

# 2013 PRODUCT GUIDE





## About us

### A GLOBAL GROUP FOR COMFORT ALL OVER THE WORLD

*CLINT is the brand meaning Comfort worldwide.*

*CLINT is part of the Global Group G.I. HOLDING SPA, which can claim over 25 years experience in manufacturing and marketing a complete range of solutions for Comfort and Industrial Cooling: from Air Conditioning and Air Treatment of service and industrial ambients, to Close Control systems, to the Cooling of Industrial Processes.*

*The Group has reached an important dimension at Global level:*

- 3 Sales Offices in three Continents;
- 4 Manufacturing plants worldwide;
- 300 employees;
- 38.000 m<sup>2</sup> of total productive covered area.



# • Our values

## • CUSTOMER FOCUS.

*Offer tailor-made solutions to satisfy each Customer requirement.*

CLINT offers targeted, customized answers to very specific needs, especially for large installations.

**Service focus.** Offering an highly skilled Pre-Sales support, the Company is able to define jointly with the Customer the best solution for each specific need, also with tailor-made solutions on the Customer's installation. The After-Sales support and a complete Service Network geographically spread worldwide are able to give support on startups and have immediate reaction in case of any problems.

**Fast reaction.** A quick decision process & short manufacturing lead-time, thanks to an highly flexible organization allow us to react immediately to Customer's requests.

**Specific product ranges tailor-made to every market**

CLINT, thanks to its flexibility and Customer orientation, is able to introduce itself to the different international markets with specific ranges, built on the real Customers' needs.

To better satisfy each market requirement in terms of power supply, a dedicated range with 460V or 380V power supply and 60Hz frequency is also available, in addition to the range at 400V / 50Hz.

## • LATEST TECHNOLOGY.

*We believe in innovation providing real benefit.*

At G.I. HOLDING Group we are ready to take on any technological challenge with fast and prompt reaction, thanks to the continuous research for new ideas on products, interfaces, networking. The aim of Research & Developments is to improve the quality and performances of products, as well as offering totally new solutions to the markets that can produce real benefits in terms of higher comfort in every installation with lower energy consumption.







## • QUALITY & PERFORMANCE.

*Production cycle control is the focus of our philosophy.*

TOTAL QUALITY is the philosophy at the base of all our activities.

The Company believes in Customer satisfaction and pursues this objective through the development of solutions to ensure the best performance over time and the maximum reliability of its products, constantly monitoring all phases in product-life cycle.

The Company's production is organized on modern assembly lines and work islands. The whole production process is subject to thorough checks and controls, both at the end and at intermediate steps. Each unit must go through strict testing, simulating operational conditions on the Customer's site even in the most demanding situations.

Pressure, temperature, sound level, vibrations: everything is checked to make sure it complies with set parameters.

The Company is also strongly geared for maximum Customer satisfaction and offers a vast Service Network relying on very skilled professionals who can carry out unit start-up on Customer's premises, if required, to adjust the machines to the requirements of any system they are connected to.

## • CARING FOR THE ENVIRONMENT.

*A modern firm operating in respect for the environment.*

G.I. HOLDING Group believes in searching for innovative solutions and developing both materials and cooling fluids that comply with the strictest directives on environmental matters, and low energy consumption machines achieving highest ESEER/IPLV.

All cooling fluids used in our CLINT refrigerating machines comply with the directives of the Kyoto and Montreal Protocols, they offer DPO=0 (Ozone Destruction Potential=0) and are used in cooling circuits designed to cut down energy dissipation and space usage, and eliminate potential gas leaks in the environment.

R134a and R410A are the refrigerants used in our cooling units for residential, commercial and industrial air conditioning systems.

On top of that, our post-sales service staff is trained and ready to carry out maintenance operations on machines or dismantle them at the end of their useful life without leaking any gas in the environment.

# The group

## THE GROUP STRUCTURE.

*A wide global group aimed at answering to the needs of each specific market.*



G.I. HOLDING Group operates through its Industrial Companies:

- G.I. INDUSTRIAL HOLDING SpA, manufacturing and trading Company based in Italy;
- GIMEK Zrt, manufacturing Company based in Hungary;
- G.I. INDUSTRIAL ASIA HOLDING Sdn Bhd, manufacturing and trading Company based in Malaysia.



The historical centre of the Group, with production totally "made in Europe". With its sales network it serves the whole World, with a particular attention to European markets.

### Sales Offices:

- Rivignano – ITALY. Company Headquarters & Eurasia Regional Office.
- Dubai – U.A.E. Middle East Regional Office.

### Manufacturing facilities:

- Rivignano – ITALY. Chillers & Fancoils.
- Piove di Sacco – ITALY. Chillers & Close Control Systems.



The manufacturing business unit serving the Companies of the Group.

### Manufacturing facility:

- Budapest – HUNGARY. Air Handling Units & Roof Tops.



The new Company of the Group, based in Malaysia and aimed at developing the business of the Group in international markets.

The key reference market is Asia Pacific, where it offers a dedicated and competitive product range.

With its sales network it also serves the whole World, with a competitive range complementary to the European one.

### Sales Office:

- Klang – MALAYSIA. Company Headquarters & Asia Pacific Regional Office.
- Dubai – U.A.E. Middle East Regional Office.

### Manufacturing facility:

- Klang – MALAYSIA. Chillers, Fan Coils, Ducted Split Systems, Air Handling Units & Roof Tops.

## DISTRIBUTION AND SERVICE NETWORK.

More than 60 Distributors in 70 Countries all over the World and a wide Service Network are widely distributed to offer the best sales and after sales services worldwide.



## THE BRANDS

G.I. HOLDING Group operates worldwide through 4 brands, each dedicated to a specific branch of the HVAC business.

G.I. HOLDING Group can claim a deep specialization in the HVAC field due to its nature as a Group formed by the integration of experienced Companies already operating since long time in the different branches of HVAC business.

Within the Group, CLINT is focused on the segment of liquid chillers, ducted split systems, roof-tops and hydronic terminal units.

MONTAIR is the trademark of special applications dedicated to high-tech Close Control Systems.

NOVAIR is the leading brand in the Air Treatment sector.



The Group's brand portfolio also includes the KTK brand, focused on the European market for Process Cooling and special Air Conditioning applications.



## Product range

*CLINT offers a wide range of watercooled and aircooled liquid Chillers and Heat Pumps as well as Roof Tops, Fan Coils and Ducted Split Systems.*

*They are available in both 50Hz and 60Hz frequencies.*



### CHILLERS



The HYDROPLUS chillers range is the ideal solution for medium and large areas in commercial and service buildings.

The range features Scroll compressors and R410A refrigerant. A wide number of models with different capacities is available in both aircooled and watercooled versions, with axial or radial fans, plate or shell and tube exchangers.

Compactness and easy installation are the key benefits of this range. The range can also feature the additional AquaLogik technology, with dynamic set point and Inverter circulating pump.



The NEXTPOWER chillers range is based on multi-Scroll technology, with R410A refrigerant. This ensures an high efficiency at partial loads, since the power is split among the different compressors based on the actual load detected by the system, to let only the required compressors work.

The family includes both aircooled and watercooled models, with plate or shell and tube exchangers, on a wide capacity range.



The ENERGYMAX chillers range with Screw compressors features environmentally friendly and efficient R134a refrigerant. It ensures high power with low energy consumption.

The family includes both aircooled and watercooled models with a wide capacity range.

### SPECIAL FEATURES



A special range with MICROCHANNEL condensing coils and EC INVERTER fans (optional) is also available for the highest ESEER/IPLV.





## • ROOF TOPS



FLEXI AIR is the range of single skin packaged Roof Tops. Full installation flexibility is the main benefit: the airflow direction of both air delivery and intake can be adjusted directly onsite. The range features Scroll compressors and R410A refrigerant.



The packaged Roof Tops of TOP AIR family feature double skin panels for an high energy efficiency. The modular design and the wide range of accessories allow to build the customized solution. The range features Scroll compressors and R410A refrigerant.

## • FAN COILS

The Ceiling Concealed & Ducted Blower Fan Coils of FBW-FDW-DBW series are designed for installation in both service areas or built-in, providing cool or warm air to the rooms with quick reaction and silent operation.

The range includes Ducted Blower units and Ceiling Concealed units in both Blow Through and Draw Through versions, in order to satisfy any installation requirement.

## • DUCTED SPLIT SYSTEMS

The Ducted Split Systems for light commercial applications are designed for installation both in service rooms or built-in.

The systems operate with R410A refrigerant and feature Rotary or Scroll compressors, depending on the model.

50 Hz

CHA-M/K 181-P÷522-P

0 75 150



Axial fans, Scroll compressors and plate exchanger



14-41 TON

16-46 TON

24 - 25

50 Hz

CHA-M/K/ST 181-P÷522-P

0 75 150



Axial fans, Scroll compressors, plate exchanger and pump kit. AquaLogik control system



14-41 TON

16-46 TON

26 - 27

50 Hz

CHA-M/K 181÷522

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger



14-41 TON

16-46 TON

28 - 29

50 Hz

CHA-M/K/ST 181÷522

0 75 150



Axial fans, Scroll compressors, shell and tube exchanger and pump kit. AquaLogik control system



14-41 TON

16-46 TON

30 - 31

50 Hz

CHA-M/K 724-P÷1306-P

0 75 150



Axial fans, Scroll compressors and plate exchanger



56-123 TON

67-141 TON

32 - 33

50 Hz

CHA-M/K 724÷1306

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger



56-123 TON

67-141 TON

34 - 35

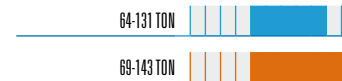
50 Hz

CHA-M/Y 1202÷2002

0 75 150



Axial fans, Screw compressors and shell and tube exchanger



36 - 37

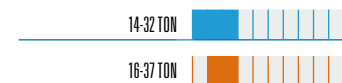
50 Hz

CRA-M/K 181-P÷392-P

0 75 150



Radial fans, Scroll compressors and plate exchanger



38 - 39

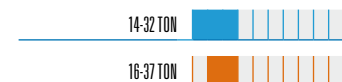
50 Hz

CRA-M/K/ST 181-P÷392-P

0 75 150



Radial fans, Scroll compressors, plate exchanger and pump kit. AquaLogik control system



40 - 41

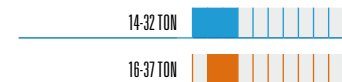
50 Hz

CRA-M/K 181÷392

0 75 150



Radial fans, Scroll compressors and shell and tube exchanger



42 - 43

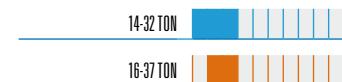
50 Hz

CRA-M/K/ST 181÷392

0 75 150



Radial fans, Scroll compressors, shell and tube exchanger and pump kit. AquaLogik control system



44 - 45

## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |

50 Hz

CHA-M/K/MC 181-P÷522-P

0 75 150



Axial fans, Scroll compressors and plate exchanger  
With MICROCHANNEL condensing coil and EC INVERTER fans



14-41 TON

46 - 47

50 Hz

CHA-M/K/MC/ST 181-P÷522-P

0 75 150



Axial fans, Scroll compressors, plate exchanger and pump kit. AquaLogik control system  
With MICROCHANNEL condensing coil and EC INVERTER fans



14-41 TON

48 - 49

50 Hz

CHA-M/K/MC 181÷522

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger  
With MICROCHANNEL condensing coil and EC INVERTER fans



14-41 TON

50 - 51

50 Hz

CHA-M/K/MC/ST 181÷522

0 75 150



Axial fans, Scroll compressors, shell and tube exchanger and pump kit. AquaLogik control system  
With MICROCHANNEL condensing coil and EC INVERTER fans



14-41 TON

52 - 53

50 Hz

CHA-M/K/MC 724-P÷1306-P

0 75 150



Axial fans, Scroll compressors and plate exchanger  
With MICROCHANNEL condensing coils and EC INVERTER fans



56-123 TON

54 - 55

50 Hz

CHA-M/K/MC 724÷1306

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger  
With MICROCHANNEL condensing coils and EC INVERTER fans



56-123 TON

56 - 57



50 Hz

CHA-M/Y/MC 1202÷2002

0 75 150



Axial fans, Screw compressors and shell and tube exchanger  
With MICROCHANNEL condensing coils and EC INVERTER fans

ENERGY  
MAXMICROCHANNEL  
COILS TECHNOLOGYEC  
FANS

64-131 TON

58 - 59

## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |

60 Hz

CHA-M/SZ/K 181-P÷522-P

0 75 150



Axial fans, Scroll compressors and plate exchanger



60 - 61

60 Hz

CHA-M/SZ/K/ST 181-P÷522-P

0 75 150



Axial fans, Scroll compressors, plate exchanger and pump kit. AquaLogik control system



62 - 63

60 Hz

CHA-M/SZ/K 181÷522

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger



64 - 65

60 Hz

CHA-M/SZ/K/ST 181÷522

0 75 150



Axial fans, Scroll compressors, shell and tube exchanger and pump kit. AquaLogik control system



66 - 67

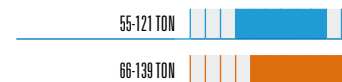
60 Hz

CHA-M/SZ/K 724-P÷1306-P

0 75 150



Axial fans, Scroll compressors and plate exchanger



68 - 69

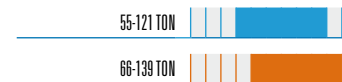
60 Hz

CHA-M/SZ/K 724÷1306

0 75 150



Axial fans, Scroll compressors and shell and tube exchanger



70 - 71

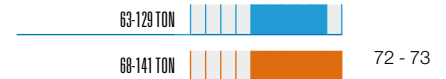
60 Hz

CHA-M/SZ/Y 1202÷2002

0 75 150



Axial fans, Screw compressors and shell and tube exchanger



60 Hz

CRA-M/SZ/K 181-P÷392-P

0 75 150



Radial fans, Scroll compressors and plate exchanger



60 Hz

CRA-M/SZ/K/ST 181-P÷392-P

0 75 150



Radial fans, Scroll compressors, plate exchanger and pump kit. AquaLogik control system



60 Hz

CRA-M/SZ/K 181÷392

0 75 150



Radial fans, Scroll compressors and shell and tube exchanger



60 Hz

CRA-M/SZ/K/ST 181÷392

0 75 150



Radial fans, Scroll compressors, shell and tube exchanger and pump kit. AquaLogik control system



## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |

50 Hz

CWW-M/K 181-P÷522-P

0 125 250



Scroll compressors and plate exchangers



16-50 TON

20-62 TON

84 - 85

50 Hz

CWW-M/K 181÷522

0 125 250



Scroll compressors and shell and tube exchangers



16-50 TON

20-62 TON

86 - 87

50 Hz

CWW-M/K 724-P÷1306-P

0 125 250



Scroll compressors and plate exchangers



67-152 TON

86-191 TON

88 - 89

50 Hz

CWW-M/K 724÷1306

0 125 250



Scroll compressors and shell and tube exchangers



67-152 TON

86-191 TON

90 - 91

50 Hz

CWW-M/Y 1302÷2002

0 125 250



Screw compressors and shell and tube exchangers



69-141 TON

79-161 TON

92 - 93

50 Hz

MR-M 200-400

0 125 250



Remote hydronic modules



94 - 95



60 Hz

CWW-M/SZ/K 181-P÷522-P



Scroll compressors and plate exchangers



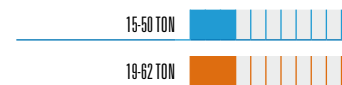
96 - 97

60 Hz

CWW-M/SZ/K 181÷522



Scroll compressors and shell and tube exchangers



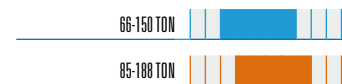
98 - 99

60 Hz

CWW-M/SZ/K 724-P÷1306-P



Scroll compressors and plate exchangers



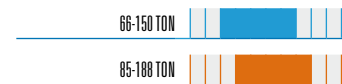
100 - 101

60 Hz

CWW-M/SZ/K 724÷1306



Scroll compressors and shell and tube exchangers



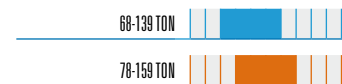
102 - 103

60 Hz

CWW-M/SZ/Y 1302÷2002



Screw compressors and shell and tube exchangers



104 - 105

## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |

Cooling

Heating

## CHAPTER 2

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS.  
REMOTE HYDRONIC MODULES.**

Power (TON)    Page

60 Hz

MR-M/SZ 200-400

0      125      250



Remote hydronic modules



106 - 107

50 Hz

RTQ-M/K 51÷724



Single skin and Scroll compressors



3-50 TON

4-56 TON

110 - 111

50 Hz

RTQXT-M/K 51÷804



Single skin and Scroll compressors. High ambient temperature up to 52°C.



4-55 TON

4-56 TON

112 - 113

50 Hz

RTA-M/K 181÷602



Double skin and Scroll compressors



16-55 TON

17-55 TON

114 - 115

50 Hz

RTA-M/K/MS 181÷602



Double skin, Scroll compressors and Mixing Box



16-55 TON

17-55 TON

116 - 117

50 Hz

RTA-M/K/ECO 181÷602



Double skin, Scroll compressors and Economizer



16-55 TON

17-55 TON

118 - 119

## LEGENDA

## Version

- Cooling only
- Cooling & Heating
- High ESP fans

## Compressor

- Scroll
- Screw

## Fan

- Axial
- Radial

## Exchanger

- Plate
- Shell and tube

## Solution

- Inverter
- Microchannel
- Web Monitoring
- Operating limit 52°C ambient air temperature
- Side connections

## Solution

- Operation at 60 Hz
- Operation at 50 Hz & 60 Hz
- Single skin
- Double skin

## Refrigerant

- R410A
- R134a
- H<sub>2</sub>O

50 Hz

RTA-M/K/ECO/REC-FX 181÷602

0 36 71



Double skin, Scroll compressors, Economizer and Heat Recovery



16-55 TON

17-55 TON

120 - 121

60 Hz

RTQXT-M/SZ/K 51÷804

0 36 71



Single skin and Scroll compressors. High ambient temperature up to 52°C



4-54 TON

4-55 TON

122 - 123

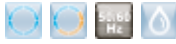
50 Hz 60 Hz

FBW-M 23÷123

0 3 6



Ceiling concealed Fan Coils. Blow through



1-3 TON

1-6 TON

126 - 127

50 Hz 60 Hz

FDW-M 23÷123

0 3 6



Ceiling concealed Fan Coils. Draw through



1-3 TON

1-6 TON

128 - 129

50 Hz

DBW-M 133÷464

0 50 100



Ducted Blower Fan Coils



3-14 TON

4-18 TON

130 - 131

50 Hz

DBW-M 643÷2256

0 50 100



Ducted Blower Fan Coils



15-78 TON

132 - 133

60 Hz

DBW-M/SZ 133÷464

0 50 100



Ducted Blower Fan Coils



4-15 TON

4-18 TON

134 - 135

## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |

Cooling

Heating

# CHAPTER 4

FAN COILS.

Power (TON) Page

60 Hz

DBW-M/SZ 643÷2256

0 50 100



Ducted Blower Fan Coils



16-83 TON

136 - 137



50 Hz

DXC-M/K 12÷60

0 350'000 700'000



Ceiling concealed Split Systems



12.000-60.000 BTU/h

12.600-63.000 BTU/h

140 - 141

50 Hz

DXCXT-M/K 13÷67

0 350'000 700'000



Ceiling concealed Split Systems. High ambient temperature up to 52 °C



13.000-67.000 BTU/h

12.600-63.000 BTU/h

142 - 143

50 Hz

DXD-M/K 75÷600

0 350'000 700'000



Ducted Blower Split Systems



75.000-600.000 BTU/h

78.200-622.800 BTU/h

144 - 145

50 Hz

DXDXT-M/K 85÷660

0 350'000 700'000



Ducted Blower Split Systems. High ambient temperature up to 52 °C



85.000-660.000 BTU/h

78.200-622.800 BTU/h

146 - 147

60 Hz

DXCXT-M/SZ/K 13÷67

0 350'000 700'000



Ceiling concealed Split Systems. High ambient temperature up to 52 °C



13.000-64.000 BTU/h

12.000-61.100 BTU/h

148 - 149

60 Hz

DXDXT-M/SZ/K 85÷660

0 350'000 700'000



Ducted Blower Split Systems. High ambient temperature up to 52 °C



84.000-645.000 BTU/h

77.000-610.000 BTU/h

150 - 151

## LEGENDA

| Version           | Compressor | Fan    | Exchanger      | Solution                                     | Solution                   | Refrigerant      |
|-------------------|------------|--------|----------------|--|----------------------------|------------------|
| Cooling only      | Scroll     | Axial  | Plate          | Inverter                                     | Operation at 60 Hz         | R410A            |
| Cooling & Heating | Screw      | Radial | Shell and tube | Microchannel                                 | Operation at 50 Hz & 60 Hz | R134a            |
| High ESP fans     |            |        |                | Web Monitoring                               | Single skin                | H <sub>2</sub> O |
|                   |            |        |                | Operating limit 52°C ambient air temperature | Double skin                |                  |
|                   |            |        |                | Side connections                             |                            |                  |



# CHAPTER 1

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH  
AXIAL AND RADIAL FANS

## UNIT

Page

### 50 HZ

|                           |         |
|---------------------------|---------|
| CHA-M/K 181-P÷522-P       | 24 - 25 |
| CHA-M/K/ST 181-P÷522-P    | 26 - 27 |
| CHA-M/K 181÷522           | 28 - 29 |
| CHA-M/K/ST 181÷522        | 30 - 31 |
| CHA-M/K 724-P÷1306-P      | 32 - 33 |
| CHA-M/K 724÷1306          | 34 - 35 |
| CHA-M/Y 1202÷2002         | 36 - 37 |
| CRA-M/K 181-P÷392-P       | 38 - 39 |
| CRA-M/K/ST 181-P÷392-P    | 40 - 41 |
| CRA-M/K 181÷392           | 42 - 43 |
| CRA-M/K/ST 181÷392        | 44 - 45 |
| CHA-M/K/MC 181-P÷522-P    | 46 - 47 |
| CHA-M/K/MC/ST 181-P÷522-P | 48 - 49 |
| CHA-M/K/MC 181÷522        | 50 - 51 |
| CHA-M/K/MC/ST 181÷522     | 52 - 53 |
| CHA-M/K/MC 724-P÷1306-P   | 54 - 55 |
| CHA-M/K/MC 724÷1306       | 56 - 57 |
| CHA-M/Y/MC 1202÷2002      | 58 - 59 |

### 60 HZ

|                           |         |
|---------------------------|---------|
| CHA-M/SZ/K 181-P÷522-P    | 60 - 61 |
| CHA-M/SZ/K/ST 181-P÷522-P | 62 - 63 |
| CHA-M/SZ/K 181÷522        | 64 - 65 |
| CHA-M/SZ/K/ST 181÷522     | 66 - 67 |
| CHA-M/SZ/K 724-P÷1306-P   | 68 - 69 |
| CHA-M/SZ/K 724÷1306       | 70 - 71 |
| CHA-M/SZ/Y 1202÷2002      | 72 - 73 |
| CRA-M/SZ/K 181-P÷392-P    | 74 - 75 |
| CRA-M/SZ/K/ST 181-P÷392-P | 76 - 77 |
| CRA-M/SZ/K 181÷392        | 78 - 79 |
| CRA-M/SZ/K/ST 181÷392     | 80 - 81 |

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.

## CHA-M/K 181-P÷522-P

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



The liquid chillers and heat pumps of CHA-M/K 181-P÷522-P HYDROPLUS series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and plate type exchanger, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump; they can be supplied with RS 485 ModBus connection.

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



### VERSIONS

#### CHA-M/K

Cooling only

#### CHA-M/K/WP

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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                                 |
|----|---------------------------------|
| SL | Unit silencing                  |
| CT | Condensing control down to 0 °C |
| BT | Low Temperature Kit             |
| DS | Desuperheater                   |
| RT | Total heat recovery             |
| SI | Inertial tank                   |
| PS | Circulating pump                |
| PD | Double circulating pump         |

#### LOOSE ACCESSORIES

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

## CHA-M/K 181-P÷522-P

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 19.1         | 24.1  | 30.9  | 46.4  | 64.9  |
| Heating                    | Heating capacity (2)      | TON     | 15.9         | 20.9  | 26.0  | 37.2  | 46.3  |
|                            |                           | kW      | 56.0         | 73.4  | 91.6  | 131   | 163   |
|                            | Absorbed power (2)        | kW      | 18.2         | 22.7  | 30.7  | 43.3  | 55.6  |
| Compressors                | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
| Evaporator                 | Water flow                | gpm     | 36.8         | 47.7  | 62.3  | 84.8  | 108   |
|                            |                           | l/s     | 2.32         | 3.01  | 3.93  | 5.35  | 6.83  |
|                            | Pressure drops            | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  | 13.7  |
|                            |                           | kPa     | 58           | 55    | 40    | 56    | 41    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current      | A       | 43           | 52    | 67    | 103   | 127   |
|                            | Inrush current            | A       | 219          | 264   | 328   | 316   | 387   |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59    | 61    | 63    | 63    |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57    | 59    | 61    | 61    |
| Unit with tank and pump    | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.50  | 1.50  |
|                            | Available static pressure | ft WG   | 35.0         | 33.3  | 48.3  | 41.7  | 38.3  |
|                            |                           | kPa     | 105          | 100   | 145   | 125   | 115   |
|                            | Tank water volume         | gal     | 106          | 106   | 106   | 106   | 106   |
|                            |                           | l       | 400          | 400   | 400   | 400   | 400   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
| Weights                    | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
|                            | Transport weight (4)      | Kg      | 573          | 612   | 722   | 871   | 987   |
|                            | Operating weight (4)      | Kg      | 580          | 620   | 740   | 890   | 1010  |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K 181-P÷522-P

300 | 1800 | 800 | 800



### 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.
  - 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 indicated on the technical book.



FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.

## CHA-M/K/ST 181-P÷522-P

**AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.**



CHA-M/K/ST 181-P÷522-P **HYDROPLUS** series liquid chillers and heat pumps, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs. They are equipped with axial fans, Scroll compressors and plate type exchanger; they can be supplied with RS 485 ModBus connection. A wide range of accessories, factory-assembled or supplied separately, completes the outstanding versatility and functionality of the series.



### VERSIONS

#### CHA-M/K/ST

Cooling only with AQUALOGIK technology

#### CHA-M/K/ST/WP

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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fans.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with AQUALOGIK technology.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

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



## CHA-M/K/ST 181-P÷522-P

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 19.1         | 24.1  | 30.9  | 46.4  | 64.9  |
| Heating                    | Heating capacity (2)      | TON     | 15.9         | 20.9  | 26.0  | 37.2  | 46.3  |
|                            |                           | kW      | 56.0         | 73.4  | 91.6  | 131   | 163   |
|                            | Absorbed power (2)        | kW      | 18.2         | 22.7  | 30.7  | 43.3  | 55.6  |
| Compressors                | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
| Evaporator                 | Water flow                | gpm     | 36.8         | 47.7  | 62.3  | 84.8  | 108   |
|                            |                           | l/s     | 2.32         | 3.01  | 3.93  | 5.35  | 6.83  |
|                            | Pressure drops            | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  | 13.7  |
|                            |                           | kPa     | 58           | 55    | 40    | 56    | 41    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current      | A       | 45           | 54    | 70    | 108   | 132   |
|                            | Inrush current            | A       | 221          | 266   | 331   | 321   | 392   |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59    | 61    | 63    | 63    |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57    | 59    | 61    | 61    |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.85  | 1.85  |
|                            | Available static pressure | ft WG   | 35.0         | 33.3  | 48.3  | 38.3  | 36.7  |
|                            |                           | kPa     | 105          | 100   | 145   | 115   | 110   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
| Weights                    | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
|                            | Transport weight          | Kg      | 588          | 627   | 737   | 891   | 1007  |
|                            | Operating weight          | Kg      | 595          | 635   | 755   | 910   | 1030  |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/ST 181-P÷522-P

300 | 1800 | 800 | 800



### 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.
  - 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 indicated on the technical book.

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.

## CHA-M/K 181÷522

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



The liquid chillers and heat pumps of CHA-M/K 181÷522 **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and shell and tube exchanger, these units can be supplied with RS 485 ModBus connection.

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



### VERSIONS

#### CHA-M/K

Cooling only

#### CHA-M/K/WP

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.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencing                  |
| CT    | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |

#### LOOSE ACCESSORIES

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

## CHA-M/K 181÷522

| MODEL                      |                       |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|-----------------------|---------|--------------|------|------|------|------|
| Cooling                    | Cooling capacity (1)  | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                       | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)    | kW      | 19.1         | 24.1 | 30.9 | 46.4 | 64.9 |
| Heating                    | Heating capacity (2)  | TON     | 15.9         | 20.9 | 26.0 | 37.2 | 46.3 |
|                            |                       | kW      | 56.0         | 73.4 | 91.6 | 131  | 163  |
|                            | Absorbed power (2)    | kW      | 18.2         | 22.7 | 30.7 | 43.3 | 55.6 |
| Compressors                | Quantity              | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits  | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps        | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow            | gpm     | 36.8         | 47.7 | 62.3 | 84.8 | 108  |
|                            |                       | l/s     | 2.32         | 3.01 | 3.93 | 5.35 | 6.83 |
|                            | Pressure drops        | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 | 17.7 |
|                            |                       | kPa     | 30           | 51   | 41   | 44   | 53   |
|                            | Water connections     | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |      |      |      |      |
|                            | Max. running current  | A       | 43           | 52   | 67   | 103  | 127  |
|                            | Inrush current        | A       | 219          | 264  | 328  | 316  | 387  |
| Sound pressure             | STD version (3)       | dB(A)   | 59           | 59   | 61   | 63   | 63   |
|                            | With SL accessory (3) | dB(A)   | 57           | 57   | 59   | 61   | 61   |
| Weights                    | Transport weight (4)  | Kg      | 611          | 649  | 764  | 926  | 1026 |
|                            | Operating weight (4)  | Kg      | 630          | 670  | 790  | 960  | 1060 |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|--|------|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 1920 | 1920 | 1920 | 2220 | 2220 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K 181÷522

300 | 1800 | 800 | 800



### NOTES

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

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.

## CHA-M/K/ST 181÷522

**AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, SCROLL COMPRESSORS, SHELL AND TUBE EXCHANGER, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.**



CHA-M/K/ST 181÷522 **HYDROPLUS** series liquid chillers and heat pumps, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. **AQUALOGIK** optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs. They are equipped with axial fans, Scroll compressors and shell and tube exchanger; they can be supplied with RS 485 ModBus connection. A wide range of accessories, factory-assembled or supplied separately, completes the outstanding versatility and functionality of the series.



### VERSIONS

#### CHA-M/K/ST

Cooling only with AQUALOGIK technology

#### CHA-M/K/ST/WP

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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fans.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| SL    | Unit silencing                |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |

#### LOOSE ACCESSORIES

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

## CHA-M/K/ST 181÷522

| MODEL                      |                           |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|
| Cooling                    | Cooling capacity (1)      | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                           | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)        | kW      | 19.1         | 24.1 | 30.9 | 46.4 | 64.9 |
| Heating                    | Heating capacity (2)      | TON     | 15.9         | 20.9 | 26.0 | 37.2 | 46.3 |
|                            |                           | kW      | 56.0         | 73.4 | 91.6 | 131  | 163  |
|                            | Absorbed power (2)        | kW      | 18.2         | 22.7 | 30.7 | 43.3 | 55.6 |
| Compressors                | Quantity                  | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps            | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow                | gpm     | 36.8         | 47.7 | 62.3 | 84.8 | 108  |
|                            |                           | l/s     | 2.32         | 3.01 | 3.93 | 5.35 | 6.83 |
|                            | Pressure drops            | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 | 17.7 |
|                            |                           | kPa     | 30           | 51   | 41   | 44   | 53   |
|                            | Water connections         | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |      |      |      |      |
|                            | Max. running current      | A       | 45           | 54   | 70   | 108  | 132  |
|                            | Inrush current            | A       | 221          | 266  | 331  | 321  | 392  |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59   | 61   | 63   | 63   |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57   | 59   | 61   | 61   |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75 | 1.10 | 1.85 | 1.85 |
|                            | Available static pressure | ft WG   | 43.3         | 35.0 | 48.3 | 41.7 | 33.3 |
|                            |                           | kPa     | 130          | 105  | 145  | 125  | 100  |
|                            | Expansion vessel          | gal     | 3.2          | 3.2  | 3.2  | 3.2  | 3.2  |
|                            |                           | l       | 12           | 12   | 12   | 12   | 12   |
| Weights                    | Water connections         | "G      | 2½"          | 2½"  | 2½"  | 2½"  | 2½"  |
|                            | Transport weight          | Kg      | 626          | 664  | 779  | 946  | 1046 |
|                            | Operating weight          | Kg      | 645          | 685  | 805  | 980  | 1080 |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1920 | 1920 | 1920 | 2220 | 2220 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/ST 181÷522

300 | 1800 | 800 | 800



### NOTES

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

FROM 56 TON TO 123 TON.  
FROM 196 KW TO 431 KW.

## CHA-M/K 724-P÷1306-P

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



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and plate exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.



### VERSIONS

#### CHA-M/K

Cooling only

#### CHA-M/K/WP

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 in AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                                 |
|----|---------------------------------|
| SL | Unit silencement                |
| CT | Condensing control down to 0 °C |
| BT | Low Temperature Kit             |
| DS | Desuperheater                   |
| RT | Total heat recovery             |
| AD | Air section divider             |

#### LOOSE ACCESSORIES

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



## CHA-M/K 724-P÷1306-P

| MODEL                      |                       |         | 724-P        | 824-P | 1044-P | 1206-P | 1306-P |
|----------------------------|-----------------------|---------|--------------|-------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0   | 104    | 123    |
|                            |                       | kW      | 196          | 249   | 306    | 365    | 431    |
|                            | Absorbed power (1)    | kW      | 77           | 105   | 117    | 151    | 190    |
| Heating                    | Heating capacity (2)  | TON     | 66.5         | 83.9  | 99.8   | 118    | 141    |
|                            |                       | kW      | 234          | 295   | 351    | 414    | 497    |
|                            | Absorbed power (2)    | kW      | 74           | 98    | 117    | 141    | 164    |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2    | 3+3    | 3+3    |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | 4            | 4     | 4      | 6      | 6      |
| Evaporator                 | Water flow (1)        | gpm     | 148          | 189   | 232    | 276    | 326    |
|                            |                       | l/s     | 9.36         | 11.90 | 14.62  | 17.44  | 20.59  |
|                            | Pressure drops (1)    | ft WG   | 17.3         | 18.7  | 19.3   | 16.0   | 15.3   |
|                            |                       | kPa     | 52           | 56    | 58     | 48     | 46     |
|                            | Water connections     | DN      | 100          | 100   | 100    | 100    | 100    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |        |        |        |
|                            | Max. running current  | A       | 161          | 195   | 249    | 293    | 361    |
|                            | Inrush current        | A       | 340          | 410   | 512    | 515    | 625    |
| Sound pressure             | STD version (3)       | dB(A)   | 67           | 68    | 68     | 69     | 70     |
|                            | With SL accessory (3) | dB(A)   | 64           | 65    | 65     | 66     | 67     |
| Weights                    | Transport weight      | Kg      | 1650         | 1748  | 2344   | 2479   | 2685   |
|                            | Operating weight      | Kg      | 1690         | 1790  | 2390   | 2530   | 2740   |

| DIMENSIONS |     |    | 724-P | 824-P | 1044-P | 1206-P | 1306-P |
|------------|-----|----|-------|-------|--------|--------|--------|
| L          | STD | mm | 2800  | 2800  | 3900   | 3900   | 3900   |
| W          | STD | mm | 2200  | 2200  | 2200   | 2200   | 2200   |
| H          | STD | mm | 2100  | 2100  | 2100   | 2100   | 2100   |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K 724-P÷1306-P

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.
  3. 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 indicated on the technical book.

FROM 56 TON TO 123 TON.  
FROM 196 KW TO 431 KW.

## CHA-M/K 724÷1306

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



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and shell and tube exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.



### VERSIONS

#### CHA-M/K

Cooling only

#### CHA-M/K/WP

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.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencing                  |
| CT    | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |
| AD    | Air section divider             |

#### LOOSE ACCESSORIES

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

## CHA-M/K 724÷1306

| MODEL                      |                       |         | 724          | 824   | 1044  | 1206  | 1306  |
|----------------------------|-----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0  | 104   | 123   |
|                            |                       | kW      | 196          | 249   | 306   | 365   | 431   |
|                            | Absorbed power (1)    | kW      | 77           | 105   | 117   | 151   | 190   |
| Heating                    | Heating capacity (2)  | TON     | 66.5         | 83.9  | 99.8  | 118   | 141   |
|                            |                       | kW      | 234          | 295   | 351   | 414   | 497   |
|                            | Absorbed power (2)    | kW      | 74           | 98    | 117   | 141   | 164   |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2   | 3+3   | 3+3   |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 4            | 4     | 4     | 6     | 6     |
| Evaporator                 | Water flow (1)        | gpm     | 148          | 189   | 232   | 276   | 326   |
|                            |                       | l/s     | 9.36         | 11.90 | 14.62 | 17.44 | 20.59 |
|                            | Pressure drops (1)    | ft WG   | 17.7         | 17.7  | 20.3  | 13.7  | 16.7  |
|                            |                       | kPa     | 53           | 53    | 61    | 41    | 50    |
|                            | Water connections     | DN      | 100          | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current  | A       | 161          | 195   | 249   | 293   | 361   |
|                            | Inrush current        | A       | 340          | 410   | 512   | 515   | 625   |
| Sound pressure             | STD version (3)       | dB(A)   | 67           | 68    | 68    | 69    | 70    |
|                            | With SL accessory (3) | dB(A)   | 64           | 65    | 65    | 66    | 67    |
| Weights                    | Transport weight      | Kg      | 1753         | 1834  | 2492  | 2665  | 2940  |
|                            | Operating weight      | Kg      | 1850         | 1930  | 2620  | 2820  | 3100  |

| DIMENSIONS |     |    | 724  | 824  | 1044 | 1206 | 1306 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2800 | 2800 | 3900 | 3900 | 3900 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2100 | 2100 | 2100 | 2100 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K 724÷1306

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.
  3. 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 indicated on the technical book.

FROM 64 TON TO 131 TON.  
FROM 225 KW TO 459 KW.

## CHA-M/Y 1202÷2002

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



The liquid chillers and heat pumps of CHA-M/Y 1202÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed to meet the needs of large-sized service or industrial buildings. They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

They are equipped with axial fans, Screw compressors and shell and tube exchanger. The use of large size condensing coils, together with fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit and the use of latest generation Screw compressors, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.

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



### VERSIONS

#### CHA-M/Y

Cooling only

#### CHA-M/Y/WP

Reversible heat pump

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, crankcase heater, sight glass, thermal protection, hot gas shut off valves and 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 refrigerants circuits and one water circuit.
- Electronic thermostatic valve.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a step regulation of the fans.
- Condensing control included allows to reach up to 0°C external air temperature.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |   |
|-------|---|
| RZ    | Compressors stepless control  |
| BT    | Low Temperature Kit   |
| HR    | Desuperheater   |
| HRT/S | Total heat recovery in series   |
| FE    | Evaporator heater   |
| SS    | Soft start  |
| AD    | Air section divider   |
| WM    | Web Monitoring enables remote management of the system through communication protocols GPRS/GSM/TCP |
| CP    | Potential free contacts   |

#### LOOSE ACCESSORIES

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

## CHA-M/Y 1202÷2002

| MODEL                      |                      |         | 1202         | 1302  | 1502  | 1702  | 1902  | 2002  |
|----------------------------|----------------------|---------|--------------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1) | TON     | 64.0         | 75.1  | 85.6  | 101   | 114   | 131   |
|                            |                      | kW      | 225          | 264   | 301   | 355   | 402   | 459   |
|                            | Absorbed power (1)   | kW      | 95           | 122   | 131   | 159   | 168   | 225   |
| Heating                    | Heating capacity (2) | TON     | 68.8         | 82.7  | 92.1  | 110   | 124   | 143   |
|                            |                      | kW      | 242          | 291   | 324   | 387   | 437   | 504   |
|                            | Absorbed power (2)   | kW      | 76           | 93    | 100   | 120   | 129   | 153   |
| Compressors                | Quantity             | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps       | n°      | 6            | 6     | 6     | 6     | 6     | 6     |
| Evaporator                 | Water flow           | gpm     | 170          | 200   | 228   | 269   | 305   | 348   |
|                            |                      | l/s     | 10.75        | 12.61 | 14.38 | 16.96 | 19.21 | 21.93 |
|                            | Pressure drops       | ft WG   | 13.3         | 14.3  | 16.3  | 20.7  | 16.0  | 18.0  |
|                            |                      | kPa     | 40           | 43    | 49    | 62    | 48    | 54    |
|                            | Water connections    | DN      | 100          | 100   | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply         | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Max. running current | A       | 212          | 250   | 278   | 334   | 363   | 434   |
|                            | Inrush current       | A       | 277          | 371   | 385   | 444   | 518   | 611   |
| Sound pressure             | STD version (3)      | dB(A)   | 69           | 69    | 68    | 70    | 70    | 70    |
| Weights                    | Transport weight     | Kg      | 2475         | 2842  | 3083  | 3262  | 3500  | 3927  |
|                            | Operating weight     | Kg      | 2640         | 3000  | 3280  | 3450  | 3690  | 4250  |

| DIMENSIONS |     |    |  | 1202 | 1302 | 1502 | 1702 | 1902 | 2002 |
|------------|-----|----|--|------|------|------|------|------|------|
| L          | STD | mm |  | 2800 | 2800 | 3900 | 3900 | 3900 | 3900 |
| W          | STD | mm |  | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm |  | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/Y 1202÷2002

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.
  3. 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 indicated on the technical book.



FROM 14 TON TO 32 TON.  
FROM 49 KW TO 112 KW.

## CRA-M/K 181-P÷392-P

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



The indoor installation liquid chillers and heat pumps of the CRA-M/K 181-P÷392-P **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service 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.

Equipped with radial fans, Scroll compressors and plate type exchanger, these units are available even in the version with high ESP fans and can be completed by a hydraulic circuit with tank, with pump, or with tank and pump; they can be supplied with RS 485 ModBus connection.

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



### VERSIONS

#### CRA-M/K

Cooling only

#### CRA-M/K/WP

Reversible heat pump

#### CRA-M/K/AP

Cooling only with high ESP fans

#### CRA-M/K/WP/AP

Reversible heat pump with high ESP fans

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- 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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                                 |
|-----|---------------------------------|
| SL  | Unit silencing                  |
| CCM | Condensing control down to 0 °C |
| BT  | Low Temperature Kit             |
| DS  | Desuperheater                   |
| RT  | Total heat recovery             |
| SI  | Inertial tank                   |
| PS  | Circulating pump                |
| PD  | Double circulating pump         |

#### LOOSE ACCESSORIES

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

# CRA-M/K 181-P÷392-P

| MODEL                      |  |         | 181-P        | 241-P | 301-P | 392-P |
|----------------------------|--|---------|--------------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)                   | TON     | 13.8         | 17.9  | 23.4  | 31.8  |
|                            |  | kW      | 48.6         | 62.9  | 82.3  | 112   |
|                            | Absorbed power (1)                     | kW      | 20.1         | 25.1  | 31.3  | 50.4  |
| Heating                    | Heating capacity (2)                   | TON     | 15.9         | 20.9  | 26.0  | 37.2  |
|                            |  | kW      | 56.0         | 73.4  | 91.6  | 131   |
|                            | Absorbed power (2)                     | kW      | 19.2         | 23.7  | 31.1  | 47.4  |
| Compressors                | Quantity                               | n°      | 1            | 1     | 1     | 2     |
|                            | Refrigerant circuits                   | n°      | 1            | 1     | 1     | 1     |
|                            | Capacity steps                         | n°      | 1            | 1     | 1     | 2     |
| Evaporator                 | Water flow                             | gpm     | 36.8         | 47.7  | 62.3  | 84.8  |
|                            |  | l/s     | 2.32         | 3.01  | 3.93  | 5.35  |
|                            | Pressure drops                         | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  |
|                            |  | kPa     | 58           | 55    | 40    | 56    |
|                            | Water connections                      | "G      | 1½"          | 1½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 400 / 3 / 50 |       |       |       |
|                            | Max. running current                   | A       | 46           | 55    | 72    | 112   |
|                            | Inrush current                         | A       | 222          | 267   | 333   | 325   |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66    | 67    | 68    |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63    | 64    | 65    |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67    | 68    | ---   |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64    | 65    | ---   |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62  | 0.60  | 0.48  |
|                            |  | Pa      | 170          | 155   | 150   | 120   |
|                            | High ESP version                       | in WG   | 1.18         | 1.08  | 1.14  | ---   |
|                            |  | Pa      | 295          | 270   | 285   | ---   |
| Unit with tank and pump    | Pump nominal power                     | kW      | 0.75         | 0.75  | 1.10  | 1.50  |
|                            | Available static pressure              | ft WG   | 35.0         | 33.3  | 48.3  | 41.7  |
|                            |  | kPa     | 105          | 100   | 145   | 125   |
|                            |  | gal     | 106          | 106   | 106   | 106   |
|                            | Tank water volume                      | l       | 400          | 400   | 400   | 400   |
|                            |  | gal     | 3.2          | 3.2   | 3.2   | 3.2   |
|                            | Expansion vessel                       | l       | 12           | 12    | 12    | 12    |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"   | 2½"   | 2½"   |
|                            | Transport weight (4)                   | Kg      | 658          | 722   | 792   | 871   |
|                            | Operating weight (4)                   | Kg      | 665          | 730   | 810   | 890   |

| DIMENSIONS |     |    |  | 181-P | 241-P | 301-P | 392-P |
|------------|-----|----|--|-------|-------|-------|-------|
| L          | STD | mm |  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm |  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm |  | 2005  | 2005  | 2005  | 2005  |
| H (5)      | STD | mm |  | 2205  | 2205  | 2205  | 2205  |

## DIMENSIONAL & CLEARANCE AREA

CRA-M/K 181-P÷392-P

300 | 1800 | 800 | 800



## NOTES

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

FROM 14 TON TO 32 TON.  
FROM 49 KW TO 112 KW.



## CRA-M/K/ST 181-P÷392-P

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



The indoor installation liquid chillers and heat pumps of the CRA-M/K/ST 181-P÷392-P **HYDROPLUS** series, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings 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 are managed by the AQUALOGIK smart control system, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with radial fans, Scroll compressors and plate type exchangers, they are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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

### VERSIONS

#### CRA-M/K/ST

Cooling only with AQUALOGIK technology

#### CRA-M/K/WP/ST

Reversible heat pump with AQUALOGIK technology

#### CRA-M/K/AP/ST

Cooling only with high ESP fans and AQUALOGIK technology

#### CRA-M/K/WP/AP/ST

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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device for modulating adjustment of the dampers.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with AQUALOGIK technology.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

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

# CRA-M/K/ST 181-P÷392-P

| MODEL                      |  |         | 181-P        | 241-P | 301-P | 392-P |
|----------------------------|--|---------|--------------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)                   | TON     | 13.8         | 17.9  | 23.4  | 31.8  |
|                            |  | kW      | 48.6         | 62.9  | 82.3  | 112   |
|                            | Absorbed power (1)                     | kW      | 20.1         | 25.1  | 31.3  | 50.4  |
| Heating                    | Heating capacity (2)                   | TON     | 15.9         | 20.9  | 26.0  | 37.2  |
|                            |  | kW      | 56.0         | 73.4  | 91.6  | 131   |
|                            | Absorbed power (2)                     | kW      | 19.2         | 23.7  | 31.1  | 47.4  |
| Compressors                | Quantity                               | n°      | 1            | 1     | 1     | 2     |
|                            | Refrigerant circuits                   | n°      | 1            | 1     | 1     | 1     |
|                            | Capacity steps                         | n°      | 1            | 1     | 1     | 2     |
| Evaporator                 | Water flow                             | gpm     | 36.8         | 47.7  | 62.3  | 84.8  |
|                            |  | l/s     | 2.32         | 3.01  | 3.93  | 5.35  |
|                            | Pressure drops                         | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  |
|                            |  | kPa     | 58           | 55    | 40    | 56    |
|                            | Water connections                      | "G      | 1½"          | 1½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 400 / 3 / 50 |       |       |       |
|                            | Max. running current                   | A       | 48           | 57    | 75    | 117   |
|                            | Inrush current                         | A       | 224          | 269   | 336   | 330   |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66    | 67    | 68    |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63    | 64    | 65    |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67    | 68    | ---   |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64    | 65    | ---   |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62  | 0.60  | 0.48  |
|                            |  | Pa      | 170          | 155   | 150   | 120   |
|                            | High ESP version                       | in WG   | 1.18         | 1.08  | 1.14  | ---   |
|                            |  | Pa      | 295          | 270   | 285   | ---   |
| Water circuit              | Pump nominal power                     | kW      | 0.75         | 0.75  | 1.10  | 1.85  |
|                            | Available static pressure              | ft WG   | 35.0         | 33.3  | 48.3  | 38.3  |
|                            |  | kPa     | 105          | 100   | 145   | 115   |
|                            | Expansion vessel                       | gal     | 3.2          | 3.2   | 3.2   | 3.2   |
|                            |  | l       | 12           | 12    | 12    | 12    |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"   | 2½"   | 2½"   |
|                            | Transport weight                       | Kg      | 673          | 737   | 807   | 891   |
|                            | Operating weight                       | Kg      | 680          | 745   | 825   | 910   |

| DIMENSIONS |     |    |  | 181-P | 241-P | 301-P | 392-P |
|------------|-----|----|--|-------|-------|-------|-------|
| L          | STD | mm |  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm |  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm |  | 2005  | 2005  | 2005  | 2005  |

## DIMENSIONAL & CLEARANCE AREA

CRA-M/K/ST 181-P÷392-P

300 | 1800 | 800 | 800



## NOTES

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

FROM 14 TON TO 32 TON.  
FROM 49 KW TO 112 KW.



## CRA-M/K 181÷392

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



The indoor installation liquid chillers and heat pumps of the CRA-M/K 181÷392 **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service 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.

Equipped with radial fans, Scroll compressors and shell and tube exchangers, these units are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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



### VERSIONS

#### **CRA-M/K**

Cooling only

#### **CRA-M/K/WP**

Reversible heat pump

#### **CRA-M/K/AP**

Cooling only with high ESP fans

#### **CRA-M/K/WP/AP**

Reversible heat pump with high ESP fans

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- 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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### **FACTORY FITTED ACCESSORIES**

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencement                |
| CCM   | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |

#### **LOOSE ACCESSORIES**

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

## CRA-M/K 181÷392

| MODEL                      |  |         | 181          | 241  | 301  | 392  |
|----------------------------|--|---------|--------------|------|------|------|
| Cooling                    | Cooling capacity (1)                   | TON     | 13.8         | 17.9 | 23.4 | 31.8 |
|                            |  | kW      | 48.6         | 62.9 | 82.3 | 112  |
|                            | Absorbed power (1)                     | kW      | 20.1         | 25.1 | 31.3 | 50.4 |
| Heating                    | Heating capacity (2)                   | TON     | 15.9         | 20.9 | 26.0 | 37.2 |
|                            |  | kW      | 56.0         | 73.4 | 91.6 | 131  |
|                            | Absorbed power (2)                     | kW      | 19.2         | 23.7 | 31.1 | 47.4 |
| Compressors                | Quantity                               | n°      | 1            | 1    | 1    | 2    |
|                            | Refrigerant circuits                   | n°      | 1            | 1    | 1    | 1    |
|                            | Capacity steps                         | n°      | 1            | 1    | 1    | 2    |
| Evaporator                 | Water flow                             | gpm     | 36.8         | 47.7 | 62.3 | 84.8 |
|                            |  | l/s     | 2.32         | 3.01 | 3.93 | 5.35 |
|                            | Pressure drops                         | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 |
|                            |  | kPa     | 30           | 51   | 41   | 44   |
|                            | Water connections                      | "G      | 1½"          | 2"   | 2½"  | 3"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 400 / 3 / 50 |      |      |      |
|                            | Max. running current                   | A       | 46           | 55   | 72   | 112  |
|                            | Inrush current                         | A       | 222          | 267  | 333  | 325  |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66   | 67   | 68   |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63   | 64   | 65   |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67   | 68   | ---  |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64   | 65   | ---  |
|                            |  |         |              |      |      |      |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62 | 0.60 | 0.48 |
|                            |  | Pa      | 170          | 155  | 150  | 120  |
|                            | High ESP version                       | in WG   | 1.18         | 1.08 | 1.14 | ---  |
|                            |  | Pa      | 295          | 270  | 285  | ---  |
|                            | Transport weight                       | Kg      | 696          | 759  | 834  | 926  |
| Weights                    | Operating weight                       | Kg      | 715          | 780  | 860  | 960  |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  |
|------------|-----|----|--|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 2005 | 2005 | 2005 | 2005 |

### DIMENSIONAL & CLEARANCE AREA

CRA-M/K 181÷392

300 | 1800 | 800 | 800



### NOTES

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



FROM 14 TON TO 32 TON.  
FROM 49 KW TO 112 KW.

## CRA-M/K/ST 181÷392

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



The indoor installation liquid chillers and heat pumps of the CRA-M/K/ST 181÷392 **HYDROPLUS** series, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service 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 are managed by the AQUALOGIK smart control system, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with radial fans, Scroll compressors and shell and tube exchangers, they are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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



### VERSIONS

#### CRA-M/K/ST

Cooling only with AQUALOGIK technology

#### CRA-M/K/WP/ST

Reversible heat pump with AQUALOGIK technology

#### CRA-M/K/AP/ST

Cooling only with high ESP fans and AQUALOGIK technology

#### CRA-M/K/WP/AP/ST

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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device for modulating adjustment of the dampers.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| SL    | Unit silencing                |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |

#### LOOSE ACCESSORIES

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

## CRA-M/K/ST 181÷392

| MODEL                      |  |         | 181          | 241  | 301  | 392  |
|----------------------------|--|---------|--------------|------|------|------|
| Cooling                    | Cooling capacity (1)                   | TON     | 13.8         | 17.9 | 23.4 | 31.8 |
|                            |  | kW      | 48.6         | 62.9 | 82.3 | 112  |
|                            | Absorbed power (1)                     | kW      | 20.1         | 25.1 | 31.3 | 50.4 |
| Heating                    | Heating capacity (2)                   | TON     | 15.9         | 20.9 | 26.0 | 37.2 |
|                            |  | kW      | 56.0         | 73.4 | 91.6 | 131  |
|                            | Absorbed power (2)                     | kW      | 19.2         | 23.7 | 31.1 | 47.4 |
| Compressors                | Quantity                               | n°      | 1            | 1    | 1    | 2    |
|                            | Refrigerant circuits                   | n°      | 1            | 1    | 1    | 1    |
|                            | Capacity steps                         | n°      | 1            | 1    | 1    | 2    |
| Evaporator                 | Water flow                             | gpm     | 36.8         | 47.7 | 62.3 | 84.8 |
|                            |  | l/s     | 2.32         | 3.01 | 3.93 | 5.35 |
|                            | Pressure drops                         | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 |
|                            |  | kPa     | 30           | 51   | 41   | 44   |
|                            | Water connections                      | "G      | 1½"          | 2"   | 2½"  | 3"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 400 / 3 / 50 |      |      |      |
|                            | Max. running current                   | A       | 48           | 57   | 75   | 117  |
|                            | Inrush current                         | A       | 224          | 269  | 336  | 330  |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66   | 67   | 68   |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63   | 64   | 65   |
|                            | High ESP version (3)                   | dB(A)   | 65           | 66   | 67   | ---  |
|                            | High ESP version with SL accessory (3) | dB(A)   | 62           | 63   | 64   | ---  |
| Available static pressure  | STD version                            | in WG   | 6.82         | 6.22 | 6.02 | ---  |
|                            |  | Pa      | 170          | 155  | 150  | ---  |
|                            | High ESP version                       | in WG   | 0.68         | 0.62 | 0.60 | 0.48 |
|                            |  | Pa      | 170          | 155  | 150  | 120  |
| Water circuit              | Pump nominal power                     | kW      | 0.75         | 0.75 | 1.10 | 1.85 |
|                            | Available static pressure              | ft WG   | 43.3         | 35.0 | 48.3 | 41.7 |
|                            |  | kPa     | 130          | 105  | 145  | 125  |
|                            | Expansion vessel                       | gal     | 3.2          | 3.2  | 3.2  | 3.2  |
|                            |  | l       | 12           | 12   | 12   | 12   |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"  | 2½"  | 2½"  |
|                            | Transport weight                       | Kg      | 711          | 774  | 849  | 946  |
|                            | Operating weight                       | Kg      | 720          | 780  | 870  | 965  |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  |
|------------|-----|----|--|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 2005 | 2005 | 2005 | 2005 |

### DIMENSIONAL & CLEARANCE AREA

CRA-M/K/ST 181÷392

300 | 1800 | 800 | 800



### NOTES

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

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.



## CHA-M/K/MC 181-P÷522-P

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

**WITH MICROCHANNEL CONDENSING COIL AND EC INVERTER FANS.**



The liquid chillers of CHA-M/K/MC 181-P÷522-P **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and plate type exchanger, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump; they can be supplied with RS 485 ModBus connection.

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

They feature MICROCHANNEL condensing coil to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature EC INVERTER fans.



### VERSIONS

#### CHA-M/K/MC

Cooling only with MICROCHANNEL condensing coil

#### CHA-M/K/MC/EC

Cooling only with MICROCHANNEL condensing coil and EC INVERTER fans

### 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. EC version is provided with EC INVERTER fans.
- Condenser made of aluminium MICROCHANNEL condensing coil.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device, included on EC version only, with built-in INVERTER device, to decrease the sound level with continuous regulation of the fans.
- Condensing control, included on EC version only, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |   |
|----|---|
| SL | Unit silencing  |
| CT | Condensing control down to 0 °C (standard version only) |
| BT | Low Temperature Kit                                     |
| DS | Desuperheater   |
| RT | Total heat recovery                                     |
| SI | Inertial tank   |
| PS | Circulating pump  |
| PD | Double circulating pump                                 |

#### LOOSE ACCESSORIES

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

# CHA-M/K/MC 181-P÷522-P

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling STD version        | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 16.4         | 21.3  | 27.2  | 40.1  | 53.8  |
| Cooling EC version         | EER                       |         | 2.96         | 2.95  | 3.03  | 2.79  | 2.66  |
|                            | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 16.2         | 21.1  | 26.8  | 39.6  | 52.8  |
|                            | EER                       |         | 3.00         | 2.98  | 3.07  | 2.83  | 2.71  |
|                            | ESEER                     |         | 3.41         | 3.40  | 3.50  | 3.69  | 3.75  |
| Compressors                | IPLV                      |         | 3.95         | 3.91  | 4.02  | 4.16  | 4.29  |
|                            | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
| Evaporator                 | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Water flow                | gpm     | 36.8         | 47.7  | 62.3  | 84.8  | 108   |
|                            |                           | l/s     | 2.32         | 3.01  | 3.93  | 5.35  | 6.83  |
|                            | Pressure drops            | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  | 13.7  |
|                            |                           | kPa     | 58           | 55    | 40    | 56    | 41    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current      | A       | 43           | 52    | 67    | 103   | 127   |
|                            | Inrush current            | A       | 219          | 264   | 328   | 316   | 387   |
| Sound pressure             | STD version (2)           | dB(A)   | 58           | 58    | 60    | 62    | 62    |
|                            | with SL accessory (2)     | dB(A)   | 56           | 56    | 58    | 60    | 60    |
| Max sound pressure         | EC version (2)            | dB(A)   | 58           | 58    | 60    | 62    | 62    |
|                            | With SL accessory (2)     | dB(A)   | 56           | 56    | 58    | 60    | 60    |
| Unit with tank and pump    | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.50  | 1.50  |
|                            | Available static pressure | ft WG   | 35.0         | 33.3  | 48.3  | 41.7  | 38.3  |
|                            |                           | kPa     | 105          | 100   | 145   | 125   | 115   |
|                            | Tank water volume         | gal     | 106          | 106   | 106   | 106   | 106   |
|                            |                           | l       | 400          | 400   | 400   | 400   | 400   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
| Weights                    | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
|                            | Transport weight (3)      | Kg      | 543          | 582   | 682   | 821   | 937   |
|                            | Operating weight (3)      | Kg      | 550          | 590   | 700   | 840   | 960   |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

## DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC 181-P÷522-P

300 | 1800 | 800 | 800



## NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
3. Unit without tank and pump.

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.



## CHA-M/K/MC/ST 181-P÷522-P

**AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.**

**WITH MICROCHANNEL CONDENSING COIL AND EC INVERTER FANS.**



CHA-M/K/MC/ST 181-P÷522-P **HYDROPLUS** series liquid chillers, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. **AQUALOGIK** optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs.

They are equipped with axial fans, Scroll compressors and plate type exchanger; they can be supplied with RS 485 ModBus connection.

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

They feature **MICROCHANNEL** condensing coil to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature **EC INVERTER** fans.

### VERSIONS

#### CHA-M/K/MC/ST

Cooling only with **MICROCHANNEL** condensing coil and **AQUALOGIK** technology

#### CHA-M/K/MC/ST/EC

Cooling only with **MICROCHANNEL** condensing coil, **EC INVERTER** 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.
- Axial fans directly coupled to an electric motor with external rotor. EC version is provided with **EC INVERTER** fans.
- Condenser made of aluminium **MICROCHANNEL** condensing coil.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- On standard version, electronic proportional device to decrease the sound level, with a continuous regulation of the fans. On EC version, fans feature built-in **INVERTER** device.
- Condensing control, included on both standard and EC versions, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with **AQUALOGIK** technology.
- The hydraulic circuit includes **INVERTER** circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

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

## CHA-M/K/MC/ST 181-P÷522-P

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling STD version        | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 16.4         | 21.3  | 27.2  | 40.1  | 53.8  |
| Cooling EC version         | EER                       |         | 2.96         | 2.95  | 3.03  | 2.79  | 2.66  |
|                            | Cooling capacity (1)      | TON     | 13.8         | 17.9  | 23.4  | 31.8  | 40.7  |
|                            |                           | kW      | 48.6         | 62.9  | 82.3  | 112   | 143   |
|                            | Absorbed power (1)        | kW      | 16.2         | 21.1  | 26.8  | 39.6  | 52.8  |
|                            | EER                       |         | 3.00         | 2.98  | 3.07  | 2.83  | 2.71  |
|                            | ESEER                     |         | 3.41         | 3.40  | 3.50  | 3.69  | 3.75  |
| Compressors                | IPLV                      |         | 3.95         | 3.91  | 4.02  | 4.16  | 4.29  |
|                            | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
| Evaporator                 | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Water flow                | gpm     | 36.8         | 47.7  | 62.3  | 84.8  | 108   |
|                            |                           | l/s     | 2.32         | 3.01  | 3.93  | 5.35  | 6.83  |
|                            | Pressure drops            | ft WG   | 19.3         | 18.3  | 13.3  | 18.7  | 13.7  |
|                            |                           | kPa     | 58           | 55    | 40    | 56    | 41    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current      | A       | 45           | 54    | 70    | 108   | 132   |
|                            | Inrush current            | A       | 221          | 266   | 331   | 321   | 392   |
| Sound pressure             | STD version (2)           | dB(A)   | 58           | 58    | 60    | 62    | 62    |
|                            | with SL accessory (2)     | dB(A)   | 56           | 56    | 58    | 60    | 60    |
| Max sound pressure         | EC version (2)            | dB(A)   | 58           | 58    | 60    | 62    | 62    |
|                            | With SL accessory (2)     | dB(A)   | 56           | 56    | 58    | 60    | 60    |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.85  | 1.85  |
|                            | Available static pressure | ft WG   | 35.0         | 33.3  | 48.3  | 38.3  | 36.7  |
|                            |                           | kPa     | 105          | 100   | 145   | 115   | 110   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
|                            | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
| Weights                    | Transport weight          | Kg      | 558          | 597   | 697   | 841   | 957   |
|                            | Operating weight          | Kg      | 565          | 605   | 715   | 860   | 980   |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC/ST 181-P÷522-P

300 | 1800 | 800 | 800



### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.

## CHA-M/K/MC 181÷522

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

**WITH MICROCHANNEL CONDENSING COIL AND EC INVERTER FANS.**



The liquid chillers of CHA-M/K/MC 181÷522 **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and shell and tube exchanger, these units can be supplied with RS 485 ModBus connection.

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

They feature MICROCHANNEL condensing coil to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature EC INVERTER fans.



### VERSIONS

#### CHA-M/K/MC

Cooling only with MICROCHANNEL condensing coil

#### CHA-M/K/MC/EC

Cooling only with MICROCHANNEL condensing coil and EC INVERTER fans

### 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. EC version is provided with EC INVERTER fans.
- Condenser made of aluminium MICROCHANNEL condensing coil.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device, included on EC version only, with built-in INVERTER device, to decrease the sound level with continuous regulation of the fans.
- Condensing control, included on EC version only, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |   |
|-------|---|
| SL    | Unit silencing  |
| CT    | Condensing control down to 0 °C (standard version only) |
| BT    | Low Temperature Kit                                     |
| HR    | Desuperheater   |
| HRT/S | Total heat recovery in series                           |

#### LOOSE ACCESSORIES

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



## CHA-M/K/MC 181÷522

| MODEL                      |                       |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|-----------------------|---------|--------------|------|------|------|------|
| Cooling STD version        | Cooling capacity (1)  | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                       | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)    | kW      | 16.4         | 21.3 | 27.2 | 40.1 | 53.8 |
|                            |                       | EER     | 2.96         | 2.95 | 3.03 | 2.79 | 2.66 |
| Cooling EC version         | Cooling capacity (1)  | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                       | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)    | kW      | 16.2         | 21.1 | 26.8 | 39.6 | 52.8 |
|                            |                       | EER     | 2.96         | 2.95 | 3.03 | 2.79 | 2.66 |
|                            | ESEER                 |         | 3.41         | 3.40 | 3.50 | 3.69 | 3.75 |
|                            |                       | IPLV    | 3.95         | 3.91 | 4.02 | 4.16 | 4.29 |
| Compressors                | Quantity              | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits  | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps        | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow            | gpm     | 36.8         | 47.7 | 62.3 | 84.8 | 108  |
|                            |                       | l/s     | 2.32         | 3.01 | 3.93 | 5.35 | 6.83 |
|                            | Pressure drops        | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 | 17.7 |
|                            |                       | kPa     | 30           | 51   | 41   | 44   | 53   |
|                            | Water connections     | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |      |      |      |      |
|                            | Max. running current  | A       | 43           | 52   | 67   | 103  | 127  |
|                            | Inrush current        | A       | 219          | 264  | 328  | 316  | 387  |
| Sound pressure             | STD version (2)       | dB(A)   | 58           | 58   | 60   | 62   | 62   |
|                            | With SL accessory (2) | dB(A)   | 56           | 56   | 58   | 60   | 60   |
| Max sound pressure         | EC version (2)        | dB(A)   | 58           | 58   | 60   | 62   | 62   |
|                            | with SL accessory     | dB(A)   | 56           | 56   | 58   | 60   | 60   |
| Weights                    | Transport weight (3)  | Kg      | 581          | 619  | 724  | 876  | 976  |
|                            | Operating weight (3)  | Kg      | 600          | 640  | 750  | 910  | 1010 |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1920 | 1920 | 1920 | 2220 | 2220 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC 181÷522

300 | 1800 | 800 | 800



Electrical board side

### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
3. Unit without tank and pump.

FROM 14 TON TO 41 TON.  
FROM 49 KW TO 143 KW.



## CHA-M/K/MC/ST 181÷522

**AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, SCROLL COMPRESSORS, SHELL AND TUBE EXCHANGER, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.**

**WITH MICROCHANNEL CONDENSING COIL AND EC INVERTER FANS.**



CHA-M/K/MC/ST 181 ÷ 522 **HYDROPLUS** series liquid chillers, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. **AQUALOGIK** optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs.

They are equipped with axial fans, Scroll compressors and shell and tube exchanger; they can be supplied with RS 485 ModBus connection.

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

They feature **MICROCHANNEL** condensing coil to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature **EC INVERTER** fans.

### VERSIONS

#### CHA-M/K/MC/ST

Cooling only with **MICROCHANNEL** condensing coil and **AQUALOGIK** technology

#### CHA-M/K/MC/ST/EC

Cooling only with **MICROCHANNEL** condensing coil, **EC INVERTER** 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.
- Axial fans directly coupled to an electric motor with external rotor. EC version is provided with **EC INVERTER** fans.
- Condenser made of aluminium **MICROCHANNEL** condensing coil.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- On standard version, electronic proportional device to decrease the sound level, with a continuous regulation of the fans. On EC version, fans feature built-in **INVERTER** device.
- Condensing control, included on both standard and EC versions, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.
- The hydraulic circuit includes **INVERTER** circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| SL    | Unit silencing                |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |

#### LOOSE ACCESSORIES

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

## CHA-M/K/MC/ST 181÷522

| MODEL                      |                           |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|
| Cooling STD version        | Cooling capacity (1)      | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                           | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)        | kW      | 16.4         | 21.3 | 27.2 | 40.1 | 53.8 |
|                            |                           | EER     | 2.96         | 2.95 | 3.03 | 2.79 | 2.66 |
| Cooling EC version         | Cooling capacity (1)      | TON     | 13.8         | 17.9 | 23.4 | 31.8 | 40.7 |
|                            |                           | kW      | 48.6         | 62.9 | 82.3 | 112  | 143  |
|                            | Absorbed power (1)        | kW      | 16.2         | 21.1 | 26.8 | 39.6 | 52.8 |
|                            |                           | EER     | 3.00         | 2.98 | 3.07 | 2.83 | 2.71 |
|                            | ESEER                     |         | 3.41         | 3.40 | 3.50 | 3.69 | 3.75 |
|                            |                           | IPLV    | 3.95         | 3.91 | 4.02 | 4.16 | 4.29 |
| Compressors                | Quantity                  | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps            | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow                | gpm     | 36.8         | 47.7 | 62.3 | 84.8 | 108  |
|                            |                           | l/s     | 2.32         | 3.01 | 3.93 | 5.35 | 6.83 |
|                            | Pressure drops            | ft WG   | 10.0         | 17.0 | 13.7 | 14.7 | 17.7 |
|                            |                           | kPa     | 30           | 51   | 41   | 44   | 53   |
|                            | Water connections         | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |      |      |      |      |
|                            | Max. running current      | A       | 45           | 54   | 70   | 108  | 132  |
|                            | Inrush current            | A       | 221          | 266  | 331  | 321  | 392  |
| Sound pressure             | STD version (2)           | dB(A)   | 58           | 58   | 60   | 62   | 62   |
|                            | with SL accessory (2)     | dB(A)   | 56           | 56   | 58   | 60   | 60   |
| Max sound pressure         | EC version (2)            | dB(A)   | 58           | 58   | 60   | 62   | 62   |
|                            | With SL accessory (2)     | dB(A)   | 56           | 56   | 58   | 60   | 60   |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75 | 1.10 | 1.85 | 1.85 |
|                            | Available static pressure | ft WG   | 43.3         | 35.0 | 48.3 | 41.7 | 33.3 |
|                            |                           | kPa     | 130          | 105  | 145  | 125  | 100  |
|                            | Expansion vessel          | gal     | 3.2          | 3.2  | 3.2  | 3.2  | 3.2  |
|                            |                           | l       | 12           | 12   | 12   | 12   | 12   |
|                            | Water connections         | "G      | 2½"          | 2½"  | 2½"  | 2½"  | 2½"  |
| Weights                    | Transport weight          | Kg      | 596          | 634  | 739  | 896  | 996  |
|                            | Operating weight          | Kg      | 620          | 660  | 775  | 945  | 1045 |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1920 | 1920 | 1920 | 2220 | 2220 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC/ST 181÷522

300 | 1800 | 800 | 800



Electrical board side

### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

FROM 56 TON TO 123 TON.  
FROM 196 KW TO 431 KW.

# CHA-M/K/MC 724-P÷1306-P

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

**WITH MICROCHANNEL CONDENSING COILS AND EC INVERTER FANS.**



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and plate exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.

It features MICROCHANNEL condensing coils to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature EC INVERTER fans.



## VERSIONS

### CHA-M/K/MC

Cooling only with MICROCHANNEL condensing coil

### CHA-M/K/MC/EC

Cooling only with MICROCHANNEL condensing coil and EC INVERTER fans

## 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. EC version is provided with EC INVERTER fans.
- Condenser made of two aluminium MICROCHANNEL condensing coils.
- Evaporator in AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device, included on EC version only, to decrease the sound level with continuous regulation of the fans with built-in INVERTER device.
- Condensing control, included on EC version only, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |   |
|----|---|
| SL | Unit silencing  |
| CT | Condensing control down to 0 °C (standard version only) |
| BT | Low Temperature Kit                                     |
| DS | Desuperheater   |
| RT | Total heat recovery                                     |
| AD | Air section divider                                     |

### LOOSE ACCESSORIES

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

## CHA-M/K/MC 724-P÷1306-P

| MODEL                      |                       |         | 724-P        | 824-P | 1044-P | 1206-P | 1306-P |
|----------------------------|-----------------------|---------|--------------|-------|--------|--------|--------|
| Cooling STD version        | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0   | 104    | 123    |
|                            |                       | kW      | 196          | 249   | 306    | 365    | 431    |
|                            | Absorbed power (1)    | kW      | 66.9         | 90.5  | 101    | 128    | 158    |
|                            |                       | EER     | 2.93         | 2.75  | 3.03   | 2.85   | 2.73   |
| Cooling EC version         | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0   | 104    | 123    |
|                            |                       | kW      | 196          | 249   | 306    | 365    | 431    |
|                            | Absorbed power (1)    | kW      | 65.9         | 88.9  | 100    | 126    | 154    |
|                            |                       | EER     | 2.97         | 2.80  | 3.06   | 2.90   | 2.80   |
|                            | ESEER                 |         | 4.11         | 3.81  | 3.92   | 3.88   | 3.91   |
|                            |                       | IPLV    | 4.66         | 4.28  | 4.45   | 4.39   | 4.47   |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2    | 3+3    | 3+3    |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | 4            | 4     | 4      | 6      | 6      |
| Evaporator                 | Water flow (1)        | gpm     | 148          | 189   | 232    | 276    | 326    |
|                            |                       | l/s     | 9.36         | 11.90 | 14.62  | 17.44  | 20.59  |
|                            | Pressure drops (1)    | ft WG   | 17.3         | 18.7  | 19.3   | 16.0   | 15.3   |
|                            |                       | kPa     | 52           | 56    | 58     | 48     | 46     |
|                            | Water connections     | DN      | 100          | 100   | 100    | 100    | 100    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |        |        |        |
|                            | Max. running current  | A       | 161          | 195   | 249    | 293    | 361    |
|                            | Inrush current        | A       | 340          | 410   | 512    | 515    | 625    |
| Sound pressure             | STD version (2)       | dB(A)   | 66           | 67    | 66     | 67     | 68     |
|                            | With SL accessory (2) | dB(A)   | 63           | 64    | 63     | 64     | 65     |
| Max sound pressure         | EC version (2)        | dB(A)   | 66           | 67    | 66     | 67     | 68     |
|                            | with SL accessory     | dB(A)   | 63           | 64    | 63     | 64     | 65     |
| Weights                    | Transport weight      | Kg      | 1510         | 1608  | 2114   | 2249   | 2455   |
|                            | Operating weight      | Kg      | 1550         | 1650  | 2160   | 2300   | 2510   |

| DIMENSIONS |     |    | 724-P | 824-P | 1044-P | 1206-P | 1306-P |
|------------|-----|----|-------|-------|--------|--------|--------|
| L          | STD | mm | 2800  | 2800  | 3900   | 3900   | 3900   |
| W          | STD | mm | 2200  | 2200  | 2200   | 2200   | 2200   |
| H          | STD | mm | 2100  | 2100  | 2500   | 2500   | 2500   |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC 724-P÷1306-P

500 | 1800 | 1000 | 1800



### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

FROM 56 TON TO 123 TON.  
FROM 196 KW TO 431 KW.

## CHA-M/K/MC 724÷1306

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

**WITH MICROCHANNEL CONDENSING COILS AND EC INVERTER FANS.**



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and shell and tube exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.

It features MICROCHANNEL condensing coils to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature EC INVERTER fans.



### VERSIONS

#### CHA-M/K/MC

Cooling only with MICROCHANNEL condensing coil

#### CHA-M/K/MC/EC

Cooling only with MICROCHANNEL condensing coil and EC INVERTER fans

### 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. EC version is provided with EC INVERTER fans.
- Condenser made of two aluminium MICROCHANNEL condensing coils.
- Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device, included on EC version only, to decrease the sound level with continuous regulation of the fans with built-in INVERTER device.
- Condensing control, included on EC version only, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |   |
|-------|---|
| SL    | Unit silencement  |
| CT    | Condensing control down to 0 °C (standard version only) |
| BT    | Low Temperature Kit                                     |
| HR    | Desuperheater   |
| HRT/S | Total heat recovery in series                           |
| AD    | Air section divider                                     |

#### LOOSE ACCESSORIES

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

## CHA-M/K/MC 724÷1306

| MODEL                      |                       |         | 724          | 824   | 1044  | 1206  | 1306  |
|----------------------------|-----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling STD version        | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0  | 104   | 123   |
|                            |                       | kW      | 196          | 249   | 306   | 365   | 431   |
|                            | Absorbed power (1)    | kW      | 66.9         | 90.5  | 101   | 128   | 158   |
|                            |                       | EER     | 2.93         | 2.75  | 3.03  | 2.85  | 2.73  |
| Cooling EC version         | Cooling capacity (1)  | TON     | 55.7         | 70.8  | 87.0  | 104   | 123   |
|                            |                       | kW      | 196          | 249   | 306   | 365   | 431   |
|                            | Absorbed power (1)    | kW      | 65.9         | 88.9  | 100   | 126   | 154   |
|                            |                       | EER     | 2.97         | 2.80  | 3.06  | 2.90  | 2.80  |
|                            | ESEER                 |         | 4.11         | 3.81  | 3.92  | 3.88  | 3.91  |
|                            |                       | IPLV    | 4.66         | 4.28  | 4.45  | 4.39  | 4.47  |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2   | 3+3   | 3+3   |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 4            | 4     | 4     | 6     | 6     |
| Evaporator                 | Water flow (1)        | gpm     | 148          | 189   | 232   | 276   | 326   |
|                            |                       | l/s     | 9.36         | 11.90 | 14.62 | 17.44 | 20.59 |
|                            | Pressure drops (1)    | ft WG   | 17.7         | 17.7  | 20.3  | 13.7  | 16.7  |
|                            |                       | kPa     | 53           | 53    | 61    | 41    | 50    |
|                            | Water connections     | DN      | 100          | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current  | A       | 161          | 195   | 249   | 293   | 361   |
|                            | Inrush current        | A       | 340          | 410   | 512   | 515   | 625   |
| Sound pressure             | STD version (2)       | dB(A)   | 66           | 67    | 66    | 67    | 68    |
|                            | With SL accessory (2) | dB(A)   | 63           | 64    | 63    | 64    | 65    |
| Max sound pressure         | EC version (2)        | dB(A)   | 66           | 67    | 66    | 67    | 68    |
|                            | With SL accessory (2) | dB(A)   | 63           | 64    | 63    | 64    | 65    |
| Weights                    | Transport weight      | Kg      | 1613         | 1694  | 2262  | 2435  | 2710  |
|                            | Operating weight      | Kg      | 1710         | 1790  | 2390  | 2590  | 2870  |

| DIMENSIONS |     |    | 724  | 824  | 1044 | 1206 | 1306 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2800 | 2800 | 3900 | 3900 | 3900 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2100 | 2500 | 2500 | 2500 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/K/MC 724÷1306

500 | 1800 | 1000 | 1800



### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.



FROM 64 TON TO 131 TON.  
FROM 225 KW TO 459 KW.

## CHA-M/Y/MC 1202÷2002

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

**WITH MICROCHANNEL CONDENSING COILS AND EC INVERTER FANS.**



The liquid chillers of CHA-M/Y/MC 1202÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed to meet the needs of large-sized service or industrial buildings. They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

They are equipped with axial fans, Screw compressors and shell and tube exchanger. The use of large size condensing coils, together with fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit and the use of latest generation Screw compressors, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.

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

They feature MICROCHANNEL condensing coil to obtain high EER values; for a further ESEER / IPLV improvement, selected models also feature EC INVERTER fans.



### VERSIONS

#### CHA-M/Y/MC

Cooling only with MICROCHANNEL condensing coil

#### CHA-M/Y/MC/EC

Cooling only with MICROCHANNEL condensing coil and EC INVERTER fans

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, crankcase heater, sight glass, thermal protection, hot gas shut off valves and capacity steps.
- Axial fans directly coupled to an electric motor with external rotor. EC version is provided with EC INVERTER fans.
- Condenser made of two aluminium MICROCHANNEL condensing coils.
- Shell and tube type evaporator, with two independent refrigerants circuits and one water circuit.
- Electronic thermostatic valve.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- On standard version, electronic proportional device to decrease the sound level, with a step regulation of the fans. On EC version, fans feature built-in INVERTER device.
- Condensing control, included on both standard and EC versions, allows to reach up to 0°C external air temperature on standard version and up to -20°C external air temperature on EC version.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| RZ    | Compressors stepless control  |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |
| FE    | Evaporator heater             |
| SS    | Soft start                    |
| AD    | Air section divider           |

|    |   |
|----|---|
| WM | Web Monitoring enables remote management of the system through communication protocols GPRS/GSM/TCP |
| CP | Potential free contacts   |

#### LOOSE ACCESSORIES

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

## CHA-M/Y/MC 1202÷2002

| MODEL                      |                      |         | 1202         | 1302  | 1502  | 1702  | 1902  | 2002  |
|----------------------------|----------------------|---------|--------------|-------|-------|-------|-------|-------|
| Cooling STD version        | Cooling capacity (1) | TON     | 64.0         | 75.1  | 85.6  | 101   | 114   | 131   |
|                            |                      | kW      | 225          | 264   | 301   | 355   | 402   | 459   |
|                            | Absorbed power (1)   | kW      | 79.8         | 92.9  | 106   | 126   | 137   | 171   |
|                            |                      | EER     | 2.82         | 2.84  | 2.84  | 2.82  | 2.93  | 2.68  |
| Cooling EC version         | Cooling capacity (1) | TON     | 64.0         | 75.1  | 85.6  | 101   | 114   | 131   |
|                            |                      | kW      | 225          | 264   | 301   | 355   | 402   | 459   |
|                            | Absorbed power (1)   | kW      | 78.2         | 91.5  | 104   | 124   | 135   | 167   |
|                            |                      | EER     | 2.88         | 2.89  | 2.89  | 2.86  | 2.98  | 2.75  |
|                            | ESEER                |         | 4.10         | 4.06  | 4.33  | 4.28  | 4.55  | 3.96  |
|                            |                      | IPLV    | 4.41         | 4.37  | 4.65  | 4.60  | 4.89  | 4.26  |
| Compressors                | Quantity             | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps       | n°      | 6            | 6     | 6     | 6     | 6     | 6     |
| Evaporator                 | Water flow           | gpm     | 170          | 200   | 228   | 269   | 305   | 348   |
|                            |                      | l/s     | 10.75        | 12.61 | 14.38 | 16.96 | 19.21 | 21.93 |
|                            | Pressure drops       | ft WG   | 13.3         | 14.3  | 16.3  | 20.7  | 16.0  | 18.0  |
|                            |                      | kPa     | 40           | 43    | 49    | 62    | 48    | 54    |
|                            | Water connections    | DN      | 100          | 100   | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply         | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Max. running current | A       | 212          | 250   | 278   | 334   | 363   | 434   |
|                            | Inrush current       | A       | 277          | 371   | 385   | 444   | 518   | 611   |
| Max sound pressure         | STD version (2)      | dB(A)   | 68           | 67    | 66    | 68    | 68    | 68    |
|                            | EC version (2)       | dB(A)   | 68           | 67    | 66    | 68    | 68    | 68    |
| Weights                    | Transport weight     | Kg      | 2335         | 2802  | 2853  | 3032  | 3270  | 3697  |
|                            | Operating weight     | Kg      | 2500         | 2960  | 3050  | 3220  | 3460  | 4020  |

| DIMENSIONS |     |    | 1202 | 1302 | 1502 | 1702 | 1902 | 2002 |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 2800 | 3900 | 3900 | 3900 | 3900 | 3900 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2500 | 2500 | 2500 | 2500 | 2500 |

### DIMENSIONAL & CLEARANCE AREA

CHA-M/Y/MC 1202÷2002

500 | 1800 | 1000 | 1800



### NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

FROM 13 TON TO 40 TON.  
FROM 46 KW TO 142 KW.

# CHA-M/SZ/K 181-P÷522-P

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



The liquid chillers and heat pumps of CHA-M/SZ/K 181-P÷522-P **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and plate type exchanger, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump; they can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**



## VERSIONS

### CHA-M/SZ/K

Cooling only

### CHA-M/SZ/K/WP

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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                                 |
|----|---------------------------------|
| SL | Unit silencing                  |
| CT | Condensing control down to 0 °C |
| BT | Low Temperature Kit             |
| DS | Desuperheater                   |
| RT | Total heat recovery             |
| SI | Inertial tank                   |
| PS | Circulating pump                |
| PD | Double circulating pump         |

### LOOSE ACCESSORIES

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

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 12.9         | 17.6  | 23.1  | 31.6  | 40.4  |
|                            |                           | kW      | 45.5         | 62.0  | 81.1  | 111   | 142   |
|                            | Absorbed power (1)        | kW      | 16.4         | 23.8  | 29.7  | 44.8  | 61.0  |
| Heating                    | Heating capacity (2)      | TON     | 14.9         | 20.6  | 25.7  | 37.0  | 46.1  |
|                            |                           | kW      | 52.4         | 72.4  | 90.3  | 130   | 162   |
|                            | Absorbed power (2)        | kW      | 15.6         | 22.4  | 29.5  | 41.9  | 52.3  |
| Compressors                | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
| Evaporator                 | Water flow                | gpm     | 34.4         | 46.9  | 61.3  | 84.0  | 108   |
|                            |                           | l/s     | 2.17         | 2.96  | 3.87  | 5.30  | 6.78  |
|                            | Pressure drops            | ft WG   | 17.0         | 17.7  | 13.0  | 18.3  | 13.3  |
|                            |                           | kPa     | 51           | 53    | 39    | 55    | 40    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |
|                            | Max. running current      | A       | 37           | 45    | 58    | 90    | 110   |
|                            | Inrush current            | A       | 190          | 230   | 285   | 275   | 337   |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59    | 61    | 63    | 63    |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57    | 59    | 61    | 61    |
| Unit with tank and pump    | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.50  | 1.50  |
|                            | Available static pressure | ft WG   | 36.7         | 35.0  | 48.3  | 41.7  | 38.3  |
|                            |                           | kPa     | 110          | 105   | 145   | 125   | 115   |
|                            | Tank water volume         | gal     | 106          | 106   | 106   | 106   | 106   |
|                            |                           | l       | 400          | 400   | 400   | 400   | 400   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
| Weights                    | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
|                            | Transport weight (4)      | Kg      | 536          | 572   | 675   | 814   | 923   |
|                            | Operating weight (4)      | Kg      | 545          | 580   | 695   | 835   | 945   |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CHA-M/SZ/K 181-P÷522-P

300 | 1800 | 800 | 800



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

FROM 13 TON TO 40 TON.  
FROM 46 KW TO 142 KW.

## CHA-M/SZ/K/ST 181-P÷522-P

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



60 Hz



CHA-M/SZ/K/ST 181-P÷522-P **HYDROPLUS** series liquid chillers and heat pumps, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs. They are equipped with axial fans, Scroll compressors and plate type exchanger; they can be supplied with RS 485 ModBus connection. A wide range of accessories, factory-assembled or supplied separately, completes the outstanding versatility and functionality of the series. **The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

#### CHA-M/SZ/K/ST

Cooling only with AQUALOGIK technology

#### CHA-M/SZ/K/ST/WP

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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fans.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with AQUALOGIK technology.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

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

| MODEL                      |                           |         | 181-P        | 241-P | 301-P | 392-P | 522-P |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 12.9         | 17.6  | 23.1  | 31.6  | 40.4  |
|                            |                           | kW      | 45.5         | 62.0  | 81.1  | 111   | 142   |
|                            | Absorbed power (1)        | kW      | 16.4         | 23.8  | 29.7  | 44.8  | 61.0  |
|                            |                           |         |              |       |       |       |       |
| Heating                    | Heating capacity (2)      | TON     | 14.9         | 20.6  | 25.7  | 37.0  | 46.1  |
|                            |                           | kW      | 52.4         | 72.4  | 90.3  | 130   | 162   |
|                            | Absorbed power (2)        | kW      | 15.6         | 22.4  | 29.5  | 41.9  | 52.3  |
|                            |                           |         |              |       |       |       |       |
| Compressors                | Quantity                  | n°      | 1            | 1     | 1     | 2     | 2     |
|                            |                           |         |              |       |       |       |       |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     |
|                            |                           |         |              |       |       |       |       |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 2     | 2     |
|                            |                           |         |              |       |       |       |       |
| Evaporator                 | Water flow                | gpm     | 34.4         | 46.9  | 61.3  | 84.0  | 108   |
|                            |                           | l/s     | 2.17         | 2.96  | 3.87  | 5.30  | 6.78  |
|                            | Pressure drops            | ft WG   | 17.0         | 17.7  | 13.0  | 18.3  | 13.3  |
|                            |                           | kPa     | 51           | 53    | 39    | 55    | 40    |
|                            | Water connections         | "G      | 1½"          | 1½"   | 2½"   | 2½"   | 2½"   |
|                            |                           |         |              |       |       |       |       |
| Electrical characteristics | Power supply              | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |
|                            | Max. running current      | A       | 37           | 45    | 58    | 90    | 110   |
|                            | Inrush current            | A       | 190          | 230   | 285   | 275   | 337   |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59    | 61    | 63    | 63    |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57    | 59    | 61    | 61    |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75  | 1.10  | 1.85  | 1.85  |
|                            | Available static pressure | ft WG   | 36.7         | 35.0  | 48.3  | 38.3  | 36.7  |
|                            |                           | kPa     | 110          | 105   | 145   | 115   | 110   |
|                            | Expansion vessel          | gal     | 3.2          | 3.2   | 3.2   | 3.2   | 3.2   |
|                            |                           | l       | 12           | 12    | 12    | 12    | 12    |
| Weights                    | Water connections         | "G      | 2½"          | 2½"   | 2½"   | 2½"   | 2½"   |
|                            | Transport weight          | Kg      | 551          | 587   | 690   | 834   | 943   |
|                            | Operating weight          | Kg      | 560          | 595   | 710   | 855   | 965   |

| DIMENSIONS |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|------------|-----|----|-------|-------|-------|-------|-------|
| L          | STD | mm | 2350  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm | 1100  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm | 1920  | 1920  | 1920  | 2220  | 2220  |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CHA-M/SZ/K/ST 181-P÷522-P

300 | 1800 | 800 | 800



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

FROM 13 TON TO 40 TON.  
FROM 46 KW TO 142 KW.

## CHA-M/SZ/K 181÷522

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



The liquid chillers and heat pumps of CHA-M/SZ/K 181÷522 **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

Equipped with axial fans, Scroll compressors and shell and tube exchanger, these units can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### CHA-M/SZ/K

Cooling only

#### CHA-M/SZ/K/WP

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.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencing                  |
| CT    | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |

#### LOOSE ACCESSORIES

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



| MODEL                      |                       |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|-----------------------|---------|--------------|------|------|------|------|
| Cooling                    | Cooling capacity (1)  | TON     | 12.9         | 17.6 | 23.1 | 31.6 | 40.4 |
|                            |                       | kW      | 45.5         | 62.0 | 81.1 | 111  | 142  |
|                            | Absorbed power (1)    | kW      | 16.4         | 23.8 | 29.7 | 44.8 | 61.0 |
| Heating                    | Heating capacity (2)  | TON     | 14.9         | 20.6 | 25.7 | 37.2 | 46.3 |
|                            |                       | kW      | 52.4         | 72.4 | 90.3 | 131  | 163  |
|                            | Absorbed power (2)    | kW      | 15.6         | 22.4 | 29.5 | 41.9 | 52.3 |
| Compressors                | Quantity              | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits  | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps        | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow            | gpm     | 34.4         | 46.9 | 61.3 | 84.0 | 108  |
|                            |                       | l/s     | 2.17         | 2.96 | 3.87 | 5.30 | 6.78 |
|                            | Pressure drops        | ft WG   | 8.7          | 16.3 | 13.3 | 14.3 | 17.3 |
|                            |                       | kPa     | 26           | 49   | 40   | 43   | 52   |
|                            | Water connections     | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |      |      |      |      |
|                            | Max. running current  | A       | 37           | 45   | 58   | 90   | 110  |
|                            | Inrush current        | A       | 190          | 230  | 285  | 275  | 337  |
| Sound pressure             | STD version (3)       | dB(A)   | 59           | 59   | 61   | 63   | 63   |
|                            | With SL accessory (3) | dB(A)   | 57           | 57   | 59   | 61   | 61   |
| Weights                    | Transport weight (4)  | Kg      | 571          | 607  | 714  | 866  | 959  |
|                            | Operating weight (4)  | Kg      | 590          | 630  | 740  | 900  | 990  |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1920 | 1920 | 1920 | 2220 | 2220 |

## DIMENSIONAL &amp; CLEARANCE AREA

CHA-M/SZ/K 181÷522

300 | 1800 | 800 | 800



## NOTES

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

FROM 13 TON TO 40 TON.  
FROM 46 KW TO 142 KW.

## CHA-M/SZ/K/ST 181÷522

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



60 Hz



CHA-M/SZ/K/ST 181÷522 **HYDROPLUS** series liquid chillers and heat pumps, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings. They are used, combined 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, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs. They are equipped with axial fans, Scroll compressors and shell and tube exchanger; they can be supplied with RS 485 ModBus connection. A wide range of accessories, factory-assembled or supplied separately, completes the outstanding versatility and functionality of the series. **The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

#### CHA-M/SZ/K/ST

Cooling only with AQUALOGIK technology

#### CHA-M/SZ/K/ST/WP

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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fans.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| SL    | Unit silencing                |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |

#### LOOSE ACCESSORIES

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

| MODEL                      |                           |         | 181          | 241  | 301  | 392  | 522  |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|
| Cooling                    | Cooling capacity (1)      | TON     | 12.9         | 17.6 | 23.1 | 31.6 | 40.4 |
|                            |                           | kW      | 45.5         | 62.0 | 81.1 | 111  | 142  |
|                            | Absorbed power (1)        | kW      | 16.4         | 23.8 | 29.7 | 44.8 | 61.0 |
| Heating                    | Heating capacity (2)      | TON     | 14.9         | 20.6 | 25.7 | 37.2 | 46.3 |
|                            |                           | kW      | 52.4         | 72.4 | 90.3 | 131  | 163  |
|                            | Absorbed power (2)        | kW      | 15.6         | 22.4 | 29.5 | 41.9 | 52.3 |
| Compressors                | Quantity                  | n°      | 1            | 1    | 1    | 2    | 2    |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1    | 1    | 1    |
|                            | Capacity steps            | n°      | 1            | 1    | 1    | 2    | 2    |
| Evaporator                 | Water flow                | gpm     | 34.4         | 46.9 | 61.3 | 84.0 | 108  |
|                            |                           | l/s     | 2.17         | 2.96 | 3.87 | 5.30 | 6.78 |
|                            | Pressure drops            | ft WG   | 8.7          | 16.3 | 13.3 | 14.3 | 17.3 |
|                            |                           | kPa     | 26           | 49   | 40   | 43   | 52   |
|                            | Water connections         | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 460 / 3 / 60 |      |      |      |      |
|                            | Max. running current      | A       | 37           | 45   | 58   | 90   | 110  |
|                            | Inrush current            | A       | 190          | 230  | 285  | 275  | 337  |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59   | 61   | 63   | 63   |
|                            | With SL accessory (3)     | dB(A)   | 57           | 57   | 59   | 61   | 61   |
| Water circuit              | Pump nominal power        | kW      | 0.75         | 0.75 | 1.10 | 1.85 | 1.85 |
|                            | Available static pressure | ft WG   | 45.0         | 35.0 | 48.3 | 41.7 | 33.3 |
|                            |                           | kPa     | 135          | 105  | 145  | 125  | 100  |
|                            | Expansion vessel          | gal     | 3.2          | 3.2  | 3.2  | 3.2  | 3.2  |
|                            |                           | l       | 12           | 12   | 12   | 12   | 12   |
| Weights                    | Water connections         | "G      | 2½"          | 2½"  | 2½"  | 2½"  | 2½"  |
|                            | Transport weight          | Kg      | 586          | 622  | 729  | 886  | 979  |
|                            | Operating weight          | Kg      | 605          | 645  | 755  | 920  | 1010 |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|--|------|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 1920 | 1920 | 1920 | 2220 | 2220 |

## DIMENSIONAL &amp; CLEARANCE AREA

CHA-M/SZ/K/ST 181÷522

300 | 1800 | 800 | 800



## NOTES

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

FROM 55 TON TO 121 TON.  
FROM 193 KW TO 425 KW.

# CHA-M/SZ/K 724-P÷1306-P

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



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and plate exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.

**The units feature 460V power supply and 60Hz frequency.**



## VERSIONS

### CHA-M/SZ/K

Cooling only

### CHA-M/SZ/K/WP

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 in AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and on the water side, complete with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                                 |
|----|---------------------------------|
| SL | Unit silencing                  |
| CT | Condensing control down to 0 °C |
| BT | Low Temperature Kit             |
| DS | Desuperheater                   |
| RT | Total heat recovery             |
| AD | Air section divider             |

### LOOSE ACCESSORIES

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

| MODEL                      |                       |         | 724-P        | 824-P | 1044-P | 1206-P | 1306-P |
|----------------------------|-----------------------|---------|--------------|-------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | TON     | 54.9         | 69.9  | 85.9   | 102    | 121    |
|                            |                       | kW      | 193          | 246   | 302    | 360    | 425    |
|                            | Absorbed power (1)    | kW      | 76           | 104   | 116    | 149    | 188    |
| Heating                    | Heating capacity (2)  | TON     | 65.7         | 82.7  | 98.4   | 116    | 139    |
|                            |                       | kW      | 231          | 291   | 346    | 408    | 490    |
|                            | Absorbed power (2)    | kW      | 73           | 97    | 115    | 139    | 162    |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2    | 3+3    | 3+3    |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | 4            | 4     | 4      | 6      | 6      |
| Evaporator                 | Water flow (1)        | gpm     | 146          | 186   | 229    | 273    | 322    |
|                            |                       | l/s     | 9.22         | 11.75 | 14.43  | 17.20  | 20.31  |
|                            | Pressure drops (1)    | ft WG   | 16.7         | 18.3  | 19.0   | 15.7   | 15.0   |
|                            |                       | kPa     | 50           | 55    | 57     | 47     | 45     |
|                            | Water connections     | DN      | 100          | 100   | 100    | 100    | 100    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |       |        |        |        |
|                            | Max. running current  | A       | 140          | 170   | 217    | 255    | 314    |
|                            | Inrush current        | A       | 296          | 357   | 445    | 448    | 543    |
| Sound pressure             | STD version (3)       | dB(A)   | 67           | 68    | 68     | 69     | 70     |
|                            | With SL accessory (3) | dB(A)   | 64           | 65    | 65     | 66     | 67     |
| Weights                    | Transport weight      | Kg      | 1543         | 1634  | 2192   | 2318   | 2510   |
|                            | Operating weight      | Kg      | 1580         | 1675  | 2240   | 2370   | 2565   |

| DIMENSIONS |     |    | 724-P | 824-P | 1044-P | 1206-P | 1306-P |
|------------|-----|----|-------|-------|--------|--------|--------|
| L          | STD | mm | 2800  | 2800  | 3900   | 3900   | 3900   |
| W          | STD | mm | 2200  | 2200  | 2200   | 2200   | 2200   |
| H          | STD | mm | 2100  | 2100  | 2100   | 2100   | 2100   |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CHA-M/SZ/K 724-P÷1306-P

500 | 1800 | 1000 | 1800



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

FROM 55 TON TO 121 TON.  
FROM 193 KW TO 425 KW.

## CHA-M/SZ/K 724÷1306

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



The models of **NEXTPOWER** range are dedicated to air conditioning of medium and wide areas. The intelligent control module optimizes functioning times and supplied power from compressors based on heat load demands in the system.

The range is equipped with R410A refrigerant and features Scroll compressors and shell and tube exchanger.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels. The optional Air Section Divider allows to service one circuit without stopping the whole unit.

NEXTPOWER obtains high energy yield with high ESEER/IPLV values and excellent silent functioning, since the fans adjust their speed to the actual system load, providing benefits in terms of silent operation, important especially at night.

NEXTPOWER, thanks to the high partialization and the intelligent control module, doesn't require inertial storage tank.

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### CHA-M/SZ/K

Cooling only

#### CHA-M/SZ/K/WP

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.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencing                  |
| CT    | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |
| AD    | Air section divider             |

#### LOOSE ACCESSORIES

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

| MODEL                      |                       |         | 724          | 824   | 1044  | 1206  | 1306  |
|----------------------------|-----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 54.9         | 69.9  | 85.9  | 102   | 121   |
|                            |                       | kW      | 193          | 246   | 302   | 360   | 425   |
|                            | Absorbed power (1)    | kW      | 76           | 104   | 116   | 149   | 188   |
| Heating                    | Heating capacity (2)  | TON     | 65.7         | 82.7  | 98.4  | 116   | 139   |
|                            |                       | kW      | 231          | 291   | 346   | 408   | 490   |
|                            | Absorbed power (2)    | kW      | 73           | 97    | 115   | 139   | 162   |
| Compressors                | Quantity              | n°      | 2+2          | 2+2   | 2+2   | 3+3   | 3+3   |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 4            | 4     | 4     | 6     | 6     |
| Evaporator                 | Water flow (1)        | gpm     | 146          | 186   | 229   | 273   | 322   |
|                            |                       | l/s     | 9.22         | 11.75 | 14.43 | 17.20 | 20.31 |
|                            | Pressure drops (1)    | ft WG   | 17.0         | 17.3  | 19.7  | 13.3  | 16.3  |
|                            |                       | kPa     | 51           | 52    | 59    | 40    | 49    |
|                            | Water connections     | DN      | 100          | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |
|                            | Max. running current  | A       | 140          | 170   | 217   | 255   | 314   |
|                            | Inrush current        | A       | 296          | 357   | 445   | 448   | 543   |
| Sound pressure             | STD version (3)       | dB(A)   | 67           | 68    | 68    | 69    | 70    |
|                            | With SL accessory (3) | dB(A)   | 64           | 65    | 65    | 66    | 67    |
| Weights                    | Transport weight      | Kg      | 1639         | 1715  | 2330  | 2492  | 2749  |
|                            | Operating weight      | Kg      | 1735         | 1810  | 2455  | 2645  | 2910  |

| DIMENSIONS |     |    |  | 724  | 824  | 1044 | 1206 | 1306 |
|------------|-----|----|--|------|------|------|------|------|
| L          | STD | mm |  | 2800 | 2800 | 3900 | 3900 | 3900 |
| W          | STD | mm |  | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm |  | 2100 | 2100 | 2100 | 2100 | 2100 |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CHA-M/SZ/K 724÷1306

500 | 1800 | 1000 | 1800



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



FROM 63 TON TO 129 TON.  
FROM 222 KW TO 453 KW.

## CHA-M/SZ/Y 1202÷2002

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



The liquid chillers and heat pumps of CHA-M/SZ/Y 1202÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed to meet the needs of large-sized service or industrial buildings. They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes.

They are equipped with axial fans, Screw compressors and shell and tube exchanger. The use of large size condensing coils, together with fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit and the use of latest generation Screw compressors, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.

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

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### CHA-M/SZ/Y

Cooling only

#### CHA-M/SZ/Y/WP

Reversible heat pump

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, crankcase heater, sight glass, thermal protection, hot gas shut off valves and 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 refrigerants circuits and one water circuit.
- Electronic thermostatic valve.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device to decrease the sound level, with a step regulation of the fans.
- Condensing control included allows to reach up to 0°C external air temperature.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |   |
|-------|---|
| RZ    | Compressors stepless control  |
| BT    | Low Temperature Kit   |
| HR    | Desuperheater   |
| HRT/S | Total heat recovery in series   |
| FE    | Evaporator heater   |
| SS    | Soft start  |
| AD    | Air section divider   |
| WM    | Web Monitoring enables remote management of the system through communication protocols GPRS/GSM/TCP |
| CP    | Potential free contacts   |

#### LOOSE ACCESSORIES

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

| MODEL                      |                      |         | 1202         | 1302  | 1502  | 1702  | 1902  | 2002  |
|----------------------------|----------------------|---------|--------------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1) | TON     | 63.1         | 73.9  | 84.4  | 99.5  | 113   | 129   |
|                            |                      | kW      | 222          | 260   | 297   | 350   | 396   | 453   |
|                            | Absorbed power (1)   | kW      | 94           | 120   | 129   | 157   | 166   | 222   |
| Heating                    | Heating capacity (2) | TON     | 68.0         | 81.6  | 91.0  | 109   | 123   | 141   |
|                            |                      | kW      | 239          | 287   | 320   | 382   | 431   | 497   |
|                            | Absorbed power (2)   | kW      | 75           | 92    | 99    | 119   | 127   | 151   |
| Compressors                | Quantity             | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits | n°      | 2            | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps       | n°      | 6            | 6     | 6     | 6     | 6     | 6     |
| Evaporator                 | Water flow           | gpm     | 168          | 197   | 225   | 265   | 300   | 343   |
|                            |                      | l/s     | 10.61        | 12.42 | 14.19 | 16.72 | 18.92 | 21.64 |
|                            | Pressure drops       | ft WG   | 13.0         | 14.0  | 16.0  | 20.0  | 15.7  | 17.7  |
|                            |                      | kPa     | 39           | 42    | 48    | 60    | 47    | 53    |
|                            | Water connections    | DN      | 100          | 100   | 100   | 100   | 100   | 100   |
| Electrical characteristics | Power supply         | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |       |
|                            | Max. running current | A       | 184          | 217   | 242   | 290   | 316   | 377   |
|                            | Inrush current       | A       | 241          | 323   | 335   | 386   | 450   | 531   |
| Sound pressure             | STD version (3)      | dB(A)   | 69           | 69    | 68    | 70    | 70    | 70    |
| Weights                    | Transport weight     | Kg      | 2426         | 2785  | 3021  | 3197  | 3430  | 3848  |
|                            | Operating weight     | Kg      | 2590         | 2945  | 3220  | 3385  | 3620  | 4170  |

| DIMENSIONS |     |    | 1202 | 1302 | 1502 | 1702 | 1902 | 2002 |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 2800 | 2800 | 3900 | 3900 | 3900 | 3900 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CHA-M/SZ/Y 1202÷2002

500 | 1800 | 1000 | 1800



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

FROM 13 TON TO 32 TON.  
FROM 46 KW TO 111 KW.

## CRA-M/SZ/K 181-P÷392-P

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



60 Hz



The indoor installation liquid chillers and heat pumps of the CRA-M/SZ/K 181-P÷392-P **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service 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.

Equipped with radial fans, Scroll compressors and plate type exchanger, these units are available even in the version with high ESP fans and can be completed by a hydraulic circuit with tank, with pump, or with tank and pump; they can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### CRA-M/SZ/K

Cooling only

#### CRA-M/SZ/K/WP

Reversible heat pump

#### CRA-M/SZ/K/AP

Cooling only with high ESP fans

#### CRA-M/SZ/K/WP/AP

Reversible heat pump with high ESP fans

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- 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, completed with water differential pressure switch. On the heat pump units is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                                 |
|-----|---------------------------------|
| SL  | Unit silencing                  |
| CCM | Condensing control down to 0 °C |
| BT  | Low Temperature Kit             |
| DS  | Desuperheater                   |
| RT  | Total heat recovery             |
| SI  | Inertial tank                   |
| PS  | Circulating pump                |
| PD  | Double circulating pump         |

#### LOOSE ACCESSORIES

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

| MODEL                      |  |         | 181-P        | 241-P | 301-P | 392-P |
|----------------------------|--|---------|--------------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)                   | TON     | 12.9         | 17.6  | 23.1  | 31.6  |
|                            |  | kW      | 45.5         | 62.0  | 81.1  | 111   |
|                            | Absorbed power (1)                     | kW      | 17.4         | 24.8  | 30.1  | 48.8  |
| Heating                    | Heating capacity (2)                   | TON     | 14.9         | 20.6  | 25.7  | 37.0  |
|                            |  | kW      | 52.4         | 72.4  | 90.3  | 130   |
|                            | Absorbed power (2)                     | kW      | 16.6         | 23.4  | 29.9  | 46.0  |
| Compressors                | Quantity                               | n°      | 1            | 1     | 1     | 2     |
|                            | Refrigerant circuits                   | n°      | 1            | 1     | 1     | 1     |
|                            | Capacity steps                         | n°      | 1            | 1     | 1     | 2     |
| Evaporator                 | Water flow                             | gpm     | 34.4         | 46.9  | 61.3  | 84.0  |
|                            |  | l/s     | 2.17         | 2.96  | 3.87  | 5.30  |
|                            | Pressure drops                         | ft WG   | 17.0         | 17.7  | 13.0  | 18.3  |
|                            |  | kPa     | 51           | 53    | 39    | 55    |
|                            | Water connections                      | "G      | 1½"          | 1½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 460 / 3 / 60 |       |       |       |
|                            | Max. running current                   | A       | 40           | 48    | 63    | 97    |
|                            | Inrush current                         | A       | 193          | 232   | 290   | 283   |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66    | 67    | 68    |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63    | 64    | 65    |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67    | 68    | ---   |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64    | 65    | ---   |
|                            |  |         |              |       |       |       |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62  | 0.60  | 0.48  |
|                            |  | Pa      | 170          | 155   | 150   | 120   |
|                            | High ESP version                       | in WG   | 1.18         | 1.08  | 1.14  | ---   |
|                            |  | Pa      | 295          | 270   | 285   | ---   |
| Unit with tank and pump    | Pump nominal power                     | kW      | 0.75         | 0.75  | 1.10  | 1.50  |
|                            | Available static pressure              | ft WG   | 36.7         | 35.0  | 48.3  | 41.7  |
|                            |  | kPa     | 110          | 105   | 145   | 125   |
|                            |  | gal     | 106          | 106   | 106   | 106   |
|                            | Tank water volume                      | l       | 400          | 400   | 400   | 400   |
|                            |  | gal     | 3.2          | 3.2   | 3.2   | 3.2   |
|                            | Expansion vessel                       | l       | 12           | 12    | 12    | 12    |
|                            |  | gal     | 3.2          | 3.2   | 3.2   | 3.2   |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"   | 2½"   | 2½"   |
|                            | Transport weight (4)                   | Kg      | 615          | 675   | 741   | 814   |
|                            | Operating weight (4)                   | Kg      | 625          | 680   | 760   | 830   |

| DIMENSIONS |     |    |  | 181-P | 241-P | 301-P | 392-P |
|------------|-----|----|--|-------|-------|-------|-------|
| L          | STD | mm |  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm |  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm |  | 2205  | 2005  | 2005  | 2005  |
| H (5)      | STD | mm |  | 2205  | 2205  | 2205  | 2205  |

## DIMENSIONAL &amp; CLEARANCE AREA

CRA-M/SZ/K 181-P÷392-P

800 | 1800 | 300 | 800



## NOTES

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

FROM 13 TON TO 32 TON.  
FROM 46 KW TO 111 KW.

# CRA-M/SZ/K/ST 181-P÷392-P

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



**60 Hz**



The indoor installation liquid chillers and heat pumps of the CRA-M/SZ/K/ST 181-P÷392-P **HYDROPLUS** series, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service or industrial buildings 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 are managed by the AQUALOGIK smart control system, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. AQUALOGIK optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with radial fans, Scroll compressors and plate type exchangers, they are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**

## VERSIONS

### CRA-M/SZ/K/ST

Cooling only with AQUALOGIK technology

### CRA-M/SZ/K/WP/ST

Reversible heat pump with AQUALOGIK technology

### CRA-M/SZ/K/AP/ST

Cooling only with high ESP fans and AQUALOGIK technology

### CRA-M/SZ/K/WP/AP/ST

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, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device for modulating adjustment of the dampers.
- Condensing control included, allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with AQUALOGIK technology.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

### LOOSE ACCESSORIES

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

| MODEL                      |  |         | 181-P        | 241-P | 301-P | 392-P |
|----------------------------|--|---------|--------------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)                   | TON     | 12.9         | 17.6  | 23.1  | 31.6  |
|                            |  | kW      | 45.5         | 62.0  | 81.1  | 111   |
|                            | Absorbed power (1)                     | kW      | 17.4         | 24.8  | 30.1  | 48.8  |
| Heating                    | Heating capacity (2)                   | TON     | 14.9         | 20.6  | 25.7  | 37.0  |
|                            |  | kW      | 52.4         | 72.4  | 90.3  | 130   |
|                            | Absorbed power (2)                     | kW      | 16.6         | 23.4  | 29.9  | 46.0  |
| Compressors                | Quantity                               | n°      | 1            | 1     | 1     | 2     |
|                            | Refrigerant circuits                   | n°      | 1            | 1     | 1     | 1     |
|                            | Capacity steps                         | n°      | 1            | 1     | 1     | 2     |
| Evaporator                 | Water flow                             | gpm     | 34.4         | 46.9  | 61.3  | 84.0  |
|                            |  | l/s     | 2.17         | 2.96  | 3.87  | 5.30  |
|                            | Pressure drops                         | ft WG   | 17.0         | 17.7  | 13.0  | 18.3  |
|                            |  | kPa     | 51           | 53    | 39    | 55    |
|                            | Water connections                      | "G      | 1½"          | 1½"   | 2½"   | 2½"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 460 / 3 / 60 |       |       |       |
|                            | Max. running current                   | A       | 42           | 50    | 66    | 102   |
|                            | Inrush current                         | A       | 195          | 234   | 293   | 288   |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66    | 67    | 68    |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63    | 64    | 65    |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67    | 68    | ---   |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64    | 65    | ---   |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62  | 0.60  | 0.48  |
|                            |  | Pa      | 170          | 155   | 150   | 120   |
|                            | High ESP version                       | in WG   | 1.18         | 1.08  | 1.14  | ---   |
|                            |  | Pa      | 295          | 270   | 285   | ---   |
| Water circuit              | Pump nominal power                     | kW      | 0.75         | 0.75  | 1.10  | 1.85  |
|                            | Available static pressure              | ft WG   | 36.7         | 35.0  | 48.3  | 38.3  |
|                            |  | kPa     | 110          | 105   | 145   | 115   |
|                            | Expansion vessel                       | gal     | 3.2          | 3.2   | 3.2   | 3.2   |
|                            |  | l       | 12           | 12    | 12    | 12    |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"   | 2½"   | 2½"   |
|                            | Transport weight                       | Kg      | 630          | 690   | 756   | 834   |
|                            | Operating weight                       | Kg      | 635          | 695   | 775   | 850   |

| DIMENSIONS |     |    |  | 181-P | 241-P | 301-P | 392-P |
|------------|-----|----|--|-------|-------|-------|-------|
| L          | STD | mm |  | 2350  | 2350  | 2350  | 2350  |
| W          | STD | mm |  | 1100  | 1100  | 1100  | 1100  |
| H          | STD | mm |  | 2005  | 2005  | 2005  | 2005  |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CRA-M/SZ/K/ST 181-P÷392-P

300 | 1800 | 800 | 800



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

FROM 13 TON TO 32 TON.  
FROM 46 KW TO 111 KW.

## CRA-M/SZ/K 181÷392

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



**60 Hz**



The indoor installation liquid chillers and heat pumps of the CRA-M/SZ/K 181÷392 **HYDROPLUS** series, with R410A refrigerant, are designed to meet the needs of medium-sized service 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.

Equipped with radial fans, Scroll compressors and shell and tube exchangers, these units are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### **CRA-M/SZ/K**

Cooling only

#### **CRA-M/SZ/K/WP**

Reversible heat pump

#### **CRA-M/SZ/K/AP**

Cooling only with high ESP fans

#### **CRA-M/SZ/K/WP/AP**

Reversible heat pump with high ESP fans

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- 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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Microprocessor control and regulation system.

### ACCESSORIES

#### **FACTORY FITTED ACCESSORIES**

|       |                                 |
|-------|---------------------------------|
| SL    | Unit silencement                |
| CCM   | Condensing control down to 0 °C |
| BT    | Low Temperature Kit             |
| HR    | Desuperheater                   |
| HRT/S | Total heat recovery in series   |

#### **LOOSE ACCESSORIES**

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



| MODEL                      |  |         | 181          | 241  | 301  | 392  |
|----------------------------|--|---------|--------------|------|------|------|
| Cooling                    | Cooling capacity (1)                   | TON     | 12.9         | 17.6 | 23.1 | 31.6 |
|                            |  | kW      | 45.5         | 62.0 | 81.1 | 111  |
|                            | Absorbed power (1)                     | kW      | 17.4         | 24.8 | 30.1 | 48.8 |
| Heating                    | Heating capacity (2)                   | TON     | 14.9         | 20.6 | 25.7 | 37.0 |
|                            |  | kW      | 52.4         | 72.4 | 90.3 | 130  |
|                            | Absorbed power (2)                     | kW      | 16.6         | 23.4 | 29.9 | 46.0 |
| Compressors                | Quantity                               | n°      | 1            | 1    | 1    | 2    |
|                            | Refrigerant circuits                   | n°      | 1            | 1    | 1    | 1    |
|                            | Capacity steps                         | n°      | 1            | 1    | 1    | 2    |
| Evaporator                 | Water flow                             | gpm     | 34.4         | 46.9 | 61.3 | 84.0 |
|                            |  | l/s     | 2.17         | 2.96 | 3.87 | 5.30 |
|                            | Pressure drops                         | ft WG   | 8.7          | 16.3 | 13.3 | 14.3 |
|                            |  | kPa     | 26           | 49   | 40   | 43   |
|                            | Water connections                      | "G      | 1½"          | 2"   | 2½"  | 3"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 460 / 3 / 60 |      |      |      |
|                            | Max. running current                   | A       | 40           | 48   | 63   | 97   |
|                            | Inrush current                         | A       | 193          | 232  | 290  | 283  |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66   | 67   | 68   |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63   | 64   | 65   |
|                            | High ESP version (3)                   | dB(A)   | 66           | 67   | 68   | ---  |
|                            | High ESP version with SL accessory (3) | dB(A)   | 63           | 64   | 65   | ---  |
|                            |  |         |              |      |      |      |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62 | 0.60 | 0.48 |
|                            |  | Pa      | 170          | 155  | 150  | 120  |
|                            | High ESP version                       | in WG   | 1.18         | 1.08 | 1.14 | ---  |
|                            |  | Pa      | 295          | 270  | 285  | ---  |
|                            | Transport weight                       | Kg      | 651          | 710  | 780  | 866  |
| Weights                    | Operating weight                       | Kg      | 670          | 730  | 810  | 900  |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  |
|------------|-----|----|--|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 2005 | 2005 | 2005 | 2005 |

## DIMENSIONAL &amp; CLEARANCE AREA

CRA-M/SZ/K 181÷392

300 | 1800 | 800 | 800



## NOTES

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

FROM 13 TON TO 32 TON.  
FROM 46 KW TO 111 KW.

## CRA-M/SZ/K/ST 181÷392

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



60 Hz



The indoor installation liquid chillers and heat pumps of the CRA-M/sZ/K/ST 181÷392 **HYDROPLUS** series, with R410A refrigerant and **AQUALOGIK** technology, are designed to meet the needs of medium-sized service 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 are managed by the **AQUALOGIK** smart control system, with built-in hydronic kit featuring safety valve, expansion vessel and Inverter pump that dynamically runs machine operating parameters, adapting them to real system load requirements. **AQUALOGIK** optimises the water set point and modulates the Inverter pump and the fans, thus making the use of the inertial tank unnecessary. These provide high energy efficiency, quiet operation and optimised dimensions and costs. Equipped with radial fans, Scroll compressors and shell and tube exchangers, they are available even in the version with high ESP fans; they can be supplied with RS 485 ModBus connection.

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

**The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

#### CRA-M/SZ/K/ST

Cooling only with AQUALOGIK technology

#### CRA-M/SZ/K/WP/ST

Reversible heat pump with AQUALOGIK technology

#### CRA-M/SZ/K/AP/ST

Cooling only with high ESP fans and AQUALOGIK technology

#### CRA-M/SZ/K/WP/AP/ST

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.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermo-contacts for fans.
- Electronic proportional device for modulating adjustment of the dampers.
- Condensing control included allows to reach up to -20°C external air temperature.
- Microprocessor control and regulation system with AQUALOGIK technology.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|       |                               |
|-------|-------------------------------|
| SL    | Unit silencing                |
| BT    | Low Temperature Kit           |
| HR    | Desuperheater                 |
| HRT/S | Total heat recovery in series |

#### LOOSE ACCESSORIES

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

| MODEL                      |  |         | 181          | 241  | 301  | 392  |
|----------------------------|--|---------|--------------|------|------|------|
| Cooling                    | Cooling capacity (1)                   | TON     | 12.9         | 17.6 | 23.1 | 31.6 |
|                            |  | kW      | 45.5         | 62.0 | 81.1 | 111  |
|                            | Absorbed power (1)                     | kW      | 17.4         | 24.8 | 30.1 | 48.8 |
| Heating                    | Heating capacity (2)                   | TON     | 14.9         | 20.6 | 25.7 | 37.0 |
|                            |  | kW      | 52.4         | 72.4 | 90.3 | 130  |
|                            | Absorbed power (2)                     | kW      | 16.6         | 23.4 | 29.9 | 46.0 |
| Compressors                | Quantity                               | n°      | 1            | 1    | 1    | 2    |
|                            | Refrigerant circuits                   | n°      | 1            | 1    | 1    | 1    |
|                            | Capacity steps                         | n°      | 1            | 1    | 1    | 2    |
| Evaporator                 | Water flow                             | gpm     | 34.4         | 46.9 | 61.3 | 84.0 |
|                            |  | l/s     | 2.17         | 2.96 | 3.87 | 5.30 |
|                            | Pressure drops                         | ft WG   | 8.7          | 16.3 | 13.3 | 14.3 |
|                            |  | kPa     | 26           | 49   | 40   | 43   |
|                            | Water connections                      | "G      | 1½"          | 2"   | 2½"  | 3"   |
| Electrical characteristics | Power supply                           | V/Ph/Hz | 460 / 3 / 60 |      |      |      |
|                            | Max. running current                   | A       | 42           | 50   | 66   | 102  |
|                            | Inrush current                         | A       | 195          | 234  | 293  | 288  |
| Sound pressure             | STD version (3)                        | dB(A)   | 65           | 66   | 67   | 68   |
|                            | With SL accessory (3)                  | dB(A)   | 62           | 63   | 64   | 65   |
|                            | High ESP version (3)                   | dB(A)   | 65           | 66   | 67   | ---  |
|                            | High ESP version with SL accessory (3) | dB(A)   | 62           | 63   | 64   | ---  |
| Available static pressure  | STD version                            | in WG   | 0.68         | 0.62 | 0.60 | 0.48 |
|                            |  | Pa      | 170          | 155  | 150  | 120  |
|                            | High ESP version                       | in WG   | 6.82         | 6.22 | 6.02 | ---  |
|                            |  | Pa      | 170          | 155  | 150  | ---  |
| Water circuit              | Pump nominal power                     | kW      | 0.75         | 0.75 | 1.10 | 1.85 |
|                            | Available static pressure              | ft WG   | 45.0         | 35.0 | 48.3 | 41.7 |
|                            |  | kPa     | 135          | 105  | 145  | 125  |
|                            | Expansion vessel                       | gal     | 3.2          | 3.2  | 3.2  | 3.2  |
|                            |  | l       | 12           | 12   | 12   | 12   |
| Weights                    | Water connections                      | "G      | 2½"          | 2½"  | 2½"  | 2½"  |
|                            | Transport weight                       | Kg      | 666          | 725  | 795  | 886  |
|                            | Operating weight                       | Kg      | 685          | 745  | 825  | 920  |

| DIMENSIONS |     |    |  | 181  | 241  | 301  | 392  |
|------------|-----|----|--|------|------|------|------|
| L          | STD | mm |  | 2350 | 2350 | 2350 | 2350 |
| W          | STD | mm |  | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm |  | 2005 | 2005 | 2005 | 2005 |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CRA-M/SZ/K/ST 181÷392

300 | 1800 | 800 | 800



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



# CHAPTER 2

WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS.  
REMOTE HYDRONIC MODULES

## UNIT

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### 50 HZ

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|                         |           |
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FROM 16 TON TO 50 TON.  
FROM 58 KW TO 176 KW.

# CWW-M/K 181-P÷522-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.**



The CWW-M/K 181-P÷522-P **HYDROPLUS** liquid chillers and heat pumps, with R410A refrigerant, are designed to meet the needs of medium-sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with prepainted plate structure, Scroll compressors and plate type exchangers, these units have cooling and hydraulic circuits complete for quick installation and high energy efficiency, even in the version with tank and pump.

A wide series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.



## VERSIONS

### CWW-M/K

Cooling only

### CWW-M/K/WP

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.
- Condenser AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

### LOOSE ACCESSORIES

|     |   |
|-----|---|
| MN  | High and low gauges                       |
| CR  | Remote display                            |
| IS  | RS 485 serial interface                   |
| SPU | Inertial tank and single circulating pump |
| SPD | Inertial tank and double circulating pump |
| PV2 | 2-way pressostatic valve                  |
| PV3 | 3-way pressostatic valve                  |
| AG  | Rubber shock absorbers                    |

# CWW-M/K 181-P÷522-P

| MODEL                      |                           |         | 181-P        | 241-P  | 301-P  | 392-P  | 522-P  |
|----------------------------|---------------------------|---------|--------------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.3         | 21.0   | 26.9   | 39.0   | 50.0   |
|                            |                           | kW      | 57.5         | 73.9   | 94.5   | 137    | 176    |
|                            | Absorbed power (1)        | kW      | 13.2         | 16.9   | 21.9   | 31.9   | 41.3   |
|                            |                           | TON     | 20.3         | 26.3   | 33.0   | 47.8   | 62.0   |
| Heating                    | Heating capacity (2)      | TON     | 20.3         | 26.3   | 33.0   | 47.8   | 62.0   |
|                            |                           | kW      | 71.3         | 92.4   | 116    | 168    | 218    |
|                            | Absorbed power (2)        | kW      | 16.8         | 21.3   | 27.6   | 40.6   | 51.9   |
|                            |                           | n°      | 1            | 1      | 1      | 2      | 2      |
| Compressors                | Refrigerant circuits      | n°      | 1            | 1      | 1      | 1      | 1      |
|                            |                           | n°      | 1            | 1      | 1      | 2      | 2      |
|                            | Capacity steps            | gpm     | 43.6         | 56.0   | 71.6   | 104    | 133    |
|                            |                           | l/s     | 2.75         | 3.53   | 4.52   | 6.55   | 8.41   |
| Evaporator                 | Pressure drops            | ft WG   | 14.3         | 17.3   | 15.3   | 17.0   | 18.7   |
|                            |                           | kPa     | 43           | 52     | 46     | 51     | 56     |
|                            | Water connections         | "G      | 32           | 32     | 65     | 65     | 65     |
|                            |                           | gpm     | 53.6         | 68.8   | 88.1   | 128    | 165    |
| Condenser                  | Pressure drops            | l/s     | 3.38         | 4.34   | 5.56   | 8.07   | 10.38  |
|                            |                           | ft WG   | 17.3         | 19.7   | 16.0   | 18.0   | 20.0   |
|                            | Water connections         | kPa     | 52           | 59     | 48     | 54     | 60     |
|                            |                           | "G      | 32           | 32     | 65     | 65     | 65     |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |        |        |        |        |
|                            |                           | A       | 39           | 48     | 59     | 95     | 119    |
|                            | Max. running current      | A       | 215          | 260    | 320    | 308    | 379    |
|                            |                           | A       | 215          | 260    | 320    | 308    | 379    |
| Sound pressure             | STD version (3)           | dB(A)   | 59           | 59     | 60     | 60     | 62     |
|                            |                           | dB(A)   | 56           | 56     | 57     | 57     | 59     |
|                            | With SL accessory (3)     | dB(A)   | 56           | 56     | 57     | 57     | 59     |
|                            |                           | dB(A)   | 56           | 56     | 57     | 57     | 59     |
|                            | Pump nominal power        | kW      | 0.75         | 0.75   | 1.10   | 1.50   | 1.85   |
|                            |                           | ft WG   | 41.7         | 33.3   | 40.0   | 41.7   | 40.0   |
| Unit with tank and pump    | Available static pressure | kPa     | 125          | 100    | 120    | 125    | 120    |
|                            |                           | gal     | 79.4         | 79.4   | 79.4   | 79.4   | 79.4   |
|                            | Tank water volume         | l       | 300          | 300    | 300    | 300    | 300    |
|                            |                           | gal     | 3.2          | 3.2    | 3.2    | 3.2    | 3.2    |
|                            | Expansion vessel          | l       | 12           | 12     | 12     | 12     | 12     |
|                            |                           | gal     | 3.2          | 3.2    | 3.2    | 3.2    | 3.2    |
| Weights                    | Water connections         | "G      | 2" 1/2       | 2" 1/2 | 2" 1/2 | 2" 1/2 | 2" 1/2 |
|                            |                           | Kg      | 372          | 391    | 456    | 609    | 725    |
|                            | Transport weight (4)      | Kg      | 380          | 400    | 470    | 620    | 750    |
|                            |                           | Kg      | 380          | 400    | 470    | 620    | 750    |

| DIMENSIONS  |     |    | 181-P | 241-P | 301-P | 392-P | 522-P |
|-------------|-----|----|-------|-------|-------|-------|-------|
| L           | STD | mm | 1200  | 1200  | 1200  | 1600  | 1600  |
| L (STD+SPD) | STD | mm | 2310  | 2310  | 2310  | 2710  | 2710  |
| L (STD+SPU) | STD | mm | 2310  | 2310  | 2310  | 2710  | 2710  |
| W           | STD | mm | 680   | 680   | 680   | 680   | 680   |
| H           | STD | mm | 1520  | 1520  | 1520  | 1520  | 1520  |

## DIMENSIONAL & CLEARANCE AREA

CWW-M/K 181-P÷522-P

0 | 300 | 800 | 300



## NOTES

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
  4. Unit without tank and pump.
- N.B. Weights of WP versions are indicated on the technical book.



FROM 16 TON TO 50 TON.  
FROM 58 KW TO 176 KW.

## CWW-M/K 181÷522

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The CWW-M/K 181÷522 **HYDROPLUS** liquid chillers and heat pumps, with R410A refrigerant, are designed to meet the needs of medium-sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with Scroll compressors and shell and tube exchangers, these units have cooling and hydraulic circuits complete for quick installation and high energy efficiency.

A wide series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.



### VERSIONS

#### CWW-M/K

Cooling only

#### CWW-M/K/WP

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.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                     |
|-----|---------------------|
| SL  | Unit silencing      |
| BT  | Low Temperature Kit |
| HR  | Desuperheater       |
| HRT | Total heat recovery |

#### LOOSE ACCESSORIES

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

## CWW-M/K 181÷522

| MODEL                      |                       |         | 181          | 241  | 301  | 392  | 522   |
|----------------------------|-----------------------|---------|--------------|------|------|------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 16.3         | 21.0 | 26.9 | 39.0 | 50.0  |
|                            |                       | kW      | 57.5         | 73.9 | 94.5 | 137  | 176   |
|                            | Absorbed power (1)    | kW      | 13.2         | 16.9 | 21.9 | 31.9 | 41.3  |
| Heating                    | Heating capacity (2)  | TON     | 20.3         | 26.3 | 33.0 | 47.8 | 62.0  |
|                            |                       | kW      | 71.3         | 92.4 | 116  | 168  | 218   |
|                            | Absorbed power (2)    | kW      | 16.8         | 21.3 | 27.6 | 40.6 | 51.9  |
| Compressors                | Quantity              | n°      | 1            | 1    | 1    | 2    | 2     |
|                            | Refrigerant circuits  | n°      | 1            | 1    | 1    | 1    | 1     |
|                            | Capacity steps        | n°      | 1            | 1    | 1    | 2    | 2     |
| Evaporator                 | Water flow            | gpm     | 43.6         | 56.0 | 71.6 | 104  | 133   |
|                            |                       | l/s     | 2.75         | 3.53 | 4.52 | 6.55 | 8.41  |
|                            | Pressure drops        | ft WG   | 14.3         | 17.3 | 15.3 | 17.0 | 18.7  |
|                            |                       | kPa     | 43           | 52   | 46   | 51   | 56    |
|                            | Water connections     | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"    |
| Condenser                  | Water flow            | gpm     | 53.6         | 68.8 | 88.1 | 128  | 165   |
|                            |                       | l/s     | 3.38         | 4.34 | 5.56 | 8.07 | 10.38 |
|                            | Pressure drops        | ft WG   | 3.7          | 5.0  | 8.3  | 10.0 | 16.7  |
|                            |                       | kPa     | 11           | 15   | 25   | 30   | 50    |
|                            | Water connections     | "G      | 2½"          | 2½"  | 2½"  | 2½"  | 2½"   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |      |      |      |       |
|                            | Max. running current  | A       | 39           | 48   | 59   | 95   | 119   |
|                            | Inrush current        | A       | 215          | 260  | 320  | 308  | 379   |
| Sound pressure             | STD version (3)       | dB(A)   | 59           | 59   | 60   | 60   | 62    |
|                            | With SL accessory (3) | dB(A)   | 56           | 56   | 57   | 57   | 59    |
| Weights                    | Transport weight      | Kg      | 492          | 516  | 592  | 722  | 879   |
|                            | Operating weight      | Kg      | 520          | 550  | 630  | 780  | 950   |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2000 | 2200 | 2200 | 2200 | 2500 |
| W          | STD | mm | 820  | 820  | 820  | 850  | 850  |
| H          | STD | mm | 1400 | 1400 | 1400 | 1400 | 1400 |

### DIMENSIONAL & CLEARANCE AREA

CWW-M/K 181÷522

500 | 500 | 800 | 1000



### NOTES

- Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  - Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  - 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 indicated on the technical book.

FROM 67 TON TO 152 TON.  
FROM 235 KW TO 533 KW.

# CWW-M/K 724-P÷1306-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.**



The CWW-M/K 724-P÷1306-P **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and plate exchangers, is designed to meet the needs of industrial systems requiring high power, space-saving units and quiet operation.

These units are ideal for indoor installation reducing the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels.

NEXTPOWER obtains high energy yield with elevated ESEER/IPLV values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.



## VERSIONS

### CWW-M/K

Cooling only

### CWW-M/K/WP

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.
- Condenser AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side, completed with water differential pressure switch.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

### LOOSE ACCESSORIES

|     |                          |
|-----|--------------------------|
| MN  | High and low gauges      |
| CR  | Remote display           |
| IS  | RS 485 serial interface  |
| PV2 | 2-way pressostatic valve |
| PV3 | 3-way pressostatic valve |
| AG  | Rubber shock absorbers   |

## CWW-M/K 724-P÷1306-P

| MODEL                      |                       |         | 724-P        | 824-P | 1044-P | 1206-P | 1306-P |
|----------------------------|-----------------------|---------|--------------|-------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | TON     | 66.8         | 80.5  | 99.8   | 124    | 152    |
|                            |                       | kW      | 235          | 283   | 351    | 437    | 533    |
|                            | Absorbed power (1)    | kW      | 55           | 64    | 83     | 100    | 126    |
| Heating                    | Heating capacity (2)  | TON     | 85.9         | 100   | 128    | 154    | 191    |
|                            |                       | kW      | 302          | 353   | 451    | 541    | 670    |
|                            | Absorbed power (2)    | kW      | 70           | 83    | 105    | 128    | 161    |
| Compressors                | Quantity              | n°      | 4            | 4     | 4      | 6      | 6      |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | 4            | 4     | 4      | 6      | 6      |
| Evaporator                 | Water flow            | gpm     | 178          | 214   | 266    | 331    | 404    |
|                            |                       | l/s     | 11.23        | 13.52 | 16.77  | 20.88  | 25.47  |
|                            | Pressure drops        | ft WG   | 18.3         | 18.0  | 25.3   | 17.7   | 19.7   |
|                            |                       | kPa     | 55           | 54    | 76     | 53     | 59     |
|                            | Water connections     | DN      | 80           | 80    | 80     | 80     | 80     |
| Condenser                  | Water flow            | gpm     | 219          | 263   | 329    | 406    | 499    |
|                            |                       | l/s     | 13.84        | 16.59 | 20.73  | 25.64  | 31.50  |
|                            | Pressure drops        | ft WG   | 23.0         | 17.0  | 24.3   | 20.3   | 22.3   |
|                            |                       | kPa     | 69           | 51    | 73     | 61     | 67     |
|                            | Water connections     | DN      | 80           | 80    | 80     | 80     | 80     |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |        |        |        |
|                            | Max. running current  | A       | 146          | 180   | 225    | 270    | 337    |
|                            | Inrush current        | A       | 324          | 395   | 489    | 485    | 601    |
| Sound pressure             | STD version (3)       | dB(A)   | 64           | 65    | 65     | 66     | 66     |
|                            | With SL accessory (3) | dB(A)   | 60           | 61    | 61     | 62     | 62     |
| Weights                    | Transport weight      | Kg      | 1093         | 1162  | 1362   | 1531   | 1889   |
|                            | Operating weight      | Kg      | 1120         | 1210  | 1410   | 1600   | 1970   |

| DIMENSIONS |     |    | 724-P | 824-P | 1044-P | 1206-P | 1306-P |
|------------|-----|----|-------|-------|--------|--------|--------|
| L          | STD | mm | 2500  | 2500  | 2500   | 3000   | 3000   |
| W          | STD | mm | 800   | 800   | 800    | 800    | 800    |
| H          | STD | mm | 1900  | 1900  | 1900   | 1900   | 1900   |

### DIMENSIONAL & CLEARANCE AREA

CWW-M/K 724-P÷1306-P

500 | 500 | 800 | 500



### NOTES

- Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  - Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  - 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 indicated on the technical book.

FROM 67 TON TO 152 TON.  
FROM 235 KW TO 533 KW.

## CWW-M/K 724÷1306

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The CWW-M/K 724÷1306 **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and shell and tube exchangers, is designed to meet the needs of industrial systems requiring high power, space-saving units and quiet operation.

These units are ideal for indoor installation reducing the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels.

NEXTPOWER obtains high energy yield with elevated ESEER/IPLV values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.



### VERSIONS

#### CWW-M/K

Cooling only

#### CWW-M/K/WP

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.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator with two independent circuits on the refrigerant side and one on the water side.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                     |
|-----|---------------------|
| SL  | Unit silencing      |
| BT  | Low Temperature Kit |
| HR  | Desuperheater       |
| HRT | Total heat recovery |

#### LOOSE ACCESSORIES

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

## CWW-M/K 724÷1306

| MODEL                      |                       |         | 724          | 824   | 1044  | 1206  | 1306  |
|----------------------------|-----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 66.8         | 80.5  | 99.8  | 124   | 152   |
|                            |                       | kW      | 235          | 283   | 351   | 437   | 533   |
|                            | Absorbed power (1)    | kW      | 55           | 64    | 83    | 100   | 126   |
| Heating                    | Heating capacity (2)  | TON     | 85.9         | 100   | 128   | 154   | 191   |
|                            |                       | kW      | 302          | 353   | 451   | 541   | 670   |
|                            | Absorbed power (2)    | kW      | 70           | 83    | 105   | 128   | 161   |
| Compressors                | Quantity              | n°      | 4            | 4     | 6     | 6     | 6     |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 4            | 4     | 6     | 6     | 6     |
| Evaporator                 | Water flow            | gpm     | 178          | 214   | 266   | 331   | 404   |
|                            |                       | l/s     | 11.23        | 13.52 | 16.77 | 20.88 | 25.47 |
|                            | Pressure drops        | ft WG   | 19.0         | 17.7  | 18.3  | 17.3  | 20.0  |
|                            |                       | kPa     | 57           | 53    | 55    | 52    | 60    |
|                            | Water connections     | DN      | 125          | 125   | 125   | 125   | 125   |
| Condenser                  | Water flow            | gpm     | 219          | 263   | 329   | 406   | 499   |
|                            |                       | l/s     | 13.84        | 16.59 | 20.73 | 25.64 | 31.50 |
|                            | Pressure drops        | ft WG   | 20.0         | 16.7  | 21.0  | 17.3  | 20.3  |
|                            |                       | kPa     | 60           | 50    | 63    | 52    | 61    |
|                            | Water connections     | DN      | 65           | 65    | 65    | 80    | 80    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current  | A       | 146          | 180   | 225   | 270   | 337   |
|                            | Inrush current        | A       | 324          | 395   | 489   | 485   | 601   |
| Sound pressure             | STD version (3)       | dB(A)   | 64           | 65    | 65    | 66    | 66    |
|                            | With SL accessory (3) | dB(A)   | 60           | 61    | 61    | 62    | 62    |
| Weights                    | Transport weight      | Kg      | 1530         | 1600  | 1870  | 2180  | 2550  |
|                            | Operating weight      | Kg      | 1630         | 1720  | 2020  | 2370  | 2770  |

| DIMENSIONS |     |    | 724  | 824  | 1044 | 1206 | 1306 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 3300 | 3300 | 3300 | 3300 | 3300 |
| W          | STD | mm | 850  | 850  | 850  | 850  | 850  |
| H          | STD | mm | 1800 | 1800 | 1800 | 1800 | 1800 |

### DIMENSIONAL & CLEARANCE AREA

CWW-M/K 724÷1306

500 | 500 | 800 | 500



### NOTES

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  3. 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 indicated on the technical book.

FROM 69 TON TO 141 TON.  
FROM 241 KW TO 496 KW.

## CWW-M/Y 1302÷2002

**WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The liquid chillers of CWW-M/Y 1302÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed to meet the needs of large-sized service or industrial systems requiring high power, space-saving units and quiet operation.

Equipped with latest generation Screw compressors, shell and tube exchangers and connections for condensation with cooling tower or dry-cooler, they have a wide series of accessories which are factory-assembled or supplied separately such as: total heat recuperator, soft start and, if necessary, a device for operating a heat pump.

Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.



### VERSIONS

**CWW-M/Y**

Cooling only

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, crankcase heater, sight glass, thermal protection, hot gas shut off valves and capacity steps.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator with two independent circuits on the refrigerant side and one on the water side.
- Electronic thermostatic valve.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |   |
|-----|---|
| RZ  | Compressors stepless control  |
| BT  | Low Temperature Kit   |
| HR  | Desuperheater   |
| HRT | Total heat recovery   |
| SS  | Soft start  |
| DP  | Device for heat pump operation  |
| WM  | Web Monitoring enables remote management of the system through communication protocols GPRS/GSM/TCP |
| CP  | Potential free contacts   |

#### LOOSE ACCESSORIES

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



## CWW-M/Y 1302÷2002

| MODEL                      |                      |         | 1302         | 1502  | 1702  | 1902  | 2002  |
|----------------------------|----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1) | TON     | 68.5         | 86.7  | 104   | 123   | 141   |
|                            |                      | kW      | 241          | 305   | 367   | 431   | 496   |
|                            | Absorbed power (1)   | kW      | 54           | 70    | 83    | 93    | 110   |
| Heating                    | Heating capacity (2) | TON     | 79.3         | 101   | 119   | 140   | 161   |
|                            |                      | kW      | 279          | 354   | 420   | 493   | 567   |
|                            | Absorbed power (2)   | kW      | 69           | 89    | 107   | 120   | 142   |
| Compressors                | Quantity             | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps       | n°      | 6            | 6     | 6     | 6     | 6     |
| Evaporator                 | Water flow           | gpm     | 182          | 231   | 278   | 326   | 376   |
|                            |                      | l/s     | 11.51        | 14.57 | 17.53 | 20.59 | 23.70 |
|                            | Pressure drops       | ft WG   | 19.3         | 14.3  | 19.0  | 14.7  | 20.0  |
|                            |                      | kPa     | 58           | 43    | 57    | 44    | 60    |
|                            | Water connections    | DN      | 125          | 125   | 125   | 125   | 125   |
| Condenser                  | Water flow           | gpm     | 223          | 284   | 341   | 397   | 459   |
|                            |                      | l/s     | 14.09        | 17.89 | 21.48 | 25.04 | 28.96 |
|                            | Pressure drops       | ft WG   | 19.7         | 19.3  | 23.3  | 15.7  | 22.3  |
|                            |                      | kPa     | 59           | 58    | 70    | 47    | 67    |
|                            | Water connections    | DN      | 65           | 65    | 65    | 80    | 80    |
| Electrical characteristics | Power supply         | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |
|                            | Max. running current | A       | 234          | 262   | 310   | 339   | 410   |
|                            | Inrush current       | A       | 355          | 369   | 420   | 494   | 587   |
| Sound pressure             | STD version (3)      | dB(A)   | 69           | 69    | 70    | 70    | 69    |
| Weights                    | Transport weight     | Kg      | 1950         | 2370  | 2480  | 2770  | 3165  |
|                            | Operating weight     | Kg      | 2100         | 2580  | 2690  | 3010  | 3520  |

| DIMENSIONS |     |    | 1302 | 1502 | 1702 | 1902 | 2002 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 3300 | 3300 | 3300 | 3300 | 3300 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1900 | 1900 | 1900 | 1900 | 1900 |

### DIMENSIONAL & CLEARANCE AREA

CWW-M/Y 1302÷2002

500 | 500 | 800 | 500



### NOTES

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

200 GAL. AND 400 GAL.  
760 LT. AND 1520 LT.

## MR-M 200-400

REMOTE HYDRONIC MODULES WITH PUMP KIT.



The remote hydronic modules with pumping group of the MR-M 200-400 series are designed to solve technical problems resulting from thermal inertia in cooling systems for both residential and industrial use.

Installing a tank for cooled water allows units to reduce the operating cycles of the compressors, thus extending the useful life of the machines. It also results in a greater capacity of the system itself, a remarkable operational saving even using machines with reduced capacities and a greater flexibility, being able to work with temperatures other than the design temperatures.

The remote hydronic modules are made of galvanized steel frame protected with polyester powder painting, with a capacity of 200 and 400 gal (760 and 1520 lt); they are available with single circulation pump or double circulation pump accessory and are completed with all the components necessary for a quick on-site installation.

### VERSIONS

#### MR-M 200

200 gal. - 760 lt.

#### MR-M 400

400 gal. - 1520 lt.

### FEATURES

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

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

PU1-PU4 Single circulating pump

PD1-PD4 Double circulating pump

## MR-M 200-400

| MODEL                           |                      |         | 200          | 400  |
|---------------------------------|----------------------|---------|--------------|------|
| Pumping kit                     | Storage water volume | gal     | 200          | 400  |
|                                 |                      | l       | 760          | 1520 |
|                                 | Expansion vessel     | gal     | 1            | 1    |
|                                 |                      | l       | 2x25         | 2x25 |
| Transport weight                | Water connections    | "G      | 4"           | 4"   |
|                                 |                      | Kg      | 390          | 470  |
|                                 | STD                  | Kg      | 433          | 513  |
|                                 | STD+PU1              | Kg      | 532          | 569  |
|                                 | STD+PU2              | Kg      | 631          | 569  |
|                                 | STD+PU3              | Kg      | 795          | 634  |
|                                 | STD+PD1              | Kg      | 1181         | 586  |
|                                 | STD+PD2              | Kg      | 1407         | 696  |
|                                 | STD+PD3              | Kg      | 1633         | 696  |
|                                 | STD+PD4              | Kg      | 1989         | 826  |
| Operating weight                | STD                  | Kg      | 1150         | 1990 |
|                                 |                      | Kg      | 1193         | 2033 |
|                                 | STD+PU1              | Kg      | 1292         | 2089 |
|                                 | STD+PU2              | Kg      | 1391         | 2089 |
|                                 | STD+PU3              | Kg      | 1555         | 2154 |
|                                 | STD+PD1              | Kg      | 1941         | 2106 |
|                                 | STD+PD2              | Kg      | 2167         | 2216 |
|                                 | STD+PD3              | Kg      | 2393         | 2216 |
|                                 | STD+PD4              | Kg      | 2749         | 2346 |
| PUMP ELECTRICAL CHARACTERISTICS |                      |         |              |      |
| Power supply                    |                      | V/Ph/Hz | 400 / 3 / 50 |      |
| Nominal absorbed power          | PU1                  | kW      | 3.0          | 3.0  |
|                                 | PU2                  | kW      | 5.5          | 5.5  |
|                                 | PU3                  | kW      | 7.5          | 7.5  |
|                                 | PU4                  | kW      | 15           | 15   |
| Max runnig current              | PU1                  | A       | 5.6          | 5.6  |
|                                 | PU2                  | A       | 11           | 11   |
|                                 | PU3                  | A       | 15           | 15   |
|                                 | PU4                  | A       | 29           | 29   |

| DIMENSIONS |     |    | 200  | 400  |
|------------|-----|----|------|------|
| L          | STD | mm | 1900 | 1900 |
| W          | STD | mm | 2200 | 2200 |
| H          | STD | mm | 1800 | 1800 |

### DIMENSIONAL & CLEARANCE AREA

### NOTES

MR-M 200-400

N.B. PD = two PU pumps

800 | 800 | 800 | 800



Electrical board side

FROM 15 TON TO 50 TON.  
FROM 54 KW TO 175 KW.

## CWW-M/SZ/K 181-P÷522-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL  
COMPRESSORS AND PLATE EXCHANGERS.**



60 Hz



The CWW-M/SZ/K 181-P÷522-P **HYDROPLUS** liquid chillers and heat pumps, with R410A refrigerant, are designed to meet the needs of medium-sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with prepainted plate structure, Scroll compressors and plate type exchangers, these units have cooling and hydraulic circuits complete for quick installation and high energy efficiency, even in the version with tank and pump.

A wide series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.

**The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

#### CWW-M/SZ/K

Cooling only

#### CWW-M/SZ/K/WP

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.
- Condenser AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

|     |   |
|-----|---|
| MN  | High and low gauges                       |
| CR  | Remote display                            |
| IS  | RS 485 serial interface                   |
| SPU | Inertial tank and single circulating pump |
| SPD | Inertial tank and double circulating pump |
| PV2 | 2-way pressostatic valve                  |
| PV3 | 3-way pressostatic valve                  |
| AG  | Rubber shock absorbers                    |

| MODEL                      |                           |         | 181-P        | 241-P  | 301-P  | 392-P  | 522-P  |
|----------------------------|---------------------------|---------|--------------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)      | TON     | 15.3         | 20.7   | 26.5   | 38.7   | 49.8   |
|                            |                           | kW      | 53.8         | 72.9   | 93.1   | 136    | 175    |
|                            | Absorbed power (1)        | kW      | 11.3         | 16.7   | 21.1   | 30.8   | 38.8   |
| Heating                    | Heating capacity (2)      | TON     | 19.0         | 25.9   | 32.4   | 47.5   | 61.7   |
|                            |                           | kW      | 66.7         | 91.1   | 114    | 167    | 217    |
|                            | Absorbed power (2)        | kW      | 14.4         | 21.0   | 26.5   | 39.2   | 48.8   |
| Compressors                | Quantity                  | n°      | 1            | 1      | 1      | 2      | 2      |
|                            | Refrigerant circuits      | n°      | 1            | 1      | 1      | 1      | 1      |
|                            | Capacity steps            | n°      | 1            | 1      | 1      | 2      | 2      |
| Evaporator                 | Water flow                | gpm     | 40.7         | 55.2   | 70.5   | 103    | 133    |
|                            |                           | l/s     | 2.57         | 3.48   | 4.45   | 6.50   | 8.36   |
|                            | Pressure drops            | ft WG   | 12.7         | 17.0   | 15.0   | 16.7   | 18.3   |
|                            |                           | kPa     | 38           | 51     | 45     | 50     | 55     |
|                            | Water connections         | "G      | 32           | 32     | 65     | 65     | 65     |
| Condenser                  | Water flow                | gpm     | 49.3         | 67.8   | 86.5   | 112    | 162    |
|                            |                           | l/s     | 3.11         | 4.28   | 5.46   | 7.07   | 10.21  |
|                            | Pressure drops            | ft WG   | 14.7         | 19.0   | 15.3   | 17.7   | 19.3   |
|                            |                           | kPa     | 44           | 57     | 46     | 53     | 58     |
|                            | Water connections         | "G      | 32           | 32     | 65     | 65     | 65     |
| Electrical characteristics | Power supply              | V/Ph/Hz | 460 / 3 / 60 |        |        |        |        |
|                            | Max. running current      | A       | 34           | 42     | 51     | 83     | 103    |
|                            | Inrush current            | A       | 187          | 226    | 278    | 268    | 330    |
| Unit with tank and pump    | Pump nominal power        | kW      | 0.75         | 0.75   | 1.10   | 1.50   | 1.85   |
|                            | Available static pressure | ft WG   | 43.3         | 33.3   | 40.0   | 41.7   | 40.0   |
|                            |                           | kPa     | 130          | 100    | 120    | 125    | 120    |
|                            | Tank water volume         | gal     | 79.4         | 79.4   | 79.4   | 79.4   | 79.4   |
|                            |                           | l       | 300          | 300    | 300    | 300    | 300    |
|                            | Expansion vessel          | gal     | 3.2          | 3.2    | 3.2    | 3.2    | 3.2    |
|                            |                           | l       | 12           | 12     | 12     | 12     | 12     |
| Sound pressure             | Water connections         | "G      | 2" 1/2       | 2" 1/2 | 2" 1/2 | 2" 1/2 | 2" 1/2 |
|                            | STD version (3)           | dB(A)   | 59           | 59     | 60     | 60     | 62     |
|                            | With SL accessory (3)     | dB(A)   | 56           | 56     | 57     | 57     | 59     |
| Weights                    | Transport weight (4)      | Kg      | 348          | 366    | 426    | 569    | 678    |
|                            | Operating weight (4)      | Kg      | 355          | 375    | 440    | 580    | 705    |

| DIMENSIONS  |     |    |  | 181-P | 241-P | 301-P | 392-P | 522-P |
|-------------|-----|----|--|-------|-------|-------|-------|-------|
| L           | STD | mm |  | 1200  | 1200  | 1200  | 1600  | 1600  |
| L (STD+SPD) | STD | mm |  | 2310  | 2310  | 2310  | 2710  | 2710  |
| L (STD+SPU) | STD | mm |  | 2310  | 2310  | 2310  | 2710  | 2710  |
| W           | STD | mm |  | 680   | 680   | 680   | 680   | 680   |
| H           | STD | mm |  | 1520  | 1520  | 1520  | 1520  | 1520  |

## DIMENSIONAL &amp; CLEARANCE AREA

CWW-M/SZ/K 181-P÷522-P

0 | 300 | 800 | 300



## NOTES

- Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  - Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°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 WP versions are indicated on the technical book.

FROM 15 TON TO 50 TON.  
FROM 54 KW TO 175 KW.

## CWW-M/SZ/K 181÷522

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**

60 Hz



The CWW-M/SZ/K 181÷522 **HYDROPLUS** liquid chillers and heat pumps, with R410A refrigerant, are designed to meet the needs of medium-sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with Scroll compressors and shell and tube exchangers, these units have cooling and hydraulic circuits complete for quick installation and high energy efficiency.

A wide series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.

**The units feature 460V power supply and 60Hz frequency.**



### VERSIONS

#### CWW-M/SZ/K

Cooling only

#### CWW-M/SZ/K/WP

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.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                     |
|-----|---------------------|
| SL  | Unit silencing      |
| BT  | Low Temperature Kit |
| HR  | Desuperheater       |
| HRT | Total heat recovery |

#### LOOSE ACCESSORIES

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

| MODEL                      |                       |         | 181          | 241  | 301  | 392  | 522   |
|----------------------------|-----------------------|---------|--------------|------|------|------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 15.3         | 20.7 | 26.5 | 38.7 | 49.8  |
|                            |                       | kW      | 53.8         | 72.9 | 93.1 | 136  | 175   |
|                            | Absorbed power (1)    | kW      | 11.3         | 16.7 | 21.1 | 30.8 | 38.8  |
| Heating                    | Heating capacity (2)  | TON     | 19.0         | 25.9 | 32.4 | 47.5 | 61.7  |
|                            |                       | kW      | 66.7         | 91.1 | 114  | 167  | 217   |
|                            | Absorbed power (2)    | kW      | 14.4         | 21.0 | 26.5 | 39.2 | 48.8  |
| Compressors                | Quantity              | n°      | 1            | 1    | 1    | 2    | 2     |
|                            | Refrigerant circuits  | n°      | 1            | 1    | 1    | 1    | 1     |
|                            | Capacity steps        | n°      | 1            | 1    | 1    | 2    | 2     |
| Evaporator                 | Water flow            | gpm     | 40.7         | 55.2 | 70.5 | 103  | 133   |
|                            |                       | l/s     | 2.57         | 3.48 | 4.45 | 6.50 | 8.36  |
|                            | Pressure drops        | ft WG   | 11.0         | 21.0 | 17.7 | 20.7 | 16.0  |
|                            |                       | kPa     | 33           | 63   | 53   | 62   | 48    |
|                            | Water connections     | "G      | 1½"          | 2"   | 2½"  | 3"   | 3"    |
| Condenser                  | Water flow            | gpm     | 50.6         | 68.9 | 86.4 | 127  | 164   |
|                            |                       | l/s     | 3.19         | 4.35 | 5.45 | 7.98 | 10.37 |
|                            | Pressure drops        | ft WG   | 17.0         | 32.7 | 26.3 | 31.0 | 24.7  |
|                            |                       | kPa     | 51           | 98   | 79   | 93   | 74    |
|                            | Water connections     | "G      | 2½"          | 2½"  | 2½"  | 2½"  | 2½"   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |      |      |      |       |
|                            | Max. running current  | A       | 34           | 42   | 51   | 83   | 103   |
|                            | Inrush current        | A       | 187          | 226  | 278  | 268  | 330   |
| Sound pressure             | STD version (3)       | dB(A)   | 59           | 59   | 60   | 60   | 62    |
|                            | With SL accessory (3) | dB(A)   | 56           | 56   | 57   | 57   | 59    |
| Weights                    | Transport weight      | Kg      | 460          | 482  | 554  | 675  | 822   |
|                            | Operating weight      | Kg      | 490          | 515  | 590  | 735  | 895   |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 2000 | 2200 | 2200 | 2200 | 2500 |
| W          | STD | mm | 820  | 820  | 820  | 850  | 850  |
| H          | STD | mm | 1400 | 1400 | 1400 | 1400 | 1400 |

## DIMENSIONAL &amp; CLEARANCE AREA

CWW-M/SZ/K 181÷522

500 | 500 | 800 | 1000



## NOTES

- Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  - Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  - 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 indicated on the technical book.



FROM 66 TON TO 150 TON.  
FROM 232 KW TO 526 KW.

## CWW-M/SZ/K 724-P÷1306-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.**

60 Hz

**NEXT  
POWER**



The CWW-M/SZ/K 724-P÷1306-P **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and plate exchangers, is designed to meet the needs of industrial systems requiring high power, space-saving units and quiet operation.

These units are ideal for indoor installation reducing the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

High reliability is the key plus of NEXTPOWER, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels.

NEXTPOWER obtains high energy yield with elevated ESEER/IPLV values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.

**The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

**CWW-M/SZ/K**

Cooling only

**CWW-M/SZ/K/WP**

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.
- Condenser AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plate type with two independent circuits on the refrigerant side and one on the water side, completed with water differential pressure switch.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |                     |
|----|---------------------|
| SL | Unit silencing      |
| BT | Low Temperature Kit |
| DS | Desuperheater       |
| RT | Total heat recovery |

#### LOOSE ACCESSORIES

|     |                          |
|-----|--------------------------|
| MN  | High and low gauges      |
| CR  | Remote display           |
| IS  | RS 485 serial interface  |
| PV2 | 2-way pressostatic valve |
| PV3 | 3-way pressostatic valve |
| AG  | Rubber shock absorbers   |

| MODEL                      |                       |         | 724-P        | 824-P | 1044-P | 1206-P | 1306-P |
|----------------------------|-----------------------|---------|--------------|-------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | TON     | 66.0         | 79.3  | 98.4   | 123    | 150    |
|                            |                       | kW      | 232          | 279   | 346    | 431    | 526    |
|                            | Absorbed power (1)    | kW      | 54           | 64    | 82     | 98     | 125    |
| Heating                    | Heating capacity (2)  | TON     | 84.7         | 99.0  | 127    | 152    | 188    |
|                            |                       | kW      | 298          | 348   | 445    | 534    | 661    |
|                            | Absorbed power (2)    | kW      | 69           | 82    | 104    | 126    | 159    |
| Compressors                | Quantity              | n°      | 4            | 4     | 4      | 6      | 6      |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | 4            | 4     | 4      | 6      | 6      |
| Evaporator                 | Water flow            | gpm     | 176          | 211   | 262    | 326    | 398    |
|                            |                       | l/s     | 11.08        | 13.33 | 16.53  | 20.59  | 25.13  |
|                            | Pressure drops        | ft WG   | 18.0         | 17.3  | 24.7   | 17.3   | 19.0   |
|                            |                       | kPa     | 54           | 52    | 74     | 52     | 57     |
|                            | Water connections     | DN      | 80           | 80    | 80     | 80     | 80     |
| Condenser                  | Water flow            | gpm     | 217          | 259   | 324    | 401    | 493    |
|                            |                       | l/s     | 13.66        | 16.36 | 20.44  | 25.29  | 31.09  |
|                            | Pressure drops        | ft WG   | 22.3         | 16.7  | 23.7   | 19.7   | 21.7   |
|                            |                       | kPa     | 67           | 50    | 71     | 59     | 65     |
|                            | Water connections     | DN      | 80           | 80    | 80     | 80     | 80     |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |       |        |        |        |
|                            | Max. running current  | A       | 127          | 157   | 196    | 235    | 293    |
|                            | Inrush current        | A       | 282          | 343   | 425    | 422    | 523    |
| Sound pressure             | STD version (3)       | dB(A)   | 64           | 65    | 65     | 66     | 66     |
|                            | With SL accessory (3) | dB(A)   | 60           | 61    | 61     | 62     | 62     |
| Weights                    | Transport weight      | Kg      | 1044         | 1110  | 1301   | 1462   | 1804   |
|                            | Operating weight      | Kg      | 1070         | 1160  | 1350   | 1530   | 1885   |

| DIMENSIONS |     |    | 724-P | 824-P | 1044-P | 1206-P | 1306-P |
|------------|-----|----|-------|-------|--------|--------|--------|
| L          | STD | mm | 2500  | 2500  | 2500   | 3000   | 3000   |
| W          | STD | mm | 800   | 800   | 800    | 800    | 800    |
| H          | STD | mm | 1900  | 1900  | 1900   | 1900   | 1900   |

## DIMENSIONAL &amp; CLEARANCE AREA

CWW-M/SZ/K 724-P÷1306-P

500 | 500 | 800 | 500



## NOTES

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  3. 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 indicated on the technical book.

FROM 66 TON TO 150 TON.  
FROM 232 KW TO 526 KW.

## CWW-M/SZ/K 724÷1306

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**

60 Hz

**NEXT  
POWER**



The CWW-M/SZ/K 724÷1306 **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and shell and tube exchangers, is designed to meet the needs of industrial systems requiring high power, space-saving units and quiet operation.

These units are ideal for indoor installation reducing the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

High reliability is the key plus of **NEXTPOWER**, thanks to the use of components built in large series and the management of several compressors allowing an increased compressor life span and the reduction of machine stopping risks: a faulty compressor will not compromise the functioning of the unit, that will continue to work with decreased power levels.

**NEXTPOWER** obtains high energy yield with elevated ESEER/IPLV values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.

**The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

**CWW-M/SZ/K**

Cooling only

**CWW-M/SZ/K/WP**

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.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator with two independent circuits on the refrigerant side and one on the water side.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |                     |
|-----|---------------------|
| SL  | Unit silencing      |
| BT  | Low Temperature Kit |
| HR  | Desuperheater       |
| HRT | Total heat recovery |

#### LOOSE ACCESSORIES

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

| MODEL                      |                       |         | 724          | 824   | 1044  | 1206  | 1306  |
|----------------------------|-----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | TON     | 66.0         | 79.3  | 98.4  | 123   | 150   |
|                            |                       | kW      | 232          | 279   | 346   | 431   | 526   |
|                            | Absorbed power (1)    | kW      | 54           | 64    | 82    | 98    | 125   |
| Heating                    | Heating capacity (2)  | TON     | 84.7         | 99.0  | 127   | 152   | 188   |
|                            |                       | kW      | 298          | 348   | 445   | 534   | 661   |
|                            | Absorbed power (2)    | kW      | 69           | 82    | 104   | 126   | 159   |
| Compressors                | Quantity              | n°      | 4            | 4     | 4     | 6     | 6     |
|                            | Refrigerant circuits  | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 4            | 4     | 4     | 6     | 6     |
| Evaporator                 | Water flow            | gpm     | 176          | 211   | 262   | 326   | 398   |
|                            |                       | l/s     | 11.08        | 13.33 | 16.53 | 20.59 | 25.13 |
|                            | Pressure drops        | ft WG   | 18.3         | 17.3  | 17.7  | 17.0  | 19.3  |
|                            |                       | kPa     | 55           | 52    | 53    | 51    | 58    |
|                            | Water connections     | DN      | 125          | 125   | 125   | 125   | 125   |
| Condenser                  | Water flow            | gpm     | 217          | 259   | 324   | 401   | 493   |
|                            |                       | l/s     | 13.66        | 16.36 | 20.44 | 25.29 | 31.09 |
|                            | Pressure drops        | ft WG   | 19.3         | 16.3  | 20.3  | 17.0  | 19.7  |
|                            |                       | kPa     | 58           | 49    | 61    | 51    | 59    |
|                            | Water connections     | DN      | 65           | 65    | 65    | 80    | 80    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |
|                            | Max. running current  | A       | 127          | 157   | 196   | 235   | 293   |
|                            | Inrush current        | A       | 282          | 343   | 425   | 422   | 523   |
| Sound pressure             | STD version (3)       | dB(A)   | 64           | 65    | 65    | 66    | 66    |
|                            | With SL accessory (3) | dB(A)   | 60           | 61    | 61    | 62    | 62    |
| Weights                    | Transport weight      | Kg      | 1460         | 1530  | 1790  | 2020  | 2440  |
|                            | Operating weight      | Kg      | 1560         | 1650  | 1940  | 2210  | 2660  |

| DIMENSIONS |     |    | 724  | 824  | 1044 | 1206 | 1306 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 3300 | 3300 | 3300 | 3300 | 3300 |
| W          | STD | mm | 850  | 850  | 850  | 850  | 850  |
| H          | STD | mm | 1800 | 1800 | 1800 | 1800 | 1800 |

## DIMENSIONAL &amp; CLEARANCE AREA

CWW-M/SZ/K 724÷ 1306

500 | 500 | 800 | 500



## NOTES

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
  2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
  3. 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 indicated on the technical book.

FROM 68 TON TO 139 TON.  
FROM 238 KW TO 489 KW.

# CWW-M/SZ/Y 1302÷2002

**WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



**60 Hz**



The liquid chillers of CWW-M/SZ/Y 1302÷2002 **ENERGYMAX** series, with R134a refrigerant, is designed to meet the needs of large-sized service or industrial systems requiring high power, space saving units and quiet operation.

Equipped with latest generation Screw compressors, shell and tube exchangers and connections for condensation with cooling tower or dry-cooler, they have a wide series of accessories which are factory-assembled or supplied separately such as: total heat recuperator, soft start and, if necessary, a device for operating a heat pump.

Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.

**The units feature 460V power supply and 60Hz frequency.**



## VERSIONS

**CWW-M/SZ/Y**

Cooling only

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, crankcase heater, sight glass, thermal protection, hot gas shut off valves and capacity steps.
- Shell and tube type condenser, with each refrigerant circuit supplied with an independent condenser. Easily removable cast iron heads to enable access for maintenance operations. Water connections for cooling tower and dry cooler operation; on request for well water.
- Shell and tube type evaporator with two independent circuits on the refrigerant side and one on the water side.
- Electronic thermostatic valve.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules and overload protection for compressors.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |   |
|-----|---|
| RZ  | Compressors stepless control  |
| BT  | Low Temperature Kit   |
| HR  | Desuperheater   |
| HRT | Total heat recovery   |
| SS  | Soft start  |
| DP  | Device for heat pump operation  |
| WM  | Web Monitoring enables remote management of the system through communication protocols GPRS/GSM/TCP |
| CP  | Potential free contacts   |

### LOOSE ACCESSORIES

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

| MODEL                      |                      |         | 1302         | 1502  | 1702  | 1902  | 2002  |
|----------------------------|----------------------|---------|--------------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1) | TON     | 67.7         | 85.6  | 103   | 121   | 139   |
|                            |                      | kW      | 238          | 301   | 362   | 425   | 489   |
|                            | Absorbed power (1)   | kW      | 53           | 69    | 81    | 92    | 109   |
| Heating                    | Heating capacity (2) | TON     | 78.2         | 99.2  | 118   | 138   | 159   |
|                            |                      | kW      | 275          | 349   | 414   | 486   | 559   |
|                            | Absorbed power (2)   | kW      | 69           | 88    | 105   | 119   | 140   |
| Compressors                | Quantity             | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Type                 |         |              |       | Screw |       |       |
|                            | Refrigerant circuits | n°      | 2            | 2     | 2     | 2     | 2     |
|                            | Capacity steps       | n°      | 6            | 6     | 6     | 6     | 6     |
| Evaporator                 | Water flow           | gpm     | 180          | 228   | 274   | 322   | 370   |
|                            |                      | l/s     | 11.37        | 14.38 | 17.30 | 20.31 | 23.36 |
|                            | Pressure drops       | ft WG   | 19.0         | 14.0  | 18.7  | 14.3  | 19.3  |
|                            |                      | kPa     | 57           | 42    | 56    | 43    | 58    |
|                            | Water connections    | DN      | 125          | 125   | 125   | 125   | 125   |
| Condenser                  | Water flow           | gpm     | 221          | 280   | 336   | 392   | 453   |
|                            |                      | l/s     | 13.91        | 17.66 | 21.18 | 24.70 | 28.56 |
|                            | Pressure drops       | ft WG   | 19.3         | 19.0  | 22.7  | 15.3  | 21.7  |
|                            |                      | kPa     | 58           | 57    | 68    | 46    | 65    |
|                            | Water connections    | DN      | 65           | 65    | 65    | 80    | 80    |
| Electrical characteristics | Power supply         | V/Ph/Hz | 460 / 3 / 60 |       |       |       |       |
|                            | Max. running current | A       | 203          | 228   | 270   | 295   | 357   |
|                            | Inrush current       | A       | 309          | 321   | 365   | 430   | 510   |
| Sound pressure             | STD version (3)      | dB(A)   | 69           | 69    | 70    | 70    | 69    |
| Weights                    | Transport weight     | Kg      | 1900         | 2310  | 2420  | 2700  | 3090  |
|                            | Operating weight     | Kg      | 2050         | 2520  | 2630  | 2940  | 3445  |

| DIMENSIONS |     |    | 1302 | 1502 | 1702 | 1902 | 2002 |
|------------|-----|----|------|------|------|------|------|
| L          | STD | mm | 3300 | 3300 | 3300 | 3300 | 3300 |
| W          | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 |
| H          | STD | mm | 1900 | 1900 | 1900 | 1900 | 1900 |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

CWW-M/SZ/Y 1202÷2002

500 | 500 | 800 | 500



Electrical board side

1. Chilled water from 12 to 7°C, water temperature at the condenser from 30 to 35°C.
2. Heated water from 40 to 45°C, water temperature at the evaporator from 15 to 10°C.
3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

200 GAL. AND 400 GAL.  
760 LT. AND 1520 LT.

## MR-M/SZ 200-400

REMOTE HYDRONIC MODULES WITH PUMP KIT.



The remote hydronic modules with pumping group of the MR-M/SZ 200-400 series are designed to solve technical problems resulting from thermal inertia in cooling systems for both residential and industrial use.

Installing a tank for cooled water allows units to reduce the operating cycles of the compressors, thus extending the useful life of the machines. It also results in a greater capacity of the system itself, a remarkable operational saving even using machines with reduced capacities and a greater flexibility, being able to work with temperatures other than the design temperatures.

The remote hydronic modules are made of galvanized steel frame protected with polyester powder painting, with a capacity of 200 and 400 gal (760 and 1520 lt); they are available with single circulation pump or double circulation pump accessory and are completed with all the components necessary for a quick on-site installation.

**The units feature 460V power supply and 60Hz frequency.**

### VERSIONS

#### MR-M/SZ 200

200 gal. - 760 lt.

#### MR-M/SZ 400

400 gal. - 1520 lt.

### FEATURES

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

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

PU1-PU4 Single circulating pump

PD1-PD4 Double circulating pump



| MODEL                           |                      |         | 200          | 400  |
|---------------------------------|----------------------|---------|--------------|------|
| Pumping kit                     | Storage water volume | gal     | 200          | 400  |
|                                 |                      | l       | 760          | 1520 |
|                                 | Expansion vessel     | gal     | 1            | 1    |
|                                 |                      | l       | 2x25         | 2x25 |
| Transport weight                | Water connections    | "G      | 4"           | 4"   |
|                                 |                      | Kg      | 390          | 470  |
|                                 | STD                  | Kg      | 433          | 513  |
|                                 | STD+PU1              | Kg      | 532          | 569  |
|                                 | STD+PU2              | Kg      | 631          | 569  |
|                                 | STD+PU3              | Kg      | 795          | 634  |
|                                 | STD+PD1              | Kg      | 1181         | 586  |
|                                 | STD+PD2              | Kg      | 1407         | 696  |
|                                 | STD+PD3              | Kg      | 1633         | 696  |
|                                 | STD+PD4              | Kg      | 1989         | 826  |
| Operating weight                | STD                  | Kg      | 1150         | 1990 |
|                                 |                      | Kg      | 1193         | 2033 |
|                                 | STD+PU1              | Kg      | 1292         | 2089 |
|                                 | STD+PU2              | Kg      | 1391         | 2089 |
|                                 | STD+PU3              | Kg      | 1555         | 2154 |
|                                 | STD+PD1              | Kg      | 1941         | 2106 |
|                                 | STD+PD2              | Kg      | 2167         | 2216 |
|                                 | STD+PD3              | Kg      | 2393         | 2216 |
|                                 | STD+PD4              | Kg      | 2749         | 2346 |
| PUMP ELECTRICAL CHARACTERISTICS |                      |         |              |      |
| Power supply                    |                      | V/Ph/Hz | 460 / 3 / 60 |      |
| Nominal absorbed power          | PU1                  | kW      | 3.0          | 3.0  |
|                                 | PU2                  | kW      | 5.5          | 5.5  |
|                                 | PU3                  | kW      | 7.5          | 7.5  |
|                                 | PU4                  | kW      | 15           | 15   |
| Max runnig current              | PU1                  | A       | 4.9          | 4.9  |
|                                 | PU2                  | A       | 9.6          | 9.6  |
|                                 | PU3                  | A       | 13           | 13   |
|                                 | PU4                  | A       | 22           | 22   |

| DIMENSIONS |     |    | 200  | 400  |
|------------|-----|----|------|------|
| L          | STD | mm | 1900 | 1900 |
| W          | STD | mm | 2200 | 2200 |
| H          | STD | mm | 1800 | 1800 |

## DIMENSIONAL &amp; CLEARANCE AREA

## NOTES

MR-M/SZ 200-400

N.B. PD = two PU pumps

800 | 800 | 800 | 800



Electrical board side



# CHAPTER 3

## ROOFTOPS

### UNIT

Page

#### 50 HZ

|  |           |
|--|-----------|
| <a href="#">RTQ-M/K 51÷724</a>             | 110 - 111 |
| <a href="#">RTQXT-M/K 51÷804</a>           | 112 - 113 |
| <a href="#">RTA-M/K 181÷602</a>            | 114 - 115 |
| <a href="#">RTA-M/K/MS 181÷602</a>         | 116 - 117 |
| <a href="#">RTA-M/K/ECO 181÷602</a>        | 118 - 119 |
| <a href="#">RTA-M/K/ECO/REC-FX 181÷602</a> | 120 - 121 |

#### 60 HZ

|                                     |           |
|-------------------------------------|-----------|
| <a href="#">RTQXT-M/SZ/K 51÷804</a> | 122 - 123 |
|-------------------------------------|-----------|

FROM 3 TON TO 50 TON.  
FROM 12 KW TO 176 KW.

## RTQ-M/K 51÷724

**SINGLE SKIN PACKAGED ROOFTOP UNITS WITH SCROLL COMPRESSORS.**



The single skin packaged RoofTop air conditioning units of the **FLEXI AIR** series, with R410A refrigerant, can be connected to a duct network for air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

Equipped with radial fans, these units are available in cooling-only and reversible heat pump version.

FLEXI AIR is characterized by full installation flexibility: the airflow direction for both air delivery and intake can be adjusted directly onsite; air delivery and intake are foreseen both on the same side in order to keep the overall space at minimum.

The cabinet features a solid steel structure with zinc coated galvanized treatment.



### VERSIONS

#### RTQ-M/K

Cooling only

#### RTQ-M/K/WP

Reversible heat pump

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanized. Self-supporting galvanized steel frame further protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### LOOSE ACCESSORIES

- ECO Free-cooling economizer section with aluminium dampers managed by electrical motor. Microprocessor control for dampers' opening to manage supply, return and fresh air.

## RTQ-M/K 51÷724

| MODEL                      |                           |         | 51           | 61   | 71   | 101  | 121  | 151  | 181   |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 3.3          | 4.2  | 5.0  | 6.7  | 8.3  | 10.0 | 12.5  |
|                            |                           | kW      | 11.7         | 14.6 | 17.6 | 23.4 | 29.3 | 35.2 | 43.9  |
|                            | Absorbed power (1),(2)    | kW      | 4.2          | 4.9  | 6.0  | 8.3  | 9.6  | 12.3 | 14.7  |
| Heating                    | Heating capacity (3)      | TON     | 3.7          | 4.7  | 5.6  | 7.5  | 9.3  | 11.2 | 14.0  |
|                            |                           | kW      | 13.1         | 16.4 | 19.7 | 26.3 | 32.8 | 39.4 | 49.2  |
|                            | Absorbed power (2),(3)    | kW      | 3.6          | 4.2  | 5.1  | 7.1  | 8.2  | 10.5 | 12.5  |
| Air treatment section      | Air flow                  | cfm     | 1271         | 1694 | 1906 | 2753 | 3389 | 4024 | 5083  |
|                            |                           | m³/s    | 0.6          | 0.8  | 0.9  | 1.3  | 1.6  | 1.9  | 2.4   |
|                            | Available static pressure | in WG   | 0.40         | 0.40 | 0.40 | 0.60 | 0.60 | 0.60 | 0.60  |
|                            |                           | Pa      | 100          | 100  | 100  | 150  | 150  | 150  | 150   |
|                            | Fans                      | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Filters                   |         | G4           | G4   | G4   | G4   | G4   | G4   | G4    |
| Condensing section         | Compressors               | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Capacity steps            | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Fans                      | n°      | 1            | 2    | 2    | 1    | 1    | 1    | 1     |
|                            | Air flow                  | cfm     | 2965         | 3812 | 3812 | 5930 | 6989 | 9319 | 11861 |
|                            |                           | m³/s    | 1.4          | 1.8  | 1.8  | 2.8  | 3.3  | 4.4  | 5.6   |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |      |      |      |      |      |       |
|                            | Max. running current      | A       | 10           | 12   | 14   | 18   | 20   | 26   | 34    |
|                            | Inrush current            | A       | 51           | 59   | 70   | 100  | 115  | 144  | 184   |
| Sound pressure             | STD version (4)           | dB(A)   | 50           | 52   | 54   | 55   | 55   | 59   | 60    |
| Weights                    | Transport weight          | Kg      | 343          | 362  | 372  | 394  | 443  | 460  | 505   |
|                            | Operating weight          | Kg      | 333          | 352  | 362  | 384  | 433  | 450  | 495   |

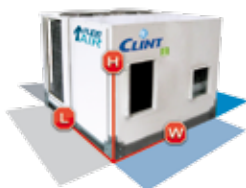
| MODEL                      |                           |         | 242          | 302   | 362   | 484   | 544   | 604   | 724   |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.7         | 20.8  | 25.0  | 29.9  | 33.3  | 40.1  | 50.0  |
|                            |                           | kW      | 58.6         | 73.2  | 87.9  | 105   | 117   | 141   | 176   |
|                            | Absorbed power (1),(2)    | kW      | 19.7         | 24.7  | 29.2  | 39.0  | 43.3  | 48.5  | 57.0  |
| Heating                    | Heating capacity (3)      | TON     | 18.7         | 23.3  | 28.0  | 33.6  | 37.2  | 44.9  | 56.0  |
|                            |                           | kW      | 65.6         | 82.0  | 98.4  | 118   | 131   | 158   | 197   |
|                            | Absorbed power (2),(3)    | kW      | 16.7         | 21.0  | 24.8  | 33.1  | 36.8  | 41.2  | 48.4  |
| Air treatment section      | Air flow                  | cfm     | 6778         | 8260  | 9955  | 12073 | 13343 | 16097 | 19909 |
|                            |                           | m³/s    | 3.2          | 3.9   | 4.7   | 5.7   | 6.3   | 7.6   | 9.4   |
|                            | Available static pressure | in WG   | 1.20         | 1.20  | 1.20  | 1.20  | 1.20  | 1.20  | 1.20  |
|                            |                           | Pa      | 300          | 300   | 300   | 300   | 300   | 300   | 300   |
|                            | Fans                      | n°      | 1            | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Filters                   |         | G4           | G4    | G4    | G4    | G4    | G4    | G4    |
| Condensing section         | Compressors               | n°      | 2            | 2     | 2     | 4     | 4     | 4     | 4     |
|                            | Refrigerant circuits      | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps            | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Fans                      | n°      | 2            | 2     | 2     | 2     | 4     | 4     | 4     |
|                            | Air flow                  | cfm     | 14191        | 19909 | 19909 | 23510 | 28169 | 37701 | 37701 |
|                            |                           | m³/s    | 6.7          | 9.4   | 9.4   | 11.1  | 13.3  | 17.8  | 17.8  |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |       |
|                            | Max. running current      | A       | 45           | 53    | 69    | 87    | 92    | 109   | 134   |
|                            | Inrush current            | A       | 140          | 172   | 219   | 276   | 369   | 228   | 284   |
| Sound pressure             | STD version (4)           | dB(A)   | 60           | 60    | 62    | 61    | 62    | 62    | 61    |
| Weights                    | Transport weight          | Kg      | 533          | 555   | 587   | 684   | 722   | 778   | 827   |
|                            | Operating weight          | Kg      | 523          | 545   | 577   | 674   | 712   | 768   | 817   |

| DIMENSIONS |     |    | 51   | 61   | 71   | 101  | 121  | 151  | 181  | 242  | 302  | 362  | 484  | 544  | 604  | 724  |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1200 | 1200 | 1350 | 1600 | 1700 | 1900 | 2140 | 1900 | 2190 | 2150 | 3040 | 3175 | 3215 | 3650 |
| W          | STD | mm | 1200 | 1200 | 1300 | 1200 | 1450 | 1450 | 1750 | 1700 | 1850 | 1850 | 2100 | 2250 | 2250 | 2250 |
| H          | STD | mm | 950  | 1000 | 1000 | 1250 | 1250 | 1250 | 1250 | 1750 | 1750 | 2050 | 2050 | 2050 | 2330 | 2330 |

### DIMENSIONAL & CLEARANCE AREA

RTQ-M/K 51÷724

1000 | 1000 | 1000 | 1000



### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  2. Excluded the power absorbed by radial fans.
  3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  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 indicated on the technical book.

FROM 4 TON TO 55 TON.  
FROM 13 KW TO 195 KW.

## RTQXT-M/K 51÷804

**SINGLE SKIN PACKAGED ROOFTOP UNITS WITH SCROLL COMPRESSORS.**

**HIGH AMBIENT TEMPERATURE UP TO 52 °C**



The single skin packaged Rooftop air conditioning units of the **FLEXI AIR** series, with R410A refrigerant, can be connected to a duct network for air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

The RTQXT-M/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature**.

Equipped with radial fans, these units are available in cooling-only and reversible heat pump version.

FLEXI AIR is characterized by full installation flexibility: the airflow direction for both air delivery and intake can be adjusted directly onsite; air delivery and intake are foreseen both on the same side in order to keep the overall space at minimum.

The cabinet features a solid steel structure with zinc coated galvanized treatment.



### VERSIONS

#### RTQXT-M/K

Cooling only

#### RTQXT-M/K/WP

Reversible heat pump

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanized. Self-supporting galvanized steel frame further protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### LOOSE ACCESSORIES

**ECO** Free-cooling economizer section with aluminium dampers managed by electrical motor. Microprocessor control for dampers' opening to manage supply, return and fresh air.



## RTQXT-M/K 51÷804

| MODEL                      |                           |         | 51           | 61   | 81   | 101  | 131  | 161  | 201   |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 3.3          | 4.2  | 5.0  | 6.7  | 8.3  | 10.0 | 12.5  |
|                            |                           | kW      | 11.7         | 14.6 | 17.6 | 23.4 | 29.3 | 35.2 | 43.9  |
|                            | Absorbed power (1),(2)    | kW      | 4.9          | 6.2  | 7.6  | 9.5  | 12.3 | 15.8 | 19.0  |
|                            |                           | kW      | 3.7          | 4.6  | 5.5  | 7.4  | 9.2  | 11.1 | 13.8  |
| Heating                    | Cooling capacity (3)      | TON     | 13.1         | 16.2 | 19.5 | 26.0 | 32.5 | 39.0 | 48.7  |
|                            |                           | kW      | 4.0          | 5.0  | 6.2  | 7.8  | 10.1 | 13.0 | 15.6  |
|                            | Absorbed power (2),(3)    | kW      | 3.7          | 4.7  | 5.6  | 7.5  | 9.3  | 11.2 | 14.0  |
|                            |                           | kW      | 13.1         | 16.4 | 19.7 | 26.3 | 32.8 | 39.4 | 49.2  |
| Air treatment section      | Heating capacity (4)      | TON     | 4.1          | 5.1  | 6.3  | 7.9  | 10.3 | 13.2 | 15.9  |
|                            |                           | kW      | 1271         | 1694 | 1906 | 2753 | 3389 | 4024 | 5083  |
|                            | Available static pressure | m³/s    | 0.6          | 0.8  | 0.9  | 1.3  | 1.6  | 1.9  | 2.4   |
|                            |                           | in WG   | 0.40         | 0.40 | 0.40 | 0.60 | 0.60 | 0.60 | 0.60  |
| Condensing section         | Fans                      | Pa      | 100          | 100  | 100  | 150  | 150  | 150  | 150   |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Filters                   | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            |                           | G4      | G4           | G4   | G4   | G4   | G4   | G4   | G4    |
| Electrical characteristics | Compressors               | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
| Sound pressure             | Capacity steps            | n°      | 2            | 2    | 2    | 1    | 1    | 1    | 2     |
|                            |                           | n°      | 2965         | 3812 | 3812 | 5930 | 6989 | 9319 | 11861 |
|                            | Air flow                  | cfm     | 1.4          | 1.8  | 1.8  | 2.8  | 3.3  | 4.4  | 5.6   |
|                            |                           | m³/s    | 400 / 3 / 50 |      |      |      |      |      |       |
| Weights                    | Power supply              | V/Ph/Hz | 11           | 14   | 17   | 20   | 25   | 30   | 39    |
|                            |                           | A       | 57           | 71   | 90   | 108  | 140  | 166  | 216   |
|                            | Inrush current            | A       | 52           | 54   | 54   | 55   | 59   | 60   | 60    |
|                            |                           | dB(A)   | 359          | 383  | 395  | 418  | 467  | 498  | 545   |
| Operating weight           | Kg                        | Kg      | 349          | 373  | 385  | 408  | 457  | 488  | 535   |

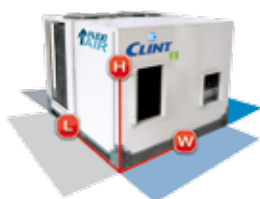
| MODEL                      |                           |         | 262          | 324   | 404   | 484   | 544   | 604   | 804   |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.7         | 20.8  | 25.0  | 30.1  | 33.3  | 40.1  | 50.0  |
|                            |                           | kW      | 58.6         | 73.2  | 87.9  | 106   | 117   | 141   | 176   |
|                            | Absorbed power (1),(2)    | kW      | 24.6         | 31.3  | 38.3  | 44.3  | 49.1  | 63.1  | 76.7  |
|                            |                           | kW      | 18.5         | 23.1  | 27.7  | 33.3  | 37.0  | 44.4  | 55.4  |
| Heating                    | Cooling capacity (3)      | TON     | 65.0         | 81.2  | 97.5  | 117   | 130   | 156   | 195   |
|                            |                           | kW      | 20.0         | 24.4  | 31.2  | 35.9  | 39.9  | 51.1  | 62.5  |
|                            | Absorbed power (2),(3)    | kW      | 18.7         | 23.3  | 28.0  | 33.6  | 37.2  | 44.9  | 56.0  |
|                            |                           | kW      | 65.6         | 82.0  | 98.4  | 118   | 131   | 158   | 197   |
| Air treatment section      | Heating capacity (4)      | TON     | 20.3         | 32.0  | 31.8  | 36.5  | 40.6  | 52.0  | 63.5  |
|                            |                           | kW      | 6778         | 8260  | 9955  | 12073 | 13343 | 16097 | 19909 |
|                            | Air flow                  | cfm     | 3.2          | 3.9   | 4.7   | 5.7   | 6.3   | 7.6   | 9.4   |
|                            |                           | m³/s    | 1.20         | 1.20  | 1.20  | 1.20  | 1.20  | 1.20  | 1.20  |
| Condensing section         | Available static pressure | Pa      | 300          | 300   | 300   | 300   | 300   | 300   | 300   |
|                            |                           | n°      | 1            | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Filters                   | n°      | 1            | 1     | 1     | 1     | 1     | 1     | 1     |
|                            |                           | G4      | G4           | G4    | G4    | G4    | G4    | G4    | G4    |
| Electrical characteristics | Compressors               | n°      | 2            | 4     | 4     | 4     | 4     | 4     | 4     |
|                            |                           | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            |                           | n°      | 2            | 2     | 2     | 4     | 4     | 4     | 4     |
| Sound pressure             | Capacity steps            | n°      | 14191        | 19909 | 19909 | 23510 | 28169 | 37701 | 37701 |
|                            |                           | n°      | 6.7          | 9.4   | 9.4   | 11.1  | 13.3  | 17.8  | 17.8  |
|                            | Air flow                  | cfm     | 400 / 3 / 50 |       |       |       |       |       |       |
|                            |                           | m³/s    | 53           | 62    | 80    | 94    | 104   | 129   | 158   |
| Weights                    | Power supply              | V/Ph/Hz | 165          | 195   | 254   | 297   | 212   | 255   | 327   |
|                            |                           | A       | 60           | 62    | 62    | 61    | 62    | 62    | 62    |
|                            | Inrush current            | dB(A)   | 573          | 597   | 637   | 749   | 787   | 858   | 907   |
|                            |                           | Kg      | 563          | 587   | 627   | 739   | 777   | 848   | 897   |

| DIMENSIONS |     |    | 51   | 61   | 81   | 101  | 131  | 161  | 201  | 262  | 324  | 404  | 484  | 544  | 604  | 804  |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1200 | 1200 | 1350 | 1600 | 1700 | 1900 | 2140 | 1900 | 2190 | 2150 | 3040 | 3175 | 3215 | 3650 |
| W          | STD | mm | 1200 | 1200 | 1300 | 1200 | 1450 | 1450 | 1750 | 1700 | 1850 | 1850 | 2100 | 2250 | 2250 | 2250 |
| H          | STD | mm | 950  | 1000 | 1000 | 1250 | 1250 | 1250 | 1250 | 1750 | 1750 | 2050 | 2050 | 2050 | 2330 | 2330 |

### DIMENSIONAL & CLEARANCE AREA

RTQ-MXT/K 51÷724

|      |      |      |      |
|------|------|------|------|
| 1000 | 1000 | 1000 | 1000 |
|------|------|------|------|



### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 46 °C.
  2. Excluded the power absorbed by radial fans.
  3. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  4. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  5. 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 indicated on the technical book.



FROM 16 TON TO 55 TON.  
FROM 57 KW TO 192 KW.

## RTA-M/K 181÷602

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS.**



The double skin packaged Roof Top air conditioning units of the **TOP AIR** series, with R410A refrigerant, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

Equipped with radial fans, extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in cooling-only and reversible heat pump version. They have a high level of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections.

The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.



### VERSIONS

#### RTA-M/K

Cooling only

#### RTA-M/K/WP

Heat pump

### COMPLEMENTARY SECTIONS

UMI Section with preparation for humidifier

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). Frame made of extruded aluminium alloy profiles connected by 3 way joints. Assembling of the base to the frame is of dual support and grants the walking on the base panels installation without sticking out screws. 50mm thick sandwich panels made of prepainted steel sheet and fastened with a snap-in system without screws; water proofing granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| SL   | Unit silencement                                  |
| CT   | Condensing control down to 0 °C                   |
| FT   | Filter section efficiency F6-F7-F8                |
| FT/R | Rigid bag filter F6-F7-F8 effc.                   |
| WS2  | 2-row water coil for heating with three way valve |
| EH   | Integrated electrical coils                       |
| SQ   | Air quality sensor                                |
| PF   | Differential pressostat filters control           |
| CP   | Potential free contacts                           |
| RP   | Metallic guards for condenser                     |

#### LOOSE ACCESSORIES

|    |                         |
|----|-------------------------|
| MN | High and low gauges     |
| CS | Shutter protection caps |
| CR | Remote display          |
| IS | RS 485 serial interface |
| AG | Rubber shock absorbers  |

# RTA-M/K 181÷602

| MODEL                      |                           |         | 181          | 241   | 301   | 392   | 522   | 602   |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.2         | 21.7  | 27.3  | 35.8  | 43.5  | 54.6  |
|                            |                           | kW      | 57.1         | 76.2  | 96.0  | 126   | 153   | 192   |
|                            | Absorbed power (1),(2)    | kW      | 20.9         | 24.3  | 28.6  | 38.1  | 49.5  | 58.2  |
|                            |                           |         |              |       |       |       |       |       |
| Heating                    | Heating capacity (3)      | TON     | 16.9         | 21.8  | 27.4  | 36.4  | 44.4  | 55.4  |
|                            |                           | kW      | 59.5         | 76.5  | 96.3  | 128   | 156   | 195   |
|                            | Absorbed power (2),(3)    | kW      | 18.0         | 19.9  | 24.1  | 33.8  | 40.5  | 50.8  |
|                            |                           |         |              |       |       |       |       |       |
| Air treatment section      | Air flow                  | cfm     | 5719         | 8684  | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s    | 2.7          | 4.1   | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG   | 1.00         | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
|                            |                           | Pa      | 250          | 250   | 250   | 250   | 250   | 250   |
|                            | Fans                      | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
| Condensing section         | Filters                   |         | G4           | G4    | G4    | G4    | G4    | G4    |
|                            | Compressors               | n°      | 1            | 1     | 1     | 2     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Fans                      | n°      | 2            | 2     | 2     | 4     | 4     | 4     |
|                            | Air flow                  | cfm     | 15461        | 15250 | 20545 | 30499 | 30499 | 41089 |
|                            |                           | m³/s    | 7.3          | 7.2   | 9.7   | 14.4  | 14.4  | 19.4  |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Max. running current      | A       | 44           | 53    | 68    | 87    | 105   | 136   |
|                            | Inrush current            | A       | 220          | 265   | 329   | 264   | 318   | 397   |
| Hot water coil             | Heating capacity (4)      | TON     | 24.2         | 35.5  | 42.7  | 56.9  | 71.1  | 85.3  |
|                            |                           | kW      | 85           | 125   | 150   | 200   | 250   | 300   |
|                            | Air pressure drops        | in WG   | 0.12         | 0.12  | 0.12  | 0.14  | 0.14  | 0.14  |
|                            |                           | Pa      | 30           | 31    | 31    | 36    | 35    | 35    |
|                            | Water flow (4)            | gpm     | 32.2         | 47.4  | 56.7  | 75.8  | 94.6  | 114   |
|                            |                           | l/s     | 2.03         | 2.99  | 3.58  | 4.78  | 5.97  | 7.17  |
|                            | Water pressure drops      | ft WG   | 15.0         | 16.0  | 16.3  | 17.0  | 17.7  | 19.0  |
|                            |                           | kPa     | 45           | 48    | 49    | 51    | 53    | 57    |
|                            | Water connections         | "G      | 1"½          | 1"½   | 1"½   | 2"    | 2"    | 2"½   |
| Electric heating           | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Heating capacity          | kW      | 15           | 27    | 27    | 41    | 41    | 48    |
|                            | Max absorbed current      | A       | 22           | 39    | 39    | 59    | 59    | 69    |
|                            | Steps                     | n°      | 2            | 2     | 2     | 4     | 4     | 4     |
| Sound pressure             | STD version (5)           | dB(A)   | 59           | 59    | 59    | 61    | 62    | 62    |
| Weights                    | Transport weight          | Kg      | 1010         | 1157  | 1310  | 1890  | 2216  | 2500  |
|                            | Operating weight          | Kg      | 1002         | 1145  | 1298  | 1874  | 2200  | 2484  |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  | 602  |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 2980 | 3190 | 3290 | 4500 | 5150 | 5300 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2340 | 2340 | 2340 | 2340 | 2510 |

## DIMENSIONAL & CLEARANCE AREA

RTA-M/K 181÷301

|     |     |     |      |
|-----|-----|-----|------|
| 800 | 800 | 800 | 1700 |
|-----|-----|-----|------|

RTA-M/K 392÷602

|     |      |      |      |
|-----|------|------|------|
| 800 | 1700 | 1000 | 1700 |
|-----|------|------|------|



## NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  2. Excluded the power absorbed by radial fans.
  3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  4. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. 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 indicated on the technical book.

FROM 16 TON TO 55 TON.  
FROM 57 KW TO 192 KW.

## RTA-M/K/MS 181÷602

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS AND WITH MIXING BOX.**



The double skin packaged Roof Top air conditioning units of the **TOP AIR** series, with R410A refrigerant, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

Equipped with radial fans, extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in cooling-only and reversible heat pump version.

They have an high level of modularity and adaptability to every plant-engineering need: this unit features, in addition to the basic sections, a **MIXING BOX**.

The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.



### VERSIONS

#### RTA-M/K/MS

Cooling only with mixing box

#### RTA-M/K/WP/MS

Heat pump with mixing box

### MIXING BOX

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

### COMPLEMENTARY SECTIONS

UMI Section with preparation for humidifier

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). Frame made of extruded aluminium alloy profiles connected by 3 way joints. Assembling of the base to the frame is of dual support and grants the walking on the base panels installation without sticking out screws. 50mm thick sandwich panels made of prepainted steel sheet and fastened with a snap-in system without screws; water proofing granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake centrifugal fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| SL   | Unit silencement                                  |
| CT   | Condensing control down to 0 °C                   |
| FT   | Filter section efficiency F6-F7-F8                |
| FT/R | Rigid bag filter F6-F7-F8 effc.                   |
| WS2  | 2-row water coil for heating with three way valve |
| EH   | Integrated electrical coils                       |
| SQ   | Air quality sensor                                |
| PF   | Differential pressostat filters control           |

|    |                               |
|----|-------------------------------|
| CP | Potential free contacts       |
| RP | Metallic guards for condenser |

#### LOOSE ACCESSORIES

|    |                         |
|----|-------------------------|
| MN | High and low gauges     |
| CS | Shutter protection caps |
| CR | Remote display          |
| IS | RS 485 serial interface |
| AG | Rubber shock absorbers  |

# RTA-M/K/MS 181÷602

| MODEL                      |                           |         | 181          | 241   | 301   | 392   | 522   | 602   |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.2         | 21.7  | 27.3  | 35.8  | 43.5  | 54.6  |
|                            |                           | kW      | 57.1         | 76.2  | 96.0  | 126   | 153   | 192   |
|                            | Absorbed power (1),(2)    | kW      | 20.9         | 24.3  | 28.6  | 38.1  | 49.5  | 58.2  |
|                            |                           |         |              |       |       |       |       |       |
| Heating                    | Heating capacity (3)      | TON     | 16.9         | 21.8  | 27.4  | 36.4  | 44.4  | 55.4  |
|                            |                           | kW      | 59.5         | 76.5  | 96.3  | 128   | 156   | 195   |
|                            | Absorbed power (2),(3)    | kW      | 18.0         | 19.9  | 24.1  | 33.8  | 40.5  | 50.8  |
|                            |                           |         |              |       |       |       |       |       |
| Air treatment section      | Air flow                  | cfm     | 5719         | 8684  | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s    | 2.7          | 4.1   | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG   | 1.00         | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
|                            |                           | Pa      | 250          | 250   | 250   | 250   | 250   | 250   |
|                            | Fans                      | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
| Condensing section         | Filters                   |         | G4           | G4    | G4    | G4    | G4    | G4    |
|                            | Compressors               | n°      | 1            | 1     | 1     | 2     | 2     | 2     |
|                            | Refrigerant circuits      | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Capacity steps            | n°      | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Fans                      | n°      | 2            | 2     | 2     | 4     | 4     | 4     |
|                            | Air flow                  | cfm     | 15461        | 15250 | 20545 | 30499 | 30499 | 41089 |
|                            |                           | m³/s    | 7.3          | 7.2   | 9.7   | 14.4  | 14.4  | 19.4  |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Max. running current      | A       | 44           | 53    | 68    | 87    | 105   | 136   |
|                            | Inrush current            | A       | 220          | 265   | 329   | 264   | 318   | 397   |
| Hot water coil             | Heating capacity (4)      | TON     | 24.2         | 35.5  | 42.7  | 56.9  | 71.1  | 85.3  |
|                            |                           | kW      | 85           | 125   | 150   | 200   | 250   | 300   |
|                            | Air pressure drops        | in WG   | 0.12         | 0.12  | 0.12  | 0.14  | 0.14  | 0.14  |
|                            |                           | Pa      | 30           | 31    | 31    | 36    | 35    | 35    |
|                            | Water flow (4)            | gpm     | 32.2         | 47.4  | 56.7  | 75.8  | 94.6  | 114   |
|                            |                           | l/s     | 2.03         | 2.99  | 3.58  | 4.78  | 5.97  | 7.17  |
|                            | Water pressure drops      | ft WG   | 15.0         | 16.0  | 16.3  | 17.0  | 17.7  | 19.0  |
|                            |                           | kPa     | 45           | 48    | 49    | 51    | 53    | 57    |
|                            | Water connections         | "G      | 1"½          | 1"½   | 1"½   | 2"    | 2"    | 2"½   |
| Electric heating           | Power supply              | V/Ph/Hz | 400 / 3 / 50 |       |       |       |       |       |
|                            | Heating capacity          | kW      | 15           | 27    | 27    | 41    | 41    | 48    |
|                            | Max absorbed current      | A       | 22           | 39    | 39    | 59    | 59    | 69    |
|                            | Steps                     | n°      | 2            | 2     | 2     | 4     | 4     | 4     |
|                            | STD version (5)           | dB(A)   | 59           | 59    | 59    | 61    | 62    | 62    |
| Weights                    | Transport weight          | Kg      | 1090         | 1262  | 1410  | 1990  | 2316  | 2620  |
|                            | Operating weight          | Kg      | 1078         | 1250  | 1398  | 1974  | 2296  | 2600  |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  | 602  |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 3430 | 3640 | 3740 | 4950 | 5600 | 5750 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2340 | 2340 | 2340 | 2340 | 2510 |

## DIMENSIONAL & CLEARANCE AREA

RTA-M/K/MS 181÷301

800 | 800 | 800 | 1700

RTA-M/K/MS 392÷602

800 | 1700 | 1000 | 1700



## NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  2. Excluded the power absorbed by radial fans.
  3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  4. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. 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 indicated on the technical book.

FROM 16 TON TO 55 TON.  
FROM 57 KW TO 192 KW.

## RTA-M/K/ECO 181÷602

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS AND WITH ECONOMIZER.**



The double skin packaged Roof Top air conditioning units of the **TOP AIR** series, with R410A refrigerant, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in cooling-only and reversible heat pump version.

They have an high level of modularity and adaptability to every plant-engineering need: this unit features, in addition to the basic sections, an **ECONOMIZER** which is automatically controlled both in **FREE-COOLING** or **FREE-HEATING**.

The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.



### VERSIONS

#### RTA-M/K/ECO

Cooling only with economizer

#### RTA-M/K/WP/ECO

Heat pump with economizer

### ECO

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

### COMPLEMENTARY SECTIONS

UMI Section with preparation for humidifier

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). Frame made of extruded aluminium alloy profiles connected by 3 way joints. Assembling of the base to the frame is of dual support and grants the walking on the base panels installation without sticking out screws. 50mm thick sandwich panels made of prepainted steel sheet and fastened with a snap-in system without screws; water proofing granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake centrifugal fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| SL   | Unit silencement                                  |
| CT   | Condensing control down to 0 °C                   |
| FT   | Filter section efficiency F6-F7-F8                |
| FT/R | Rigid bag filter F6-F7-F8 effec.                  |
| WS2  | 2-row water coil for heating with three way valve |
| EH   | Integrated electrical coils                       |

|    |   |
|----|---|
| CH | Enthalpic control (ECO only)            |
| SQ | Air quality sensor                      |
| PF | Differential pressostat filters control |
| CP | Potential free contacts                 |
| RP | Metallic guards for condenser           |

#### LOOSE ACCESSORIES

|    |                         |
|----|-------------------------|
| MN | High and low gauges     |
| CS | Shutter protection caps |
| CR | Remote display          |
| IS | RS 485 serial interface |
| AG | Rubber shock absorbers  |

# RTA-M/K/ECO 181÷602

| MODEL                      |                           |                 | 181          | 241   | 301   | 392   | 522   | 602   |
|----------------------------|---------------------------|-----------------|--------------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON             | 16.2         | 21.7  | 27.3  | 35.8  | 43.5  | 54.6  |
|                            |                           | kW              | 57.1         | 76.2  | 96.0  | 126   | 153   | 192   |
|                            | Absorbed power (1),(2)    | kW              | 20.9         | 24.3  | 28.6  | 38.1  | 49.5  | 58.2  |
| Heating                    | Heating capacity (3)      | TON             | 16.9         | 21.8  | 27.4  | 36.4  | 44.4  | 55.4  |
|                            |                           | kW              | 59.5         | 76.5  | 96.3  | 128   | 156   | 195   |
|                            | Absorbed power (2),(3)    | kW              | 18.0         | 19.9  | 24.1  | 33.8  | 40.5  | 50.8  |
| Air treatment section      | Air flow                  | cfm             | 5719         | 8684  | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s            | 2.7          | 4.1   | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG           | 1.00         | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
|                            |                           | Pa              | 250          | 250   | 250   | 250   | 250   | 250   |
|                            | Fans                      | n°              | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Filters                   |                 | G4           | G4    | G4    | G4    | G4    | G4    |
| Air intake section         | Air flow                  | cfm             | 5719         | 8684  | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s            | 2.7          | 4.1   | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG           | 0.40         | 0.40  | 0.40  | 0.40  | 0.40  | 0.40  |
|                            |                           | Pa              | 100          | 100   | 100   | 100   | 100   | 100   |
|                            | Fans                      | n°              | 1            | 1     | 1     | 1     | 1     | 1     |
|                            | Condensing section        | Compressors     | n°           | 1     | 1     | 1     | 2     | 2     |
| Refrigerant circuits       |                           | n°              | 1            | 1     | 1     | 1     | 1     | 1     |
| Capacity steps             |                           | n°              | 1            | 1     | 1     | 1     | 1     | 1     |
| Fans                       |                           | n°              | 2            | 2     | 2     | 4     | 4     | 4     |
| Air flow                   |                           | cfm             | 15461        | 15250 | 20545 | 30499 | 30499 | 41089 |
|                            |                           | m³/s            | 7.3          | 7.2   | 9.7   | 14.4  | 14.4  | 19.4  |
| Electrical characteristics | Power supply              | V/Ph/Hz         | 400 / 3 / 50 |       |       |       |       |       |
|                            | Max. running current      | A               | 44           | 53    | 68    | 87    | 105   | 136   |
|                            | Inrush current            | A               | 220          | 265   | 329   | 264   | 318   | 397   |
| Hot water coil             | Heating capacity (4)      | TON             | 24.2         | 35.5  | 42.7  | 56.9  | 71.1  | 85.3  |
|                            |                           | kW              | 85           | 125   | 150   | 200   | 250   | 300   |
|                            | Air pressure drops        | in WG           | 0.12         | 0.12  | 0.12  | 0.14  | 0.14  | 0.14  |
|                            |                           | Pa              | 30           | 31    | 31    | 36    | 35    | 35    |
|                            | Water flow (4)            | gpm             | 32.2         | 47.4  | 56.7  | 75.8  | 94.6  | 114   |
|                            |                           | l/s             | 2.03         | 2.99  | 3.58  | 4.78  | 5.97  | 7.17  |
|                            | Water pressure drops      | ft WG           | 15.0         | 16.0  | 16.3  | 17.0  | 17.7  | 19.0  |
|                            |                           | kPa             | 45           | 48    | 49    | 51    | 53    | 57    |
| Water connections          | “G                        | 1”½             | 1”½          | 1”½   | 2”    | 2”    | 2”½   |       |
| Electric heating           | Power supply              | V/Ph/Hz         | 400 / 3 / 50 |       |       |       |       |       |
|                            | Heating capacity          | kW              | 15           | 27    | 27    | 41    | 41    | 48    |
|                            | Max absorbed current      | A               | 22           | 39    | 39    | 59    | 59    | 69    |
|                            | Steps                     | n°              | 2            | 2     | 2     | 4     | 4     | 4     |
|                            | Sound pressure            | STD version (5) | dB(A)        | 59    | 59    | 59    | 61    | 62    |
| Weights                    | Transport weight          | Kg              | 1550         | 1787  | 1940  | 2550  | 3076  | 3520  |
|                            | Operating weight          | Kg              | 1534         | 1767  | 1920  | 2526  | 3048  | 3492  |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  | 602  |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 5260 | 5570 | 5650 | 6900 | 8080 | 8470 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2340 | 2340 | 2340 | 2340 | 2510 |

## DIMENSIONAL & CLEARANCE AREA

RTA-M/K/ECO 181÷301

800 | 800 | 800 | 1700

RTA-M/K/ECO 392÷602

800 | 1700 | 1000 | 1700



## NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  2. Excluded the power absorbed by radial fans.
  3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  4. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. 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 indicated on the technical book.

FROM 16 TON TO 55 TON.  
FROM 57 KW TO 192 KW.

# RTA-M/K/ECO/REC-FX 181÷602

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS, ECONOMIZER AND CROSS-FLOW HEAT RECOVERY.**



The double skin packaged Roof Top air conditioning units of the **TOP AIR** series, with R410A refrigerant, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in cooling-only and reversible heat pump version.

They have an high level of modularity and adaptability to every plant-engineering need: this unit features, in addition to the basic sections, an **ECONOMIZER** which is automatically controlled both in **FREE-COOLING** or **FREE-HEATING** and a **CROSS-FLOW HEAT RECOVERY** with max 25% of total air flow.

The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.



## VERSIONS

### RTA-M/K/ECO/REC-FX

Cooling only with economizer and cross flow heat recovery

### RTA-M/K/WP/ECO/REC-FX

Heat pump with economizer and cross flow heat recovery

## ECO/REC-FX

ECO/REC-FX - Cross flow heat recovery. Further to components of the basic section, includes: static recovery device made of aluminium with moisture drain pan; flat filters inspect able through hinged door and dampers; supply air damper; 2 free-cooling dampers. Also the adjustment of this section is included into the unit control.

## COMPLEMENTARY SECTIONS

UMI Section with preparation for humidifier

## FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). Frame made of extruded aluminium alloy profiles connected by 3 way joints. Assembling of the base to the frame is of dual support and grants the walking on the base panels installation without sticking out screws. 50mm thick sandwich panels made of prepainted steel sheet and fastened with a snap-in system without screws; water proofing granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake centrifugal fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| SL   | Unit silencement                                  |
| CT   | Condensing control down to 0 °C                   |
| FT   | Filter section efficiency F6-F7-F8                |
| FT/R | Rigid bag filter F6-F7-F8 effic.                  |
| WS2  | 2-row water coil for heating with three way valve |
| EH   | Integrated electrical coils                       |
| CH   | Enthalpic control (ECO only)                      |

|    |   |
|----|---|
| SQ | Air quality sensor                      |
| PF | Differential pressostat filters control |
| CP | Potential free contacts                 |
| RP | Metallic guards for condenser           |

### LOOSE ACCESSORIES

|    |                         |
|----|-------------------------|
| MN | High and low gauges     |
| CS | Shutter protection caps |
| CR | Remote display          |
| IS | RS 485 serial interface |
| AG | Rubber shock absorbers  |



# RTA-M/K/ECO/REC-FX 181÷602

| MODEL                      |                           |         | 181          | 241  | 301   | 392   | 522   | 602   |
|----------------------------|---------------------------|---------|--------------|------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.2         | 21.7 | 27.3  | 35.8  | 43.5  | 54.6  |
|                            |                           | kW      | 57.1         | 76.2 | 96.0  | 126   | 153   | 192   |
|                            | Absorbed power (1),(2)    | kW      | 20.9         | 24.3 | 28.6  | 38.1  | 49.5  | 58.2  |
|                            |                           |         |              |      |       |       |       |       |
| Heating                    | Heating capacity (3)      | TON     | 16.9         | 21.8 | 27.4  | 36.4  | 44.4  | 55.4  |
|                            |                           | kW      | 59.5         | 76.5 | 96.3  | 128   | 156   | 195   |
|                            | Absorbed power (2),(3)    | kW      | 18.0         | 19.9 | 24.1  | 33.8  | 40.5  | 50.8  |
|                            |                           |         |              |      |       |       |       |       |
| Air treatment section      | Air flow                  | cfm     | 5719         | 8684 | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s    | 2.7          | 4.1  | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG   | 1.00         | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
|                            |                           | Pa      | 250          | 250  | 250   | 250   | 250   | 250   |
|                            | Fans                      | n°      | 1            | 1    | 1     | 1     | 1     | 1     |
|                            |                           |         |              |      |       |       |       |       |
| Air intake section         | Air flow                  | cfm     | 5719         | 8684 | 10378 | 13343 | 17368 | 20545 |
|                            |                           | m³/s    | 2.7          | 4.1  | 4.9   | 6.3   | 8.2   | 9.7   |
|                            | Available static pressure | in WG   | 0.40         | 0.40 | 0.40  | 0.40  | 0.40  | 0.40  |
|                            |                           | Pa      | 100          | 100  | 100   | 100   | 100   | 100   |
|                            | Fans                      | n°      | 1            | 1    | 1     | 1     | 1     | 1     |
|                            |                           |         |              |      |       |       |       |       |
| Condensing section         | Compressors               | n°      | 1            | 1    | 1     | 2     | 2     | 2     |
|                            |                           |         |              |      |       |       |       |       |
|                            | Refrigerant circuits      | n°      | 1            | 1    | 1     | 1     | 1     | 1     |
|                            |                           |         |              |      |       |       |       |       |
|                            | Capacity steps            | n°      | 1            | 1    | 1     | 1     | 1     | 1     |
|                            |                           |         |              |      |       |       |       |       |
| Electrical characteristics | Power supply              | V/Ph/Hz | 400 / 3 / 50 |      |       |       |       |       |
|                            |                           |         |              |      |       |       |       |       |
|                            | Max. running current      | A       | 44           | 53   | 68    | 87    | 105   | 136   |
|                            |                           |         |              |      |       |       |       |       |
|                            | Inrush current            | A       | 220          | 265  | 329   | 264   | 318   | 397   |
|                            |                           |         |              |      |       |       |       |       |
| Hot water coil             | Heating capacity (4)      | TON     | 24.2         | 35.5 | 42.7  | 56.9  | 71.1  | 85.3  |
|                            |                           | kW      | 85           | 125  | 150   | 200   | 250   | 300   |
|                            | Air pressure drops        | in WG   | 0.12         | 0.12 | 0.12  | 0.14  | 0.14  | 0.14  |
|                            |                           | Pa      | 30           | 31   | 31    | 36    | 35    | 35    |
|                            | Water flow (4)            | gpm     | 32.2         | 47.4 | 56.7  | 75.8  | 94.6  | 114   |
|                            |                           | l/s     | 2.03         | 2.99 | 3.58  | 4.78  | 5.97  | 7.17  |
| Electric heating           | Water pressure drops      | ft WG   | 15.0         | 16.0 | 16.3  | 17.0  | 17.7  | 19.0  |
|                            |                           | kPa     | 45           | 48   | 49    | 51    | 53    | 57    |
|                            | Water connections         | "G      | 1"½          | 1"½  | 1"½   | 2"    | 2"    | 2"½   |
|                            |                           |         |              |      |       |       |       |       |
|                            | Power supply              | V/Ph/Hz | 400 / 3 / 50 |      |       |       |       |       |
|                            |                           |         |              |      |       |       |       |       |
| Sound pressure             | Heating capacity          | kW      | 15           | 27   | 27    | 41    | 41    | 48    |
|                            |                           |         |              |      |       |       |       |       |
|                            | Max absorbed current      | A       | 22           | 39   | 39    | 59    | 59    | 69    |
|                            |                           |         |              |      |       |       |       |       |
| Weights                    | Steps                     | n°      | 2            | 2    | 2     | 4     | 4     | 4     |
|                            |                           |         |              |      |       |       |       |       |
| STD version (5)            | dB(A)                     |         | 59           | 59   | 59    | 61    | 62    | 62    |
|                            |                           |         |              |      |       |       |       |       |
| Transport weight           | Kg                        |         | 1695         | 1967 | 2120  | 2790  | 3316  | 3740  |
|                            |                           |         |              |      |       |       |       |       |
| Operating weight           | Kg                        |         | 1675         | 1657 | 2100  | 2766  | 3288  | 3708  |
|                            |                           |         |              |      |       |       |       |       |

| DIMENSIONS |     |    | 181  | 241  | 301  | 392  | 522  | 602  |
|------------|-----|----|------|------|------|------|------|------|
| L          | STD | mm | 6060 | 6270 | 6450 | 7870 | 9120 | 9380 |
| W          | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H          | STD | mm | 2100 | 2340 | 2340 | 2340 | 2340 | 2510 |

## DIMENSIONAL & CLEARANCE AREA

RTA-M/K/ECO/REC-FX 181÷301

800 | 800 | 800 | 1700

RTA-M/K/ECO/REC-FX 392÷602

800 | 1700 | 1000 | 1700



## NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  2. Excluded the power absorbed by radial fans.
  3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  4. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. 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 indicated on the technical book.

FROM 4 TON TO 54 TON.  
FROM 13 KW TO 191 KW.

## RTQXT-M/SZ/K 51÷804

**SINGLE SKIN PACKAGED ROOFTOP UNITS WITH SCROLL COMPRESSORS.**

**HIGH AMBIENT TEMPERATURE UP TO 52 °C**



The single skin packaged Rooftop air conditioning units of the **FLEXI AIR** series, with R410A refrigerant, can be connected to a duct network for air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial ambients such as food processing or preservation centres.

The RTQXT-M/SZ/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature**.

Equipped with radial fans, these units are available in cooling-only and reversible heat pump version.

FLEXI AIR is characterized by full installation flexibility: the airflow direction for both air delivery and intake can be adjusted directly onsite; air delivery and intake are foreseen both on the same side in order to keep the overall space at minimum.

The cabinet features a solid steel structure with zinc coated galvanized treatment.

**The units feature 380V power supply and 60Hz frequency.**



### VERSIONS

#### RTQXT-M/SZ/K

Cooling only

#### RTQXT-M/SZ/K/WP

Heat pump

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanized. Self-supporting galvanized steel frame further protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- R410A refrigerant.
- Electrical board includes: protection modules; thermal protection relays on compressors; thermo-contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### LOOSE ACCESSORIES

**ECO** Free-cooling economizer section with aluminium dampers managed by electrical motor. Microprocessor control for dampers' opening to manage supply, return and fresh air.

# RTQXT-M/SZ/K 51÷804

| MODEL                      |                           |         | 51           | 61   | 81   | 101  | 131  | 161  | 201   |
|----------------------------|---------------------------|---------|--------------|------|------|------|------|------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 3.2          | 4.0  | 4.9  | 6.5  | 8.1  | 9.8  | 12.2  |
|                            |                           | kW      | 11.4         | 14.2 | 17.2 | 22.8 | 28.6 | 34.3 | 42.8  |
|                            | Absorbed power (1),(2)    | kW      | 4.8          | 6.0  | 7.4  | 9.3  | 12.0 | 15.4 | 18.5  |
|                            |                           | kW      | 3.6          | 4.5  | 5.4  | 7.2  | 9.0  | 10.8 | 13.5  |
| Heating                    | Cooling capacity (3)      | TON     | 12.8         | 15.8 | 19.1 | 25.3 | 31.7 | 38.0 | 47.5  |
|                            |                           | kW      | 3.9          | 4.8  | 6.0  | 7.6  | 9.9  | 12.7 | 15.2  |
|                            | Heating capacity (4)      | TON     | 3.7          | 4.6  | 5.5  | 7.3  | 9.1  | 11.0 | 13.7  |
|                            |                           | kW      | 12.9         | 16.2 | 19.4 | 25.8 | 32.1 | 38.6 | 48.1  |
| Air treatment section      | Absorbed power (2),(4)    | kW      | 4.0          | 5.0  | 6.1  | 7.7  | 10.0 | 12.9 | 15.5  |
|                            |                           | kW      | 1271         | 1694 | 1906 | 2753 | 3389 | 4024 | 5083  |
|                            | Air flow                  | m³/s    | 0.6          | 0.8  | 0.9  | 1.3  | 1.6  | 1.9  | 2.4   |
|                            |                           | in WG   | 0.4          | 0.4  | 0.4  | 0.6  | 0.6  | 0.6  | 0.6   |
| Condensing section         | Available static pressure | Pa      | 100          | 100  | 100  | 150  | 150  | 150  | 150   |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Fans                      | G4      | G4           | G4   | G4   | G4   | G4   | G4   | G4    |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
| Electrical characteristics | Compressors               | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            |                           | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            | Capacity steps            | n°      | 1            | 1    | 1    | 1    | 1    | 1    | 1     |
|                            |                           | n°      | 2            | 2    | 2    | 1    | 1    | 1    | 2     |
| Sound pressure             | Air flow                  | cfm     | 2965         | 3812 | 3812 | 6142 | 7201 | 9531 | 12073 |
|                            |                           | m³/s    | 1.4          | 1.8  | 1.8  | 2.9  | 3.4  | 4.5  | 5.7   |
|                            | Power supply              | V/Ph/Hz | 380 / 3 / 60 |      |      |      |      |      |       |
|                            |                           | A       | 10           | 13   | 16   | 19   | 24   | 29   | 37    |
| Weights                    | Max. running current      | A       | 54           | 67   | 86   | 103  | 133  | 158  | 205   |
|                            |                           | A       | 52           | 54   | 54   | 55   | 59   | 60   | 60    |
|                            | STD version (5)           | dB(A)   | 52           | 54   | 54   | 55   | 59   | 60   | 60    |
|                            |                           | Kg      | 352          | 378  | 388  | 412  | 460  | 492  | 537   |
| Operating weight           | Transport weight          | Kg      | 342          | 368  | 378  | 402  | 450  | 482  | 527   |
|                            |                           | Kg      | 342          | 368  | 378  | 402  | 450  | 482  | 527   |

| MODEL                      |                           |         | 262          | 324   | 404   | 484   | 544   | 604   | 804   |
|----------------------------|---------------------------|---------|--------------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)      | TON     | 16.3         | 20.3  | 24.4  | 29.3  | 32.4  | 39.0  | 48.9  |
|                            |                           | kW      | 57.2         | 71.4  | 85.7  | 103   | 114   | 137   | 172   |
|                            | Absorbed power (1),(2)    | kW      | 24.0         | 30.5  | 37.4  | 43.2  | 47.8  | 61.5  | 74.7  |
|                            |                           | kW      | 18.0         | 22.5  | 27.0  | 32.4  | 36.1  | 43.2  | 54.2  |
| Heating                    | Cooling capacity (3)      | TON     | 63.4         | 79.2  | 95.1  | 114   | 127   | 152   | 191   |
|                            |                           | kW      | 19.5         | 23.8  | 30.4  | 35.0  | 38.8  | 49.8  | 61.0  |
|                            | Absorbed power (2),(3)    | kW      | 18.2         | 22.8  | 27.4  | 33.0  | 36.4  | 44.1  | 54.9  |
|                            |                           | kW      | 64.1         | 80.3  | 96.4  | 116   | 128   | 155   | 193   |
| Air treatment section      | Heating capacity (4)      | TON     | 19.8         | 26.5  | 31.0  | 35.6  | 39.6  | 50.7  | 61.9  |
|                            |                           | kW      | 6778         | 8260  | 9955  | 12073 | 13343 | 16097 | 19909 |
|                            | Air flow                  | cfm     | 3.2          | 3.9   | 4.7   | 5.7   | 6.3   | 7.6   | 9.4   |
|                            |                           | m³/s    | 1.2          | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| Condensing section         | Available static pressure | Pa      | 300          | 300   | 300   | 300   | 300   | 300   | 300   |
|                            |                           | n°      | 1            | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Fans                      | G4      | G4           | G4    | G4    | G4    | G4    | G4    | G4    |
|                            |                           | n°      | 2            | 4     | 4     | 4     | 4     | 4     | 4     |
| Electrical characteristics | Compressors               | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            |                           | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps            | n°      | 2            | 2     | 2     | 2     | 2     | 2     | 2     |
|                            |                           | n°      | 2            | 2     | 2     | 4     | 4     | 4     | 4     |
| Sound pressure             | Air flow                  | cfm     | 14614        | 20333 | 20333 | 23933 | 28805 | 38548 | 38548 |
|                            |                           | m³/s    | 6.9          | 9.6   | 9.6   | 11.3  | 13.6  | 18.2  | 18.2  |
|                            | Power supply              | V/Ph/Hz | 380 / 3 / 60 |       |       |       |       |       |       |
|                            |                           | A       | 50           | 59    | 76    | 89    | 99    | 123   | 150   |
| Weights                    | Max. running current      | A       | 157          | 185   | 241   | 282   | 201   | 242   | 311   |
|                            |                           | A       | 60           | 62    | 62    | 61    | 62    | 62    | 62    |
|                            | STD version (5)           | dB(A)   | 60           | 62    | 62    | 61    | 62    | 62    | 62    |
|                            |                           | Kg      | 565          | 589   | 627   | 738   | 775   | 845   | 894   |
| Operating weight           | Transport weight          | Kg      | 555          | 579   | 617   | 728   | 765   | 835   | 884   |
|                            |                           | Kg      | 555          | 579   | 617   | 728   | 765   | 835   | 884   |

| DIMENSIONS |     |    | 51   | 61   | 81   | 101  | 131  | 161  | 201  | 262  | 324  | 404  | 484  | 544  | 604  | 804  |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1200 | 1200 | 1350 | 1600 | 1700 | 1900 | 2140 | 1900 | 2190 | 2150 | 3040 | 3175 | 3215 | 3650 |
| W          | STD | mm | 1200 | 1200 | 1300 | 1200 | 1450 | 1450 | 1750 | 1700 | 1850 | 1850 | 2100 | 2250 | 2250 | 2250 |
| H          | STD | mm | 950  | 1000 | 1000 | 1250 | 1250 | 1250 | 1250 | 1750 | 1750 | 2050 | 2050 | 2050 | 2330 | 2330 |

## DIMENSIONAL & CLEARANCE AREA

RTQ-MXT/SZ/K 51÷804

1000 | 1000 | 1000 | 1000



## NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 46 °C.
  2. Excluded the power absorbed by radial fans.
  3. Evaporator inlet air temperature 27 °C d.b./19 °C w.b., ambient air temperature 35 °C.
  4. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  5. 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 indicated on the technical book.



# CHAPTER 4

FAN COILS

## UNIT

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### 50 HZ

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### 60 HZ

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[DBW-M/SZ 643÷2256](#) 136 - 137

FROM 0.6 TON TO 3.1 TON.  
FROM 2.0 KW TO 10.7 KW.

## FBW-M 23÷123

**CEILING CONCEALED FAN COILS, BLOWTHROUGH.**



The Blow Through ceiling concealed Fan Coils of the FBW-M series are designed for installation in domestic ambients or in services sector including offices, hotels, restaurants, gyms and shops.

If connected to a system equipped with a water chiller, FBW-M generates cool air silently and with instantaneous reaction. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

### VERSIONS

#### **FBW-M**

Built-in horizontal unit rear inlet and horizontal delivery

#### **FBW-M/AP**

Built-in horizontal unit rear inlet and horizontal delivery. High ESP fans

### FEATURES

- Structure made of galvanized steel sheet complete with heat/sound insulation, filter and natural discharge condensation tray.
- Radial fan type directly coupled to a 4-speed single phase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.
- Standard water connections on left side based on air flow direction, they are easily converted to opposite side directly on-site without requiring additional parts.

### ACCESSORIES

#### **LOOSE ACCESSORIES**

- C Auxiliary tray
- V2 3-way on/off valve for system with 2 pipes

# FBW-M 23÷123

# 50 Hz

| MODEL                      |                               |         | 23                | 33          | 43          | 63          | 83          | 103         | 123         |
|----------------------------|-------------------------------|---------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Cooling                    | Total cooling capacity (1)    | TON     | 0.58              | 0.83        | 1.12        | 1.63        | 2.06        | 2.41        | 3.05        |
|                            |                               | kW      | 2.04              | 2.92        | 3.95        | 5.75        | 7.26        | 8.48        | 10.74       |
|                            | Sensible cooling capacity (1) | TON     | 0.42              | 0.60        | 0.80        | 1.17        | 1.50        | 1.76        | 2.22        |
|                            |                               | kW      | 1.46              | 2.11        | 2.83        | 4.12        | 5.29        | 6.20        | 7.81        |
|                            | Water flow (1)                | gpm     | 1.5               | 2.2         | 3.0         | 4.4         | 5.5         | 6.4         | 8.1         |
|                            |                               | l/h     | 351               | 502         | 679         | 989         | 1249        | 1459        | 1847        |
| Heating                    | Pressure drops (1)            | ft WG   | 4.0               | 3.3         | 6.0         | 14.0        | 3.7         | 5.0         | 9.0         |
|                            |                               | kPa     | 12                | 10          | 18          | 42          | 11          | 15          | 27          |
|                            | Heating capacity (2)          | TON     | 1.15              | 1.67        | 2.22        | 3.24        | 4.21        | 4.92        | 6.15        |
|                            |                               | kW      | 4.05              | 5.87        | 7.81        | 11.39       | 14.81       | 17.30       | 21.62       |
|                            | Water flow (2)                | gpm     | 1.5               | 2.2         | 3.0         | 4.3         | 5.6         | 6.6         | 8.2         |
|                            |                               | l/h     | 348               | 505         | 672         | 980         | 1274        | 1488        | 1859        |
| Air flow                   | Pressure drops (2)            | ft WG   | 3.3               | 4.7         | 4.7         | 10.3        | 3.0         | 4.0         | 7.0         |
|                            |                               | kPa     | 10                | 14          | 14          | 31          | 9           | 12          | 21          |
|                            | Max.                          | cfm     | 206               | 300         | 412         | 600         | 800         | 965         | 1201        |
|                            |                               | m³/h    | 350               | 510         | 700         | 1020        | 1360        | 1640        | 2040        |
|                            | Med.                          | cfm     | 171               | 230         | 288         | 483         | 647         | 800         | 1024        |
|                            |                               | m³/h    | 290               | 390         | 490         | 820         | 1100        | 1360        | 1740        |
| Available static pressure  | Min.                          | cfm     | 118               | 165         | 206         | 418         | 500         | 647         | 889         |
|                            |                               | m³/h    | 200               | 280         | 350         | 710         | 850         | 1100        | 1510        |
|                            | STD                           | in WG   | 0.00 / 0.12       | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 |
|                            |                               | Pa      | 0 / 30            | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      |
|                            | AP                            | in WG   | 0.24 / 0.32       | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 |
|                            |                               | Pa      | 60 / 80           | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     |
| Sound pressure             | Max. (3)                      | dB(A)   | 32                | 36          | 38          | 43          | 41          | 42          | 43          |
|                            | Med. (3)                      | dB(A)   | 31                | 31          | 34          | 38          | 38          | 37          | 38          |
|                            | Min. (3)                      | dB(A)   | 25                | 28          | 32          | 31          | 33          | 33          | 33          |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 50 - 60 |             |             |             |             |             |             |
|                            | Max absorbed power            | kW      | 0.053             | 0.073       | 0.097       | 0.157       | 0.215       | 0.237       | 0.285       |
| Weights                    | Transport weight              | Kg      | 17                | 20          | 24          | 28          | 39          | 42          | 44          |
|                            | Operating weight              | Kg      | 15                | 18          | 22          | 26          | 37          | 40          | 42          |

# FBW-M 23÷123

# 60 Hz

| MODEL                      |                               |         | 23                | 33          | 43          | 63          | 83          | 103         | 123         |
|----------------------------|-------------------------------|---------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Cooling                    | Total cooling capacity (1)    | TON     | 0.66              | 0.95        | 1.28        | 1.87        | 2.35        | 2.75        | 3.48        |
|                            |                               | kW      | 2.33              | 3.33        | 4.50        | 6.56        | 8.28        | 9.67        | 12.24       |
|                            | Sensible cooling capacity (1) | TON     | 0.47              | 0.69        | 0.92        | 1.34        | 1.71        | 2.01        | 2.53        |
|                            |                               | kW      | 1.66              | 2.41        | 3.23        | 4.70        | 6.03        | 7.07        | 8.90        |
|                            | Water flow (1)                | gpm     | 1.8               | 2.5         | 3.4         | 5.0         | 6.3         | 7.3         | 9.3         |
|                            |                               | l/h     | 401               | 573         | 774         | 1128        | 1424        | 1663        | 2105        |
| Heating                    | Pressure drops (1)            | ft WG   | 5.3               | 4.3         | 7.7         | 18.3        | 4.7         | 6.3         | 11.7        |
|                            |                               | kPa     | 16                | 13          | 23          | 55          | 14          | 19          | 35          |
|                            | Heating capacity (2)          | TON     | 1.31              | 1.90        | 2.53        | 3.69        | 4.80        | 5.61        | 7.01        |
|                            |                               | kW      | 4.62              | 6.69        | 8.90        | 12.98       | 16.88       | 19.72       | 24.65       |
|                            | Water flow (2)                | gpm     | 1.7               | 2.5         | 3.4         | 4.9         | 6.4         | 7.5         | 9.3         |
|                            |                               | l/h     | 397               | 575         | 765         | 1116        | 1452        | 1696        | 2120        |
| Air flow                   | Pressure drops (2)            | ft WG   | 4.3               | 6.0         | 6.0         | 13.3        | 4.0         | 5.3         | 9.0         |
|                            |                               | kPa     | 13                | 18          | 18          | 40          | 12          | 16          | 27          |
|                            | Max.                          | cfm     | 247               | 360         | 494         | 720         | 961         | 1158        | 1441        |
|                            |                               | m³/h    | 420               | 612         | 840         | 1224        | 1632        | 1968        | 2448        |
|                            | Med.                          | cfm     | 205               | 275         | 346         | 579         | 777         | 961         | 1229        |
|                            |                               | m³/h    | 348               | 468         | 588         | 984         | 1320        | 1632        | 2088        |
| Available static pressure  | Min.                          | cfm     | 141               | 198         | 247         | 501         | 600         | 777         | 1067        |
|                            |                               | m³/h    | 240               | 336         | 420         | 852         | 1020        | 1320        | 1812        |
|                            | STD                           | in WG   | 0.00 / 0.12       | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 |
|                            |                               | Pa      | 0 / 30            | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      |
|                            | AP                            | in WG   | 0.24 / 0.32       | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 |
|                            |                               | Pa      | 60 / 80           | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     |
| Sound pressure             | Max. (3)                      | dB(A)   | 33                | 37          | 38          | 44          | 41          | 43          | 44          |
|                            | Med. (3)                      | dB(A)   | 31                | 31          | 35          | 38          | 39          | 37          | 39          |
|                            | Min. (3)                      | dB(A)   | 26                | 29          | 33          | 32          | 33          | 34          | 33          |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 50 - 60 |             |             |             |             |             |             |
|                            | Max absorbed power            | kW      | 0.064             | 0.088       | 0.116       | 0.188       | 0.258       | 0.284       | 0.342       |
| Weights                    | Transport weight              | Kg      | 17                | 20          | 24          | 28          | 39          | 42          | 44          |
|                            | Operating weight              | Kg      | 15                | 18          | 22          | 26          | 37          | 40          | 42          |

| DIMENSIONS |     |    | 23  | 33  | 43   | 63   | 83   | 103  | 123  |
|------------|-----|----|-----|-----|------|------|------|------|------|
| L          | STD | mm | 740 | 910 | 1040 | 1240 | 1490 | 1590 | 1850 |
| W          | STD | mm | 480 | 480 | 480  | 480  | 480  | 480  | 480  |
| H          | STD | mm | 260 | 260 | 260  | 260  | 260  | 260  | 260  |

## DIMENSIONAL & CLEARANCE AREA

FBW-M 23÷123

200 | 400



Electrical board side

## NOTES

1. Ambient air temperature 27 °C d.b. / 19 °C w.b., water temperature 7/12 °C.
2. Ambient air temperature 20 °C d.b., water temperature 70/60 °C.
3. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.



FROM 0.6 TON TO 3.1 TON.  
FROM 2.1 KW TO 10.9 KW.

## FDW-M 23÷123

CEILING CONCEALED FAN COILS, DRAW THROUGH.



The Draw Through ceiling concealed Fan Coils of the FDW-M series are designed for installation in domestic ambients or in services sector including offices, hotels, restaurants, gyms and shops.

If connected to a system equipped with a water chiller, FDW-M generates cool air silently and with instantaneous reaction. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

### VERSIONS

#### FDW-M

Built-in horizontal unit rear inlet and horizontal delivery

#### FDW-M/AP

Built-in horizontal unit rear inlet and horizontal delivery. High ESP fans

### FEATURES

- Structure made of galvanized steel sheet complete with heat/sound insulation, filter and natural discharge condensation tray.
- Radial fan type directly coupled to a 4-speed single phase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.
- Standard water connections on left side based on air flow direction, they are easily converted to opposite side directly on-site without requiring additional parts.

### ACCESSORIES

#### LOOSE ACCESSORIES

- C Auxiliary tray
- V2 3-way on/off valve for system with 2 pipes

## FDW-M 23÷123

## 50 Hz

| MODEL                      |                               |         | 23                | 33          | 43          | 63          | 83          | 103         | 123         |
|----------------------------|-------------------------------|---------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Cooling                    | Total cooling capacity (1)    | TON     | 0.59              | 0.84        | 1.15        | 1.66        | 2.08        | 2.46        | 3.10        |
|                            |                               | kW      | 2.08              | 2.95        | 4.05        | 5.84        | 7.30        | 8.65        | 10.90       |
|                            | Sensible cooling capacity (1) | TON     | 0.42              | 0.61        | 0.82        | 1.19        | 1.51        | 1.80        | 2.25        |
|                            |                               | kW      | 1.49              | 2.13        | 2.90        | 4.18        | 5.32        | 6.33        | 7.93        |
|                            | Water flow (1)                | gpm     | 1.6               | 2.2         | 3.1         | 4.4         | 5.5         | 6.6         | 8.3         |
|                            |                               | l/h     | 358               | 507         | 697         | 1004        | 1256        | 1488        | 1875        |
| Heating                    | Pressure drops (1)            | ft WG   | 4.3               | 3.3         | 6.3         | 14.3        | 3.7         | 5.3         | 9.3         |
|                            |                               | kPa     | 13                | 10          | 19          | 43          | 11          | 16          | 28          |
|                            | Heating capacity (2)          | TON     | 1.17              | 1.69        | 2.28        | 3.29        | 4.23        | 5.02        | 6.24        |
|                            |                               | kW      | 4.13              | 5.93        | 8.01        | 11.56       | 14.88       | 17.65       | 21.95       |
|                            | Water flow (2)                | gpm     | 1.6               | 2.2         | 3.0         | 4.4         | 5.6         | 6.7         | 8.3         |
|                            |                               | l/h     | 355               | 510         | 689         | 994         | 1280        | 1518        | 1888        |
| Air flow                   | Pressure drops (2)            | ft WG   | 3.3               | 4.7         | 5.0         | 10.7        | 3.0         | 4.3         | 7.3         |
|                            |                               | kPa     | 10                | 14          | 15          | 32          | 9           | 13          | 22          |
|                            | Max.                          | cfm     | 206               | 300         | 412         | 600         | 800         | 965         | 1201        |
|                            |                               | m³/h    | 350               | 510         | 700         | 1020        | 1360        | 1640        | 2040        |
|                            | Med.                          | cfm     | 171               | 230         | 288         | 483         | 647         | 800         | 1024        |
|                            |                               | m³/h    | 290               | 390         | 490         | 820         | 1100        | 1360        | 1740        |
| Available static pressure  | Min.                          | cfm     | 118               | 165         | 206         | 418         | 500         | 647         | 889         |
|                            |                               | m³/h    | 200               | 280         | 350         | 710         | 850         | 1100        | 1510        |
|                            | STD                           | in WG   | 0.00 / 0.12       | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 |
|                            |                               | Pa      | 0 / 30            | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      |
|                            | AP                            | in WG   | 0.24 / 0.32       | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 |
|                            |                               | Pa      | 60 / 80           | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     |
| Sound pressure             | Max. (3)                      | dB(A)   | 33                | 37          | 38          | 43          | 41          | 43          | 44          |
|                            | Med. (3)                      | dB(A)   | 31                | 31          | 35          | 39          | 38          | 37          | 39          |
|                            | Min. (3)                      | dB(A)   | 26                | 29          | 33          | 32          | 33          | 34          | 33          |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 50 - 60 |             |             |             |             |             |             |
|                            | Max absorbed power            | kW      | 0.053             | 0.073       | 0.097       | 0.157       | 0.215       | 0.237       | 0.285       |
| Water connections          |                               | "G      | 3/4"              | 3/4"        | 3/4"        | 3/4"        | 3/4"        | 3/4"        | 3/4"        |
| Weights                    | Transport weight              | Kg      | 19                | 22          | 26          | 30          | 41          | 44          | 46          |
|                            | Operating weight              | Kg      | 17                | 20          | 24          | 28          | 39          | 42          | 44          |

## FDW-M 23÷123

## 60 Hz

| MODEL                      |                               |         | 23                | 33          | 43          | 63          | 83          | 103         | 123         |
|----------------------------|-------------------------------|---------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Cooling                    | Total cooling capacity (1)    | TON     | 0.67              | 0.96        | 1.31        | 1.89        | 2.37        | 2.80        | 3.53        |
|                            |                               | kW      | 2.37              | 3.36        | 4.62        | 6.66        | 8.32        | 9.86        | 12.43       |
|                            | Sensible cooling capacity (1) | TON     | 0.48              | 0.69        | 0.94        | 1.36        | 1.72        | 2.05        | 2.57        |
|                            |                               | kW      | 1.70              | 2.43        | 3.31        | 4.77        | 6.06        | 7.22        | 9.04        |
|                            | Water flow (1)                | gpm     | 1.8               | 2.5         | 3.5         | 5.0         | 6.3         | 7.5         | 9.4         |
|                            |                               | l/h     | 408               | 578         | 795         | 1146        | 1431        | 1696        | 2138        |
| Heating                    | Pressure drops (1)            | ft WG   | 5.7               | 4.3         | 8.3         | 18.7        | 4.7         | 7.0         | 12.0        |
|                            |                               | kPa     | 17                | 13          | 25          | 56          | 14          | 21          | 36          |
|                            | Heating capacity (2)          | TON     | 1.34              | 1.92        | 2.60        | 3.75        | 4.82        | 5.72        | 7.11        |
|                            |                               | kW      | 4.71              | 6.76        | 9.13        | 13.18       | 16.96       | 20.12       | 25.02       |
|                            | Water flow (2)                | gpm     | 1.8               | 2.6         | 3.5         | 5.0         | 6.4         | 7.6         | 9.5         |
|                            |                               | l/h     | 405               | 581         | 785         | 1133        | 1459        | 1730        | 2152        |
| Air flow                   | Pressure drops (2)            | ft WG   | 4.3               | 6.0         | 6.3         | 14.0        | 4.0         | 5.7         | 9.7         |
|                            |                               | kPa     | 13                | 18          | 19          | 42          | 12          | 17          | 29          |
|                            | Max.                          | cfm     | 247               | 360         | 494         | 720         | 961         | 1158        | 1441        |
|                            |                               | m³/h    | 420               | 612         | 840         | 1224        | 1632        | 1968        | 2448        |
|                            | Med.                          | cfm     | 205               | 275         | 346         | 579         | 777         | 961         | 1229        |
|                            |                               | m³/h    | 348               | 468         | 588         | 984         | 1320        | 1632        | 2088        |
| Available static pressure  | Min.                          | cfm     | 141               | 198         | 247         | 501         | 600         | 777         | 1067        |
|                            |                               | m³/h    | 240               | 336         | 420         | 852         | 1020        | 1320        | 1812        |
|                            | STD                           | in WG   | 0.00 / 0.12       | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 | 0.00 / 0.12 |
|                            |                               | Pa      | 0 / 30            | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      | 0 / 30      |
|                            | AP                            | in WG   | 0.24 / 0.32       | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 | 0.24 / 0.32 |
|                            |                               | Pa      | 60 / 80           | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     | 60 / 80     |
| Sound pressure             | Max. (3)                      | dB(A)   | 34                | 38          | 38          | 44          | 41          | 44          | 45          |
|                            | Med. (3)                      | dB(A)   | 31                | 31          | 36          | 39          | 39          | 37          | 40          |
|                            | Min. (3)                      | dB(A)   | 27                | 30          | 34          | 33          | 33          | 35          | 33          |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 50 - 60 |             |             |             |             |             |             |
|                            | Max absorbed power            | kW      | 0.064             | 0.088       | 0.116       | 0.188       | 0.258       | 0.284       | 0.342       |
| Water connections          |                               | "G      | 3/4"              | 3/4"        | 3/4"        | 3/4"        | 3/4"        | 3/4"        | 3/4"        |
| Weights                    | Transport weight              | Kg      | 19                | 22          | 26          | 30          | 41          | 44          | 46          |
|                            | Operating weight              | Kg      | 17                | 20          | 26          | 28          | 39          | 42          | 44          |

| DIMENSIONS |     |    | 23  | 33  | 43  | 63   | 83   | 103  | 123  |
|------------|-----|----|-----|-----|-----|------|------|------|------|
| L          | STD | mm | 795 | 795 | 995 | 1105 | 1395 | 1525 | 1755 |
| W          | STD | mm | 330 | 330 | 330 | 330  | 330  | 330  | 330  |
| H          | STD | mm | 260 | 260 | 260 | 260  | 260  | 260  | 260  |

## DIMENSIONAL &amp; CLEARANCE AREA

FDW-M 23÷123

200 | 400



Electrical board side

## NOTES

1. Ambient air temperature 27 °C d.b. / 19 °C w.b., water temperature 7/12 °C.
2. Ambient air temperature 20 °C d.b., water temperature 70/60 °C.
3. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.

FROM 3.3 TON TO 13.8 TON.  
FROM 11.7 KW TO 48.7 KW.

## DBW-M 133÷464

**DUCTED BLOWER FAN COILS.**



The Ducted Blower Fan Coils of the DBW-M series are designed for installation in wide ambients as office buildings, hotels, restaurants, sport structures and shopping malls.

If connected to a system equipped with a water chiller, DBW-M generates cool or warm air silently and with instantaneous reaction. The range includes 8 models with cooling capacities from 3 to 14 TON which are characterized by high static pressure (up to 0,6 inWG) to satisfy the needs of wide installations where external unit is far from the internal ambients or there are multiple far ambients to be cooled simultaneously.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

### VERSIONS

#### DBW-M

Horizontal unit rear inlet and horizontal delivery

### FEATURES

- Structure made of galvanized steel sheet with electrostatic powder paint complete with polyethylene for thermal and acoustical purpose.
- G3 standard cleanable filter.
- Radial fan type, directly coupled with single-phase 3-speed electric motor or to 3-phase motors by V belt and variable pulley, depending on the model.
- Heat exchanger coil with copper pipes and aluminium fins with manual air vent and drain pan.
- Standard water connections on left side based on air flow direction. On request units can provided with water connections on right side.

## DBW-M 133÷464

| MODEL                      |                               |         | 133          | 164  | 203     | 253     | 324     | 423          | 424    | 464    |
|----------------------------|-------------------------------|---------|--------------|------|---------|---------|---------|--------------|--------|--------|
| Cooling                    | Total cooling capacity (1)    | TON     | 3.3          | 4.3  | 4.7     | 5.5     | 9.0     | 10.6         | 12.5   | 13.8   |
|                            |                               | kW      | 11.7         | 15.0 | 16.4    | 19.3    | 31.7    | 37.2         | 44.0   | 48.7   |
|                            | Sensible cooling capacity (1) | TON     | 2.3          | 3.0  | 3.4     | 4.1     | 6.3     | 7.3          | 8.6    | 9.4    |
|                            |                               | kW      | 7.9          | 10.6 | 12.0    | 14.4    | 22.3    | 25.8         | 30.2   | 33.1   |
|                            | Water flow (1)                | gpm     | 8.9          | 11.3 | 12.4    | 14.6    | 24.0    | 28.2         | 33.3   | 36.8   |
|                            |                               | l/h     | 2016         | 2571 | 2823    | 3326    | 5444    | 6402         | 7561   | 8368   |
|                            | Pressure drops (1)            | ft WG   | 4.0          | 1.0  | 0.7     | 1.0     | 2.5     | 9.7          | 7.3    | 9.1    |
|                            |                               | kPa     | 12           | 3    | 2       | 3       | 8       | 29           | 22     | 27     |
| Heating                    | Heating capacity (2)          | TON     | 4.2          | 5.7  | 6.9     | 8.1     | 11.8    | 13.9         | 15.8   | 17.6   |
|                            |                               | kW      | 14.9         | 19.9 | 24.1    | 28.5    | 41.5    | 48.9         | 55.7   | 61.8   |
|                            | Water flow (2)                | gpm     | 8.9          | 11.3 | 12.4    | 14.6    | 24.0    | 28.2         | 33.3   | 36.8   |
|                            |                               | l/h     | 2016         | 2571 | 2823    | 3326    | 5444    | 6402         | 7561   | 8368   |
| Air flow                   | Max.                          | cfm     | 1250         | 1600 | 2000    | 2500    | 3200    | 4200         | 4200   | 4600   |
|                            |                               | m³/h    | 2122         | 2716 | 3396    | 4244    | 5433    | 7131         | 7131   | 7810   |
|                            | Med.                          | cfm     | 1100         | 1400 | 1800    | 2200    | 2900    | ---          | ---    | ---    |
|                            |                               | m³/h    | 1868         | 2377 | 3056    | 3735    | 4924    | ---          | ---    | ---    |
|                            | Min.                          | cfm     | 900          | 1250 | 1400    | 1600    | 2600    | ---          | ---    | ---    |
|                            |                               | m³/h    | 1528         | 2122 | 2377    | 2716    | 4414    | ---          | ---    | ---    |
| Available static pressure  |                               | in WG   | 0.40         | 0.40 | 0.40    | 0.40    | 0.40    | 0.60         | 0.60   | 0.60   |
|                            |                               | Pa      | 100          | 100  | 100     | 100     | 100     | 150          | 150    | 150    |
| Sound pressure             | Max. (3)                      | dB(A)   | 52           | 52   | 55      | 56      | 61      | 67           | 67     | 68     |
|                            | Med. (3)                      | dB(A)   | 49           | 49   | 51      | 52      | 58      | ---          | ---    | ---    |
|                            | Min. (3)                      | dB(A)   | 40           | 40   | 43      | 44      | 49      | ---          | ---    | ---    |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 50 |      |         |         |         | 400 / 3 / 50 |        |        |
|                            | Max absorbed power            | kW      | 0.4          | 0.8  | 2 x 0.4 | 2 x 0.4 | 2 x 0.8 | 1.9          | 1.9    | 1.9    |
| Water connections          |                               | inch    | 3/4"         | 3/4" | 3/4"    | 1"      | 1"      | 1 1/4"       | 1 1/4" | 1 1/4" |
| Weights                    | Transport weight              | Kg      | 46           | 50   | 75      | 86      | 90      | 130          | 139    | 139    |
|                            | Operating weight              | Kg      | 44           | 48   | 73      | 84      | 88      | 128          | 137    | 137    |

| DIMENSIONS |     |    | 133 | 164 | 203  | 253  | 324  | 423  | 424  | 464  |
|------------|-----|----|-----|-----|------|------|------|------|------|------|
| L          | STD | mm | 855 | 855 | 1495 | 1495 | 1495 | 1630 | 1630 | 1630 |
| W          | STD | mm | 705 | 705 | 705  | 705  | 705  | 975  | 975  | 975  |
| H          | STD | mm | 565 | 565 | 565  | 565  | 565  | 785  | 785  | 785  |

### DIMENSIONAL & CLEARANCE AREA

DBW-M 133÷464

800 | 800 | 800



Electrical board side

### NOTES

1. Ambient air temperature 27 °C d.b./ 19 °C w.b., water temperature 7/12 °C.
2. Ambient air temperature 20 °C d.b., water temperature 50 °C, same water flow as for cooling.
3. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.

FROM 15.0 TON TO 77.8 TON.  
FROM 52.8 KW TO 274 KW.

## DBW-M 643÷2256

**DUCTED BLOWER FAN COILS.**



The Ducted Blower Fan Coils of the DBW-M series are designed for installation in extra wide ambients as big office buildings, hotels, restaurants, sport structures and shopping malls.

If connected to a system equipped with a water chiller, DBW-M generates cool air silently and with instantaneous reaction. The range includes 27 models with cooling capacities from 15 to 78 TON, characterized by high static pressure (up to 1,4 inWG) to satisfy the needs of extra wide installations where external unit is far from the internal ambients or there are multiple far ambients to be cooled simultaneously. Each model is available in versions with 3, 4 or 6 rows and features both horizontal and vertical air delivery to satisfy any Customer need.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

### VERSIONS

#### DBW-M

Horizontal unit rear inlet and horizontal delivery

### FEATURES

- Structure made of galvanized steel sheet with electrostatic powder paint complete with polyethylene for thermal and acoustical purpose.
- G3 standard cleanable filter.
- Radial fan type, statically and dynamically balanced to reduce vibration and noise to a minimum, directly coupled to 3-phase motors by V belt and variable pulley, installed on rubber shock absorbers.
- Heat exchanger coil with copper pipes and aluminium fins with manual air vent and drain pan.
- Units from size 643 to 646 come with standard horizontal air discharge and are convertible to vertical air discharge on site; sizes from 803 to 1204 come with standard vertical air discharge and are convertible to horizontal air discharge on site.

## DBW-M 643÷2256

| MODEL                      |                               |         | 643          | 644    | 646   | 803   | 804   | 806    | 903   | 904   | 906    | 1053   | 1054   | 1056  | 1203   | 1204   |
|----------------------------|-------------------------------|---------|--------------|--------|-------|-------|-------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| Cooling                    | Total cooling capacity (1)    | TON     | 15.0         | 20.2   | 24.3  | 18.2  | 24.7  | 29.9   | 20.6  | 27.8  | 33.5   | 25.9   | 30.5   | 37    | 28.8   | 33.8   |
|                            |                               | kW      | 52.8         | 70.9   | 85.3  | 63.9  | 86.8  | 105    | 72.4  | 97.6  | 118    | 91.2   | 107    | 130   | 101    | 119    |
|                            | Sensible cooling capacity (1) | TON     | 10.8         | 13.6   | 16.0  | 13.3  | 16.8  | 19.8   | 14.8  | 18.8  | 22.2   | 18.3   | 21.3   | 25.2  | 20.4   | 23.8   |
|                            |                               | kW      | 37.8         | 47.8   | 56.3  | 46.6  | 58.9  | 69.8   | 52.2  | 66.2  | 78.0   | 64.5   | 74.7   | 88.5  | 71.8   | 83.5   |
|                            | Water flow (1)                | gpm     | 39.9         | 53.7   | 64.6  | 48.4  | 65.7  | 79.5   | 54.8  | 73.9  | 89.2   | 69.0   | 81.2   | 98.5  | 76.6   | 90.1   |
|                            |                               | l/h     | 9073         | 12200  | 14670 | 10989 | 14921 | 18060  | 12451 | 16787 | 20265  | 15678  | 18450  | 22382 | 17391  | 20466  |
|                            | Pressure drops (1)            | ft WG   | 2.3          | 10.7   | 9.6   | 1.6   | 10.0  | 6.9    | 2.1   | 8.0   | 8.9    | 2.4    | 1.8    | 1.2   | 2.8    | 2.1    |
|                            |                               | kPa     | 7            | 32     | 29    | 5     | 30    | 21     | 6     | 24    | 27     | 7      | 5      | 4     | 8      | 6      |
| Rows                       |                               | n°      | 3            | 4      | 6     | 3     | 4     | 6      | 3     | 4     | 6      | 3      | 4      | 6     | 3      | 4      |
| Air flow                   |                               | cfm     | 6400         | 6400   | 6400  | 8000  | 8000  | 8000   | 9000  | 9000  | 9000   | 10500  | 10500  | 10500 | 12000  | 12000  |
|                            |                               | m³/h    | 10866        | 10866  | 10866 | 13582 | 13582 | 13582  | 15280 | 15280 | 15280  | 17827  | 17827  | 17827 | 20374  | 20374  |
| Available static pressure  |                               | in WG   | 0.60         | 0.60   | 0.60  | 0.80  | 0.80  | 0.80   | 0.80  | 0.80  | 0.80   | 0.80   | 0.80   | 0.80  | 0.80   | 0.80   |
|                            |                               | Pa      | 150          | 150    | 150   | 200   | 200   | 200    | 200   | 200   | 200    | 200    | 200    | 200   | 200    | 200    |
| Sound pressure (2)         |                               | dB(A)   | 72           | 72     | 72    | 74    | 74    | 74     | 76    | 76    | 76     | 79     | 79     | 79    | 77     | 77     |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 400 / 3 / 50 |        |       |       |       |        |       |       |        |        |        |       |        |        |
|                            | Max absorbed power            | kW      | 3.6          | 3.6    | 3.6   | 4.7   | 4.7   | 4.7    | 4.7   | 4.7   | 4.7    | 6.4    | 6.4    | 6.4   | 6.4    | 6.4    |
| Water connections          |                               | inch    | 1 1/2"       | 1 1/2" | 2"    | 2"    | 2"    | 2 1/2" | 2"    | 2"    | 2 1/2" | 2 1/2" | 2 1/2" | 3"    | 2 1/2" | 2 1/2" |
| Weights                    | Transport weight              | Kg      | 176          | 182    | 227   | 242   | 252   | 285    | 256   | 272   | 305    | 294    | 322    | 368   | 310    | 332    |
|                            | Operating weight              | Kg      | 174          | 180    | 225   | 240   | 250   | 283    | 254   | 270   | 303    | 292    | 320    | 366   | 308    | 330    |

| MODEL                      |                               |         | 1206         | 1353   | 1354   | 1356  | 1503   | 1504   | 1506  | 1803  | 1804  | 1806  | 2253  | 2254  | 2256  |
|----------------------------|-------------------------------|---------|--------------|--------|--------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Total cooling capacity (1)    | TON     | 41.3         | 33.0   | 38.9   | 47.3  | 35.8   | 42.3   | 51.7  | 43.8  | 51.7  | 62.9  | 54.0  | 63.8  | 77.8  |
|                            |                               | kW      | 145          | 116    | 137    | 166   | 126    | 149    | 182   | 154   | 182   | 221   | 190   | 224   | 274   |
|                            | Sensible cooling capacity (1) | TON     | 28.2         | 23.3   | 26.9   | 32.2  | 25.3   | 29.4   | 35.3  | 31.0  | 35.8  | 42.6  | 38.1  | 44.5  | 52.8  |
|                            |                               | kW      | 99.1         | 81.8   | 94.7   | 113   | 88.8   | 103    | 124   | 109   | 126   | 150   | 134   | 157   | 186   |
|                            | Water flow (1)                | gpm     | 110          | 87.9   | 104    | 126   | 95.4   | 112    | 138   | 116   | 138   | 168   | 144   | 170   | 207   |
|                            |                               | l/h     | 25004        | 19962  | 23542  | 28633 | 21677  | 25557  | 31254 | 26466 | 31254 | 38060 | 32666 | 38564 | 47083 |
|                            | Pressure drops (1)            | ft WG   | 1.5          | 3.9    | 2.9    | 2.1   | 4.5    | 3.4    | 2.4   | 4.0   | 3.0   | 2.1   | 4.4   | 3.3   | 2.3   |
|                            |                               | kPa     | 4            | 12     | 9      | 6     | 14     | 10     | 7     | 12    | 9     | 6     | 13    | 10    | 7     |
| Rows                       |                               | n°      | 6            | 3      | 4      | 6     | 3      | 4      | 6     | 3     | 4     | 6     | 3     | 4     | 6     |
| Air flow                   |                               | cfm     | 12000        | 13500  | 13500  | 13500 | 15000  | 15000  | 15000 | 18000 | 18000 | 18000 | 22500 | 22500 | 22500 |
|                            |                               | m³/h    | 20374        | 22920  | 22920  | 22920 | 25467  | 25467  | 25467 | 30560 | 30560 | 30560 | 38200 | 38200 | 38200 |
| Available static pressure  |                               | in WG   | 0.80         | 1.00   | 1.00   | 1.00  | 1.00   | 1.00   | 1.00  | 1.20  | 1.20  | 1.20  | 1.41  | 1.41  | 1.41  |
|                            |                               | Pa      | 200          | 250    | 250    | 250   | 250    | 250    | 250   | 300   | 300   | 300   | 350   | 350   | 350   |
| Sound pressure (2)         |                               | dB(A)   | 77           | 80     | 80     | 80    | 83     | 83     | 83    | 84    | 84    | 84    | 84    | 84    | 84    |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 400 / 3 / 50 |        |        |       |        |        |       |       |       |       |       |       |       |
|                            | Max absorbed power            | kW      | 6.4          | 8.6    | 8.6    | 8.6   | 12.4   | 12.4   | 12.4  | 12.4  | 12.4  | 12.4  | 16.8  | 16.8  | 16.8  |
| Water connections          |                               | inch    | 3"           | 2 1/2" | 2 1/2" | 3"    | 2 1/2" | 2 1/2" | 3"    | 2x2"  | 2x2"  | 2x2"  | 2x2"  | 2x2"  | 2x2"  |
| Weights                    | Transport weight              | Kg      | 420          | 317    | 341    | 442   | 330    | 352    | 400   | 982   | 1001  | 1098  | 1063  | 1086  | 1236  |
|                            | Operating weight              | Kg      | 418          | 315    | 339    | 440   | 328    | 350    | 398   | 980   | 999   | 1096  | 1061  | 1084  | 1234  |

| DIMENSIONS |     |    | 643  | 644  | 646  | 803  | 804  | 806  | 903  | 904  | 906  | 1053 | 1054 | 1056 | 1203 | 1204 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1875 | 1875 | 1875 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 2170 | 2170 | 2170 | 2320 | 2320 |
| W          | STD | mm | 980  | 980  | 980  | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1380 | 1380 |
| H          | STD | mm | 865  | 865  | 865  | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1490 | 1490 | 1490 | 1490 | 1490 |

| DIMENSIONS |     |    | 1206 | 1353 | 1354 | 1356 | 1503 | 1504 | 1506 | 1803 | 1804 | 1806 | 2253 | 2254 | 2256 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 |
| W          | STD | mm | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1830 | 1830 | 1830 | 1830 | 1830 | 1830 |
| H          | STD | mm | 1490 | 1490 | 1490 | 1490 | 1490 | 1490 | 1490 | 1915 | 1915 | 1915 | 2250 | 2250 | 2250 |

### DIMENSIONAL & CLEARANCE AREA

DBW-M 643÷2256

800 | 800 | 800



Electrical board side

### NOTES

1. Ambient air temperature 27 °C d.b. / 19 °C w.b., water temperature 7/12 °C.
2. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.

FROM 3.5 TON TO 14.7 TON.  
FROM 12.4 KW TO 51.6 KW.

## DBW-M/SZ 133÷464

**DUCTED BLOWER FAN COILS.**



**60 Hz**



The Ducted Blower Fan Coils of the DBW-M series are designed for installation in wide ambients as office buildings, hotels, restaurants, sport structures and shopping malls.

If connected to a system equipped with a water chiller, DBW-M generates cool or warm air silently and with instantaneous reaction. The range includes 8 models with cooling capacities from 4 to 15 TON which are characterized by high static pressure (up to 0,6 inWG) to satisfy the needs of wide installations where external unit is far from the internal ambients or there are multiple far ambients to be cooled simultaneously.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

**The units feature 230V or 380V power supply and 60Hz frequency.**

### VERSIONS

#### DBW-M/SZ

Horizontal unit rear inlet and horizontal delivery

### FEATURES

- Structure made of galvanized steel sheet with electrostatic powder paint complete with polyethylene for thermal and acoustical purpose.
- G3 standard cleanable filter.
- Radial fan type, directly coupled with single-phase 3-speed electric motor or to 3-phase motors by V belt and variable pulley, depending on the model.
- Heat exchanger coil with copper pipes and aluminium fins with manual air vent and drain pan.
- Standard water connections on left side based on air flow direction. On request units can provided with water connections on right side.

| MODEL                      |                               |         | 133          | 164  | 203     | 253     | 324     | 423          | 424    | 464    |
|----------------------------|-------------------------------|---------|--------------|------|---------|---------|---------|--------------|--------|--------|
| Cooling                    | Total cooling capacity (1)    | TON     | 3.5          | 4.5  | 4.9     | 5.8     | 9.5     | 11.2         | 13.3   | 14.7   |
|                            |                               | kW      | 12.4         | 15.8 | 17.4    | 20.5    | 33.5    | 39.5         | 46.6   | 51.6   |
|                            | Sensible cooling capacity (1) | TON     | 2.4          | 3.2  | 3.6     | 4.3     | 6.7     | 7.8          | 9.1    | 10.0   |
|                            |                               | kW      | 8.4          | 11.2 | 12.7    | 15.2    | 23.6    | 27.3         | 32.0   | 35.1   |
|                            | Water flow (1)                | gpm     | 9.4          | 12.0 | 13.2    | 15.5    | 25.4    | 29.9         | 35.3   | 39.1   |
|                            |                               | l/h     | 2133         | 2718 | 2993    | 3526    | 5762    | 6794         | 8015   | 8875   |
|                            | Pressure drops (1)            | ft WG   | 4.3          | 1.0  | 0.7     | 1.0     | 2.8     | 11.0         | 8.0    | 10.3   |
| kPa                        |                               | 13      | 3            | 2    | 3       | 8       | 33      | 24           | 31     |        |
| Heating                    | Heating capacity (2)          | TON     | 4.4          | 5.9  | 7.2     | 8.4     | 12.4    | 14.4         | 16.4   | 18.3   |
|                            |                               | kW      | 15.4         | 20.9 | 25.2    | 29.6    | 43.6    | 50.8         | 57.8   | 64.2   |
|                            | Water flow (2)                | gpm     | 9.4          | 12.0 | 13.2    | 15.5    | 25.4    | 29.9         | 35.3   | 39.1   |
|                            |                               | l/h     | 2133         | 2718 | 2993    | 3526    | 5762    | 6794         | 8015   | 8875   |
| Air flow                   | Max.                          | cfm     | 1300         | 1700 | 2100    | 2600    | 3400    | 4400         | 4400   | 4800   |
|                            |                               | m³/h    | 2207         | 2886 | 3565    | 4414    | 5772    | 7470         | 7470   | 8149   |
|                            | Med.                          | cfm     | 1200         | 1500 | 1900    | 2300    | 3000    | ---          | ---    | ---    |
|                            |                               | m³/h    | 2037         | 2547 | 3226    | 3905    | 5093    | ---          | ---    | ---    |
|                            | Min.                          | cfm     | 900          | 1300 | 1500    | 1700    | 2700    | ---          | ---    | ---    |
|                            |                               | m³/h    | 1528         | 2207 | 2547    | 2886    | 4584    | ---          | ---    | ---    |
| Available static pressure  |                               | in WG   | 0.40         | 0.40 | 0.40    | 0.40    | 0.40    | 0.60         | 0.60   | 0.60   |
|                            |                               | Pa      | 100          | 100  | 100     | 100     | 100     | 150          | 150    | 150    |
| Sound pressure             | Max. (3)                      | dB(A)   | 53           | 53   | 56      | 57      | 62      | 68           | 68     | 69     |
|                            | Med. (3)                      | dB(A)   | 50           | 50   | 52      | 53      | 59      | ---          | ---    | ---    |
|                            | Min. (3)                      | dB(A)   | 41           | 41   | 44      | 45      | 50      | ---          | ---    | ---    |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 230 / 1 / 60 |      |         |         |         | 380 / 3 / 60 |        |        |
|                            | Max absorbed power            | kW      | 0.4          | 0.8  | 2 x 0.4 | 2 x 0.4 | 2 x 0.8 | 1.9          | 1.9    | 1.9    |
| Water connections          |                               | inch    | 3/4"         | 3/4" | 3/4"    | 1"      | 1"      | 1 1/4"       | 1 1/4" | 1 1/4" |
| Weights                    | Transport weight              | Kg      | 46           | 50   | 75      | 86      | 90      | 130          | 139    | 139    |
|                            | Operating weight              | Kg      | 44           | 48   | 73      | 84      | 88      | 128          | 137    | 137    |

| DIMENSIONS |     |    | 133 | 164 | 203  | 253  | 324  | 423  | 424  | 464  |
|------------|-----|----|-----|-----|------|------|------|------|------|------|
| L          | STD | mm | 855 | 855 | 1495 | 1495 | 1495 | 1630 | 1630 | 1630 |
| W          | STD | mm | 705 | 705 | 705  | 705  | 705  | 975  | 975  | 975  |
| H          | STD | mm | 565 | 565 | 565  | 565  | 565  | 785  | 785  | 785  |

## DIMENSIONAL &amp; CLEARANCE AREA

DBW-M/SZ 133-464

800 | 800 | 800



Electrical board side

## NOTES

1. Ambient air temperature 27 °C d.b./ 19 °C w.b., water temperature 7/12 °C.
2. Ambient air temperature 20 °C d.b., water temperature 50 °C, same water flow as for cooling.
3. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.



FROM 16.0 TON TO 83.3 TON.  
FROM 56.4 KW TO 293 KW.

## DBW-M/SZ 643÷2256

**DUCTED BLOWER FAN COILS.**



The Ducted Blower Fan Coils of the DBW-M series are designed for installation in extra wide ambients as big office buildings, hotels, restaurants, sport structures and shopping malls.

If connected to a system equipped with a water chiller, DBW-M generates cool or warm air silently and with instantaneous reaction. The range includes 27 models with cooling capacities from 16 to 83 TON, characterized by high static pressure (up to 1,4 inWG) to satisfy the needs of extra wide installations where external unit is far from the internal ambients or there are multiple far ambients to be cooled simultaneously. Each model is available in versions with 3, 4 or 6 rows and features both horizontal and vertical air delivery to satisfy any Customer need.

A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.

**The units feature 380V power supply and 60Hz frequency.**

### VERSIONS

#### DBW-M/SZ

Horizontal unit rear inlet and horizontal delivery

### FEATURES

- Structure made of galvanized steel sheet with electrostatic powder paint complete with polyethylene for thermal and acoustical purpose.
- G3 standard cleanable filter.
- Radial fan type, statically and dynamically balanced to reduce vibration and noise to a minimum, directly coupled to 3-phase motors by V belt and variable pulley, installed on rubber shock absorbers.
- Heat exchanger coil with copper pipes and aluminium fins with manual air vent and drain pan.
- Units from size 643 to 646 come with standard horizontal air discharge and are convertible to vertical air discharge on site; sizes from 803 to 1204 come with standard vertical air discharge and are convertible to horizontal air discharge on site.

| MODEL                      |                               |         | 643          | 644    | 646   | 803   | 804   | 806    | 903   | 904   | 906    | 1053   | 1054   | 1056  | 1203   | 1204   |
|----------------------------|-------------------------------|---------|--------------|--------|-------|-------|-------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| Cooling                    | Total cooling capacity (1)    | TON     | 16.0         | 21.6   | 26.0  | 19.4  | 26.4  | 31.8   | 22.0  | 29.6  | 35.8   | 27.9   | 32.7   | 39.5  | 30.7   | 36.1   |
|                            |                               | kW      | 56.4         | 75.9   | 91.3  | 68.4  | 92.8  | 112    | 77.5  | 104   | 126    | 98.0   | 115    | 139   | 108    | 127    |
|                            | Sensible cooling capacity (1) | TON     | 11.5         | 14.5   | 17.1  | 14.2  | 17.9  | 21.3   | 15.9  | 20.2  | 23.7   | 19.6   | 22.7   | 26.9  | 21.8   | 25.4   |
|                            |                               | kW      | 40.5         | 51.1   | 60.2  | 49.9  | 63.0  | 75.0   | 55.8  | 70.9  | 83.4   | 69.0   | 80.0   | 94.7  | 76.8   | 89.4   |
|                            | Water flow (1)                | gpm     | 42.7         | 57.5   | 69.1  | 51.8  | 70.3  | 84.8   | 58.7  | 78.8  | 95.4   | 74.2   | 87.1   | 105   | 81.8   | 96.2   |
|                            |                               | l/h     | 9701         | 13055  | 15704 | 11765 | 15962 | 19264  | 13330 | 17888 | 21672  | 16856  | 19780  | 23908 | 18576  | 21844  |
|                            | Pressure drops (1)            | ft WG   | 3.0          | 13.7   | 12.0  | 2.0   | 12.7  | 8.7    | 2.7   | 10.3  | 11.3   | 3.0    | 2.3    | 1.7   | 3.7    | 2.7    |
|                            |                               | kPa     | 9            | 41     | 36    | 6     | 38    | 26     | 8     | 31    | 34     | 9      | 7      | 5     | 11     | 8      |
| Rows                       |                               | n°      | 3            | 4      | 6     | 3     | 4     | 6      | 3     | 4     | 6      | 3      | 4      | 6     | 3      | 4      |
| Air flow                   |                               | cfm     | 7200         | 7200   | 7200  | 9000  | 9000  | 9000   | 10200 | 10200 | 10200  | 11900  | 11900  | 11900 | 13600  | 13600  |
|                            |                               | m³/h    | 12224        | 12224  | 12224 | 15280 | 15280 | 15280  | 17317 | 17317 | 17317  | 20204  | 20204  | 20204 | 23090  | 23090  |
| Available static pressure  |                               | in WG   | 0.60         | 0.60   | 0.60  | 0.80  | 0.80  | 0.80   | 0.80  | 0.80  | 0.80   | 0.80   | 0.80   | 0.80  | 0.80   | 0.80   |
|                            |                               | Pa      | 150          | 150    | 150   | 200   | 200   | 200    | 200   | 200   | 200    | 200    | 200    | 200   | 200    | 200    |
| Sound pressure (2)         |                               | dB(A)   | 73           | 73     | 73    | 75    | 75    | 75     | 77    | 77    | 77     | 80     | 80     | 80    | 78     | 78     |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 380 / 3 / 60 |        |       |       |       |        |       |       |        |        |        |       |        |        |
|                            | Max absorbed power            | kW      | 3.6          | 3.6    | 3.6   | 4.7   | 4.7   | 4.7    | 4.7   | 4.7   | 6.4    | 6.4    | 6.4    | 8.6   | 6.4    | 6.4    |
| Water connections          |                               | inch    | 1 1/2"       | 1 1/2" | 2"    | 2"    | 2"    | 2 1/2" | 2"    | 2"    | 2 1/2" | 2 1/2" | 2 1/2" | 3"    | 2 1/2" | 2 1/2" |
| Weights                    | Transport weight              | Kg      | 176          | 182    | 227   | 242   | 252   | 285    | 256   | 272   | 305    | 294    | 322    | 368   | 310    | 332    |
|                            | Operating weight              | Kg      | 174          | 180    | 225   | 240   | 250   | 283    | 254   | 270   | 303    | 292    | 320    | 366   | 308    | 330    |

| MODEL                      |                               |         | 1206         | 1353   | 1354   | 1356  | 1503   | 1504   | 1506  | 1803  | 1804  | 1806  | 2253  | 2254  | 2256  |
|----------------------------|-------------------------------|---------|--------------|--------|--------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Total cooling capacity (1)    | TON     | 44.4         | 35.3   | 41.5   | 50.6  | 38.4   | 45.2   | 55.2  | 46.9  | 55.2  | 67.4  | 57.7  | 68.2  | 83.3  |
|                            |                               | kW      | 156          | 124    | 146    | 178   | 135    | 159    | 194   | 165   | 194   | 237   | 203   | 240   | 293   |
|                            | Sensible cooling capacity (1) | TON     | 30.1         | 24.9   | 28.7   | 34.4  | 27.0   | 31.6   | 37.8  | 33.2  | 38.4  | 45.5  | 40.7  | 47.5  | 56.6  |
|                            |                               | kW      | 106          | 87.5   | 101    | 121   | 95.0   | 111    | 133   | 116   | 135   | 160   | 143   | 165   | 199   |
|                            | Water flow (1)                | gpm     | 118          | 93.9   | 111    | 135   | 102    | 120    | 147   | 125   | 147   | 179   | 154   | 182   | 222   |
|                            |                               | l/h     | 26832        | 21328  | 25112  | 30616 | 23220  | 27348  | 33368 | 28380 | 33368 | 40764 | 34916 | 41280 | 50396 |
|                            | Pressure drops (1)            | ft WG   | 2.0          | 5.0    | 3.7    | 2.7   | 5.7    | 4.3    | 3.0   | 4.0   | 3.0   | 2.1   | 4.4   | 3.3   | 2.3   |
|                            |                               | kPa     | 6            | 15     | 11     | 8     | 17     | 13     | 9     | 12    | 9     | 6     | 13    | 10    | 7     |
| Rows                       |                               | n°      | 6            | 3      | 4      | 6     | 3      | 4      | 6     | 3     | 4     | 6     | 3     | 4     | 6     |
| Air flow                   |                               | cfm     | 13600        | 15300  | 15300  | 15300 | 17000  | 17000  | 17000 | 20300 | 20300 | 20300 | 25400 | 25400 | 25400 |
|                            |                               | m³/h    | 23090        | 25976  | 25976  | 25976 | 28862  | 28862  | 28862 | 34465 | 34465 | 34465 | 43124 | 43124 | 43124 |
| Available static pressure  |                               | in WG   | 0.80         | 1.00   | 1.00   | 1.00  | 1.00   | 1.00   | 1.00  | 1.20  | 1.20  | 1.20  | 1.41  | 1.41  | 1.41  |
|                            |                               | Pa      | 200          | 250    | 250    | 250   | 250    | 250    | 250   | 300   | 300   | 300   | 350   | 350   | 350   |
| Sound pressure (2)         |                               | dB(A)   | 78           | 81     | 81     | 81    | 84     | 84     | 84    | 85    | 85    | 85    | 85    | 85    | 85    |
| Electrical characteristics | Power supply                  | V/Ph/Hz | 380 / 3 / 60 |        |        |       |        |        |       |       |       |       |       |       |       |
|                            | Max absorbed power            | kW      | 6.4          | 8.6    | 8.6    | 8.6   | 12.4   | 12.4   | 12.4  | 12.4  | 12.4  | 12.4  | 16.8  | 16.8  | 16.8  |
| Water connections          |                               | inch    | 3"           | 2 1/2" | 2 1/2" | 3"    | 2 1/2" | 2 1/2" | 3"    | 2x2"  | 2x2"  | 2x2"  | 2x2"  | 2x2"  | 2x2"  |
| Weights                    | Transport weight              | Kg      | 420          | 317    | 341    | 442   | 330    | 352    | 400   | 982   | 1001  | 1098  | 1063  | 1086  | 1236  |
|                            | Operating weight              | Kg      | 418          | 315    | 339    | 440   | 328    | 350    | 398   | 980   | 999   | 1096  | 1061  | 1084  | 1234  |

| DIMENSIONS |     |    | 643  | 644  | 646  | 803  | 804  | 806  | 903  | 904  | 906  | 1053 | 1054 | 1056 | 1203 | 1204 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1875 | 1875 | 1875 | 1915 | 1915 | 1915 | 1915 | 1915 | 1915 | 2170 | 2170 | 2170 | 2320 | 2320 |
| W          | STD | mm | 980  | 980  | 980  | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1175 | 1380 | 1380 |
| H          | STD | mm | 865  | 865  | 865  | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1490 | 1490 | 1490 | 1490 | 1490 |

| DIMENSIONS |     |    | 1206 | 1353 | 1354 | 1356 | 1503 | 1504 | 1506 | 1803 | 1804 | 1806 | 2253 | 2254 | 2256 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 | 2320 |
| W          | STD | mm | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1830 | 1830 | 1830 | 1830 | 1830 | 1830 |
| H          | STD | mm | 1490 | 1490 | 1490 | 1490 | 1490 | 1490 | 1490 | 1915 | 1915 | 1915 | 2250 | 2250 | 2250 |

## DIMENSIONAL &amp; CLEARANCE AREA

DBW-M/SZ 643÷2256

800 | 800 | 800



Electrical board side

## NOTES

1. Ambient air temperature 27 °C d.b. / 19 °C w.b., water temperature 7/12 °C.
2. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.



# CHAPTER 5

## DUCTED SPLIT SYSTEMS

### UNIT

Page

#### 50 HZ

|                                  |           |
|----------------------------------|-----------|
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#### 60 HZ

|                                     |           |
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FROM 12.000 BTU/h TO 60.000 BTU/h.  
FROM 1,0 TON TO 5,0 TON.  
FROM 3,5 KW TO 17,6 KW.

## DXC-M/K 12÷60

CEILING CONCEALED SPLIT SYSTEMS.



The ceiling concealed split systems of DXC-M/K series are the ideal solution for keeping the best comfort level in medium-sized spaces as offices, shops, hotels or education facilities.

The units are designed for built-in installation; thanks to its height of only 305 mm, the indoor unit can be totally hidden on the ceiling, to provide the perfect comfort without compromising on the building architecture and design, nor occupying any service space. The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The range is characterized by low-noise operation of both internal units and external units, thanks to the high level acoustic insulation.

On a stylish soft-touch design, the electronic wired controller offers a wide range of control features, including self diagnosis error management, 7 days / 24 hours programming and more.

The systems operate with R410A refrigerant and feature Rotary or Scroll compressor, depending on the model.

### VERSIONS

#### DXC-M/K

Cooling only

#### DXC-M/K/WP

Reversible heat pump

### FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Single-phase Rotary (12÷36) or Three-phase Scroll compressor with oil sight glass (42÷60), internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans directly coupled with single-phase 3-speed electric motor. Outdoor units are provided with axial fans directly coupled to a single-phase electric motor.
- Indoor and Outdoor units are provided with copper tube and aluminum finned coils.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total block of the unit, indication of security device that intervened through a wired wall pad as standard.
- Wired wall pad included on indoor unit.

## DXC-M/K 12÷60

| MODEL                      |                                  |         | 12           | 18     | 24     | 30     | 36             | 42     | 48     | 60     |
|----------------------------|----------------------------------|---------|--------------|--------|--------|--------|----------------|--------|--------|--------|
| Model                      | Indoor unit                      |         | 12 INU       | 18 INU | 24 INU | 30 INU | 36 INU         | 42 INU | 48 INU | 60 INU |
|                            | Outdoor unit                     |         | 12 OTU       | 18 OTU | 24 OTU | 30 OTU | 36 OTU         | 42 OTU | 48 OTU | 60 OTU |
| Cooling                    | Cooling capacity (1)             | BTU/h   | 12000        | 18000  | 24000  | 30000  | 36000          | 42000  | 48000  | 60000  |
|                            |                                  | TON     | 1.0          | 1.5    | 2.0    | 2.5    | 3.0            | 3.5    | 4.0    | 5.0    |
|                            |                                  | kW      | 3.5          | 5.3    | 7.0    | 8.8    | 10.5           | 12.3   | 14.1   | 17.6   |
| Heating                    | Heating capacity (2)             | BTU/h   | 12600        | 18900  | 25200  | 31500  | 37800          | 44000  | 50000  | 63000  |
|                            |                                  | TON     | 1.1          | 1.6    | 2.1    | 2.6    | 3.2            | 3.7    | 4.2    | 5.3    |
|                            |                                  | kW      | 3.7          | 5.5    | 7.4    | 9.2    | 11.1           | 12.9   | 14.6   | 18.5   |
|                            | Absorbed power (1)               | kW      | 1.3          | 2.1    | 2.7    | 3.4    | 4.0            | 4.6    | 4.8    | 6.1    |
|                            |                                  | BTU/h   | 12600        | 18900  | 25200  | 31500  | 37800          | 44000  | 50000  | 63000  |
|                            |                                  | TON     | 1.1          | 1.6    | 2.1    | 2.6    | 3.2            | 3.7    | 4.2    | 5.3    |
| Indoor unit                | Max air flow                     | cfm     | 400          | 600    | 700    | 970    | 1170           | 1340   | 1340   | 1740   |
|                            |                                  | m³/s    | 0.2          | 0.3    | 0.3    | 0.5    | 0.6            | 0.6    | 0.6    | 0.8    |
|                            |                                  | in WG   | 0.30         | 0.30   | 0.40   | 0.40   | 0.50           | 0.50   | 0.60   | 0.60   |
|                            | Available static pressure        | Pa      | 75           | 75     | 90     | 100    | 120            | 120    | 150    | 150    |
|                            |                                  | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            |                                  | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            | Suction line                     | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                  | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                  | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
| Outdoor unit               | Compressors                      | n°      | 1            | 1      | 1      | 1      | 1              | 1      | 1      | 1      |
|                            |                                  | type    | Rotary       | Rotary | Rotary | Rotary | Rotary         | Scroll | Scroll | Scroll |
|                            |                                  | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            | Sound pressure (4)               | dB(A)   | 41           | 45     | 46     | 51     | 52             | 51     | 52     | 53     |
|                            |                                  | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                  | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
| Max piping lenght          | Max distance OTU-INU (5)         | m       | 15           | 15     | 15     | 15     | 40             | 40     | 40     | 40     |
|                            |                                  | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
|                            |                                  | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
| Electrical characteristics | Power supply indoor unit         | V/Ph/Hz | 230 / 1 / 50 |        |        |        |                |        |        |        |
|                            |                                  | V/Ph/Hz | 230 / 1 / 50 |        |        |        | 400 / 3+N / 50 |        |        |        |
|                            |                                  | A       | 10           | 11     | 13     | 14     | 20             | 14     | 15     | 17     |
| Weights                    | Inrush current                   | A       | 43           | 46     | 50     | 80     | 92             | 68     | 78     | 80     |
|                            |                                  | Kg      | 28           | 30     | 49     | 48     | 52             | 61     | 61     | 65     |
|                            |                                  | Kg      | 25           | 27     | 45     | 44     | 48             | 56     | 56     | 60     |
|                            | Transport weight indoor unit (6) | Kg      | 46           | 56     | 58     | 71     | 77             | 104    | 108    | 114    |
|                            |                                  | Kg      | 41           | 52     | 54     | 66     | 72             | 98     | 102    | 108    |
|                            |                                  | Kg      | 41           | 52     | 54     | 66     | 72             | 98     | 102    | 108    |

| DIMENSIONS     |     |    | 12  | 18  | 24   | 30   | 36   | 42   | 48   | 60   |
|----------------|-----|----|-----|-----|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 875 | 875 | 1160 | 1260 | 1260 | 1510 | 1510 | 1590 |
| W indoor unit  | STD | mm | 545 | 545 | 545  | 545  | 545  | 545  | 545  | 545  |
| H indoor unit  | STD | mm | 305 | 305 | 305  | 305  | 305  | 305  | 305  | 305  |
| L outdoor unit | STD | mm | 920 | 920 | 920  | 1040 | 1040 | 1050 | 1050 | 1050 |
| W outdoor unit | STD | mm | 375 | 375 | 375  | 425  | 425  | 425  | 425  | 425  |
| H outdoor unit | STD | mm | 615 | 615 | 615  | 710  | 710  | 1175 | 1175 | 1175 |

### DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT

300 | 300 | 800 | 500



### NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b.
- Sound pressure level measured at 1 m from the unit with reverberation time 0.5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lenghts reachable with proper piping diameter and siphons.
- Cooling only unit

FROM 13.000 BTU/h TO 67.000 BTU/h.  
FROM 1,1 TON TO 5,5 TON.  
FROM 3,9 KW TO 19,5 KW.

## DXCXT-M/K 13÷67

CEILING CONCEALED SPLIT SYSTEMS.

HIGH AMBIENT TEMPERATURE UP TO 52 °C



The ceiling concealed split systems of DXCXT-M/K series are the ideal solution for keeping the best comfort level in medium-sized spaces as offices, shops, hotels or education facilities.

The units are designed for built-in installation; thanks to its height of only 305 mm, the indoor unit can be totally hidden on the ceiling, to provide the perfect comfort without compromising on the building architecture and design, nor occupying any service space. The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The range is characterized by low-noise operation of both internal units and external units, thanks to the high level acoustic insulation.

On a stylish soft-touch design, the electronic wired controller offers a wide range of control features, including self diagnosis error management, 7 days / 24 hours programming and more.

The systems operate with R410A refrigerant and feature Scroll compressor.

The DXCXT-M/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature**.

### VERSIONS

#### DXCXT-M/K

Cooling only

#### DXCXT-M/K/WP

Reversible heat pump

### FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Three-phase Scroll compressor with oil sight glass, internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor. Outdoor units are provided with axial fans directly coupled to a single-phase electric motor.
- Indoor and Outdoor units are provided with copper tubes and aluminum finned coils.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total block of the unit, indication of security device that intervened through a wired wall pad as standard.
- Wired wall pad included on indoor unit.



# DXCXT-M/K 13÷67

| MODEL                      |                                   |         | 13           | 20     | 27     | 33     | 40             | 47     | 53     | 67     |
|----------------------------|-----------------------------------|---------|--------------|--------|--------|--------|----------------|--------|--------|--------|
| Model                      | Indoor unit                       |         | 12 INU       | 18 INU | 24 INU | 30 INU | 36 INU         | 42 INU | 48 INU | 60 INU |
|                            | Outdoor unit                      |         | 13 OTU       | 20 OTU | 27 OTU | 33 OTU | 40 OTU         | 47 OTU | 53 OTU | 67 OTU |
| Cooling                    | Cooling capacity (1)              | BTU/h   | 12000        | 18000  | 24000  | 30000  | 36000          | 42000  | 48000  | 60000  |
|                            |                                   | TON     | 1.0          | 1.5    | 2.0    | 2.5    | 3.0            | 3.5    | 4.0    | 5.0    |
|                            |                                   | kW      | 3.5          | 5.3    | 7.0    | 8.8    | 10.5           | 12.3   | 14.1   | 17.6   |
|                            | Absorbed power (1)                | kW      | 1.5          | 2.3    | 2.8    | 3.7    | 4.1            | 5.2    | 5.8    | 7.1    |
|                            |                                   | BTU/h   | 13000        | 20000  | 27000  | 33000  | 40000          | 47000  | 53000  | 67000  |
|                            |                                   | TON     | 1.1          | 1.6    | 2.2    | 2.8    | 3.3            | 3.9    | 4.4    | 5.5    |
| Heating                    | Cooling capacity (2)              | kW      | 3.9          | 5.8    | 7.8    | 9.7    | 11.6           | 13.7   | 15.6   | 19.5   |
|                            |                                   | kW      | 1.3          | 2.0    | 2.4    | 3.1    | 3.4            | 4.3    | 4.8    | 5.9    |
|                            |                                   | BTU/h   | 12600        | 18900  | 25200  | 31500  | 37800          | 44000  | 50000  | 63000  |
|                            | Heating capacity (3)              | TON     | 1.1          | 1.6    | 2.1    | 2.6    | 3.2            | 3.7    | 4.1    | 5.3    |
|                            |                                   | kW      | 3.7          | 5.5    | 7.4    | 9.2    | 11.1           | 12.9   | 14.6   | 18.5   |
|                            |                                   | kW      | 1.2          | 1.8    | 2.2    | 3.0    | 3.3            | 4.1    | 4.5    | 5.4    |
| Indoor unit                | Absorbed power (3)                | BTU/h   | 12600        | 18900  | 25200  | 31500  | 37800          | 44000  | 50000  | 63000  |
|                            |                                   | TON     | 1.1          | 1.6    | 2.1    | 2.6    | 3.2            | 3.7    | 4.1    | 5.3    |
|                            |                                   | kW      | 3.7          | 5.5    | 7.4    | 9.2    | 11.1           | 12.9   | 14.6   | 18.5   |
|                            | Max air flow                      | cfm     | 400          | 600    | 700    | 970    | 1170           | 1340   | 1340   | 1740   |
|                            |                                   | m³/s    | 0.2          | 0.3    | 0.3    | 0.5    | 0.6            | 0.6    | 0.6    | 0.8    |
|                            |                                   | in WG   | 0.30         | 0.30   | 0.40   | 0.40   | 0.50           | 0.50   | 0.60   | 0.60   |
| Outdoor unit               | Available static pressure         | Pa      | 75           | 75     | 90     | 100    | 120            | 120    | 150    | 150    |
|                            |                                   | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            | Suction line                      | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
| Max piping length          | Max sound pressure (4)            | dB(A)   | 39           | 40     | 41     | 42     | 43             | 44     | 47     | 50     |
|                            |                                   | n°      | 1            | 1      | 1      | 1      | 1              | 1      | 1      | 1      |
|                            |                                   | type    | Scroll       | Scroll | Scroll | Scroll | Scroll         | Scroll | Scroll | Scroll |
|                            | Liquid line                       | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
| Electrical characteristics | Sound pressure (5)                | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            |                                   | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            |                                   | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            | Max distance OTU-INU (6)          | m       | 15           | 15     | 15     | 15     | 40             | 40     | 40     | 40     |
|                            |                                   | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
|                            |                                   | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
| Weights                    | Power supply indoor unit          | V/Ph/Hz | 230 / 1 / 50 |        |        |        |                |        |        |        |
|                            |                                   | V/Ph/Hz | 230 / 1 / 50 |        |        |        | 400 / 3+N / 50 |        |        |        |
|                            |                                   | A       | 12           | 13     | 16     | 22     | 22             | 14     | 15     | 17     |
|                            | Inrush current                    | A       | 45           | 55     | 70     | 91     | 102            | 68     | 78     | 80     |
|                            |                                   | Kg      | 28           | 30     | 49     | 48     | 52             | 61     | 61     | 65     |
|                            |                                   | Kg      | 25           | 27     | 45     | 44     | 48             | 56     | 56     | 60     |
| Weights                    | Transport weight indoor unit (7)  | Kg      | 25           | 27     | 45     | 44     | 48             | 56     | 56     | 60     |
|                            |                                   | Kg      | 49           | 59     | 61     | 76     | 83             | 104    | 108    | 114    |
|                            |                                   | Kg      | 45           | 55     | 57     | 71     | 77             | 98     | 102    | 108    |
|                            | Transport weight outdoor unit (7) | Kg      | 49           | 59     | 61     | 76     | 83             | 104    | 108    | 114    |
|                            |                                   | Kg      | 45           | 55     | 57     | 71     | 77             | 98     | 102    | 108    |
|                            |                                   | Kg      | 45           | 55     | 57     | 71     | 77             | 98     | 102    | 108    |

| DIMENSIONS     |     |    | 13  | 20  | 27   | 33   | 40   | 47   | 53   | 67   |
|----------------|-----|----|-----|-----|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 875 | 875 | 1160 | 1260 | 1260 | 1510 | 1510 | 1590 |
| W indoor unit  | STD | mm | 545 | 545 | 545  | 545  | 545  | 545  | 545  | 545  |
| H indoor unit  | STD | mm | 305 | 305 | 305  | 305  | 305  | 305  | 305  | 305  |
| L outdoor unit | STD | mm | 920 | 920 | 920  | 1040 | 1040 | 1050 | 1050 | 1050 |
| W outdoor unit | STD | mm | 375 | 375 | 375  | 425  | 425  | 425  | 425  | 425  |
| H outdoor unit | STD | mm | 615 | 615 | 615  | 710  | 710  | 1175 | 1175 | 1175 |

## DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT

300 | 300 | 1000 | 500



## NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 46°C d.b.
- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b.
- Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lengths reachable with proper piping diameter and siphons.
- Cooling only unit

FROM 75.000 BTU/h TO 600.000 BTU/h.  
FROM 6,3 TON TO 50,0 TON.  
FROM 22 KW TO 176 KW.

## DXD-M/K 75÷600

**DUCTED BLOWER SPLIT SYSTEMS.**



The ducted blower split systems of DXD-M/K series are the ideal solution for keeping the best comfort level in large-sized spaces as offices, shops, hotels or education facilities. The range comprises 12 models from 75.000 BTU/h to 600.000 BTU/h and the systems are composed of one indoor unit connected to up to four outdoor units, depending on the cooling capacity required.

The systems operate with R410A refrigerant and feature Scroll compressor.

The units are designed for installation both in service rooms or built-in; the air ducts, totally hidden on the ceiling or on walls, provide the perfect comfort without compromising on the building architecture and design. Models over 125.000 BTU/h feature both horizontal and vertical air outlet, which can be chosen directly onsite, to allow the highest flexibility in installation.

The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The range is characterized by low-noise operation of both internal units and external units, thanks to the high level acoustic insulation.

### VERSIONS

#### DXD-M/K

Cooling only

#### DXD-M/K/WP

Reversible heat pump

### FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor (to build models' sizes 75 - 100) or to 3-phase motors by V belt and variable pulley (to build models' sizes 125 - 600). Outdoor units are provided axial fans directly coupled to electric motor.
- Indoor units to build models' sizes 75 - 150 come with standard horizontal air discharge; indoor units to build models' sizes 125 - 150 are convertible to vertical air discharge on site. Indoor units to build models' sizes 200 - 600 come with standard vertical air discharge and they are convertible to horizontal air discharge on site.
- Indoor and Outdoor units are provided with copper tube and aluminum finned coils precharged with nitrogen.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total unit stop, indication of security device that intervened through a wired wall pad as standard.
- Units matching with two or more outdoor units are provided with a sequential controller allowing part loading of the system capacity.
- Wired wall pad included on indoor unit.

# DXD-M/K 75÷600

| MODEL                         |                                      |                    | 75            | 100            | 125            | 150            | 200            | 250            | 300            | 350                              | 400              | 450            | 500            | 600            |        |
|-------------------------------|--------------------------------------|--------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------------|----------------|----------------|----------------|--------|
| Model                         | Indoor unit                          |                    | 1 x 75<br>INU | 1 x 100<br>INU | 1 x 125<br>INU | 1 x 150<br>INU | 1 x 200<br>INU | 1 x 250<br>INU | 1 x 300<br>INU | 1 x 350<br>INU                   | 1 x 400<br>INU   | 1 x 450<br>INU | 1 x 500<br>INU | 1 x 600<br>INU |        |
|                               | Outdoor unit                         |                    | 1 x 75<br>OTU | 1 x 100<br>OTU | 1 x 125<br>OTU | 1 x 150<br>OTU | 2 x 100<br>OTU | 2 x 125<br>OTU | 2 x 150<br>OTU | 2 x 125<br>OTU<br>1 x 100<br>OTU | 4 x 100<br>OTU   | 3 x 150<br>OTU | 4 x 125<br>OTU | 4 x 150<br>OTU |        |
| Cooling                       | Cooling capacity (1)                 | BTU/h              | 75000         | 100000         | 125000         | 150000         | 200000         | 250000         | 300000         | 350000                           | 400000           | 450000         | 500000         | 600000         |        |
|                               |                                      | TON                | 6.3           | 8.3            | 10.4           | 12.5           | 16.7           | 20.8           | 25.0           | 29.1                             | 33.3             | 37.5           | 41.7           | 50.0           |        |
|                               |                                      | kW                 | 22.0          | 29.3           | 36.6           | 43.9           | 58.6           | 73.2           | 87.9           | 103                              | 117              | 132            | 147            | 176            |        |
| Heating                       | Absorbed power (1)                   | kW                 | 8.9           | 11.4           | 14.1           | 16.7           | 23.3           | 28.9           | 35.9           | 43.6                             | 45.7             | 52.9           | 62.9           | 67.6           |        |
|                               |                                      | BTU/h              | 78200         | 104000         | 129700         | 155800         | 207600         | 259500         | 311400         | 363300                           | 415200           | 467100         | 519000         | 622800         |        |
|                               | Heating capacity (2)                 | TON                | 6.5           | 8.7            | 10.8           | 13.0           | 17.3           | 21.6           | 25.9           | 30.2                             | 34.6             | 38.9           | 43.2           | 51.9           |        |
|                               |                                      | kW                 | 22.9          | 30.5           | 38.0           | 45.6           | 60.8           | 76.0           | 91.2           | 106                              | 122              | 137            | 152            | 182            |        |
|                               | Indoor unit                          | Absorbed power (2) | kW            | 7.4            | 9.6            | 12.8           | 14.6           | 19.0           | 23.5           | 29.3                             | 35.6             | 37.3           | 43.1           | 51.2           | 55.1   |
| cfm                           |                                      |                    | 2500          | 2800           | 4100           | 4400           | 6400           | 7800           | 9000           | 10500                            | 12000            | 13500          | 14600          | 17600          |        |
| Max air flow                  |                                      | m³/s               | 1.2           | 1.3            | 1.9            | 2.1            | 3.0            | 3.7            | 4.2            | 5.0                              | 5.7              | 6.4            | 6.9            | 8.3            |        |
|                               |                                      | in WG              | 0.60          | 0.60           | 0.60           | 0.60           | 0.60           | 0.80           | 0.80           | 0.80                             | 0.80             | 1.00           | 1.00           | 1.20           |        |
| Available static pressure     |                                      | Pa                 | 150           | 150            | 150            | 150            | 150            | 200            | 200            | 200                              | 200              | 250            | 250            | 300            |        |
|                               |                                      | inch               | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"             | 5/8"           | 5/8"           | 5/8"           | 5/8"   |
| Liquid line                   |                                      | Suction line       | inch          | 1-1/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"                           | 1-3/8"<br>1-1/8" | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8" |
|                               |                                      | Drain              | inch          | 1"             | 1"             | 1"             | 1"             | 1"             | 1"             | 1"                               | 1"               | 1"             | 1"             | 1"             | 1"     |
|                               | Max sound pressure (3)               | dB(A)              | 56            | 57             | 58             | 59             | 60             | 62             | 65             | 65                               | 66               | 67             | 68             | 68             |        |
| Outdoor unit                  | Compressors                          | n°                 | 1             | 1              | 1              | 1              | 1              | 1              | 1              | 1                                | 1                | 1              | 1              | 1              |        |
|                               |                                      | type               | Scroll        | Scroll         | Scroll         | Scroll         | Scroll         | Scroll         | Scroll         | Scroll                           | Scroll           | Scroll         | Scroll         | Scroll         | Scroll |
|                               | Liquid line                          | inch               | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"             | 5/8"           | 5/8"           | 5/8"           | 5/8"   |
|                               | Suction line                         | inch               | 1-1/8"        | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"                           | 1-3/8"<br>1-1/8" | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8" |
| Max piping<br>length          | Sound pressure (4)                   | dB(A)              | 57            | 57             | 58             | 58             | 57             | 57             | 58             | 57                               | 57               | 58             | 57             | 58             |        |
|                               | Max distance<br>OTU-INU (5)          | m                  | 50            | 50             | 50             | 50             | 50             | 50             | 50             | 50                               | 50               | 50             | 50             | 50             |        |
|                               | Max height<br>OTU-INU (5)            | m                  | 30            | 30             | 30             | 30             | 30             | 30             | 30             | 30                               | 30               | 30             | 30             | 30             |        |
| Electrical<br>characteristics | Power supply indoor<br>unit          | V/Ph/Hz            | 230 / 1 / 50  |                |                | 400 / 3+N / 50 |                |                |                |                                  |                  |                |                |                |        |
|                               | Power supply<br>outdoor unit         | V/Ph/Hz            | 400 / 3 / 50  |                |                |                |                |                |                |                                  |                  |                |                |                |        |
|                               | Max. running<br>current              | A                  | 20            | 26             | 26             | 32             | 43             | 54             | 72             | 81                               | 84               | 102            | 116            | 130            |        |
|                               | Inrush current                       | A                  | 102           | 128            | 146            | 180            | 145            | 173            | 217            | 201                              | 187              | 250            | 237            | 279            |        |
| Weights                       | Transport weight<br>indoor unit (6)  | Kg                 | 127           | 150            | 215            | 217            | 235            | 368            | 378            | 503                              | 556              | 570            | 850            | 920            |        |
|                               | Operating weight<br>indoor unit (6)  | Kg                 | 122           | 145            | 210            | 212            | 225            | 358            | 368            | 493                              | 546              | 560            | 840            | 910            |        |
|                               | Transport weight<br>outdoor unit (6) | Kg                 | 185           | 190            | 196            | 230            | 190            | 197            | 230            | 197/190                          | 190              | 230            | 197            | 230            |        |
|                               | Operating weight<br>outdoor unit (6) | Kg                 | 175           | 180            | 187            | 220            | 180            | 187            | 220            | 187/180                          | 180              | 220            | 187            | 220            |        |

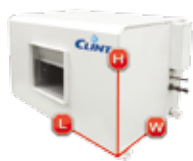
| DIMENSIONS     |     |    | 75   | 100  | 125  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 600  |
|----------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 1580 | 1880 | 1575 | 1575 | 1905 | 1905 | 1905 | 1905 | 2420 | 2420 | 2420 | 2440 |
| W indoor unit  | STD | mm | 765  | 765  | 985  | 985  | 985  | 1240 | 1240 | 1240 | 1520 | 1520 | 1520 | 1820 |
| H indoor unit  | STD | mm | 430  | 430  | 870  | 870  | 870  | 1165 | 1165 | 1385 | 1385 | 1385 | 1385 | 1770 |
| L outdoor unit | STD | mm | 965  | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 1130 |
| W outdoor unit | STD | mm | 975  | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 1110 |
| H outdoor unit | STD | mm | 950  | 950  | 950  | 950  | 950  | 950  | 1000 | 950  | 950  | 1000 | 950  | 1000 |

## DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT

600 | 600 | 600 | 600



## NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b
- Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lengths reachable with proper piping diameter and siphons.
- Cooling only unit

FROM 85.000 BTU/h TO 660.000 BTU/h.  
FROM 7,1 TON TO 55,0 TON.  
FROM 25 KW TO 193 KW.

## DXDXT-M/K 85÷660

DUCTED BLOWER SPLIT SYSTEMS.



HIGH AMBIENT TEMPERATURE UP TO 52 °C



The ducted blower split systems of DXDXT-M/K series are the ideal solution for keeping the best comfort level in large-sized spaces as offices, shops, hotels or education facilities. The range comprises 12 models from 85.000 BTU/h to 660.000 BTU/h and the systems are composed of one indoor unit connected to up to four outdoor units, depending on the cooling capacity required.

The systems operate with R410A refrigerant and feature Scroll compressor.

The units are designed for installation both in service rooms or built-in; the air ducts, totally hidden on the ceiling or on walls, provide the perfect comfort without compromising on the building architecture and design. Models from 140.000 BTU/h feature both horizontal and vertical air outlet, which can be chosen directly onsite, to allow the highest flexibility in installation.

The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The DXDXT-M/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature**.

### VERSIONS

#### DXDXT-M/K

Cooling only

#### DXDXT-M/K/WP

Reversible heat pump

### FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor (to build models' sizes 85 - 110) or to 3-phase motors by V belt and variable pulley (to build models' sizes 140 - 660). Outdoor units are provided axial fans directly coupled to electric motor.
- Indoor units to build models' sizes 85 - 165 come with standard horizontal air discharge; indoor units to build models' sizes 140 - 165 are convertible to vertical air discharge on site. Indoor units to build models' sizes 220 - 660 come with standard vertical air discharge and they are convertible to horizontal air discharge on site.
- Indoor and Outdoor units are provided with copper tube and aluminum finned coils precharged with nitrogen.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total unit stop, indication of security device that intervened through a wired wall pad as standard.
- Units matching with two or more outdoor units are provided with a sequential controller allowing part loading of the system capacity.
- Wired wall pad included on indoor unit.

# DXDXT-M/K 85÷660

| MODEL                      |                                   |         | 85            | 110            | 140            | 165            | 220            | 280            | 330            | 390                              | 440              | 495            | 560            | 660            |
|----------------------------|-----------------------------------|---------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|------------------|----------------|----------------|----------------|
| Model                      | Indoor unit                       |         | 1 x 75<br>INU | 1 x 100<br>INU | 1 x 125<br>INU | 1 x 150<br>INU | 1 x 200<br>INU | 1 x 250<br>INU | 1 x 300<br>INU | 1 x 350<br>INU                   | 1 x 400<br>INU   | 1 x 450<br>INU | 1 x 500<br>INU | 1 x 600<br>INU |
|                            | Outdoor unit                      |         | 1 x 85<br>OTU | 1 x 110<br>OTU | 1 x 140<br>OTU | 1 x 165<br>OTU | 2 x 110<br>OTU | 2 x 140<br>OTU | 2 x 165<br>OTU | 2 x 140<br>OTU<br>1 x 110<br>OTU | 4 x 110<br>OTU   | 3 x 165<br>OTU | 4 x 140<br>OTU | 4 x 165<br>OTU |
| Cooling                    | Cooling capacity (1)              | BTU/h   | 75000         | 100000         | 125000         | 150000         | 200000         | 250000         | 300000         | 350000                           | 400000           | 450000         | 500000         | 600000         |
|                            |                                   | TON     | 6.3           | 8.3            | 10.4           | 12.5           | 16.7           | 20.8           | 25.0           | 29.3                             | 33.3             | 37.5           | 41.8           | 50.0           |
|                            | Absorbed power (1)                | kW      | 22.0          | 29.3           | 36.6           | 43.9           | 58.6           | 73.2           | 87.9           | 103                              | 117              | 132            | 147            | 176            |
|                            |                                   | kW      | 11.2          | 14.1           | 17.8           | 24.4           | 28.8           | 36.4           | 51.5           | 53.9                             | 56.7             | 76.2           | 79.9           | 98.7           |
|                            | Cooling capacity (2)              | BTU/h   | 85000         | 110000         | 140000         | 165000         | 220000         | 280000         | 330000         | 390000                           | 440000           | 495000         | 560000         | 660000         |
|                            |                                   | TON     | 7.1           | 9.2            | 11.7           | 13.7           | 18.3           | 23.3           | 27.5           | 32.5                             | 36.7             | 41.3           | 46.6           | 55.0           |
| Heating                    | Heating capacity (3)              | kW      | 24.9          | 32.5           | 40.6           | 48.3           | 64.4           | 82.0           | 96.7           | 114                              | 129              | 145            | 164            | 193            |
|                            |                                   | kW      | 9.4           | 11.8           | 14.9           | 20.5           | 24.1           | 30.5           | 43.1           | 45.2                             | 47.5             | 63.8           | 65.3           | 82.7           |
|                            | Absorbed power (3)                | BTU/h   | 78200         | 104000         | 129700         | 155800         | 207600         | 259500         | 311400         | 363300                           | 415200           | 467100         | 519000         | 622800         |
|                            |                                   | TON     | 6.5           | 8.7            | 10.8           | 13.0           | 17.3           | 21.6           | 25.9           | 30.1                             | 34.7             | 38.9           | 43.2           | 52.0           |
|                            |                                   | kW      | 22.9          | 30.5           | 38.0           | 45.6           | 60.8           | 76.0           | 91.2           | 106                              | 122              | 137            | 152            | 183            |
|                            |                                   | kW      | 8.7           | 11.5           | 14.5           | 20.5           | 23.5           | 29.6           | 42.0           | 43.9                             | 46.2             | 62.1           | 63.5           | 80.4           |
| Indoor unit                | Max air flow                      | cfm     | 2500          | 2800           | 4100           | 4400           | 6400           | 7800           | 9000           | 10500                            | 12000            | 13500          | 14600          | 17600          |
|                            |                                   | m³/s    | 1.2           | 1.3            | 1.9            | 2.1            | 3.0            | 3.7            | 4.2            | 5.0                              | 5.7              | 6.4            | 6.9            | 8.3            |
|                            | Available static pressure         | in WG   | 0.60          | 0.60           | 0.60           | 0.60           | 0.60           | 0.80           | 0.80           | 0.80                             | 0.80             | 1.00           | 1.00           | 1.20           |
|                            |                                   | Pa      | 150           | 150            | 150            | 150            | 150            | 200            | 200            | 200                              | 200              | 250            | 250            | 300            |
|                            | Liquid line                       | inch    | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"             | 5/8"           | 5/8"           | 5/8"           |
|                            | Suction line                      | inch    | 1-1/8"        | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"                           | 1-3/8"<br>1-1/8" | 1-1/8"         | 1-3/8"         | 1-3/8"         |
| Outdoor unit               | Drain                             | inch    | 1"            | 1"             | 1"             | 1"             | 1"             | 1"             | 1"             | 1"                               | 1"               | 1"             | 1"             | 1"             |
|                            | Max sound pressure (4)            | dB(A)   | 56            | 57             | 58             | 59             | 60             | 62             | 65             | 65                               | 66               | 67             | 68             | 68             |
|                            | Compressors                       | n°      | 1             | 1              | 1              | 1              | 1              | 1              | 1              | 1                                | 1                | 1              | 1              | 1              |
| type                       |                                   | Scroll  | Scroll        | Scroll         | Scroll         | Scroll         | Scroll         | Scroll         | Scroll         | Scroll                           | Scroll           | Scroll         | Scroll         | Scroll         |
| Max piping lenght          | Liquid line                       | inch    | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"             | 5/8"           | 5/8"           | 5/8"           |
|                            | Suction line                      | inch    | 1-1/8"        | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"<br>1-1/8"                 | 1-1/8"           | 1-3/8"         | 1-3/8"         | 1-3/8"         |
|                            | Sound pressure (5)                | dB(A)   | 57            | 57             | 58             | 58             | 57             | 57             | 58             | 57                               | 57-56            | 58             | 57             | 58             |
| Electrical characteristics | Max distance OTU-INDU (6)         | m       | 50            | 50             | 50             | 50             | 50             | 50             | 50             | 50                               | 50               | 50             | 50             | 50             |
|                            | Max height OTU-INDU (6)           | m       | 30            | 30             | 30             | 30             | 30             | 30             | 30             | 30                               | 30               | 30             | 30             | 30             |
|                            | Max height OTU-INDU (6)           | m       | 30            | 30             | 30             | 30             | 30             | 30             | 30             | 30                               | 30               | 30             | 30             | 30             |
| Weights                    | Power supply indoor unit          | V/Ph/Hz | 230 / 1 / 50  |                | 400 / 3+N / 50 |                |                |                |                |                                  |                  |                |                |                |
|                            | Power supply outdoor unit         | V/Ph/Hz | 400 / 3 / 50  |                |                |                |                |                |                |                                  |                  |                |                |                |
|                            | Max. running current              | A       | 25            | 31             | 34             | 44             | 53             | 69             | 90             | 101                              | 105              | 136            | 147            | 176            |
|                            | Inrush current                    | A       | 119           | 129            | 180            | 243            | 148            | 212            | 288            | 244                              | 194              | 255            | 284            | 366            |
| Weights                    | Transport weight indoor unit (7)  | Kg      | 127           | 150            | 215            | 217            | 235            | 368            | 378            | 503                              | 556              | 570            | 850            | 920            |
|                            | Operating weight indoor unit (7)  | Kg      | 122           | 145            | 210            | 212            | 225            | 358            | 368            | 493                              | 546              | 560            | 840            | 910            |
|                            | Transport weight outdoor unit (7) | Kg      | 185           | 190            | 196            | 230            | 190            | 197            | 230            | 197/190                          | 190              | 230            | 197            | 230            |
|                            | Operating weight outdoor unit (7) | Kg      | 175           | 180            | 187            | 220            | 180            | 187            | 220            | 187/180                          | 180              | 220            | 187            | 220            |

| DIMENSIONS     |     |    | 85   | 110  | 140  | 165  | 220  | 280  | 330  | 390  | 440  | 495  | 560  | 660  |
|----------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 1580 | 1880 | 1575 | 1575 | 1905 | 1905 | 1905 | 1905 | 2420 | 2420 | 2420 | 2440 |
| W indoor unit  | STD | mm | 765  | 765  | 985  | 985  | 985  | 1240 | 1240 | 1240 | 1520 | 1520 | 1520 | 1820 |
| H indoor unit  | STD | mm | 430  | 430  | 870  | 870  | 870  | 1165 | 1165 | 1385 | 1385 | 1385 | 1385 | 1770 |
| L outdoor unit | STD | mm | 965  | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 1130 |
| W outdoor unit | STD | mm | 975  | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 1110 |
| H outdoor unit | STD | mm | 950  | 950  | 950  | 950  | 950  | 950  | 1000 | 950  | 950  | 1000 | 950  | 1000 |

## DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT



## NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 46°C d.b.
- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b.
- Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lenghts reachable with proper piping diameter and siphons.
- Cooling only unit

FROM 13.000 BTU/h TO 64.000 BTU/h.  
FROM 1,1 TON TO 5,3 TON.  
FROM 3,7 KW TO 18,8 KW.

## DXCXT-M/SZ/K 13÷67

CEILING CONCEALED SPLIT SYSTEMS.

HIGH AMBIENT TEMPERATURE UP TO 52 °C



60 Hz



The ceiling concealed split systems of DXCXT-M/SZ/K series are the ideal solution for keeping the best comfort level in medium-sized spaces as offices, shops, hotels or education facilities.

The units are designed for built-in installation; thanks to its height of only 305 mm, the indoor unit can be totally hidden on the ceiling, to provide the perfect comfort without compromising on the building architecture and design, nor occupying any service space. The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The range is characterized by low-noise operation of both internal units and external units, thanks to the high level acoustic insulation.

On a stylish soft-touch design, the electronic wired controller offers a wide range of control features, including self diagnosis error management, 7 days / 24 hours programming and more. The systems operate with R410A refrigerant and feature Scroll compressor.

The DXCXT-M/SZ/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature.**

**The units feature 230V or 380V power supply and 60Hz frequency.**

### VERSIONS

**DXCXT-M/SZ/K**

**DXCXT-M/SZ/K/WP**

Cooling only

Reversible heat pump

### FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Three-phase Scroll compressor with oil sight glass, internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor. Outdoor units are provided with axial fans directly coupled to a single-phase electric motor.
- Indoor and Outdoor units are provided with copper tubes and aluminum finned coils.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total block of the unit, indication of security device that intervened through a wired wall pad as standard.
- Wired wall pad included on indoor unit.

# DXCXT-M/SZ/K 13÷67

| MODEL                      |                                   |         | 13           | 20     | 27     | 33     | 40             | 47     | 53     | 67     |
|----------------------------|-----------------------------------|---------|--------------|--------|--------|--------|----------------|--------|--------|--------|
| Model                      | Indoor unit                       |         | 12 INU       | 18 INU | 24 INU | 30 INU | 36 INU         | 42 INU | 48 INU | 60 INU |
|                            | Outdoor unit                      |         | 13 OTU       | 20 OTU | 27 OTU | 33 OTU | 40 OTU         | 47 OTU | 53 OTU | 67 OTU |
| Cooling                    | Cooling capacity (1)              | BTU/h   | 11000        | 17000  | 23000  | 28000  | 34000          | 40000  | 46000  | 58000  |
|                            |                                   | TON     | 0.9          | 1.4    | 1.9    | 2.3    | 2.8            | 3.3    | 3.8    | 4.8    |
|                            |                                   | kW      | 3.2          | 5.0    | 6.7    | 8.2    | 10.0           | 11.7   | 13.5   | 17.0   |
|                            | Absorbed power (1)                | kW      | 1.4          | 2.1    | 2.7    | 3.5    | 3.9            | 4.9    | 5.5    | 6.7    |
|                            |                                   | BTU/h   | 13000        | 19000  | 26000  | 31000  | 38000          | 44000  | 51000  | 64000  |
|                            |                                   | TON     | 1.1          | 1.6    | 2.1    | 2.6    | 3.1            | 3.7    | 4.2    | 5.3    |
| Heating                    | Cooling capacity (2)              | kW      | 3.7          | 5.6    | 7.5    | 9.0    | 11.0           | 13.0   | 14.9   | 18.8   |
|                            |                                   | kW      | 1.2          | 1.8    | 2.3    | 2.9    | 3.2            | 4.1    | 4.6    | 5.6    |
|                            |                                   | BTU/h   | 12000        | 18000  | 23900  | 29600  | 35900          | 41800  | 47500  | 61100  |
|                            | Heating capacity (3)              | TON     | 1.0          | 1.5    | 2.0    | 2.5    | 3.0            | 3.5    | 4.0    | 5.1    |
|                            |                                   | kW      | 3.5          | 5.3    | 7.0    | 8.7    | 10.5           | 12.2   | 13.9   | 17.9   |
|                            |                                   | kW      | 1.1          | 1.6    | 2.1    | 2.9    | 3.1            | 3.9    | 4.3    | 5.1    |
| Indoor unit                | Absorbed power (3)                | BTU/h   | 12000        | 18000  | 23900  | 29600  | 35900          | 41800  | 47500  | 61100  |
|                            |                                   | TON     | 1.0          | 1.5    | 2.0    | 2.5    | 3.0            | 3.5    | 4.0    | 5.1    |
|                            |                                   | kW      | 3.5          | 5.3    | 7.0    | 8.7    | 10.5           | 12.2   | 13.9   | 17.9   |
|                            | Max air flow                      | cfm     | 420          | 630    | 730    | 1010   | 1220           | 1400   | 1400   | 1820   |
|                            |                                   | m³/s    | 0.2          | 0.3    | 0.3    | 0.5    | 0.6            | 0.7    | 0.7    | 0.9    |
|                            |                                   | in WG   | 0.30         | 0.30   | 0.40   | 0.40   | 0.50           | 0.50   | 0.60   | 0.60   |
| Outdoor unit               | Available static pressure         | Pa      | 75           | 75     | 90     | 100    | 120            | 120    | 150    | 150    |
|                            |                                   | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            | Suction line                      | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/4"         | 3/4"   | 3/4"   | 3/4"   | 3/4"           | 3/4"   | 3/4"   | 3/4"   |
| Max piping length          | Max sound pressure (4)            | dB(A)   | 39           | 40     | 41     | 42     | 43             | 44     | 47     | 50     |
|                            |                                   | n°      | 1            | 1      | 1      | 1      | 1              | 1      | 1      | 1      |
|                            |                                   | type    | Scroll       | Scroll | Scroll | Scroll | Scroll         | Scroll | Scroll | Scroll |
|                            | Liquid line                       | inch    | 1/4"         | 3/8"   | 3/8"   | 3/8"   | 3/8"           | 1/2"   | 1/2"   | 1/2"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
|                            |                                   | inch    | 3/8"         | 5/8"   | 5/8"   | 5/8"   | 5/8"           | 3/4"   | 3/4"   | 3/4"   |
| Electrical characteristics | Sound pressure (5)                | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            |                                   | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            |                                   | dB(A)   | 44           | 46     | 47     | 52     | 53             | 51     | 52     | 53     |
|                            | Max distance OTU-INDU (6)         | m       | 15           | 15     | 15     | 15     | 40             | 40     | 40     | 40     |
|                            |                                   | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
|                            |                                   | m       | 8            | 8      | 8      | 8      | 20             | 20     | 20     | 20     |
| Weights                    | Power supply indoor unit          | V/Ph/Hz | 230 / 1 / 60 |        |        |        |                |        |        |        |
|                            |                                   | V/Ph/Hz | 230 / 1 / 60 |        |        |        | 380 / 3+N / 60 |        |        |        |
|                            |                                   | A       | 12           | 13     | 16     | 22     | 22             | 15     | 16     | 18     |
|                            | Inrush current                    | A       | 45           | 55     | 70     | 91     | 102            | 72     | 82     | 84     |
|                            |                                   | Kg      | 28           | 30     | 49     | 48     | 52             | 61     | 61     | 65     |
|                            |                                   | Kg      | 25           | 27     | 45     | 44     | 48             | 56     | 56     | 60     |
| Weights                    | Transport weight indoor unit (7)  | Kg      | 25           | 27     | 45     | 44     | 48             | 56     | 56     | 60     |
|                            |                                   | Kg      | 47           | 57     | 59     | 71     | 78             | 99     | 103    | 109    |
|                            |                                   | Kg      | 43           | 53     | 55     | 66     | 72             | 93     | 97     | 103    |
|                            | Transport weight outdoor unit (7) | Kg      | 47           | 57     | 59     | 71     | 78             | 99     | 103    | 109    |
|                            |                                   | Kg      | 43           | 53     | 55     | 66     | 72             | 93     | 97     | 103    |
|                            |                                   | Kg      | 43           | 53     | 55     | 66     | 72             | 93     | 97     | 103    |

| DIMENSIONS     |     |    | 13  | 20  | 27   | 33   | 40   | 47   | 53   | 67   |
|----------------|-----|----|-----|-----|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 875 | 875 | 1160 | 1260 | 1260 | 1510 | 1510 | 1590 |
| W indoor unit  | STD | mm | 545 | 545 | 545  | 545  | 545  | 545  | 545  | 545  |
| H indoor unit  | STD | mm | 305 | 305 | 305  | 305  | 305  | 305  | 305  | 305  |
| L outdoor unit | STD | mm | 920 | 920 | 920  | 1040 | 1040 | 1050 | 1050 | 1050 |
| W outdoor unit | STD | mm | 375 | 375 | 375  | 425  | 425  | 425  | 425  | 425  |
| H outdoor unit | STD | mm | 615 | 615 | 615  | 710  | 710  | 1175 | 1175 | 1175 |

## DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT

300 | 300 | 1000 | 500



## NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 46°C d.b.
- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b.
- Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lengths reachable with proper piping diameter and siphons.
- Cooling only unit



FROM 84.000 BTU/h TO 645.000 BTU/h.  
FROM 7,0 TON TO 53,6 TON.  
FROM 25 KW TO 189 KW.

# DXDXT-M/SZ/K 85÷660

DUCTED BLOWER SPLIT SYSTEMS



60 Hz

HIGH AMBIENT TEMPERATURE UP TO 52 °C



The ducted blower split systems of DXDXT-M/SZ/K series are the ideal solution for keeping the best comfort level in large-sized spaces as offices, shops, hotels or education facilities. The range comprises 12 models from 84.000 BTU/h to 645.000 BTU/h and the systems are composed of one indoor unit connected to up to four outdoor units, depending on the cooling capacity required.

The systems operate with R410A refrigerant and feature Scroll compressor.

The units are designed for installation both in service rooms or built-in; the air ducts, totally hidden on the ceiling or on walls, provide the perfect comfort without compromising on the building architecture and design. Models from 136.000 BTU/h feature both horizontal and vertical air outlet, which can be chosen directly onsite, to allow the highest flexibility in installation.

The ducts ensure an even distribution of conditioned air to every corner of the room. Even multiple areas can be conditioned simultaneously just with one indoor unit.

The DXDXT-M/SZ/K models ensure the perfect functioning even on regions with high temperature, being able to work **up to 52°C external air temperature.**

**The units feature 230V or 380V power supply and 60Hz frequency.**

## VERSIONS

**DXDXT-M/SZ/K**

**DXDXT-M/SZ/K/WP**

Cooling only

Reversible heat pump

## FEATURES

- Indoor and Outdoor units are made of galvanized steel sheet with electrostatic powder paint. Indoor units are complete with polyethylene for thermal and acoustical purpose.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor (to build models' sizes 85 - 110) or to 3-phase motors by V belt and variable pulley (to build models' sizes 140 - 660). Outdoor units are provided axial fans directly coupled to electric motor.
- Indoor units to build models' sizes 85 - 165 come with standard horizontal air discharge; indoor units to build models' sizes 140 - 165 are convertible to vertical air discharge on site. Indoor units to build models' sizes 220 - 660 come with standard vertical air discharge and they are convertible to horizontal air discharge on site.
- Indoor and Outdoor units are provided with copper tube and aluminum finned coils precharged with nitrogen.
- All Indoor units are provided with return air plenum and standard cleanable filter.
- Microprocessor for the automatic control of the unit allowing continuous display of the operational status, control the set and real air temperature and, in case of partial or total unit stop, indication of security device that intervened through a wired wall pad as standard.
- Units matching with two or more outdoor units are provided with a sequential controller allowing part loading of the system capacity.
- Wired wall pad included on indoor unit.

# DXDXT-M/SZ/K 85÷660

| MODEL                      |                                   |         | 85            | 110            | 140            | 165            | 220            | 280            | 330            | 390                              | 440            | 495            | 560            | 660            |
|----------------------------|-----------------------------------|---------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|
| Model                      | Indoor unit                       |         | 1 x 75<br>INU | 1 x 100<br>INU | 1 x 125<br>INU | 1 x 150<br>INU | 1 x 200<br>INU | 1 x 250<br>INU | 1 x 300<br>INU | 1 x 350<br>INU                   | 1 x 400<br>INU | 1 x 450<br>INU | 1 x 500<br>INU | 1 x 600<br>INU |
|                            | Outdoor unit                      |         | 1 x 85<br>OTU | 1 x 110<br>OTU | 1 x 140<br>OTU | 1 x 165<br>OTU | 2 x 110<br>OTU | 2 x 140<br>OTU | 2 x 165<br>OTU | 2 x 140<br>OTU<br>1 x 110<br>OTU | 4 x 110<br>OTU | 3 x 165<br>OTU | 4 x 140<br>OTU | 4 x 165<br>OTU |
| Cooling                    | Cooling capacity (1)              | BTU/h   | 74000         | 98000          | 123000         | 147000         | 196000         | 245000         | 294000         | 343000                           | 392000         | 441000         | 490000         | 588000         |
|                            |                                   | TON     | 6.2           | 8.2            | 10.2           | 12.3           | 16.3           | 20.4           | 24.5           | 28.4                             | 32.7           | 36.7           | 40.9           | 48.9           |
|                            |                                   | kW      | 21.7          | 28.7           | 36.0           | 43.1           | 57.4           | 71.8           | 86.1           | 100                              | 115            | 129            | 144            | 172            |
|                            | Absorbed power (1)                | kW      | 11.1          | 14.0           | 17.6           | 24.2           | 28.5           | 36.0           | 51.0           | 53.4                             | 56.1           | 75.4           | 79.1           | 97.7           |
|                            |                                   | BTU/h   | 84000         | 109000         | 136000         | 162000         | 215000         | 274000         | 323000         | 379000                           | 434000         | 485000         | 550000         | 645000         |
|                            |                                   | TON     | 7.0           | 9.0            | 11.3           | 13.5           | 17.9           | 22.9           | 26.9           | 31.5                             | 36.1           | 40.3           | 45.7           | 53.6           |
| Cooling capacity (2)       | kW                                | 24.6    | 31.8          | 39.9           | 47.4           | 63.1           | 80.4           | 94.7           | 111            | 127                              | 142            | 161            | 189            |                |
|                            | Absorbed power (2)                | kW      | 9.3           | 11.7           | 14.7           | 20.3           | 23.8           | 30.2           | 42.7           | 44.8                             | 47.0           | 63.1           | 66.3           | 81.9           |
|                            |                                   | BTU/h   | 77000         | 102000         | 127000         | 153000         | 203000         | 254000         | 305000         | 356000                           | 407000         | 458000         | 509000         | 610000         |
| Heating capacity (3)       |                                   | TON     | 6.4           | 8.5            | 10.6           | 12.7           | 16.9           | 21.2           | 25.4           | 29.6                             | 33.8           | 38.1           | 42.4           | 50.9           |
|                            | kW                                | 22.6    | 29.9          | 37.2           | 44.8           | 59.5           | 74.4           | 89.3           | 104            | 119                              | 134            | 149            | 179            |                |
|                            | Absorbed power (3)                | kW      | 8.6           | 11.4           | 14.4           | 20.3           | 23.3           | 29.3           | 41.6           | 43.5                             | 45.7           | 61.5           | 62.9           | 79.6           |
| Max air flow               |                                   | cfm     | 2500          | 2800           | 4100           | 4400           | 6400           | 7800           | 9000           | 10500                            | 12000          | 13500          | 14600          | 17600          |
|                            |                                   | m³/s    | 1.2           | 1.3            | 1.9            | 2.1            | 3.0            | 3.7            | 4.2            | 5.0                              | 5.7            | 6.4            | 6.9            | 8.3            |
| Indoor unit                | Available static pressure         | in WG   | 0.60          | 0.60           | 0.60           | 0.60           | 0.60           | 0.80           | 0.80           | 0.80                             | 0.80           | 1.00           | 1.00           | 1.20           |
|                            |                                   | Pa      | 150           | 150            | 150            | 150            | 150            | 200            | 200            | 200                              | 200            | 250            | 250            | 300            |
|                            | Liquid line                       | inch    | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"           | 5/8"           | 5/8"           | 5/8"           |
|                            | Suction line                      | inch    | 1-1/8"        | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"<br>1-1/8"                 | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"         |
|                            | Drain                             | inch    | 1"            | 1"             | 1"             | 1"             | 1"             | 1"             | 1"             | 1"                               | 1"             | 1"             | 1"             | 1"             |
|                            | Max sound pressure (4)            | dB(A)   | 56            | 57             | 58             | 59             | 60             | 62             | 65             | 65                               | 66             | 67             | 68             | 68             |
| Outdoor unit               | Compressors                       | n°      | 1             | 1              | 1              | 1              | 1              | 1              | 1              | 1                                | 1              | 1              | 1              | 1              |
|                            | Liquid line                       | inch    | 5/8"          | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"           | 5/8"                             | 5/8"           | 5/8"           | 5/8"           | 5/8"           |
|                            | Suction line                      | inch    | 1-1/8"        | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"<br>1-1/8"                 | 1-1/8"         | 1-3/8"         | 1-3/8"         | 1-3/8"         |
|                            | Sound pressure (5)                | dB(A)   | 57            | 57             | 58             | 58             | 57             | 57             | 58             | 57                               | 57-56          | 58             | 57             | 58             |
| Max piping lenght          | Max distance OTU-INDU (6)         | m       | 50            | 50             | 50             | 50             | 50             | 50             | 50             | 50                               | 50             | 50             | 50             | 50             |
|                            | Max height OTU-INDU (6)           | m       | 30            | 30             | 30             | 30             | 30             | 30             | 30             | 30                               | 30             | 30             | 30             | 30             |
| Electrical characteristics | Power supply indoor unit          | V/Ph/Hz | 230 / 1 / 60  |                |                | 380 / 3+N / 60 |                |                |                |                                  |                |                |                |                |
|                            | Power supply outdoor unit         | V/Ph/Hz | 380 / 3 / 60  |                |                |                |                |                |                |                                  |                |                |                |                |
|                            | Max. running current              | A       | 26            | 33             | 36             | 46             | 56             | 73             | 95             | 106                              | 111            | 143            | 155            | 185            |
|                            | Inrush current                    | A       | 125           | 136            | 189            | 256            | 156            | 223            | 303            | 257                              | 204            | 268            | 299            | 385            |
| Weights                    | Transport weight indoor unit (7)  | Kg      | 127           | 150            | 215            | 217            | 235            | 368            | 378            | 503                              | 556            | 570            | 850            | 920            |
|                            | Operating weight indoor unit (7)  | Kg      | 122           | 145            | 210            | 212            | 225            | 358            | 368            | 493                              | 546            | 560            | 840            | 910            |
|                            | Transport weight outdoor unit (7) | Kg      | 183           | 188            | 194            | 228            | 188            | 195            | 228            | 194/188                          | 188            | 228            | 195            | 228            |
|                            | Operating weight outdoor unit (7) | Kg      | 173           | 178            | 185            | 218            | 178            | 185            | 218            | 187/180                          | 178            | 218            | 185            | 218            |

| DIMENSIONS     |     |    | 85   | 110  | 140  | 165  | 220  | 280  | 330  | 390  | 440  | 495  | 560  | 660  |
|----------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|
| L indoor unit  | STD | mm | 1580 | 1880 | 1575 | 1575 | 1905 | 1905 | 1905 | 1905 | 2420 | 2420 | 2420 | 2440 |
| W indoor unit  | STD | mm | 765  | 765  | 985  | 985  | 985  | 1240 | 1240 | 1240 | 1520 | 1520 | 1520 | 1820 |
| H indoor unit  | STD | mm | 430  | 430  | 870  | 870  | 870  | 1165 | 1165 | 1385 | 1385 | 1385 | 1385 | 1770 |
| L outdoor unit | STD | mm | 965  | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 965  | 1130 | 965  | 1130 |
| W outdoor unit | STD | mm | 975  | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 975  | 1110 | 975  | 1110 |
| H outdoor unit | STD | mm | 950  | 950  | 950  | 950  | 950  | 950  | 1000 | 950  | 950  | 1000 | 950  | 1000 |

## DIMENSIONAL & CLEARANCE AREA

INDOOR UNIT

OUTDOOR UNIT



## NOTES

- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 46°C d.b.
- Indoor air temperature 27°C d.b. / 19°C w.b., outdoor air temperature 35°C d.b.
- Indoor air temperature 20°C w.b., outdoor air temperature 7°C d.b. / 6°C w.b.
- Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Maximum lenghts reachable with proper piping diameter and siphons.
- Cooling only unit





G.I. INDUSTRIAL ASIA HOLDING Sdn Bhd  
Lot 5074, 5 1/2 miles, Jalan Meru  
41050 Klang, Selangor Darul Ehsan • MALAYSIA  
Tel. +60 3 3392 6088 • Fax +60 3 3392 7088  
[www.clintinternational.com.my](http://www.clintinternational.com.my)  
e-mail: [info@clintinternational.com.my](mailto:info@clintinternational.com.my)

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