G.I. INDUSTRIAL ASIA HOLDING

PRODUCT GUIDE

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

CLINT® INTERNATIONAL

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 40 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:

- *4 Sales Offices in three Continents;*
- *5 Manufacturing plants worldwide;*
- *280 employees;*
- *430,000 sq.ft. of total productive covered area.*

Our values

CUSTOMER FOCUS.

Tailor-made solutions to satisfy each Customer requirement.

G.I. HOLDING Group offers targeted, customized answers to very specific needs, especially for large installations.

Service focus. Offering an highly skilled Sales Engineering support, the Company is able to set, jointly with the Customer, the best solution for any specific need and to offer full tailor-made solutions to the Customer's request. A complete Service Network, geographically spread worldwide, is able to give support on startups and to ensure immediate reaction in case of any problem.

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 & Development 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.

Klang - MALAYSIA. Asia Pacific Sales Office and Production Plant.

EUROVENT CERTIFIED PERFORMANCE
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G.I. INDUSTRIAL ASIA HOLDING Sdn Bhd participates in the ECC programme for LCP-HP, FCU and AHU. Check on-going validity of certificate: www.eurovent-certification.com or www.certiflash.com

QUALITY & PERFORMANCE.

Production cycle control is the focus of our philosophy.

TOTAL QUALITY is the philosophy at the base of all our activities.
G.I. HOLDING Group 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.
To confirm our product's performance, the Chillers range is EUROVENT certified, attesting the reliability of Company data on product performance.

CARING FOR THE ENVIRONMENT.

A modern firm operating in respect for the environment.

G.I. HOLDING Group is focused on 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 SPA GROUP

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.
- G.I. MIDDLE EAST Fze, trading Company based in the United Arab Emirates.

G.I. INDUSTRIAL HOLDING SPA

The hystorical hub 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:

- Latisana – ITALY. Group Headquarters, Europe and North & South Africa Regional Office.
- Moscow – RUSSIA. Russia and other C.I.S. Countries Regional Office.

Manufacturing facilities:

- Latisana – ITALY. Small and Medium liquid Chillers.
- Rivignano Teor – ITALY. Large liquid Chillers.
- Piove di Sacco – ITALY. Close Control Systems.

GIMEK ZRT HVAC MANUFACTURING CO

The manufacturing Business Unit serving the Companies of the Group.

Manufacturing facility:

- Biatorbágy – HUNGARY. Packaged Roof Top units, Air Handling Units, Dry-Coolers as well as Fan Coil units.

G.I. INDUSTRIAL ASIA HOLDING SDN BHD

Based in Malaysia, the Company is aimed at developing the business of the Group in international markets, with a special focus on the Asia Pacific markets.

Sales Office:

- Klang – MALAYSIA. Company Headquarters and Asia Pacific Regional Office.

Manufacturing facility:

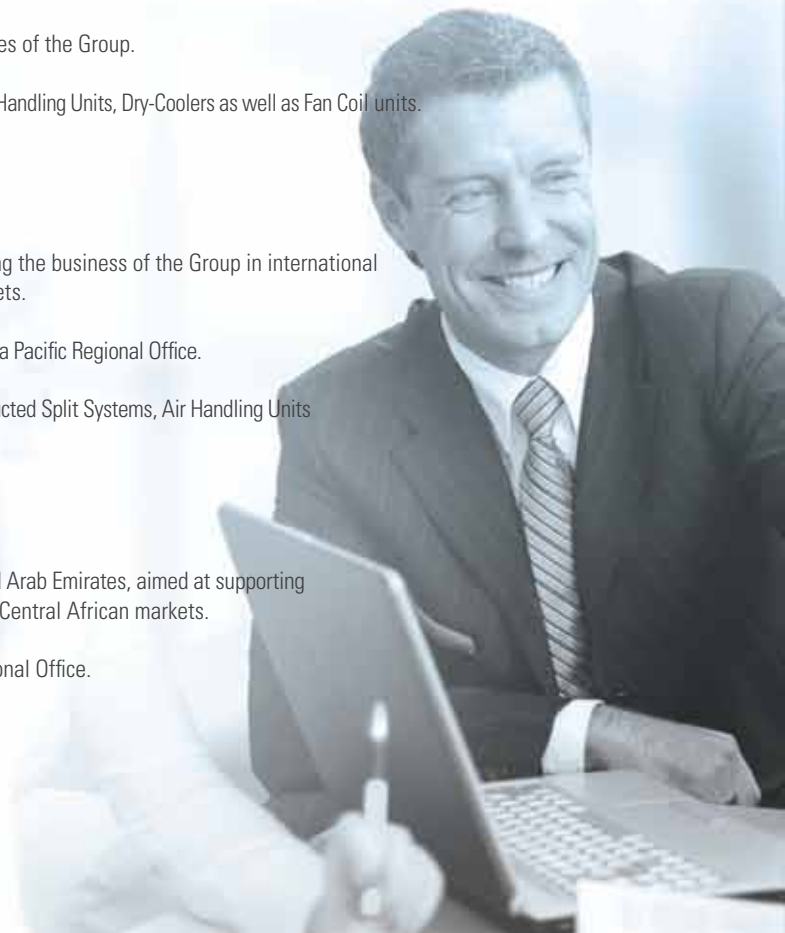
- Klang – MALAYSIA. Liquid Chillers, Fan Coil units, Ducted Split Systems, Air Handling Units and Packaged Roof Top units.

G.I. Middle East FZE

The trade and service Company based in Dubai – United Arab Emirates, aimed at supporting sales and after-sales activities on Middle Eastern and Central African markets.

Sales Office:

- Dubai – U.A.E. Middle East and Central Africa Regional Office.



Latisana – ITALY. G.I. HOLDING Headquarters.

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** brand is focused on the segment of liquid Chillers, Ducted Split Systems, Packaged Roof Top units and Fan Coil units.
MONTAIR is the trademark dedicated to Cooling Systems for Data Centres and Telecom Applications.
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.

Our references

DEDICATED SOLUTIONS FOR DIFFERENT APPLICATIONS.

SHOPPING MALLS, THEATRES, CONFERENCE CENTRES & ENTERTAINMENT

01 TAI KWUN CENTRE FOR HERITAGE & ART - former CENTRAL POLICE STATION, Sheung Wan, Hong Kong

NORTH DISTRICT Town Hall, Kowloon, Hong Kong
HONG KONG Heritage Museum, Kowloon, Hong Kong

02 SAI KUNG JOCKEY CLUB Town Hall, Sai Kung, Hong Kong

TAI SHING Street Market, Chuk Un, Hong Kong
GREENFIELD PARK Shopping Mall, Greenfield Park, Australia
WOOLWORTHS Shopping Malls, several locations, Australia
PARRAMATTA RSL Club, Parramatta, Australia
TWEED HEADS Bowls Club, Tweed Heads, Australia

03 CAIRNS Aquarium, Cairns, Australia

TONSLEY PARK Business Centre & Multifunctional Building, Adelaide, Australia

04 TE PAE Convention Centre, Cristchurch, New Zealand

BILL RICHARDSON TRANSPORT WORLD Car Museum, Invercargill, New Zealand
BIG C Shopping Mall, Bangkok, Thailand
SM CITY STA. MESA Shopping Mall, Manila, Philippines
AYALA ALABANG TOWN Shopping Mall, Manila, Philippines

05 CASCADES Shopping Mall, Pietermaritzburg, South Africa

IKEA Store, Zenata, Morocco

06 MC DONALD'S Restaurant, Moscow, Russia

07 TESAR CITY Shopping Mall, Saratov, Russia

OFFICE BUILDINGS & PLANTS

08 WANG CHEONG BUILDING, Kowloon, Hong Kong

LINDT CHOCOLATE Plant, Sidney, Australia
KEPPEL LOGISTICS Warehouse, Singapore
AGGREKO Offshore Platform, Singapore
VIET TEN Garment Manufacturing, Ho Chi Minh City, Vietnam

09 MEDI MYANMAR GROUP Pharmaceutical Wharehouse, Yangon, Myanmar

AUTHENTIC Construction Company, Mayangone, Myanmar
THAI NJR Microprocessors Plant, Muang, Thailand
HI-TECH APPARELS Garment Company, Araihazar, Bangladesh
GREEN SMART SHIRTS Garment Company, Gazipur – Dhaka, Bangladesh
NEW ONCOLOGY Hospital, Dhaka, Bangladesh
SARL AMOUDA ENGINEERING Cement Factory, El Beida, Algeria

10 MISTER SWEET Candies Plant, Johannesburg, South Africa

PREMIER FOODS Headquarters, Johannesburg, South Africa
OBLGAZ Gas Provider, Ivanovo, Russia

11 ITALON Porcelain Company, Stupino, Russia

INSTITUTIONS & PUBLIC BUILDINGS

NORTH KWAI CUSTOMHOUSE, Sheung Wan, Hong Kong
CUSTOMS AND EXCISE Department Offices, Kowloon, Hong Kong

12 HK AUX Police Station, Kowloon, Hong Kong

NT NORTH Police Station, Kowloon, Hong Kong
KOWLOON Governement Office, Ho Man Tin, Kowloon, Hong Kong
NORTH KWAI Custom House, Sheung Wan, Hong Kong
POLICE STATION, Redcliffe, Australia
BROADMEADOWS Town Hall, Broadmeadows, Australia
POST OFFICE, Archerfield, Australia
NATIONAL WATER SUPPLY Institution, Colombo, Sri Lanka
TEBESSA Law Court, Tebessa, Algeria
COUNTY GOVERNMENT OF TRANS-NZOIA, Kitale, Kenya

SCHOOLS & UNIVERSITIES

THE HONG KONG POLYTECHNIC University, Kowloon, Hong Kong
NORTH KWAI CHUNG Public Library, Hong Kong
PIMLICO BARRIER REEF TAFE Institute, Townsville, Australia
BALLINA State High School, East Ballina, Australia

13 NANYANG POLYTECHNIC University, Nanyang, Singapore

ZAGHOUAN University, Zaghouan, Tunisia
UKZN University, Durban, South Africa
WITS University - New Science Center, Johannesburg, South Africa
CSIR - Scientific and Industrial Research Centre, Pretoria, South Africa


01


CLINT
02


03


CLINT
MAXI
POWER
04


05


CLINT
06


07


08


CLINT
09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Our references

DEDICATED SOLUTIONS FOR DIFFERENT APPLICATIONS.

SPORT & WELLNESS BUILDINGS

14 HONG KONG COLISEUM Leisure & Cultural Services, Kowloon, Hong Kong

MA ON SHAN Sports Center, Kowloon, Hong Kong

15 KOWLOON PARK Swimming Pool, Kowloon, Hong Kong

CORNWALL STREET Squash Centre, Kowloon, Hong Kong
HO MAN TIN Sports Centre, Kowloon, Hong Kong
LUNG SUM Sports Centre, Sheung Shui, Hong Kong
FITNESS FIRST Gym & Swimming Pool, Carindale, Australia

16 SIDNEY UNIVERSITY SPORTS & ACQUATIC CENTRE, Sidney, Australia

VIVA GYM FOURWAYS, Johannesburg, South Africa

HOSPITALS, HOTELS & RESIDENTIAL BUILDINGS

EASTERN Hospital, Kowloon, Hong Kong
SHATIN Hospital, Shatin, Hong Kong
BRISBANE Private Hospital, Brisbane, Australia

17 MONASH Medical Centre, Clayton, Australia

ACU BUILDING T University Campus, Brisbane, Australia
PINDARA Private Hospital, Benowa, Gold Coast, Australia
DISTINCTION Hotel, Dunedin & Cristchurch, New Zealand
NGHE ANH Hospital, Ho Chi Minh, Vietnam
JASMINE PALACE Hotel, Yangon, Myanmar

18 BELMOND ROAD TO MANDALAY River Cruise, Myanmar

MILEV Hotel, Mila, Algeria
BIZERTE Hospital, Bizerte, Tunisia
AL KANTRA Hotel, Djerba, Tunisia
BRAVO GOLDEN BEACH Hotel, Monastir, Tunisia
LUX* GRAND GAUBE Resort, Port Louis, Mauritius

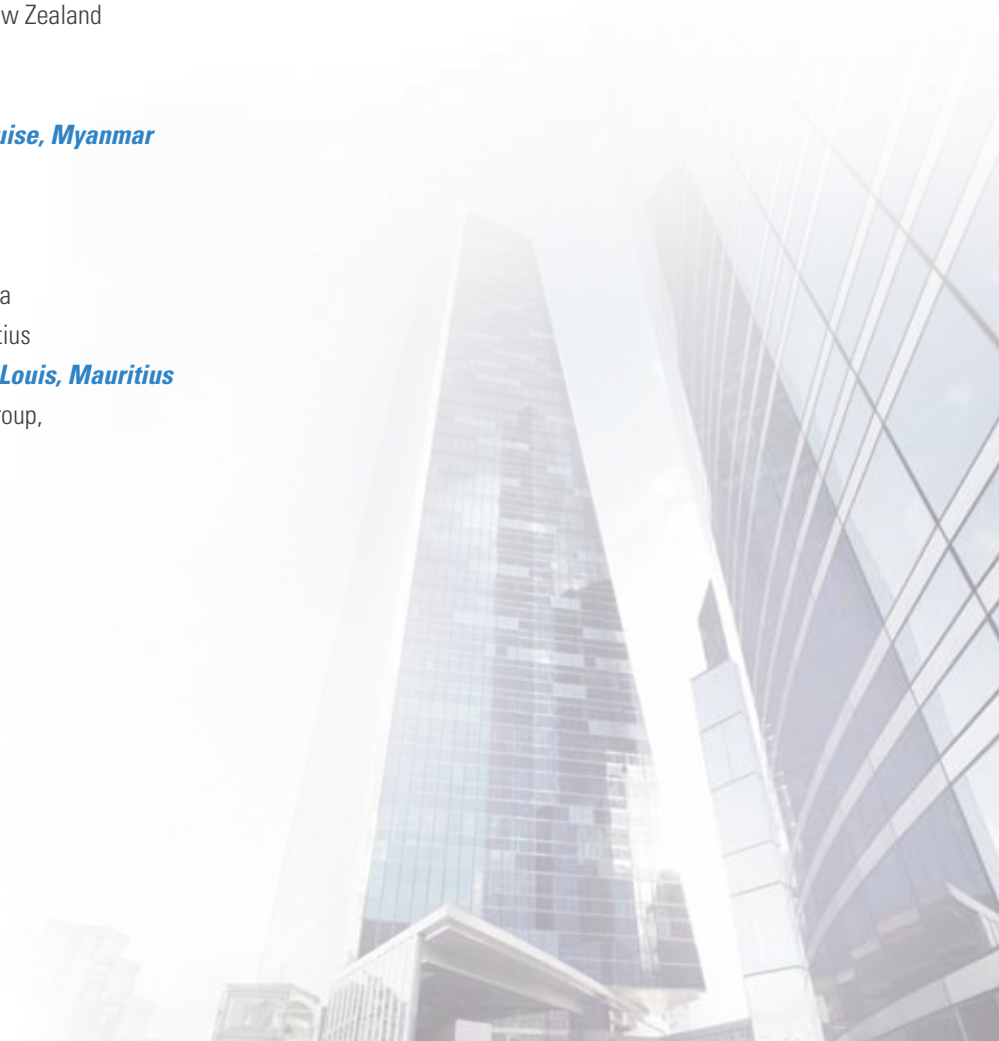
19 ONE&ONLY LE SAINT GÉRAN Resort, Port Louis, Mauritius

LE TOUESSROK Resort & Spa - SHANGRI-LA Group,
Port Louis, Mauritius
LIFE HILTON Hospital, Durban, South Africa

INDUSTRIAL & FOOD/BEVERAGE PROCESS COOLING

20 COCA COLA Plant, Saithani, Laos

NOVARTIS PHARMA Pharmaceutical, Sidney, Australia
M&J Group - COLUMBIA Washing Plant, Gazipur, Bangladesh
ROS AGRO Dairy Production Plant, Voronezh, Russia

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Product range

CLINT offers a wide range of watercooled and aircooled liquid Chillers and Heat Pumps as well as Packaged Roof Top units, Fan Coil units and Ducted Split Systems. They are available in both 50Hz and 60Hz frequencies.

LIQUID CHILLERS

MODULAR

The **MODULAR** aircooled liquid Chillers range, designed for medium sized areas in commercial and service buildings, includes a list of base modules that can be combined together to build big capacity systems.
The modules feature axial fans, single or double cooling circuit with Scroll compressors, plate or shell and tube exchanger with R410A refrigerant. They are characterized by a dedicated layout of the unit itself and its internal components to allow the modular combination.

NEXT POWER

Dedicated to wide commercial and industrial areas, the **NEXTPOWER** liquid 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.

HYDRO PLUS

The **HYDROPLUS** liquid Chillers range is the ideal solution for medium sized 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 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.

ENERGY MAX

The **ENERGYMAX** liquid Chillers range with Screw compressors is dedicated to large commercial and industrial areas and features efficient R134a refrigerant. It ensures high power with the lowest energy consumption thanks to the Inverter Control available as option on compressors.
The family includes both aircooled and watercooled models with a wide capacity range.

PACKAGED ROOF TOP UNITS

FLEXI AIR

FLEXI AIR is the range of single skin Packaged Roof Top units. 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.

TOP AIR

The Packaged Roof Top units of **TOP AIR** range feature double skin panels for an high energy efficiency. The unit design and the wide range of accessories allow to build the customized solution.
The range features Scroll compressors, R410A refrigerant and radial fans or EC Inverter Plug-Fans.

FAN COIL UNITS

The ducted **Fan Coil units** 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 Ceiling Concealed (Blow Through and Draw Through versions, even with high delta water temperature) and Ducted Blower Fan Coil units.

DUCTED BLOWER SPLIT SYSTEMS

The **Ducted Blower Split Systems** are designed for installation both in service rooms or built-in.
The systems operate with R410A refrigerant and feature Scroll compressors.

Cooling

Heating

CHAPTER 1

MODULAR AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS

CHAPTER 2

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS

LEGENDA

Version
- Cooling only
- Cooling & Heating

Compressor
- Scroll
- Inverter Screw
- Screw

Fan
- Axial
- Radial
- EC Inverter Plug-Fan

Exchanger
- Plate
- Shell & Tube
- Flooded Shell & Tube

Solution
- AquaLogik
- A CLASS
- High Ambient Temp. (up to 52°C)
- Side connections
- Web Monitoring
- Operating at 50/60 Hz
- Operating at 60 Hz
- Single skin
- Double Skin
- Mixing box
- Economizer
- Economizer and Cross-flow Heat Recovery
- High Delta Water Temperature

Refrigerant
- R410A
- R134a
- H_2O

CHAPTER 2

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS

CHAPTER 3

WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS

Power (TON) *Page*

50 Hz CWW-M/K 181-P÷522-P

Watercooled liquid Chillers and Heat Pumps with Scroll compressors and plate exchangers

HYDRO PLUS

16-50 TON
20-62 TON

52 - 53

50 Hz CWW-M/K 181÷522

Watercooled liquid Chillers and Heat Pumps with Scroll compressors and shell and tube exchangers

HYDRO PLUS

16-49 TON
20-61 TON

54 - 55

50 Hz CWW-M/K 724-P÷1306-P

Watercooled liquid Chillers and Heat Pumps with Scroll compressors and plate exchangers

NEXT POWER

67-152 TON
86-191 TON

56 - 57

50 Hz CWW-M/K 724÷1306

Watercooled liquid Chillers and Heat Pumps with Scroll compressors and shell and tube exchangers

NEXT POWER

66-151 TON
85-190 TON

58 - 59

LEGENDA

Version
- Cooling only
- Cooling & Heating

Compressor
- Scroll
- Inverter Screw
- Screw

Fan
- Axial
- Radial
- EC Inverter Plug-Fan

Exchanger
- Plate
- Shell & Tube
- Flooded Shell & Tube

Solution
- AquaLogik
- A CLASS
- High Ambient Temp. (up to 52°C)
- Side connections
- Web Monitoring
- Operating at 50/60 Hz
- Operating at 60 Hz
- Single skin
- Double Skin
- Mixing box
- Economizer
- Economizer and Cross-flow Heat Recovery
- High Delta Water Temperature

Refrigerant
- R410A
- R134a
- H_2O

CHAPTER 3

WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS

CHAPTER 4

PACKAGED ROOF TOP UNITS AND CONDENSING UNITS

Power (TON) Page

50 Hz RTQ-M/K 51÷724

Single Skin packaged Roof Top units with Scroll compressors and radial fans

FLEXI AIR

0 36 71

3-50 TON

4-56 TON

74 - 75

50 Hz RTQXT-M/K 51÷804

Single Skin packaged Roof Top units with Scroll compressors and radial fans. High ambient temperature (up to 52°C)

FLEXI AIR

0 36 71

4-55 TON

4-56 TON

76 - 77

50 Hz RTA-M/K 181÷602

Double Skin packaged Roof Top units with Scroll compressors and radial fans or EC Inverter Plug-Fans

TOP AIR
EC INVERTER PLUG FANS

0 36 71

16-55 TON

17-55 TON

78 - 79

50 Hz RTA-M/K/MS 181÷602

Double Skin packaged Roof Top units with Scroll compressors, radial fans or EC Inverter Plug-Fans and Mixing Box

TOP AIR
EC INVERTER PLUG FANS

0 36 71

16-55 TON

17-55 TON

80 - 81

LEGENDA

Version
- Cooling only
- Cooling & Heating

Compressor
- Scroll
- Inverter Screw
- Screw

Fan
- Axial
- Radial
- EC Inverter Plug-Fan

Exchanger
- Plate
- Shell & Tube
- Flooded Shell & Tube

Solution
- AquaLogik
- A CLASS
- High Ambient Temp. (up to 52°C)
- Side connections
- Web Monitoring
- Operating at 50/60 Hz
- Operating at 60 Hz
- Single skin
- Double Skin
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- Economizer and Cross-flow Heat Recovery
- High Delta Water Temperature

Refrigerant
- R410A
- R134a
- H_2O

Power (TON) Page

FBW-M 23÷123

50 Hz 60 Hz

Ceiling concealed Fan Coil units. Blow Through

0 3 6

1-3 TON

1-6 TON

90 - 91

FDW-M 23÷123

50 Hz 60 Hz

Ceiling concealed Fan Coil units. Draw Through

0 3 6

1-3 TON

1-6 TON

92 - 93

FBW-M/HDT 23÷123

50 Hz 60 Hz

Ceiling concealed Fan Coil units with High Delta Water Temperature. Blow Through

0 3 6

1-3 TON

94 - 95

FDW-M/HDT 23÷123

50 Hz 60 Hz

Ceiling concealed Fan Coil units with High Delta Water Temperature. Draw Through

0 3 6

1-3 TON

96 - 97

LEGENDA

Version
- Cooling only
- Cooling & Heating

Compressor
- Scroll
- Inverter Screw
- Screw

Fan
- Axial
- Radial
- EC Inverter Plug-Fan

Exchanger
- Plate
- Shell & Tube
- Flooded Shell & Tube

Solution
- AquaLogik
- A CLASS
- High Ambient Temp. (up to 52°C)
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- Double Skin
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Refrigerant
- R410A
- R134a
- H_2O

Power (TON) Page

50 Hz DXD-M/K 75÷600

Ducted Blower Split Systems

72K 450K 900K

75,000-600,000 Btu/h
78,200-622,800 Btu/h

108 - 109

50 Hz DXDXT-M/K 85÷660

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

72K 450K 900K

75,000-660,000 Btu/h
78,200-622,800 Btu/h

110 - 111

LEGENDA

Version
- Cooling only
- Cooling & Heating

Compressor
- Scroll
- Inverter Screw
- Screw

Fan
- Axial
- Radial
- EC Inverter Plug-Fan

Exchanger
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- High Delta Water Temperature

Refrigerant
- R410A
- R134a
- H_2O


MODULAR
CLINT

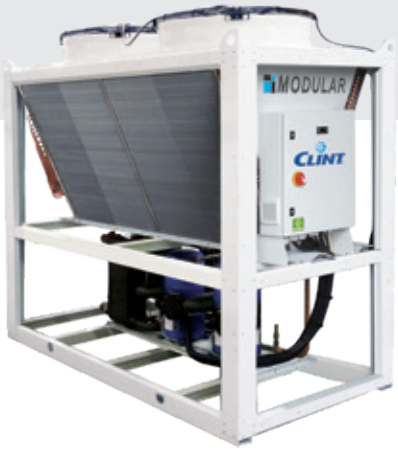
CHAPTER 1

MODULAR AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS

FROM 19 TON TO 51 TON.
FROM 65 KW TO 180 KW.

CHA-M/MK 252-P÷684-P

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



MODULAR

The liquid Chillers and Heat Pumps of CHA-M/MK 252-P÷684-P **MODULAR** series, with R410A refrigerant, are designed for medium sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms.
The MODULAR units feature a dedicated layout of the unit itself and its internal components in order to build big capacity systems through modular combination of single units.
The range is made of 4 base modules from 19 to 51 TON, featuring V design condensing coils, axial fans, single or double cooling circuit with Scroll compressors and plate exchanger.
The electric panel positioned frontally and the optimization of internal layout allow to build multi-unit modular systems of extremely compact footprint.
The multi-unit systems can be centrally controlled with **master-slave** logic through RS485 ModBus connection that ensure balancing of operation time among the units and backup in case of failure.

VERSION

CHA-M/MK	*CHA-M/MK/WP*
Cooling only	Reversible Heat Pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Evaporator AISI 316 stainless steel braze welded plates type with one circuit on the refrigerant side and one on the water side in 252-P÷342-P models; with two independent circuits on the refrigerant side and one on the water side in 504-P÷684-P models, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

LOOSE ACCESSORIES
CR Remote control panel

CHA-M/MK 252-P÷684-P

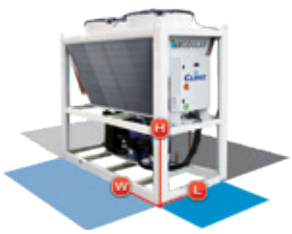
MODEL			252-P	342-P	504-P	684-P
Cooling	Cooling capacity (1)	TON	18.6	25.6	37.2	51.2
		kW	65.3	90.1	131	180
	Absorbed power (1)	kW	22.2	30.3	44.4	60.6
	EER (1)		2.94	2.97	2.94	2.97
Cooling (EN14511)	Cooling capacity (1)	TON	18.5	25.5	37.0	51.0
		kW	64.9	89.6	130	179
	Absorbed power (1)	kW	22.6	30.8	45.2	61.6
	EER (1)		2.87	2.91	2.87	2.91
Heating	Heating capacity (2)	TON	20.9	28.4	41.8	56.8
		kW	73.4	100	147	200
	Absorbed power (2)	kW	24.2	31.8	48.4	63.6
	COP (2)		3.03	3.15	3.03	3.15
Heating (EN14511)	Heating capacity (2)	TON	21.0	28.7	42.0	57.4
		kW	73.9	101	148	202
	Absorbed power (2)	kW	24.8	32.7	49.6	65.4
	COP (2)		2.98	3.08	2.98	3.08
Compressor	Quantity	n°	2	2	4	4
	Refrigerant circuits	n°	1	1	2	2
	Capacity steps	n°	2	2	4	4
Evaporator	Water flow	gpm	49.5	68.2	98.9	136
		l/s	3.12	4.30	6.24	8.60
	Pressure drops	ft WG	14.3	16.0	14.3	16.0
		kPa	43	48	43	48
	Water connections	"G	2"	2"	2"	2"
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50			
	Max. running current	A	53.5	66.6	107	133
	Max. starting current	A	170	235	340	470
Sound pressure (3)		dB(A)	60	60	62	62
Weights	Transport weight	Kg	547	596	1114	1211
	Operating weight	Kg	550	600	1120	1220

DIMENSIONS			252-P	342-P	504-P	684-P
L	STD	mm	2200	2200	2200	2200
W	STD	mm	1100	1100	2200	2200
H	STD	mm	2045	2045	2045	2045

CLEARANCE AREA

CHA-M/MK 252-P÷684-P

800	0	800	0



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 version are specified on technical brochure.

Electrical board side

FROM 18 TON TO 51 TON.
FROM 65 KW TO 179 KW.

CHA-M/MK 252÷684

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

MODULAR

The liquid Chillers and Heat Pumps of CHA-M/MK 252÷684 MODULAR series, with R410A refrigerant, are designed for medium sized service or industrial buildings. They are used, combined with terminal units, for the air conditioning of the rooms.
The MODULAR units feature a dedicated layout of the unit itself and its internal components in order to build big capacity systems through modular combination of single units.
The range is made of 4 base modules from 18 to 51 TON, featuring V design condensing coils, axial fans, single or double cooling circuit with Scroll compressors and shell and tube exchanger.
The electric panel positioned frontally and the optimization of internal layout allow to build multi-unit modular systems of extremely compact footprint.
The multi-unit systems can be centrally controlled with **master-slave** logic through RS485 ModBus connection that ensure balancing of operation time among the units and backup in case of failure.

VERSION

CHA-M/MK	*CHA-M/MK/WP*
Cooling only	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 one circuit on the refrigerant side and one on the water side in 252÷342 models; with two independent circuits on the refrigerant side and one on the water side in 504÷684 models, completed with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

LOOSE ACCESSORIES
CR Remote control panel

CHA-M/MK 252÷684

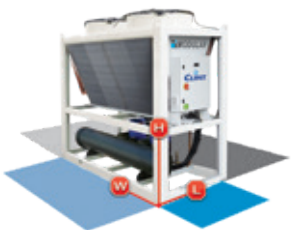
MODEL			252	342	504	684
Cooling	Cooling capacity (1)	TON	18.4	25.4	36.8	50.8
		kW	64.8	89.4	130	179
	Absorbed power (1)	kW	22.1	30.1	44.2	60.2
	EER (1)		2.93	2.97	2.93	2.97
Cooling (EN14511)	Cooling capacity (1)	TON	18.3	25.3	36.6	50.6
		kW	64.5	89.0	129	178
	Absorbed power (1)	kW	22.4	30.5	44.8	61.0
	EER (1)		2.87	2.91	2.87	2.91
Heating	Heating capacity (2)	TON	20.7	28.2	41.4	56.4
		kW	72.8	99.2	146	198
	Absorbed power (2)	kW	24.1	31.6	48.2	63.2
	COP (2)		3.02	3.14	3.02	3.14
Heating (EN14511)	Heating capacity (2)	TON	20.8	28.3	41.6	56.6
		kW	73.1	99.7	146	199
	Absorbed power (2)	kW	24.5	32.3	49.0	64.6
	COP (2)		2.98	3.09	2.98	3.09
Compressor	Quantity	n°	2	2	4	4
	Refrigerant circuits	n°	1	1	2	2
	Capacity steps	n°	2	2	4	4
Evaporator	Water flow	gpm	49.1	67.7	98.4	136
		l/s	3.10	4.27	6.21	8.60
	Pressure drops	ft WG	8.3	11.7	8.3	11.7
		kPa	25	35	25	35
	Water connections	"G	2"	2"	2"	2"
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50			
	Max. running current	A	53.5	66.6	107	133
	Max. starting current	A	170	235	340	470
Sound pressure (3)		dB(A)	60	60	62	62
Weights	Transport weight	Kg	622	687	1263	1393
	Operating weight	Kg	650	720	1320	1460

DIMENSIONS			252	342	504	684
L	STD	mm	2200	2200	2200	2200
W	STD	mm	1100	1100	2200	2200
H	STD	mm	2045	2045	2045	2045

CLEARANCE AREA

CHA-M/MK 252÷684

800	0	800	0



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 version are specified on technical brochure.

Electrical board side


CLINT
ENERGY MAX

CHAPTER 2

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS

FROM 15 TON TO 45 TON.
FROM 54 KW TO 157 KW.

CHA-M/K 181-P÷522-P

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

HYDRO PLUS

The liquid Chillers and Heat Pumps of CHA-M/K 181-P÷522-P **HYDROPLUS** series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients.
They are used, combined with Fan Coil units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. They can be supplied with Modbus RTU protocol through RS485 serial interface.
Equipped with axial fans, Scroll compressors and plate exchanger, these units can be completed by a hydraulic circuit with tank, with pump, with tank and pump or with **AQUALOGIK** technology.
The AQUALOGIK smart control system optimises the water set point and modulates the power supply voltage of the pump and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.
A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.

VERSION

CHA-M/K	***CHA-M/K/WP***
Cooling only	Reversible Heat Pump
CHA-M/K/ST	***CHA-M/K/WP/ST***
Cooling only with AQUALOGIK technology	Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via 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 copper tubes and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch. On the heat pump it is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermocontacts for fans.
- On ST versions water circuit includes INVERTER circulating pump, safety valve and expansion vessel.
- On ST versions Condensing Control is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to –20 °C in cooling mode. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation, an high/low pressure transducer on cooling circuit and an electrical heater on electrical board.
- Microprocessor control and regulation system (with AQUALOGIK technology on ST versions).

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature kit
DS	Desuperheater
RT	Total heat recovery
TX	Coil with pre-coated fins
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
RP	Coils protection metallic guards
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	15.3	18.8	25.1	35.3	44.6
		kW	53.7	66.0	88.4	124	157
	Absorbed power (1)	kW	18.0	22.6	29.4	45.0	60.0
	EER (1)		2.98	2.92	3.01	2.76	2.62
Cooling (EN14511)	Cooling capacity (1)	TON	15.2	18.6	25.0	35.0	44.4
		kW	53.3	65.5	87.9	123	156
	Absorbed power (1)	kW	18.4	23.1	29.9	45.7	60.7
	EER (1)		2.90	2.84	2.94	2.69	2.57
Heating	Heating capacity (2)	TON	17.0	21.3	27.3	39.0	48.9
		kW	59.9	74.8	96.1	137	172
	Absorbed power (2)	kW	19.3	24.3	30.6	45.5	57.8
	COP (2)		3.10	3.08	3.14	3.01	2.98
Heating (EN14511)	Heating capacity (2)	TON	17.2	21.4	27.5	39.2	49.2
		kW	60.4	75.4	96.6	138	173
	Absorbed power (2)	kW	20.0	25.1	31.3	47.0	59.1
	COP (2)		3.02	3.00	3.09	2.94	2.93
Compressor	Quantity	n°	1	1	1	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Capacity steps	n°	1			2	
Evaporator	Water flow	gpm	40.7	49.9	66.9	93.8	119
		l/s	2.57	3.15	4.22	5.92	7.50
	Pressure drops	ft WG	21.3	19.7	15.3	20.7	16.3
		kPa	64	59	46	62	49
	Water connections	"G	1 ½"	1 ½"	2 ½"	2 ½"	2 ½"
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	43	52	67	103	127
	Max. starting current	A	219	264	328	316	387
Electrical characteristics (ST versions)	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	45	54	70	108	132
	Max. starting current	A	221	266	331	321	392
Unit with tank and pump	Pump available static pressure	ft WG	33.3	31.7	43.3	36.7	33.3
		kPa	100	95	130	110	100
	Tank water volume	gal	106	106	106	106	106
		l	400	400	400	400	400
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Unit ST versions	Water flow	gpm	40.7	49.9	66.9	93.8	119
		l/s	2.57	3.15	4.22	5.92	7.50
	Pump available static pressure	ft WG	33.3	31.7	43.3	36.7	31.7
		kPa	100	95	130	110	95
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Sound pressure	STD and ST versions (3)	dB(A)	59	59	61	63	63
	With SL accessory (3)	dB(A)	57	57	59	61	61
Weights	Transport weight (4)	Kg	573	612	722	871	987
	Operating weight (4)	Kg	580	620	740	890	1010
Weights (ST versions)	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 181-P÷522-P

300 | 800 | 800 | 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.
4. Unit without tank and pump.

N.B. Weights of WP versions are specified on technical brochure.

Electrical board side

FROM 15 TON TO 44 TON.
FROM 53 KW TO 155 KW.

CHA-M/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/K 181÷522 **HYDROPLUS** series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients.
They are used, combined with Fan Coil units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. They can be supplied with Modbus RTU protocol through RS485 serial interface.
Equipped with axial fans, Scroll compressors and shell and tube exchanger, these units can be completed by a hydraulic circuit with **AQUALOGIK** technology.
The AQUALOGIK smart control system optimises the water set point and modulates the power supply voltage of the pump and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.
A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.

VERSION

CHA-M/K	***CHA-M/K/WP***
Cooling only	Reversible Heat Pump
CHA-M/K/ST	***CHA-M/K/WP/ST***
Cooling only with AQUALOGIK technology	Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via 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 copper tubes 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 thermocontacts for fans.
- On ST versions water circuit includes INVERTER circulating pump, safety valve and expansion vessel.
- On ST versions Condensing Control is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to –20 °C in cooling mode. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation, an high/low pressure transducer on cooling circuit and an electrical heater on electrical board.
- Microprocessor control and regulation system (with AQUALOGIK technology on ST versions).

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/K 181÷522

MODEL			181	241	301	392	522
Cooling	Cooling capacity (1)	TON	15.1	18.5	24.6	35.5	44.1
		kW	53.1	65.1	86.4	125	155
	Absorbed power (1)	kW	17.9	22.4	29.2	44.8	59.3
	EER (1)		2.97	2.91	2.96	2.79	2.61
Cooling (EN14511)	Cooling capacity (1)	TON	15.0	18.4	24.4	35.3	43.8
		kW	52.8	64.6	85.9	124	154
	Absorbed power (1)	kW	18.2	22.9	29.7	45.5	60.2
	EER (1)		2.90	2.82	2.89	2.73	2.56
Heating	Heating capacity (2)	TON	16.9	21.0	26.7	39.2	47.8
		kW	59.3	73.9	93.8	138	168
	Absorbed power (2)	kW	19.2	24.1	30.4	45.3	57.2
	COP (2)		3.09	3.07	3.09	3.05	2.94
Heating (EN14511)	Heating capacity (2)	TON	17.0	21.2	26.8	39.5	48.1
		kW	59.7	74.5	94.4	139	169
	Absorbed power (2)	kW	19.6	24.9	31.2	46.8	59.1
	COP (2)		3.05	2.99	3.03	2.97	2.86
Compressor	Quantity	n°	1	1	1	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Capacity steps	n°	1			2	
Evaporator	Water flow	gpm	40.3	49.3	65.5	94.6	118
		l/s	2.54	3.11	4.13	5.97	7.41
	Pressure drops	ft WG	11.7	18.3	15.0	18.3	20.7
		kPa	35	55	45	55	62
	Water connections	"G	1 ½"	2"	2 ½"	3"	3"
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	43	52	67	103	127
	Max. starting current	A	219	264	328	316	387
Electrical characteristics (ST versions)	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	45	54	70	108	132
	Max. starting current	A	221	266	331	321	392
Unit ST versions	Water flow	gpm	40.3	49.3	65.5	94.6	118
		l/s	2.54	3.11	4.13	5.97	7.41
	Pump available static pressure	ft WG	41.7	33.3	43.3	38.3	30.0
		kPa	125	100	130	115	90
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Sound pressure	STD and ST versions (3)	dB(A)	59	59	61	63	63
	With SL accessory (3)	dB(A)	57	57	59	61	61
Weights	Transport weight	Kg	611	649	764	926	1026
	Operating weight	Kg	630	670	790	960	1060
Weights (ST versions)	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 181÷522

300 | 800 | 800 | 1800

Electrical board side

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 specified on technical brochure.

FROM 63 TON TO 148 TON.
FROM 221 KW TO 519 KW.

CHA-M/K 724-P÷1306-P

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

The models of **NEXTPOWER** range are dedicated to conditioning of 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.

VERSION

CHA-M/K	***CHA-M/K/WP***
Cooling only	Reversible Heat Pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, completed 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 thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
TX	Coil with pre-coated fins
AD	Air section divider
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
RP	Coil protection metallic guards
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	62.8	84.2	105	127	148
		kW	221	296	371	448	519
	Absorbed power (1)	kW	77.0	101	122	158	196
	EER (1)		2.87	2.93	3.04	2.84	2.65
Cooling (EN14511)	Cooling capacity (1)	TON	62.6	83.6	105	127	147
		kW	220	294	369	446	517
	Absorbed power (1)	kW	78.1	103	124	160	198
	EER (1)		2.82	2.85	2.98	2.79	2.61
Heating	Heating capacity (2)	TON	72.8	97.0	117	144	171
		kW	256	341	411	507	601
	Absorbed power (2)	kW	83.1	110	131	168	193
	COP (2)		3.08	3.10	3.14	3.02	3.11
Heating (EN14511)	Heating capacity (2)	TON	73.1	97.5	118	145	172
		kW	257	343	414	510	604
	Absorbed power (2)	kW	86.1	115	136	174	200
	COP (2)		2.98	2.98	3.04	2.93	3.02
Compressor	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	167	224	281	339	393
		l/s	10.56	14.14	17.73	21.40	24.80
	Pressure drops	ft WG	18.3	21.7	21.0	18.0	16.3
		kPa	55	65	63	54	49
	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
	Max. starting 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

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 version are specified on technical brochure.

Electrical board side

FROM 63 TON TO 147 TON.
FROM 222 KW TO 517 KW.

CHA-M/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 conditioning of 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.

VERSION

CHA-M/K	***CHA-M/K/WP***
Cooling only	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 thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature Kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
AD	Air section divider
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/K 724÷1306

MODEL			724	824	1044	1206	1306
Cooling	Cooling capacity (1)	TON	63.1	82.2	106	129	147
		kW	222	289	373	454	517
	Absorbed power (1)	kW	78.1	100	121	159	195
	EER (1)		2.85	2.89	3.08	2.86	2.65
Cooling (EN14511)	Cooling capacity (1)	TON	62.8	81.9	105	129	146
		kW	221	288	371	452	515
	Absorbed power (1)	kW	79.2	101	123	161	197
	EER (1)		2.79	2.85	3.02	2.81	2.61
Heating	Heating capacity (2)	TON	73.1	94.7	117	146	170
		kW	257	333	413	513	599
	Absorbed power (2)	kW	84.2	109	130	169	192
	COP (2)		3.06	3.06	3.18	3.04	3.12
Heating (EN14511)	Heating capacity (2)	TON	73.6	95.3	118	146	171
		kW	259	335	416	515	602
	Absorbed power (2)	kW	87.3	113	135	174	199
	COP (2)		2.97	2.96	3.08	2.96	3.03
Compressor	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	168	219	283	344	392
		l/s	10.61	13.81	17.82	21.69	24.70
	Pressure drops	ft WG	19.0	19.7	22.3	15.7	18.0
		kPa	57	59	67	47	54
	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
	Max. starting 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

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 version are specified on technical brochure.

Electrical board side

FROM 68 TON TO 138 TON.
FROM 240 KW TO 484 KW.

CHA-M/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/Y 1202÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed for large service sector or industrial-type ambients. 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 fitted or supplied separately, completes the outstanding versatility and functionality of the series.

ENERGY MAX

INVERTER SCREW

VERSION

CHA-M/Y	***CHA-M/Y/WP***
Cooling only	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, oil 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 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, overload protection for compressors and thermocontacts for 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 water temperature Kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
FE	Antifreeze heater for evaporator
II	Inverter on one compressor
ID	Inverter on all compressors
SS	Soft start
AD	Air section divider
WM	Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts

LOOSE ACCESSORIES

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

CHA-M/Y 1202÷2002

MODEL			1202	1302	1502	1702	1902	2002
Cooling	Cooling capacity (1)	TON	68.2	78.5	89.0	105	120	138
		kW	240	276	313	368	423	484
	Absorbed power (1)	kW	85.1	100	111	131	152	183
	EER (1)		2.82	2.76	2.82	2.81	2.78	2.64
Cooling (EN14511)	Cooling capacity (1)	TON	68.0	78.2	88.7	104	120	137
		kW	239	275	312	366	421	482
	Absorbed power (1)	kW	86.1	101	112	133	154	185
	EER (1)		2.78	2.74	2.79	2.75	2.73	2.61
Heating	Heating capacity (2)	TON	77.1	85.9	99.0	115	133	154
		kW	271	302	348	403	466	541
	Absorbed power (2)	kW	88.6	99.7	112	130	149	178
	COP (2)		3.04	3.03	3.11	3.10	3.13	3.04
Heating (EN14511)	Heating capacity (2)	TON	77.3	86.2	99.5	115	133	155
		kW	272	303	350	405	468	544
	Absorbed power (2)	kW	91.1	102	116	135	154	184
	COP (2)		2.99	2.97	3.02	3.00	3.04	2.96
Compressor	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	182	209	237	279	320	367
		l/s	11.47	13.19	14.95	17.58	20.21	23.12
	Pressure drops	ft WG	15.3	15.7	17.7	22.3	17.7	20.0
		kPa	46	47	53	67	53	60
	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
	Max. starting current	A	277	371	385	444	518	611
Sound pressure	STD version (3)	dB(A)	76	76	75	77	77	77
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

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 version are specified on technical brochure.

Electrical board side

FROM 14 TON TO 44 TON.
FROM 50 KW TO 156 KW.

CHA-M/SZ/K 181-P÷522-P

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

60 Hz

HYDRO PLUS

The liquid Chillers and Heat Pumps of CHA-M/SZ/K 181-P÷522-P **HYDROPLUS** series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients.
They are used, combined with Fan Coil units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. They can be supplied with Modbus RTU protocol through RS485 serial interface.
Equipped with axial fans, Scroll compressors and plate exchanger, these units can be completed by a hydraulic circuit with tank, with pump, with tank and pump or with **AQUALOGIK** technology.
The AQUALOGIK smart control system optimises the water set point and modulates the power supply voltage of the pump and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.
A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.

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

VERSION

CHA-M/SZ/K	***CHA-M/SZ/K/WP***
Cooling only	Reversible Heat Pump
CHA-M/SZ/K/ST	***CHA-M/K/WP/ST***
Cooling only with AQUALOGIK technology	Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via 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 copper tubes and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type with one circuit on the refrigerant side and one on the water side, completed with water differential pressure switch. On the heat pump it is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermocontacts for fans.
- On ST versions water circuit includes INVERTER circulating pump, safety valve and expansion vessel.
- On ST versions Condensing Control is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to –20 °C in cooling mode. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation, an high/low pressure transducer on cooling circuit and an electrical heater on electrical board.
- Microprocessor control and regulation system (with AQUALOGIK technology on ST versions).

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature kit
DS	Desuperheater
RT	Total heat recovery
TX	Coil with pre-coated fins
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/SZ/K 181-P÷522-P 60 Hz

MODEL			181-P	241-P	301-P	392-P	522-P
Cooling	Cooling capacity (1)	TON	14.3	18.5	24.8	35.0	44.4
		kW	50.2	65.0	87.1	123	156
	Absorbed power (1)	kW	15.4	22.4	28.2	43.4	56.4
Heating	Heating capacity (2)	TON	16.0	21.0	27.0	38.7	48.6
		kW	56.1	73.8	94.8	136	171
	Absorbed power (2)	kW	16.6	24.0	29.4	44.0	54.4
Compressor	Quantity	n°	1	1	1	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Capacity steps	n°	1			2	
Evaporator	Water flow	gpm	38.0	49.3	65.9	93.2	118
		l/s	2.40	3.11	4.16	5.88	7.45
	Pressure drops	ft WG	16.3	18.3	14.7	20.0	16.0
		kPa	49	55	44	60	48
	Water connections	"G	1 ½"	1 ½"	2 ½"	2 ½"	2 ½"
Electrical characteristics	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	37	45	58	90	110
	Max. starting current	A	190	230	285	275	337
Electrical characteristics (ST versions)	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	37	45	58	90	110
	Max. starting current	A	190	230	285	275	337
Unit with tank and pump	Pump available static pressure	ft WG	35.0	33.3	43.3	38.3	33.3
		kPa	105	100	130	115	100
	Tank water volume	gal	106	106	106	106	106
		l	400	400	400	400	400
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Unit ST versions	Water flow	gpm	38.0	49.3	65.9	93.2	118
		l/s	2.40	3.11	4.16	5.88	7.45
	Pump available static pressure	ft WG	35.0	33.3	43.3	36.7	31.7
		kPa	105	100	130	110	95
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Sound pressure	STD and ST versions (3)	dB(A)	59	59	61	63	63
	With SL accessory (3)	dB(A)	57	57	59	61	61
Weights	Transport weight (4)	Kg	536	572	675	814	923
	Operating weight (4)	Kg	545	580	695	835	945
Weights (ST versions)	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 & CLEARANCE AREA

CHA-M/SZ/K 181-P÷522-P

300	800	800	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.
4. Unit without tank and pump.

N.B. Weights of WP versions are specified on technical brochure.

Electrical board side

FROM 14 TON TO 43 TON.
FROM 50 KW TO 152 KW.

CHA-M/SZ/K 181÷522

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

60 Hz

HYDRO PLUS

The liquid Chillers and Heat Pumps of CHA-M/SZ/K 181÷522 **HYDROPLUS** series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients.
They are used, combined with Fan Coil units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. They can be supplied with Modbus RTU protocol through RS485 serial interface.
Equipped with axial fans, Scroll compressors and shell and tube exchanger, these units can be completed by a hydraulic circuit with **AQUALOGIK** technology.
The AQUALOGIK smart control system optimises the water set point and modulates the power supply voltage of the pump and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.
A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.

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

VERSION

CHA-M/SZ/K	***CHA-M/SZ/K/WP***
Cooling only	Reversible Heat Pump
CHA-M/SZ/K/ST	***CHA-M/SZ/K/WP/ST***
Cooling only with AQUALOGIK technology	Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via 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 copper tubes 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 thermocontacts for fans.
- On ST versions water circuit includes INVERTER circulating pump, safety valve and expansion vessel.
- On ST versions Condensing Control is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to –20 °C in cooling mode. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation, an high/low pressure transducer on cooling circuit and an electrical heater on electrical board.
- Microprocessor control and regulation system (with AQUALOGIK technology on ST versions).

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/SZ/K 181÷522 60 Hz

MODEL			181	241	301	392	522
Cooling	Cooling capacity (1)	TON	14.1	18.3	24.2	35.3	43.2
		kW	49.6	64.2	85.1	124	152
	Absorbed power (1)	kW	15.3	22.2	28.0	43.2	55.8
Heating	Heating capacity (2)	TON	15.8	20.7	26.3	39.2	47.8
		kW	55.5	72.9	92.6	138	168
	Absorbed power (2)	kW	16.5	23.8	29.2	43.8	53.8
Compressor	Quantity	n°	1	1	1	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Capacity steps	n°	1			2	
Evaporator	Water flow	gpm	37.6	48.7	64.5	93.8	115
		l/s	2.37	3.07	4.07	5.92	7.26
	Pressure drops	ft WG	10.7	17.7	14.7	18.0	19.7
		kPa	32	53	44	54	59
	Water connections	"G	1 ½"	2"	2 ½"	3"	3"
Electrical characteristics	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	37	45	58	90	110
	Max. starting current	A	190	230	285	275	337
Electrical characteristics (ST versions)	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	37	45	58	90	110
	Max. starting current	A	190	230	285	275	337
Unit ST versions	Water flow	gpm	37.6	48.7	64.5	93.8	115
		l/s	2.37	3.07	4.07	5.92	7.26
	Pump available static pressure	ft WG	41.7	33.3	43.3	36.7	30.0
		kPa	125	100	130	110	90
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Sound pressure	STD and ST versions (3)	dB(A)	59	59	61	63	63
	With SL accessory (3)	dB(A)	57	57	59	61	61
Weights	Transport weight	Kg	571	607	714	866	959
	Operating weight	Kg	590	630	740	900	995
Weights (ST versions)	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 & CLEARANCE AREA

CHA-M/SZ/K 181÷522

300 | 800 | 800 | 1800

Electrical board side

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 specified on technical brochure.

FROM 62 TON TO 146 TON.
FROM 218 KW TO 512 KW.

CHA-M/SZ/K 724-P÷1306-P

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

NEXT POWER

The models of **NEXTPOWER** range are dedicated to conditioning of 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 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.

VERSION

CHA-M/SZ/K	***CHA-M/SZ/K/WP***
Cooling only	Reversible Heat Pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, completed with water differential pressure switch. On 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 thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
TX	Coil with pre-coated fins
AD	Air section divider
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/SZ/K 724-P÷1306-P 60 Hz

MODEL			724-P	824-P	1044-P	1206-P	1306-P
Cooling	Cooling capacity (1)	TON	62.0	83.0	104	126	146
		kW	218	292	366	442	512
	Absorbed power (1)	kW	76.0	100	121	156	194
Heating	Heating capacity (2)	TON	71.9	95.5	115	142	169
		kW	253	336	405	500	593
	Absorbed power (2)	kW	82.2	109	129	166	191
Compressor	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	165	221	277	335	388
		l/s	10.42	13.95	17.49	21.12	24.46
	Pressure drops	ft WG	17.7	21.3	20.7	17.3	16.0
		kPa	53	64	62	52	48
	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
	Max. starting 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

CLEARANCE AREA

CHA-M/SZ/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 version are specified on technical brochure.

Electrical board side

FROM 62 TON TO 145 TON.
FROM 219 KW TO 510 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 conditioning of 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 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.

VERSION

CHA-M/SZ/K	*CHA-M/SZ/K/WP*
Cooling only	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 thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
BT	Low water temperature Kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
AD	Air section divider
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

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

CHA-M/SZ/K 724÷1306 60 Hz

MODEL			724	824	1044	1206	1306
Cooling	Cooling capacity (1)	TON	62.3	81.0	105	127	145
		kW	219	285	368	448	510
	Absorbed power (1)	kW	77.2	99.0	120	157	193
Heating	Heating capacity (2)	TON	72.2	93.3	116	144	168
		kW	254	328	407	506	591
	Absorbed power (2)	kW	83.3	108	128	167	190
Compressor	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	166	216	279	339	386
		l/s	10.46	13.62	17.58	21.40	24.37
	Pressure drops	ft WG	18.3	19.3	21.7	15.3	17.7
		kPa	55	58	65	46	53
	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
	Max. starting 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

CLEARANCE AREA

CHA-M/SZ/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 version are specified on technical brochure.

Electrical board side

FROM 67 TON TO 136 TON.
FROM 237 KW TO 478 KW.

CHA-M/SZ/Y 1202÷2002

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

60 Hz

ENERGY MAX

INVERTER SCREW

The liquid Chillers and Heat Pumps of CHA-M/SZ/Y 1202÷2002 **ENERGYMAX** series, with R134a refrigerant, are designed for large service sector or industrial-type ambients. 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 fitted or supplied separately, completes the outstanding versatility and functionality of the series.

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

VERSION

CHA-M/SZ/Y	***CHA-M/SZ/Y/WP***
Cooling only	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, oil 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 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, overload protection for compressors and thermocontacts 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 water temperature Kit
HR	Desuperheater
HRT/S	Total heat recovery in series
TX	Coil with pre-coated fins
FE	Antifreeze heater for evaporator
II	Inverter on one compressor
ID	Inverter on all compressors
SS	Soft start
AD	Air section divider
WM	Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts

LOOSE ACCESSORIES

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

CHA-M/SZ/Y 1202÷2002 60 Hz

MODEL			1202	1302	1502	1702	1902	2002
Cooling	Cooling capacity (1)	TON	67.4	77.3	87.9	103	118	136
		kW	237	272	309	363	416	478
	Absorbed power (1)	kW	84.4	98.4	109	129	150	181
Heating	Heating capacity (2)	TON	76.2	84.7	97.8	113	131	152
		kW	268	298	344	398	460	533
	Absorbed power (2)	kW	87.6	98.6	111	129	147	176
Compressor	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	179	206	234	275	315	362
		l/s	11.32	13.00	14.76	17.34	19.88	22.84
	Pressure drops	ft WG	14.7	15.3	17.3	21.7	17.3	19.7
		kPa	44	46	52	65	52	59
	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
	Max. starting current	A	241	323	335	386	450	531
Sound pressure	STD version (3)	dB(A)	76	76	75	77	77	77
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

CLEARANCE AREA

CHA-M/SZ/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 version are specified on technical brochure.

Electrical board side


CLINT
R410A
NEXT POWER

CHAPTER 3

WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS

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 for medium sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. This range is ideal for indoor installation and, equipped with a self-contained structure, it reduces 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 with everything necessary 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 recovery, rounds off the variety of equipment in this product range.

VERSION

CWW-M/K	***CWW-M/K/WP***
Cooling only	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 plates type with one circuit on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plates 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 silencement
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic 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
Cooling (EN14511)	Cooling capacity (1)	TON	16.2	20.9	26.7	38.8	49.8
		kW	57.1	73.4	94.0	136	175
	Absorbed power (1)	kW	14.0	17.9	23.1	33.5	43.5
	EER (1)		4.08	4.08	4.07	4.07	4.03
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
Heating (EN14511)	Heating capacity (2)	TON	20.4	26.5	33.3	48.1	62.3
		kW	71.9	93.2	117	169	219
	Absorbed power (2)	kW	17.7	22.5	28.8	42.3	54.2
	COP (2)		4.06	4.14	4.06	4.00	4.05
Compressor	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	DN	32	32	65	65	65
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	17.3	19.7	16.0	18.0	20.0
		kPa	52	59	48	54	60
	Water connections	DN	32	32	65	65	65
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	39	48	59	95	119
	Max. starting current	A	215	260	320	308	379
Unit with tank and pump	Pump available static pressure	ft WG	41.7	33.3	40.0	41.7	40.0
		kPa	125	100	120	125	120
	Tank water volume	gal	79.4	79.4	79.4	79.4	79.4
		l	300	300	300	300	300
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
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 (4)	Kg	372	391	456	609	725
	Operating weight (4)	Kg	380	400	470	620	750

DIMENSIONS			181-P	241-P	301-P	392-P	522-P
UNIT	L	mm	1200	1200	1200	1600	1600
	W	mm	680	680	680	680	680
	H	mm	1520	1520	1520	1520	1520
UNIT + SPU/SPD	L	mm	2310	2310	2310	2710	2710
	W	mm	680	680	680	680	680
	H	mm	1520	1520	1520	1520	1520

CLEARANCE AREA

CWW-M/K 181-P÷522-P

0	300	800	300

Electrical board side

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 version are specified on technical brochure.

FROM 16 TON TO 49 TON.
FROM 57 KW TO 172 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 for medium sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. This range is ideal for indoor installation and it reduces 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 with everything necessary 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 recovery, rounds off the variety of equipment in this product range.

HYDRO PLUS

VERSION

CWW-M/K	***CWW-M/K/WP***
Cooling only	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 one circuit on the refrigerant side and one on the water side. The easily removable cast iron heads 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 silencement
BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic 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	16.2	20.7	26.4	39.2	48.9
		kW	56.9	72.8	93.0	138	172
	Absorbed power (1)	kW	13.1	16.7	21.7	32.1	40.4
Cooling (EN14511)	Cooling capacity (1)	TON	16.1	20.5	26.3	39.0	48.6
		kW	56.6	72.2	92.4	137	171
	Absorbed power (1)	kW	13.4	17.3	22.3	33.0	41.2
	EER (1)		4.22	4.17	4.14	4.15	4.15
Heating	Heating capacity (2)	TON	20.0	25.9	32.4	48.3	60.8
		kW	70.5	91.0	114	170	214
	Absorbed power (2)	kW	16.6	21.0	27.3	40.8	50.8
Heating (EN14511)	Heating capacity (2)	TON	20.2	26.1	32.7	48.6	61.1
		kW	71.0	91.9	115	171	215
	Absorbed power (2)	kW	17.2	22.0	28.4	42.6	52.8
	COP (2)		4.13	4.18	4.05	4.01	4.07
Compressor	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	43.1	55.2	70.4	105	130
		l/s	2.72	3.48	4.44	6.59	8.22
	Pressure drops	ft WG	12.3	21.0	17.7	21.3	15.7
		kPa	37	63	53	64	47
	Water connections	"G	1 ½"	2"	2 ½"	3"	3"
Condenser	Water flow	gpm	52.9	67.8	86.9	129	161
		l/s	3.34	4.28	5.48	8.13	10.15
	Pressure drops	ft WG	3.7	5.0	8.0	10.0	16.0
		kPa	11	15	24	30	48
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	39	48	59	95	119
	Max. starting 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

CLEARANCE AREA

CWW-M/K 181÷522

500	500	800	1000

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 version are specified on technical brochure.

Electrical board side

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.

NEXT POWER

The CWW-M/K 724-P÷1306-P **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and plate exchangers, is designed for large 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 values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.

VERSION

CWW-M/K	***CWW-M/K/WP***
Cooling only	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 plates type with two independent circuits on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plates 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 silencement
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic 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	54.6	64.3	82.9	99.6	126
Cooling (EN14511)	Cooling capacity (1)	TON	66.5	80.2	99.2	124	151
		kW	234	282	349	435	531
	Absorbed power (1)	kW	57.0	67.0	87.0	104	131
	EER (1)		4.07	4.22	3.99	4.18	4.04
Heating	Heating capacity (2)	TON	85.9	100	128	154	191
		kW	302	353	451	541	670
	Absorbed power (2)	kW	70.0	82.6	105	128	161
Heating (EN14511)	Heating capacity (2)	TON	86.4	101	129	155	192
		kW	304	355	455	544	674
	Absorbed power (2)	kW	73.0	86.0	110	133	167
	COP (2)		4.16	4.12	4.12	4.10	4.04
Compressor	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
	Max. starting 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

CLEARANCE AREA

CWW-M/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 version are specified on technical brochure.

Electrical board side

FROM 66 TON TO 151 TON.
FROM 233 KW TO 530 KW.

CWW-M/K 724÷1306

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

NEXT POWER

The CWW-M/K 724÷1306 **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and shell and tube exchangers, is designed for large 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 values; thanks to the high partialization and the intelligent control module, it doesn't require inertial storage tank.

VERSION

CWW-M/K	***CWW-M/K/WP***
Cooling only	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 two independent circuits on the refrigerant side and one on the water side. The easily removable cast iron heads enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. 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 silencement
BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic 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	66.3	81.3	101	123	151
		kW	233	286	355	433	530
	Absorbed power (1)	kW	54.1	65.2	81.9	98.2	125
Cooling (EN14511)	Cooling capacity (1)	TON	66.0	81.0	101	123	150
		kW	232	285	354	432	528
	Absorbed power (1)	kW	54.9	66.1	83.0	99.4	127
	EER (1)		4.23	4.31	4.27	4.35	4.16
Heating	Heating capacity (2)	TON	85.0	102	130	152	190
		kW	299	357	456	536	667
	Absorbed power (2)	kW	69.1	83.9	104	125	159
Heating (EN14511)	Heating capacity (2)	TON	85.3	102	130	153	191
		kW	300	358	458	538	670
	Absorbed power (2)	kW	71.1	86.0	107	128	164
	COP (2)		4.22	4.16	4.28	4.20	4.09
Compressor	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	217	269	328	401
		l/s	11.13	13.66	16.96	20.69	25.32
	Pressure drops	ft WG	11.0	10.3	12.0	11.0	14.0
		kPa	33	31	36	33	42
	Water connections	DN	150	150	150	150	150
Condenser	Water flow	gpm	217	266	331	402	496
		l/s	13.71	16.77	20.88	25.37	31.29
	Pressure drops	ft WG	10.0	10.3	15.0	14.0	16.3
		kPa	30	31	45	42	49
	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
	Max. starting 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	1554	1569	2186	2419	2993
	Operating weight	Kg	1690	1700	2390	2620	3290

DIMENSIONS			724	824	1044	1206	1306
L	STD	mm	3000	3000	3000	3000	3300
W	STD	mm	800	800	1350	1350	1350
H	STD	mm	1900	1900	1900	1900	1900

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 version are specified on technical brochure.

Electrical board side

FROM 63 TON TO 152 TON.
FROM 222 KW TO 535 KW.

CWW-M/Y/A 1301÷2601

A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS.

The liquid chillers of the CWW-M/Y/A 1301÷2601 **ENERGYMAX** series, with R134a refrigerant, are designed for the service sector or industrial systems requiring high power. These units are characterized by an high efficiency, in A CLASS, with EER higher than 5,05 thanks to the dedicated technical solutions as flooded shell and tube evaporator and Screw compressors.
Units are equipped with latest generation Screw compressors, flooded shell and tube evaporator and connections for condensation with tower water or well water or with a Dry-Cooler. Furthermore, they have a series of accessories which are factory-assembled of supplied separately such as desuperheater, total heat recovery and, if neccessary, 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.

ENERGY MAX

INVERTER SCREW

VERSION

CWW-M/Y/A

Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with external oil separator, suction filter, oil sight glass, thermal protection, hot gas shut off valves and stepless capacity steps.
- Shell and tube type condenser, with one circuit on the refrigerant side and one on the water side. The easily removable cast iron heads enable access for maintenance operations. Water connections for cooling tower and Dry-Cooler operation.
- Flooded shell and tube type evaporator with casing with high efficiency tube nest designed for R134a.
- 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

BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
FE	Antifreeze heater for evaporator
II	Inverter on one compressor
ID	Inverter on all compressors
SS	Soft start
DP	Device for heat pump operation
WM	Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

CWW-M/Y/A 1301÷2601

MODEL			1301	1501	1701	1901	2001	2601
Cooling	Cooling capacity (1)	TON	63.1	80.5	98.1	115	133	152
		kW	222	283	345	403	466	535
	Absorbed power (1)	kW	41.1	53.0	64.0	74.4	87.3	99.3
	EER (1)		5.40	5.34	5.39	5.42	5.34	5.39
Cooling (EN14511)	Cooling capacity (1)	TON	62.8	80.2	97.5	114	138	152
		kW	221	282	343	399	485	533
	Absorbed power (1)	kW	42	54	65	76	92	101
	EER (1)		5.26	5.22	5.28	5.25	5.27	5.28
Compressor	Quantity	n°	1	1	1	1	1	1
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	Stepless					
Evaporator	Water flow	gpm	168	214	261	305	353	405
		l/s	10.61	13.52	16.48	19.25	22.26	25.56
	Pressure drops	ft WG	11.0	12.3	13.7	16.0	12.7	12.7
		kPa	33	37	41	48	38	38
	Water connections	DN	100	100	100	100	100	100
Condenser	Water flow	gpm	199	254	310	361	419	480
		l/s	12.57	16.05	19.54	22.79	26.42	30.29
	Pressure drops	ft WG	18.3	14.0	19.7	17.7	18.0	16.7
		kPa	55	42	59	53	54	50
	Water connections	DN	100	100	100	100	100	125
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50					
	Max. running current	A	108	141	168	189	230	253
	Max. starting current	A	361	422	488	529	809	864
Sound pressure	STD version (2)	dB(A)	75	76	77	79	80	80
Weights	Transport weight	Kg	2923	3190	3247	3427	3942	4190
	Operating weight	Kg	3020	3320	3390	3590	4120	4400

DIMENSIONS			1301	1501	1701	1901	2001	2601
L	STD	mm	3400	3400	3400	3400	3400	3400
W	STD	mm	1150	1150	1150	1150	1150	1150
H	STD	mm	2100	2100	2100	2100	2100	2100

CLEARANCE AREA

CWW-M/Y/A 1301÷2601

500	500	800	500

NOTES

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

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

HYDRO PLUS

The CWW-M/SZ/K 181-P÷522-P **HYDROPLUS** liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. This range is ideal for indoor installation and, equipped with a self-contained structure, it reduces 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 with everything necessary 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 recovery, rounds off the variety of equipment in this product range.

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

VERSION

CWW-M/SZ/K	***CWW-M/SZ/K/WP***
Cooling only	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 plates type with one circuit on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plates 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 silencement
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers

CWW-M/SZ/K 181-P÷522-P 60 Hz

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
Compressor	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	DN	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	DN	32	32	65	65	65
Electrical characteristics	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	34	42	51	83	103
	Max. starting current	A	187	226	278	268	330
Unit with tank and pump	Pump 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
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
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 (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
UNIT	L	mm	1200	1200	1200	1600	1600
	W	mm	680	680	680	680	680
	H	mm	1520	1520	1520	1520	1520
UNIT + SPU/SPD	L	mm	2310	2310	2310	2710	2710
	W	mm	680	680	680	680	680
	H	mm	1520	1520	1520	1520	1520

CLEARANCE AREA

CWW-M/SZ/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 version are specified on technical brochure.

Electrical board side

FROM 15 TON TO 48 TON.
FROM 52 KW TO 169 KW.

CWW-M/SZ/K 181÷522

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

60 Hz

HYDRO PLUS

The CWW-M/SZ/K 181÷522 **HYDROPLUS** liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium sized domestic or industrial systems which require medium-high power, space-saving units and quiet operation. This range is ideal for indoor installation and it reduces 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 with everything necessary 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 recovery, rounds off the variety of equipment in this product range.

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

VERSION

CWW-M/SZ/K	*CWW-M/SZ/K/WP*
Cooling only	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 one circuit on the refrigerant side and one on the water side. The easily removable cast iron heads 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 silencement
BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers
FL	Flow switch

CWW-M/SZ/K 181÷522 60 Hz

MODEL			181	241	301	392	522
Cooling	Cooling capacity (1)	TON	14.8	21.2	27.4	36.7	48.1
		kW	52.2	74.7	96.2	129	169
	Absorbed power (1)	kW	11.7	16.8	21.8	29.8	37.2
Heating	Heating capacity (2)	TON	18.4	26.6	33.6	45.2	59.7
		kW	64.8	93.4	118	159	210
	Absorbed power (2)	kW	14.9	21.1	27.4	37.9	46.8
Compressor	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	39.5	56.6	72.9	97.6	128
		l/s	2.49	3.57	4.60	6.16	8.07
	Pressure drops	ft WG	10.3	22.0	19.0	18.7	15.0
		kPa	31	66	57	56	45
	Water connections	"G	1 ½"	2"	2 ½"	3"	3"
Condenser	Water flow	gpm	48.3	69.3	89.4	120	156
		l/s	3.05	4.37	5.64	7.59	9.85
	Pressure drops	ft WG	2.7	5.0	8.7	8.7	14.3
		kPa	8	15	26	26	43
	Water connections	"G	2 ½"	2 ½"	2 ½"	2 ½"	2 ½"
Electrical characteristics	Power supply	V/Ph/Hz	460/3/60				
	Max. running current	A	34	42	51	83	103
	Max. starting 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

CLEARANCE AREA

CWW-M/SZ/K 181÷522

500	500	800	1000

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 version are specified on technical brochure.

Electrical board side

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.

NEXT POWER

The CWW-M/SZ/K 724-P÷1306-P **NEXTPOWER** series, with R410A refrigerant, Scroll compressors and plate exchangers, is designed for large 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 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.

VERSION

CWW-M/SZ/K	*CWW-M/SZ/K/WP*
Cooling only	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 plates type with two independent circuits on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plates 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 silencement
BT	Low water temperature Kit
DS	Desuperheater
RT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers

CWW-M/SZ/K 724-P÷1306-P 60 Hz

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	53.9	63.5	81.8	98.3	125
Heating	Heating capacity (2)	TON	84.7	99.0	127	152	188
		kW	298	348	445	534	661
	Absorbed power (2)	kW	69.1	81.5	104	126	159
Compressor	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
	Max. starting 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

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 version are specified on technical brochure.

Electrical board side

FROM 67 TON TO 153 TON.
FROM 234 KW TO 537 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 for large 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 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.

VERSION

CWW-M/SZ/K	***CWW-M/SZ/K/WP***
Cooling only	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 two independent circuits on the refrigerant side and one on the water side. The easily removable cast iron heads enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. 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 silencement
BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
IS	Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV2	2-Way electronic pressostatic valve
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers
FL	Flow switch

CWW-M/SZ/K 724÷1306 60 Hz

MODEL			724	824	1044	1206	1306
Cooling	Cooling capacity (1)	TON	66.5	80.2	100	125	153
		kW	234	282	353	440	537
	Absorbed power (1)	kW	52.9	62.1	79.2	95.9	122
Heating	Heating capacity (2)	TON	85.6	100	129	155	192
		kW	301	352	453	545	675
	Absorbed power (2)	kW	68.1	79.9	101	123	155
Compressor	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	177	214	267	333	407
		l/s	11.18	13.47	16.87	21.02	25.66
	Pressure drops	ft WG	11.0	10.0	12.0	11.3	14.3
		kPa	33	30	36	34	43
	Water connections	DN	150	150	150	150	150
Condenser	Water flow	gpm	217	261	327	406	499
		l/s	13.71	16.44	20.64	25.61	31.49
	Pressure drops	ft WG	10.0	10.0	14.7	14.3	16.7
		kPa	30	30	44	43	50
	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
	Max. starting 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	1484	1499	2106	2259	2883
	Operating weight	Kg	1620	1630	2310	2460	3180

DIMENSIONS			724	824	1044	1206	1306
L	STD	mm	3000	3000	3000	3000	3300
W	STD	mm	800	800	1350	1350	1350
H	STD	mm	1900	1900	1900	1900	1900

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 version are specified on technical brochure.

Electrical board side

FROM 68 TON TO 147 TON.
FROM 239 KW TO 518 KW.

CWW-M/SZ/Y/A 1301÷2601

A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS.

ENERGY MAX

INVERTER SCREW

The liquid chillers of the CWW-M/SZ/Y/A 1301÷2601 **ENERGYMAX** series, with R134a refrigerant, are designed for the service sector or industrial systems requiring high power. These units are characterized by an high efficiency, in A CLASS, with EER higher than 5,05 thanks to the dedicated technical solutions as flooded shell and tube evaporator and Screw compressors.
Units are equipped with latest generation Screw compressors, flooded shell and tube evaporator and connections for condensation with tower water or well water or with a Dry-Cooler. Furthermore, they have a series of accessories which are factory-assembled of supplied separately such as desuperheater, total heat recovery and, if neccessary, 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.

VERSION

CWW-M/SZ/Y/A

Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with external oil separator, suction filter, oil sight glass, thermal protection, hot gas shut off valves and stepless capacity steps.
- Shell and tube type condenser, with one circuit on the refrigerant side and one on the water side. The easily removable cast iron heads enable access for maintenance operations. Water connections for cooling tower and Dry-Cooler operation.
- Flooded shell and tube type evaporator with casing with high efficiency tube nest designed for R134a.
- 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

BT	Low water temperature Kit
HR	Desuperheater
HRT	Total heat recovery
FE	Antifreeze heater for evaporator
II	Inverter on one compressor
ID	Inverter on all compressors
SS	Soft start
DP	Device for heat pump operation
WM	Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
PV3	3-Way electronic pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

CWW-M/SZ/Y/A 1301÷2601 60 Hz

MODEL			1301	1501	1701	1901	2001	2601
Cooling	Cooling capacity (1)	TON	68.0	80.2	95.8	115	131	147
		kW	239	282	337	406	462	518
	Absorbed power (1)	kW	45.7	52.8	65.0	77.7	85.6	96.3
	EER (1)		5.23	5.34	5.18	5.23	5.40	5.38
Compressor	Quantity	n°	1	1	1	1	1	1
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	Stepless					
Evaporator	Water flow	gpm	181	214	255	308	350	392
		l/s	11.42	13.47	16.10	19.40	22.07	24.75
	Pressure drops	ft WG	13.0	12.3	13.3	15.3	12.7	11.3
		kPa	39	37	40	46	38	34
	Water connections	DN	100	100	100	100	100	100
Condenser	Water flow	gpm	216	254	305	367	415	465
		l/s	13.62	16.01	19.21	23.12	26.18	29.34
	Pressure drops	ft WG	16.0	13.7	19.0	18.7	18.0	15.3
		kPa	48	41	57	56	54	46
	Water connections	DN	100	100	100	100	100	125
Electrical characteristics	Power supply	V/Ph/Hz	460/3/60					
	Max. running current	A	105	121	148	177	199	214
	Max. starting current	A	361	416	422	488	529	742
Sound pressure	STD version (2)	dB(A)	76	77	78	80	81	81
Weights	Transport weight	Kg	2910	3090	3217	3410	3722	3910
	Operating weight	Kg	3010	3220	3360	3580	3900	4120

DIMENSIONS			1301	1501	1701	1901	2001	2601
L	STD	mm	3400	3400	3400	3400	3400	3400
W	STD	mm	1150	1150	1150	1150	1150	1150
H	STD	mm	2100	2100	2100	2100	2100	2100

CLEARANCE AREA

CWW-M/SZ/Y/A 1301÷2001

500	500	800	500

NOTES

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

Electrical board side


CLINT
TOP AIR
CLINT
TOP AIR
EC INVERTER PLUG FANS

CHAPTER 4

PACKAGED ROOF TOP UNITS AND CONDENSING UNITS

FROM 3.3 TON TO 50 TON.
FROM 12 KW TO 176 KW.

RTQ-M/K 51÷724

SINGLE-SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS.

R410A

The single skin Packaged Roof Top units of the **FLEXI AIR** series, with R410A refrigerant, can be connected to a duct network for air conditioning of small and medium 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 air flow 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.

FLEXI AIR

VERSION

RTQ-M/K	***RTQ-M/K/WP***
Cooling only	Reversible Heat Pump

FEATURES

- Structure of base perimeter made of galvanized steel sheet elements. 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 made of 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; thermocontacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED 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
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins

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	1695	1907	2755	3390	4026	5085
		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
	Fan	n°	1	1	1	1	1	1	1
	Filters	Type	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	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
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	10	12	14	18	20	26	34
	Max. starting 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	310	360	395	430	510	580	795
	Operating weight	Kg	300	350	385	420	500	570	785

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	6780	8264	9959	12078	13349	16103	19917
		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
	Fan	n°	1	1	1	1	1	1	1
	Filters	Type	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	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	4	4
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	45	53	69	87	92	109	134
	Max. starting 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	950	1190	1310	1780	1880	2090	2450
	Operating weight	Kg	940	1180	1300	1770	1870	2080	2440

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	2330	3040	3175	3215	3650
W	STD	mm	1200	1200	1300	1200	1450	1450	1750	1700	1850	1850	2100	2250	2250	2250
H	STD	mm	1000	1000	1000	1150	1150	1150	1150	1750	1750	2050	2050	2050	2330	2330

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 fans of air treatment section.
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 version are specified on technical brochure.

Electrical board side

FROM 3.7 TON TO 55 TON.
FROM 13 KW TO 195 KW.

RTQXT-M/K 51÷804

SINGLE-SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS.

HIGH AMBIENT TEMPERATURE (UP TO 52°C).

The single skin Packaged Roof Top units of the **FLEXI AIR** series, with R410A refrigerant, can be connected to a duct network for air conditioning of small and medium 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 air flow 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.

VERSION

RTQXT-M/K	***RTQXT-M/K/WP***
Cooling only	Reversible Heat Pump

FEATURES

- Structure of base perimeter made of galvanized steel sheet elements. 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 made of 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; thermocontacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED 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
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins

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
	Cooling capacity (3)	TON	3.7	4.6	5.5	7.4	9.2	11.1	13.8
		kW	13.0	16.2	19.5	26.0	32.5	39.0	48.7
	Absorbed power (2),(3)	kW	4.0	5.0	6.2	7.8	10.1	13.0	15.6
Heating	Heating capacity (4)	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),(4)	kW	4.1	5.1	6.3	7.9	10.3	13.2	15.9
Air treatment section	Air flow	cfm	1271	1695	1907	2755	3390	4026	5085
		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
	Fan	n°	1	1	1	1	1	1	1
	Filters	Type	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	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
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	11	14	17	20	25	30	39
	Max. starting current	A	57	71	90	108	140	166	216
Sound pressure	STD version (5)	dB(A)	52	54	54	55	59	60	60
Weights	Transport weight	Kg	310	360	395	430	510	580	795
	Operating weight	Kg	300	350	385	420	500	570	785

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	31.5	38.3	44.3	49.1	63.1	76.7
	Cooling capacity (3)	TON	18.5	23.1	27.7	33.3	37.0	44.4	55.4
		kW	65.0	81.2	97.5	117	130	156	195
	Absorbed power (2),(3)	kW	20.0	24.4	31.2	35.9	39.9	51.1	62.5
Heating	Heating capacity (4)	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),(4)	kW	20.3	26.8	31.8	36.5	40.6	52.0	63.5
Air treatment section	Air flow	cfm	6780	8264	9959	12078	13349	16103	19917
		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
	Fan	n°	1	1	1	1	1	1	1
	Filters	Type	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	n°	2	4	4	4	4	4	4
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	53	62	80	94	104	129	158
	Max. starting current	A	165	195	254	297	212	255	327
Sound pressure	STD version (5)	dB(A)	60	62	62	61	62	62	62
Weights	Transport weight	Kg	950	1190	1310	1780	1880	2090	2450
	Operating weight	Kg	940	1180	1300	1770	1870	2080	2440

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	2330	3040	3175	3215	3650
W	STD	mm	1200	1200	1300	1200	1450	1450	1750	1700	1850	1850	2100	2250	2250	2250
H	STD	mm	1050	1050	1050	1200	1200	1200	1200	1800	1800	2100	2100	2100	2380	2380

CLEARANCE AREA

RTQXT-M/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 fans of air treatment section.
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 version are specified on technical brochure.

Electrical board side

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 AND RADIAL FANS OR EC INVERTER PLUG-FANS.

The double skin packaged Roof Top units of the **TOP AIR** series are the ideal solution for air conditioning of medium surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA-M/K units feature Scroll compressors with R410A refrigerant and radial fans or **EC Inverter Plug-Fans**. The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panels, these units are available in cooling only and reversible heat pump version.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

TOP AIR

EC INVERTER PLUG FANS

VERSION

RTA-M/K	***RTA-M/K/WP***
Cooling only with radial fans	Reversible Heat Pump with radial fans
RTA-M/K/EC	***RTA-M/K/EC/WP***
Cooling only with EC Inverter Plug-Fans	Reversible Heat Pump with EC Inverter Plug-Fans

FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. 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; 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 made of copper tube and aluminium finned coil.
- Delivery radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins
FT/M	Soft bag filters efficiency M6-F7-F8
FT/R	Rigid bag filters efficiency M6-F7-F8
WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heater with step regulation
SQ	Air quality sensor
PF	Filter differential pressure switch
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
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	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	2	2	2	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	n°	1	1	1	2	2	2
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	1	1	1	2	2	2
Hot water coil	Heating capacity (4)	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"
Electrical heater	Power supply	V/Ph/Hz	400/3/50					
	Max. absorbed current	A	22	39	39	59	59	69
	Heating capacity	kW	15	27	27	41	41	48
	Steps	n°	2	2	2	4	4	4
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50					
	Max. running current	A	44	53	68	87	105	136
	Max. starting current	A	220	265	329	264	318	397
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400 / 3 / 50					
	Max. running current	A	40	46	61	80	98	134
	Max. starting current	A	216	258	322	257	311	395
Sound pressure (5)		dB(A)	59	59	59	61	62	62
Sound pressure (EC version) (5)		dB(A)	58	58	58	60	61	61
Weights	Transport weight	Kg	1010	1157	1310	1890	2216	2500
	Operating weight	Kg	1002	1145	1298	1874	2200	2484
Weights (EC version)	Transport weight	Kg	970	1127	1270	1800	2176	2420
	Operating weight	Kg	962	1115	1258	1784	2160	2404

COMPLEMENTARY SECTIONS

UMI Section with preparation for Humidifier

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

CLEARANCE AREA

RTA-M/K 181÷301

800 | 1700 | 800 | 1700

RTA-M/K 392÷602

1000 | 1700 | 1000 | 1700

Electrical board side

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 fans of air treatment section.
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 specified on technical brochure.

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, RADIAL FANS OR EC INVERTER PLUG-FANS AND MIXING BOX.

The double skin packaged Roof Top units of the **TOP AIR** series are the ideal solution for air conditioning of medium surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA-M/K units feature Scroll compressors with R410A refrigerant and radial fans or **EC Inverter Plug-Fans**. The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panels, these units are available in cooling only and reversible heat pump version.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.
The MS units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, a **MIXING BOX**.

TOP AIR

EC INVERTER PLUG FANS

VERSION

RTA-M/K/MS	***RTA-M/K/WP/MS***
Cooling only with radial fans and Mixing Box	Reversible Heat Pump with radial fans and Mixing Box
RTA-M/K/EC/MS	***RTA-M/K/EC/WP/MS***
Cooling only with EC Inverter Plug-Fans and Mixing Box	Reversible Heat Pump with EC Inverter Plug-Fans and Mixing Box

FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. 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; 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 made of copper tube and aluminium finned coil.
- Delivery radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins
FT/M	Soft bag filters efficiency M6-F7-F8
FT/R	Rigid bag filters efficiency M6-F7-F8
WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heater with step regulation
SQ	Air quality sensor
PF	Filter differential pressure switch
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
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	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	2	2	2	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	n°	1	1	1	2	2	2
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	1	1	1	2	2	2
Hot water coil	Heating capacity (4)	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"
Electrical heater	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
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50					
	Max. running current	A	44	53	68	87	105	136
	Max. starting current	A	220	265	329	264	318	397
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400 / 3 / 50					
	Max. running current	A	40	46	61	80	98	134
	Max. starting current	A	216	258	322	257	311	395
Sound pressure (5)		dB(A)	59	59	59	61	62	62
Sound pressure (EC version) (5)		dB(A)	58	58	58	60	61	61
Weights	Transport weight	Kg	1090	1262	1410	1990	2316	2620
	Operating weight	Kg	1078	1250	1398	1974	2296	2600
Weights (EC version)	Transport weight	Kg	1050	1232	1370	1900	2276	2540
	Operating weight	Kg	1038	1220	1358	1884	2256	2520

MIXING BOX

MS. 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

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

CLEARANCE AREA

RTA-M/K/MS 181÷301

800 | 1700 | 800 | 1700

RTA-M/K/MS 392÷602

1000 | 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 fans of air treatment section.
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 specified on technical brochure.

Electrical board side

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, RADIAL FANS OR EC INVERTER PLUG-FANS AND ECONOMIZER.

The double skin packaged Roof Top units of the **TOP AIR** series are the ideal solution for air conditioning of medium surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA-M/K units feature Scroll compressors with R410A refrigerant and radial fans or **EC Inverter Plug-Fans**. The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panels, these units are available in cooling only and reversible heat pump version.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.
The ECO units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING.

TOP AIR

EC INVERTER PLUG FANS

VERSION

RTA-M/K/ECO	***RTA-M/K/WP/ECO***
Cooling only with radial fans and Economizer	Reversible Heat Pump with radial fans and Economizer
RTA-M/K/EC/ECO	***RTA-M/K/EC/WP/ECO***
Cooling only with EC Inverter Plug-Fans and Economizer	Reversible Heat Pump with EC Inverter Plug-Fans and Economizer

FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. 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; 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 made of copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins
FT/M	Soft bag filters efficiency M6-F7-F8
FT/R	Rigid bag filters efficiency M6-F7-F8
WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heater with step regulation
CH	Enthalpic control (ECO only)
SQ	Air quality sensor
PF	Filter differential pressure switch
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
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	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	2	2	2	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
Air intake section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	2	2	2	4
Condensing section	Compressor	n°	1	1	1	2	2	2
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	1	1	1	2	2	2
Hot water coil	Heating capacity (4)	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"
Electrical heater	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
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50					
	Max. running current	A	44	53	68	87	105	136
	Max. starting current	A	220	265	329	264	318	397
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400 / 3 / 50					
	Max. running current	A	40	46	61	80	98	134
	Max. starting current	A	216	258	322	257	311	395
Sound pressure (5)		dB(A)	59	59	59	61	62	62
Sound pressure (EC version) (5)		dB(A)	58	58	58	60	61	61
Weights	Transport weight	Kg	1550	1787	1940	2550	3076	3520
	Operating weight	Kg	1534	1767	1920	2526	3048	3492
Weights (EC version)	Transport weight	Kg	1510	1757	1900	2460	3036	3440
	Operating weight	Kg	1494	1737	1880	2436	3008	3412

ECONOMIZER

ECO. 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. Exhaust, recirculation 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

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

CLEARANCE AREA

RTA-M/K/ECO 181÷301

800 | 1700 | 800 | 1700

RTA-M/K/ECO 392÷602

1000 | 1700 | 1000 | 1700

Electrical board side

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 fans of air treatment section.
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 specified on technical brochure.

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, RADIAL FANS OR EC INVERTER PLUG-FANS, ECONOMIZER AND CROSS-FLOW HEAT RECOVERY.

The double skin packaged Roof Top units of the **TOP AIR** series are the ideal solution for air conditioning of medium surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA-M/K units feature Scroll compressors with R410A refrigerant and radial fans or **EC Inverter Plug-Fans**. The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panels, these units are available in cooling only and reversible heat pump version.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.
The ECO/REC-FX units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING and a **CROSS-FLOW HEAT RECOVERY.**

TOP AIR

EC INVERTER PLUG FANS

VERSION

RTA-M/K/ECO/REC-FX	***RTA-M/K/WP/ECO/REC-FX***
Cooling only with radial fans, Economizer and Cross-flow Heat Recovery	Reversible Heat Pump with radial fans, Economizer and Cross-flow Heat Recovery
RTA-M/K/EC/ECO/REC-FX	***RTA-M/K/EC/WP/ECO/REC-FX***
Cooling only with EC Inverter Plug-Fans, Economizer and Cross-flow Heat Recovery	Reversible Heat Pump with EC Inverter Plug-Fans, Economizer and Cross-flow Heat Recovery

FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. 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; 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 made of copper tube and aluminium finned coil.
- Delivery & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing section; contactors for the fan motors of the air treatment section.
- Microprocessor for the automatic control of the unit.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
TXC	Condensing coil with pre-coated fins
TXE	Evaporating coil with pre-coated fins
FT/M	Soft bag filters efficiency M6-F7-F8
FT/R	Rigid bag filters efficiency M6-F7-F8
WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heater with step regulation
CH	Enthalpic control (ECO only)
SQ	Air quality sensor
PF	Filter differential pressure switch
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
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	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	2	2	2	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	1	1	1	1
Air intake section (EC version)	Air flow	cfm	5720	8680	10380	13340	17370	20540
		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
	Fan	n°	1	1	2	2	2	4
Condensing section	Compressor	n°	1	1	1	2	2	2
	Refrigerant circuits	n°	1	1	1	1	1	1
	Capacity steps	n°	1	1	1	2	2	2
Hot water coil	Heating capacity (4)	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"
Electrical heater	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
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50					
	Max. running current	A	44	53	68	87	105	136
	Max. starting current	A	220	265	329	264	318	397
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400 / 3 / 50					
	Max. running current	A	40	46	61	80	98	134
	Max. starting current	A	216	258	322	257	311	395
Sound pressure (5)		dB(A)	59	59	59	61	62	62
Sound pressure (EC version) (5)		dB(A)	58	58	58	60	61	61
Weights	Transport weight	Kg	1695	1967	2120	2790	3316	3740
	Operating weight	Kg	1675	1657	2100	2766	3288	3708
Weights (EC version)	Transport weight	Kg	1655	1937	2080	2700	3276	3660
	Operating weight	Kg	1635	1627	2060	2676	3248	3628

ECONOMIZER AND CROSS-FLOW HEAT RECOVERY

ECO/REC-FX. Further to the components of the ECO section, it includes: static recovery device made of aluminium with moisture drain pan, flat filters inspectable through hinged door and dampers with return spring servomotors (fresh air damper + air recirculation damper + exhaust 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

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

CLEARANCE AREA

RTA-M/K/ECO/REC-FX 181÷301

800 | 1700 | 800 | 1700

RTA-M/K/ECO/REC-FX 392÷602

1000 | 1700 | 1000 | 1700

Electrical board side

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 fans of air treatment section.
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 specified on technical brochure.

FROM 16 TON TO 48 TON.
FROM 57 KW TO 167 KW.

MHA-M/K 181÷522

AIRCOOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH AXIAL FANS AND SCROLL COMPRESSORS.

The condensing units and reversible condensing units of the MHA-M/K 181÷522 series, with R410A refrigerant, are designed for medium sized domestic or industrial systems.
These outdoor units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporating units in both air conditioning and industrial process cooling applications
They are equipped with Scroll compressors and axial fans, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, factory fitted or supplied separately, completes the outstanding versatility and functionality of the series.

VERSION

MHA-M/K	***MHA-M/K/WP***
Cooling only	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 copper tube and aluminium finned coil.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, protection modules, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

SL	Unit silencement
CT	Condensing control down to 0 °C
TX	Coil with pre-coated fins
RL	Liquid receiver
VS	Solenoid valve
BP	Hot gas by-pass valve
FF	Dryer filter and sight glass
IS	Modbus RTU protocol, RS485 serial interface
CP	Potential free contacts

LOOSE ACCESSORIES

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

MHA-M/K 181÷522

MODEL			181	241	301	392	522
Cooling	Cooling capacity (1)	TON	16.2	19.8	26.6	37.5	47.5
		kW	57.0	69.5	93.7	132	167
	Absorbed power (1)	kW	19.4	23.4	30.6	46.5	63.7
Heating	Heating capacity (2)	TON	17.5	21.9	28.7	40.7	51.5
		kW	61.5	77.1	101	143	181
	Absorbed power (2)	kW	16.4	20.1	25.9	38.6	47.7
Compressor	Quantity	n°	1	1	1	2	2
	Refrigerant circuits	n°	1	1	1	1	1
	Capacity steps	n°	1	1	1	2	2
Connections	Suction line	Ø mm	1 x 35	1 x 42	1 x 42	1 x 54	1 x 54
	Liquid line	Ø mm	1 x 22	1 x 22	1 x 22	1 x 28	1 x 28
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50				
	Max. running current	A	43	52	67	103	127
	Max. starting 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	Kg	525	555	660	785	895
	Operating weight	Kg	535	565	670	805	915

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

CLEARANCE AREA

MHA-M/K 181÷522

300	800	800	1800

NOTES

1. Average evaporating temperature 5 °C, ambient air temperature 35 °C.
2. Average condensing temperature 40 °C, ambient air temperature 7 °C d.b./6 °C w.b.
3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

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

Electrical board side


CLINT

CHAPTER 5

FAN COIL UNITS

FROM 0.6 TON TO 3.1 TON.
FROM 2.0 KW TO 11 KW.

FBW-M 23÷123

CEILING CONCEALED FAN COIL UNITS, BLOW THROUGH.

The Blow Through ceiling concealed Fan Coil units of the FBW-M series are designed for installation in domestic ambients or in service business including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a liquid chiller, FBW-M generates cool air silently and with instantaneous reaction. Otherwise, durinf 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.

VERSION

FBW-M	***FBW-M/AP***
Built-in horizontal unit rear inlet and horizontal delivery	Built-in horizontal unit rear inlet and horizontal delivery. With high ESP fans

FEATURES

- Structure made of galvanized 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 coils made of copper tubes and aluminium fins with airvent on the headers.
- 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 moisture drain pan
V2	3-Way on/off valve for 2-Pipe system

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
	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	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
	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
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	210	300	410	600	800	970	1200
		m³/h	360	510	700	1020	1360	1650	2040
	Med	cfm	170	230	290	480	650	800	1020
		m³/h	290	390	490	820	1100	1360	1730
	Min	cfm	120	170	210	420	500	650	890
		m³/h	200	290	360	710	850	1100	1510
Available static pressure	STD version	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 version	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
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
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
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

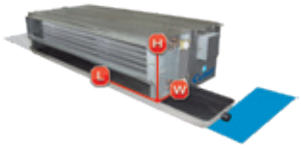
MODEL			23	33	43	63	83	103	123
Cooling	Total cooling capacity (1)	TON	0.66	0.95	1.28	1.87	2.35	2.75	3.48
		kW	2.33	3.33	4.50	6.56	8.28	9.67	12.24
	Sensible cooling capacity (1)	TON	0.47	0.69	0.92	1.34	1.71	2.01	2.53
		kW	1.66	2.41	3.23	4.70	6.03	7.07	8.90
	Water flow (1)	gpm	1.8	2.5	3.4	5.0	6.3	7.3	9.3
		l/h	401	573	774	1128	1424	1663	2105
	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	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
	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
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	250	360	490	720	960	1160	1440
		m³/h	420	610	830	1220	1630	1970	2450
	Med	cfm	210	280	350	580	780	960	1230
		m³/h	360	480	590	990	1330	1630	2090
	Min	cfm	140	200	250	500	600	780	1070
		m³/h	240	340	420	850	1020	1330	1820
Available static pressure	STD version	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 version	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
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
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
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

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 11 KW.

FDW-M 23÷123

CEILING CONCEALED FAN COIL UNITS, DRAW THROUGH.

The Draw Through ceiling concealed Fan Coil units of the FDW-M series are designed for installation in domestic ambients or in service business including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a liquid chiller, the fan coil 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.

VERSION

FDW-M	***FDW-M/AP***
Built-in horizontal unit rear inlet and horizontal delivery	Built-in horizontal unit rear inlet and horizontal delivery. With high ESP fans

FEATURES

- Structure made of galvanized 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 coils made of copper tubes and aluminium fins with airvent on the headers.
- 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 moisture drain pan
V2	3-Way on/off valve for 2-Pipe system

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
	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	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
	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
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	210	300	410	600	800	970	1200
		m³/h	360	510	700	1020	1360	1650	2040
	Med	cfm	170	230	290	480	650	800	1020
		m³/h	290	390	490	820	1100	1360	1730
	Min	cfm	120	170	210	420	500	650	890
		m³/h	200	290	360	710	850	1100	1510
Available static pressure	STD version	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 version	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
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
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
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
	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	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
	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
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	250	360	490	720	960	1160	1440
		m³/h	420	610	830	1220	1630	1970	2450
	Med	cfm	210	280	350	580	780	960	1230
		m³/h	360	480	590	990	1330	1630	2090
	Min	cfm	140	200	250	500	600	780	1070
		m³/h	240	340	420	850	1020	1330	1820
Available static pressure	STD version	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 version	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
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
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
Weights	Transport weight	Kg	19	22	26	30	41	44	46
	Operating weight	Kg	17	20	24	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

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 0.6 TON TO 3.0 TON.
FROM 2.0 KW TO 10 KW.

FBW-M/HDT 23÷123

CEILING CONCEALED FAN COIL UNITS, BLOW THROUGH WITH HIGH DELTA WATER TEMPERATURE.

The Blow Through ceiling concealed Fan Coils of the FBW-M/HDT series are designed for installation in domestic ambients or in service business including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a liquid chiller, FBW-M/HDT generates cool air silently and with instantaneous reaction.
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.

VERSION

FBW-M/HDT	***FBW-M/HDT/AP***
Built-in horizontal unit rear inlet and horizontal delivery	Built-in horizontal unit rear inlet and horizontal delivery. With high ESP fans

FEATURES

- Structure made of galvanized 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 made of copper tubes and aluminium fins with airvent on the headers, specifically designed for working with high delta water temperature.
- 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 moisture drain pan
V2	3-Way on/off valve for 2-Pipe system

FBW-M/HDT 23÷123 50 Hz

MODEL			23	33	43	63	83	103	123
Cooling	Total cooling capacity (1)	TON	0.55	0.77	1.02	1.54	2.10	2.39	2.97
		kW	1.95	2.72	3.59	5.41	7.38	8.41	10.44
	Sensible cooling capacity (1)	TON	0.38	0.55	0.71	1.07	1.44	1.68	2.06
		kW	1.34	1.92	2.51	3.76	5.08	5.91	7.23
	Water flow (1)	gpm	0.8	1.1	1.5	2.3	3.1	3.5	4.4
		l/h	186	260	343	517	705	804	998
	Pressure drops (1)	ft WG	8.0	3.0	5.0	4.7	8.7	10.3	6.7
		kPa	24	9	15	14	26	31	20
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	210	300	410	600	800	970	1200
		m³/h	360	510	700	1020	1360	1650	2040
	Med	cfm	170	230	290	480	650	800	1020
		m³/h	290	390	490	820	1100	1360	1730
	Min	cfm	120	170	210	420	500	650	890
		m³/h	200	290	360	710	850	1100	1510
Available static pressure	STD version	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 version	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 (2)	dB(A)	32	36	38	43	41	42	43
	Med (2)	dB(A)	31	31	34	38	38	37	38
	Min (2)	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/HDT 23÷123 60 Hz

MODEL			23	33	43	63	83	103	123
Cooling	Total cooling capacity (1)	TON	0.63	0.88	1.16	1.75	2.39	2.73	3.38
		kW	2.23	3.10	4.09	6.17	8.42	9.59	11.90
	Sensible cooling capacity (1)	TON	0.43	0.62	0.81	1.22	1.65	1.92	2.34
		kW	1.52	2.19	2.86	4.29	5.79	6.74	8.24
	Water flow (1)	gpm	0.9	1.3	1.7	2.6	3.5	4.0	5.0
		l/h	213	296	391	590	805	916	1137
	Pressure drops (1)	ft WG	10.3	4.0	6.3	6.0	11.3	13.3	8.7
		kPa	31	12	19	18	34	40	26
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	250	360	490	720	960	1160	1440
		m³/h	420	610	830	1220	1630	1970	2450
	Med	cfm	210	280	350	580	780	960	1230
		m³/h	360	480	590	990	1330	1630	2090
	Min	cfm	140	200	250	500	600	780	1070
		m³/h	240	340	420	850	1020	1330	1820
Available static pressure	STD version	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 version	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
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
Sound pressure	Max (2)	dB(A)	33	37	38	44	41	43	44
	Med (2)	dB(A)	31	31	35	38	39	37	39
	Min (2)	dB(A)	26	29	33	32	33	34	33
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

CLEARANCE AREA

FBW-M/HDT 23÷123

200 | 400

Electrical board side

NOTES

1. Ambient air temperature 27 °C d.b./19 °C w.b., water temperature 5,5/14,5 °C.
2. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.

FROM 0.6 TON TO 3.0 TON.
FROM 2.0 KW TO 11 KW.

FDW-M/HDT 23÷123

CEILING CONCEALED FAN COIL UNITS, DRAW THROUGH WITH HIGH DELTA WATER TEMPERATURE.

The Draw Through ceiling concealed Fan Coil units of the FDW-M/HDT series are designed for installation in domestic ambients or in service business including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a liquid chiller, FDW-M/HDT generates cool air silently and with instantaneous reaction.
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.

VERSION

FDW-M/HDT	***FDW-M/HDT/AP***
Built-in horizontal unit rear inlet and horizontal delivery	Built-in horizontal unit rear inlet and horizontal delivery. With high ESP fans

FEATURES

- Structure made of galvanized 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 made of copper tubes and aluminium fins with airvent on the headers, specifically designed for working with high delta water temperature.
- 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 moisture drain pan
V2	3-Way on/off valve for 2-Pipe system

FDW-M/HDT 23÷123 50 Hz

MODEL			23	33	43	63	83	103	123
Cooling	Total cooling capacity (1)	TON	0.57	0.78	1.05	1.56	2.11	2.44	3.01
		kW	1.99	2.75	3.68	5.49	7.42	8.58	10.60
	Sensible cooling capacity (1)	TON	0.39	0.55	0.73	1.08	1.45	1.71	2.09
		kW	1.37	1.94	2.57	3.81	5.11	6.03	7.34
	Water flow (1)	gpm	0.8	1.2	1.5	2.3	3.1	3.6	4.5
		l/h	190	263	352	525	709	820	1013
	Pressure drops (1)	ft WG	8.3	3.0	5.3	4.7	8.7	10.7	7.0
		kPa	25	9	16	14	26	32	21
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	210	300	410	600	800	970	1200
		m³/h	360	510	700	1020	1360	1650	2040
	Med	cfm	170	230	290	480	650	800	1020
		m³/h	290	390	490	820	1100	1360	1730
	Min	cfm	120	170	210	420	500	650	890
		m³/h	200	290	360	710	850	1100	1510
Available static pressure	STD version	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 version	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
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
Sound pressure	Max (2)	dB(A)	33	37	38	43	41	43	44
	Med (2)	dB(A)	31	31	35	39	38	37	39
	Min (2)	dB(A)	26	29	33	32	33	34	33
Weights	Transport weight	Kg	19	22	26	30	41	44	46
	Operating weight	Kg	17	20	24	28	39	42	44

FDW-M/HDT 23÷123 60 Hz

MODEL			23	33	43	63	83	103	123
Cooling	Total cooling capacity (1)	TON	0.65	0.89	1.19	1.78	2.41	2.78	3.44
		kW	2.27	3.13	4.20	6.26	8.46	9.78	12.09
	Sensible cooling capacity (1)	TON	0.44	0.63	0.83	1.24	1.65	1.96	2.38
		kW	1.56	2.21	2.93	4.35	5.82	6.88	8.37
	Water flow (1)	gpm	1.0	1.3	1.8	2.6	3.6	4.1	5.1
		l/h	217	299	401	598	808	935	1155
	Pressure drops (1)	ft WG	11.0	4.0	7.0	6.0	11.3	14.0	9.0
		kPa	33	12	21	18	34	42	27
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Air flow	Max	cfm	250	360	490	720	960	1160	1440
		m³/h	420	610	830	1220	1630	1970	2450
	Med	cfm	210	280	350	580	780	960	1230
		m³/h	360	480	590	990	1330	1630	2090
	Min	cfm	140	200	250	500	600	780	1070
		m³/h	240	340	420	850	1020	1330	1820
Available static pressure	STD version	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 version	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
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
Sound pressure	Max (2)	dB(A)	34	38	38	44	41	44	45
	Med (2)	dB(A)	31	31	36	39	39	37	40
	Min (2)	dB(A)	27	30	34	33	33	35	33
Weights	Transport weight	Kg	19	22	26	30	41	44	46
	Operating weight	Kg	17	20	24	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	260	260	260	260	260	260	260
H	STD	mm	330	330	330	330	330	330	330

CLEARANCE AREA

FDW-M/HDT 23÷123

200 | 400

Electrical board side

NOTES

1. Ambient air temperature 27 °C d.b./19 °C w.b., water temperature 5,5/14,5 °C.
2. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.

FROM 3.3 TON TO 14 TON.
FROM 12 KW TO 49 KW.

DBW-M 133÷464

DUCTED BLOWER FAN COIL UNITS.

The Ducted Blower Fan Coil units of the DBW-M series are designed for installation in medium sized ambients as office buildings, hotels, restaurants, sport structures and shopping malls. If connected to a system equipped with a liquid 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 medium sized 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.

VERSION

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 coils made of copper tubes and aluminium fins with airvent on the headers and drain pan.
- Standard water connections on left side based on air flow direction. On request units can be 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	2.2	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	2.7	9.7	7.3	9.0
		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
Water connections		inch	3/4"	3/4"	3/4"	1"	1"	1 ¼"	1 ¼"	1 ¼"
Air flow	Max	cfm	1250	1600	2000	2500	3200	4200	4200	4600
		m³/h	2120	2720	3400	4240	5430	7130	7130	7810
	Med	cfm	1100	1400	1800	2200	2900	---	---	---
		m³/h	1870	2380	3060	3740	4920	---	---	---
	Min	cfm	900	1250	1400	1600	2600	---	---	---
		m³/h	1530	2120	2380	2720	4410	---	---	---
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
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
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	---	---	---
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

CLEARANCE AREA

DBW-M 133÷464

800 | 800 | 800

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.

Electrical board side

FROM 15 TON TO 78 TON.
FROM 53 KW TO 274 KW.

DBW-M 643÷2256

DUCTED BLOWER FAN COIL UNITS.

The Ducted Blower Fan Coil units 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 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 wide installations where external unit is far from the internal ambients or there are multiple 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.
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.

VERSION

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 coils made of copper tubes and aluminium fins with airvent on the headers 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.
- Standard water connections on left side based on air flow direction. On request units can be provided with water connections on right side.

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	33.6	25.9	30.4	37.0	28.7	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	10.7	13.6	16.0	13.3	16.7	19.8	14.8	18.8	22.2	18.3	21.2	25.2	20.4	23.7
		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	9.7	1.7	10.0	7.0	2.0	8.0	9.0	2.3	1.7	1.3	2.7	2.0
		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
Water connections		inch	1 ½"	1 ½"	2"	2"	2"	2 ½"	2"	2"	2 ½"	2 ½"	2 ½"	3"	2 ½"	2 ½"
Air flow		cfm	6400	6400	6400	7990	7990	7990	8990	8990	8990	10490	10490	10490	11990	11990
		m³/h	10870	10870	10870	13580	13580	13580	15280	15280	15280	17830	17830	17830	20370	20370
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
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
Sound pressure	(2)	dB(A)	72	72	72	74	74	74	76	76	76	79	79	79	77	77
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	41.2	33.0	39.0	47.2	35.8	42.4	51.7	43.8	51.7	62.8	54.0	63.7	77.9
		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	32.1	25.2	29.3	35.3	31.0	35.8	42.7	38.1	44.6	52.9
		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	113	138	117	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	1.3	4.0	3.0	2.0	4.7	3.3	2.3	4.0	3.0	2.0	4.3	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
Water connections		inch	3"	2 ½"	2 ½"	3"	2 ½"	2 ½"	3"	2 X 2"	2 X 2"	2 X 2"	2 X 2"	2 X 2"	2 X 2"
Air flow		cfm	11990	13490	13490	13490	14990	14990	14990	17990	17990	17990	22480	22480	22480
		m³/h	20370	22920	22920	22920	25470	25470	25470	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
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
Sound pressure	(2)	dB(A)	77	80	80	80	83	83	83	84	84	84	84	84	84
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

CLEARANCE AREA

DBW-M 643÷2256

800	800	800

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.

Electrical board side

FROM 3.5 TON TO 15 TON.
FROM 12 KW TO 52 KW.

DBW-M/SZ 133÷464

DUCTED BLOWER FAN COIL UNITS.

The Ducted Blower Fan Coil units of the DBW-M series are designed for installation in medium sized 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 medium sized 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.

VERSION

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 coils made of copper tubes and aluminium fins with airvent on the headers and drain pan.
- Standard water connections on left side based on air flow direction. On request units can be provided with water connections on right side.

DBW-M/SZ 133÷464 60 Hz

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	2.7	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
Water connections		inch	3/4"	3/4"	3/4"	1"	1"	1 ¼"	1 ¼"	1 ¼"
Air flow	Max	cfm	1300	1700	2100	2600	3400	4400	4400	4800
		m³/h	2210	2890	3570	4410	5770	7470	7470	8150
	Med	cfm	1200	1500	1900	2300	3000	---	---	---
		m³/h	2040	2550	3230	3910	5090	---	---	---
	Min	cfm	900	1300	1500	1700	2700	---	---	---
		m³/h	1530	2210	2550	2890	4580	---	---	---
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
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
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	---	---	---
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

CLEARANCE AREA

DBW-M/SZ 133÷464

800 | 800 | 800

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.

N.B. Data declared at 230/1/50

Electrical board side

FROM 16 TON TO 83 TON.
FROM 56 KW TO 293 KW.

DBW-M/SZ 643÷2256

DUCTED BLOWER FAN COIL UNITS.

The Ducted Blower Fan Coil units 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 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 wide installations where external unit is far from the internal ambients or there are multiple 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.
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.

VERSION

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 coils made of copper tubes and aluminium fins with airvent on the headers 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.
- Standard water connections on left side based on air flow direction. On request units can be provided with water connections on right side.

DBW-M/SZ 643÷2256 60 Hz

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
Water connections		inch	1 ½"	1 ½"	2"	2"	2"	2 ½"	2"	2"	2 ½"	2 ½"	2 ½"	3"	2 ½"	2 ½"
Air flow		cfm	7190	7190	7190	8990	8990	8990	10190	10190	10190	11890	11890	11890	13590	13590
		m³/h	12220	12220	12220	15280	15280	15280	17320	17320	17320	20200	20200	20200	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
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
Sound pressure	(2)	dB(A)	73	73	73	75	75	75	77	77	77	80	80	80	78	78
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	33.0	38.4	45.5	40.7	46.9	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	180	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	2.0	4.3	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
Water connections		inch	3"	2 ½"	2 ½"	3"	2 ½"	2 ½"	3"	2 X 2"	2 X 2"	2 X 2"	2 X 2"	2 X 2"	2 X 2"
Air flow		cfm	13590	15290	15290	15290	16990	16990	16990	20290	20290	20290	25380	25380	25380
		m³/h	23090	25980	25980	25980	28860	28860	28860	34470	34470	34470	43120	43120	43120
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
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
Sound pressure	(2)	dB(A)	78	81	81	81	84	84	84	85	85	85	85	85	85
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

CLEARANCE AREA

DBW-M/SZ 643÷2256

800	800	800

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.

Electrical board side


CLINT

CHAPTER 6

DUCTED BLOWER SPLIT SYSTEMS

FROM 75,000 BTU/h TO 600,000 BTU/h.
FROM 6.3 TON TO 50 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 medium sized spaces as offices, shops, hotels or education facilities. The range includes 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.

VERSION

DXD-M/K	***DXD-M/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, with internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor (to build model sizes 75 – 100) or to 3-phase motors by V belt and variable pulley (to build model sizes 125-600). Outdoor units are provided axial fans directly coupled to electric motor.
- Indoor units to build model sizes 75 - 150 come with standard horizontal air discharge; indoor units to build model sizes 125 - 150 are convertible to vertical air discharge on site. Indoor units to build model 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 INU	1 x 100 INU	1 x 125 INU	1 x 150 INU	1 x 200 INU	1 x 250 INU	1 x 300 INU	1 x 350 INU	1 x 400 INU	1 x 450 INU	1 x 500 INU	1 x 600 INU
	Outdoor unit		1 x 75 OTU	1 x 100 OTU	1 x 125 OTU	1 x 150 OTU	2 x 100 OTU	2 x 125 OTU	2 x 150 OTU	2 x 125 OTU + 1 x 100 OTU	4 x 100 OTU	3 x 150 OTU	4 x 125 OTU	4 x 150 OTU
Cooling	Cooling capacity (1)	BTU/h	75,000	100,000	125,000	150,000	200,000	250,000	300,000	350,000	400,000	450,000	500,000	600,000
		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
	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
Heating	Heating capacity (2)	BTU/h	78,200	104,000	129,700	155,800	207,600	259,500	311,400	36,3300	415,200	467,100	519,000	622,800
		TON	6.5	8.7	10.8	13.0	17.3	21.6	25.9	30.3	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
	Absorbed power (2)	kW	7.40	9.60	12.80	14.65	19.00	23.50	29.30	35.60	37.30	43.10	51.20	55.10
Indoor unit	Max air flow	cfm	2543	2755	4026	4450	6357	7840	8899	10594	12078	13561	14620	17587
		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" - 1-1/8"	1-1/8"	1-3/8"	1-3/8"	1-3/8"
	Condensation 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	Compressor	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
	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" - 1-1/8"	1-1/8"	1-3/8"	1-3/8"	1-3/8"
	Sound pressure (4)	dB(A)	57	57	58	58	57	57	58	57	57	58	57	58
Max piping length	Max distance OTU-INU (5)	m	50	50	50	50	50	50	50	50	50	50	50	50
	Max height OTU-INU (5)	m	30	30	30	30	30	30	30	30	30	30	30	30
Electrical characteristics	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	20	26	26	32	43	54	72	81	84	102	116	130
	Max. starting current	A	102	128	146	180	145	173	217	201	187	250	237	279
Weights	Transport weight indoor unit (6)	Kg	127	150	215	217	235	368	378	503	556	570	850	920
	Operating weight indoor unit (6)	Kg	122	145	210	212	225	358	368	493	546	560	840	910
	Transport weight outdoor unit (6)	Kg	185	190	197	230	190	197	230	197/190	190	230	197	230
	Operating weight 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
INDOOR UNIT	L	mm	1580	1880	1575	1575	1905	1905	1905	1905	2420	2420	2420	2440
	W	mm	765	765	985	985	985	1240	1240	1240	1520	1520	1520	1820
	H	mm	430	430	870	870	870	1165	1165	1385	1385	1385	1385	1770
OUTDOOR UNIT	L	mm	965	965	965	1130	965	965	1130	965	965	1130	965	1130
	W	mm	975	975	975	1110	975	975	1110	975	975	1110	975	1110
	H	mm	950	950	950	950	950	950	1000	950	950	100	950	1000

CLEARANCE AREA

DXD-M/K 75÷600 INU

DXD-M/K 75÷600 OTU

600 | 600 | 600 | 600

Electrical board side

NOTES

1. Indoor air temperature 27 °C d.b./19 °C w.b.; outdoor air temperature 35 °C d.b.
2. Indoor air temperature 20 °C w.b., outdoor air temperature 7 °C d.b./6 °C w.b
3. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
5. Maximum lenght reachable with proper piping diameter and siphons.
6. Cooling only unit

FROM 75,000 BTU/h TO 660,000 BTU/h.
FROM 7.1 TON TO 55 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 medium sized spaces as offices, shops, hotels or education facilities.
The range includes 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 over 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.**

VERSION

DXDXT-M/K	***DXDXT-M/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, with internal overheat protection and crankcase heater.
- Indoor units are provided with radial fans, directly coupled with single-phase 3-speed electric motor (to build model sizes 85 – 110) or to 3-phase motors by V belt and variable pulley (to build model sizes 140 – 660). Outdoor units are provided axial fans directly coupled to electric motor.
- Indoor units to build model sizes 85 - 165 come with standard horizontal air discharge; indoor units to build model sizes 140 - 165 are convertible to vertical air discharge on site. Indoor units to build model 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 INU	1 x 100 INU	1 x 125 INU	1 x 150 INU	1 x 200 INU	1 x 250 INU	1 x 300 INU	1 x 350 INU	1 x 400 INU	1 x 450 INU	1 x 500 INU	1 x 600 INU
	Outdoor unit		1 x 85 OTU	1 x 110 OTU	1 x 140 OTU	1 x 165 OTU	2 x 110 OTU	2 x 140 OTU	2 x 165 OTU	2 x 140 OTU + 1 x 110 OTU	4 x 110 OTU	3 x 165 OTU	4 x 140 OTU	4 x 165 OTU
Cooling	Cooling capacity (1)	BTU/h	75,000	100,000	125,000	150,000	200,000	250,000	300,000	350,000	400,000	450,000	500,000	600,000
		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
		kW	22.0	29.3	36.6	43.9	58.6	73.2	87.9	103	117	132	147	176
	Absorbed power (1)	kW	11.2	14.1	17.8	24.4	28.8	36.4	51.5	53.9	56.7	76.2	77.9	98.7
	Cooling capacity (2)	BTU/h	85,000	111,000	140,000	165,000	220,000	280,000	330,000	390,000	440,000	495,000	560,000	660,000
		TON	7.1	9.2	11.5	13.7	18.3	23.3	27.5	32.4	36.7	41.2	46.6	54.9
		kW	24.9	32.5	40.6	48.3	64.4	82.0	96.7	114	129	145	164	193
	Absorbed power (2)	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
Heating	Heating capacity (3)	BTU/h	78,200	104,000	129,700	155,800	207,600	259,500	311,400	363,300	415,200	467,100	519,000	622,800
		TON	6.5	8.7	10.8	13.0	17.3	21.6	25.9	30.1	34.7	39.0	43.2	52.0
		kW	22.9	30.5	38.0	45.6	60.8	76.0	91.2	106	122	137	152	183
	Absorbed power (3)	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	2543	2755	4026	4450	6357	7840	8899	10594	12078	13561	14620	17587
		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" - 1-1/8"	1-1/8"	1-3/8"	1-3/8"	1-3/8"
	Condensation 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	Compressor	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
	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" - 1-1/8"	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 length	Max distance OTU-INU (6)	m	50	50	50	50	50	50	50	50	50	50	50	50
	Max height OTU-INU (6)	m	30	30	30	30	30	30	30	30	30	30	30	30
Electrical characteristics	Power supply indoor unit	V/Ph/Hz	230/1/50	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
	Max. starting 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	197	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
INDOOR UNIT	L	mm	1580	1880	1575	1575	1905	1905	1905	1905	2420	2420	2420	2440
	W	mm	765	765	985	985	985	1240	1240	1240	1520	1520	1520	1820
	H	mm	430	430	870	870	870	1165	1165	1385	1385	1385	1385	1770
OUTDOOR UNIT	L	mm	965	965	965	1130	965	965	1130	965	965	1130	965	1130
	W	mm	975	975	975	1110	975	975	1110	975	975	1110	975	1110
	H	mm	950	950	950	950	950	950	1000	950	950	1000	950	1000

CLEARANCE AREA

DXDXT-M/K 85÷660 INU

DXDXT-M/K 85÷660 OTU

600 | 600 | 600 | 600

NOTES

1. Indoor air temperature 27 °C d.b./19 °C w.b.; outdoor air temperature 46 °C d.b.
2. Indoor air temperature 27 °C d.b./19 °C w.b.; outdoor air temperature 35 °C d.b.
3. Indoor air temperature 20 °C w.b., outdoor air temperature 7 °C d.b./6 °C w.b
4. Sound pressure level measured at 1 m from the unit with reverberation time 0,5 s.
5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
6. Maximum lenght reachable with proper piping diameter and siphons.
7. Cooling only unit

Electrical board side

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