EMIBYTE

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THE PROJECT
ALWAYS FORWARD, POWERFULLY

EMICON is a manufacturer of climate control equipment that is tailored to both commercial applications and IT cooling, where reliability and performance are vital parameters in every project design. Emicon manufactures products covering multiple sectors from commercial climate control through to **IT cooling** with a large range of industry leading **Chillers**, **Heat pumps**, **CRAC units** and **Roof-Top packages**. The designs are highly flexible and incorporate numerous versions and accessories which allow selections to be tailored to the application. In addition, the flexibility of the manufacturing division allows non-standard designs to be considered.

THE ENVIRONMENT
EFFICENCY AND SUSTAINABILITY

For Emicon, **Research and Development** into materials and products to enhance their efficiency and lower their environmental impact is fundamental to the group culture. The company is represented in the industry bodies that continually advise on climate change impact and are thus at the forefront of current knowledge. These efforts have resulted in Emicon launching new ranges of units that utilize materials and **refrigerants with the lowest Global warming impact** such as **HFO 1234ze**, a gas with very high efficiency and low GWP (=6), as well as natural refrigerants such as **R290** (GWP=3).

THE ENVIRONMENTAL POLICY

In addition to meeting the customer's requirements and maintaining a leading market position, EMICON maintains a quality culture in its operations that **safeguards the environment** by protecting the ecosystem and **preventing pollution** by adherence to national environmental standards. We invest heavily in **personnel training**, which generates a culture of **involvement** and **motivation** and maintains a healthy work environment. Emicon also ensure that the necessary infrastructures for safe and proper performance of their employees work activities are in place.

EMICON
CLIMATE SOLUTIONS

Mission critical **Cooling & Thermal management** has been Emicon core focus since 1984. Our range of precision air conditioning solutions have been designed for a wide range of applications where **close control**, **high precision cooling** is essential, including **data centres**, telecom switching stations, theatres, museum and high technological density environments in general. Throughout its history, the data center and server room has consistently been asked to do more: handle **more capacity**, deliver **more availability** and achieve **more efficiency**. Thanks to the resourcefulness and dedication of the people responsible for managing these business-critical facilities, they have largely responded. The question now is can they continue to do so within the existing paradigms, or are we on the verge of fundamental changes in data center technologies, designs and processes?

The result to this main question nowadays is **EMIBYTE**, the new partner in **IT cooling** with his new series of products entirely designed and produced in the **Emicon factories**.
Reliable, integrated cooling, from **chiller** and computer room **air conditioners**, tackles the issues head on to lower costs and reduce downtime risk. We provide **all levels of heat removal** for different sized rooms and applications. Whether you're building new, retrofitting, or modernizin, achieve a **healthy data center environment** with our **EMIBYTE** cooling solutions.

PRODUCTION SITES

EMICON OFFICES

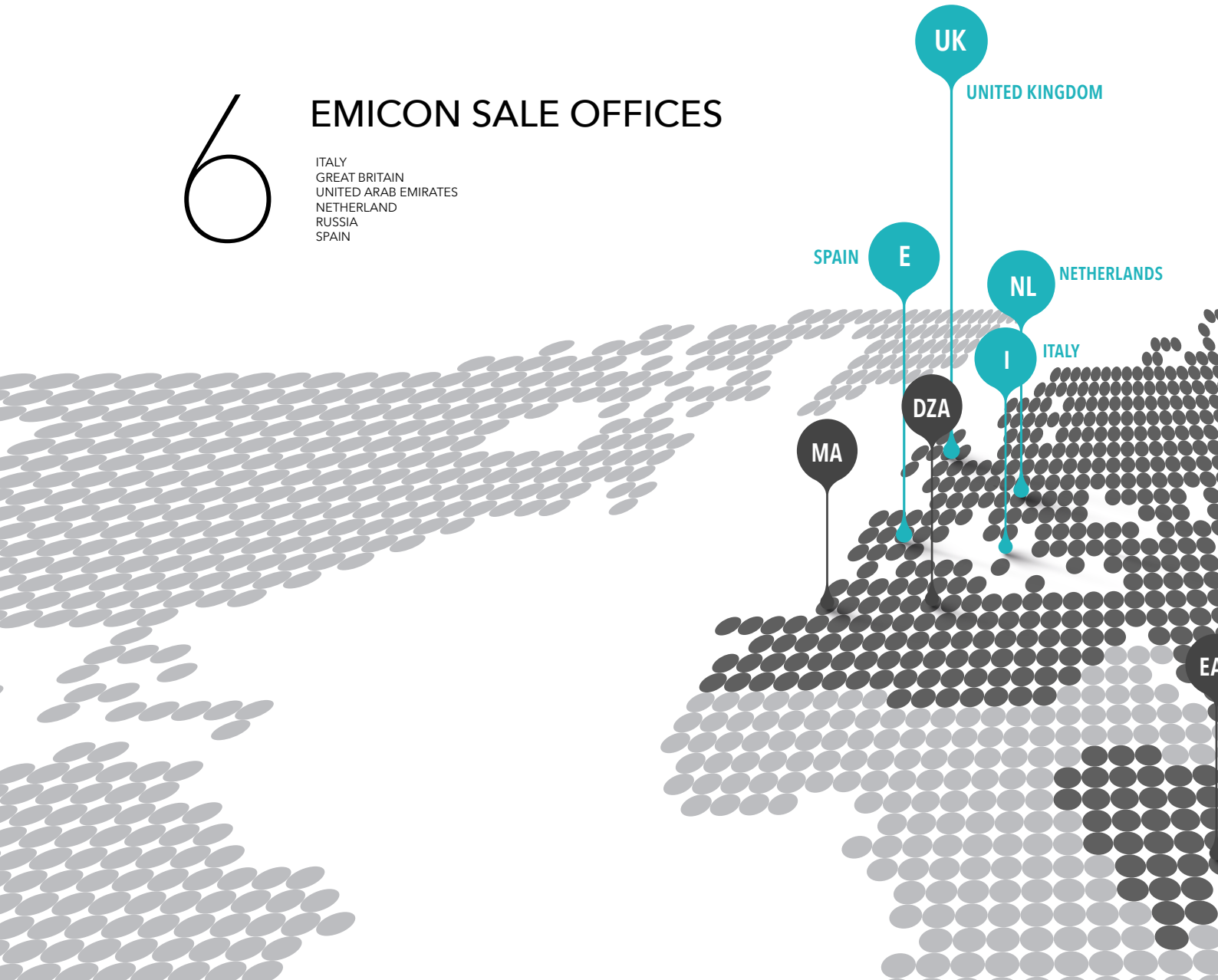
DISTRIBUTORS

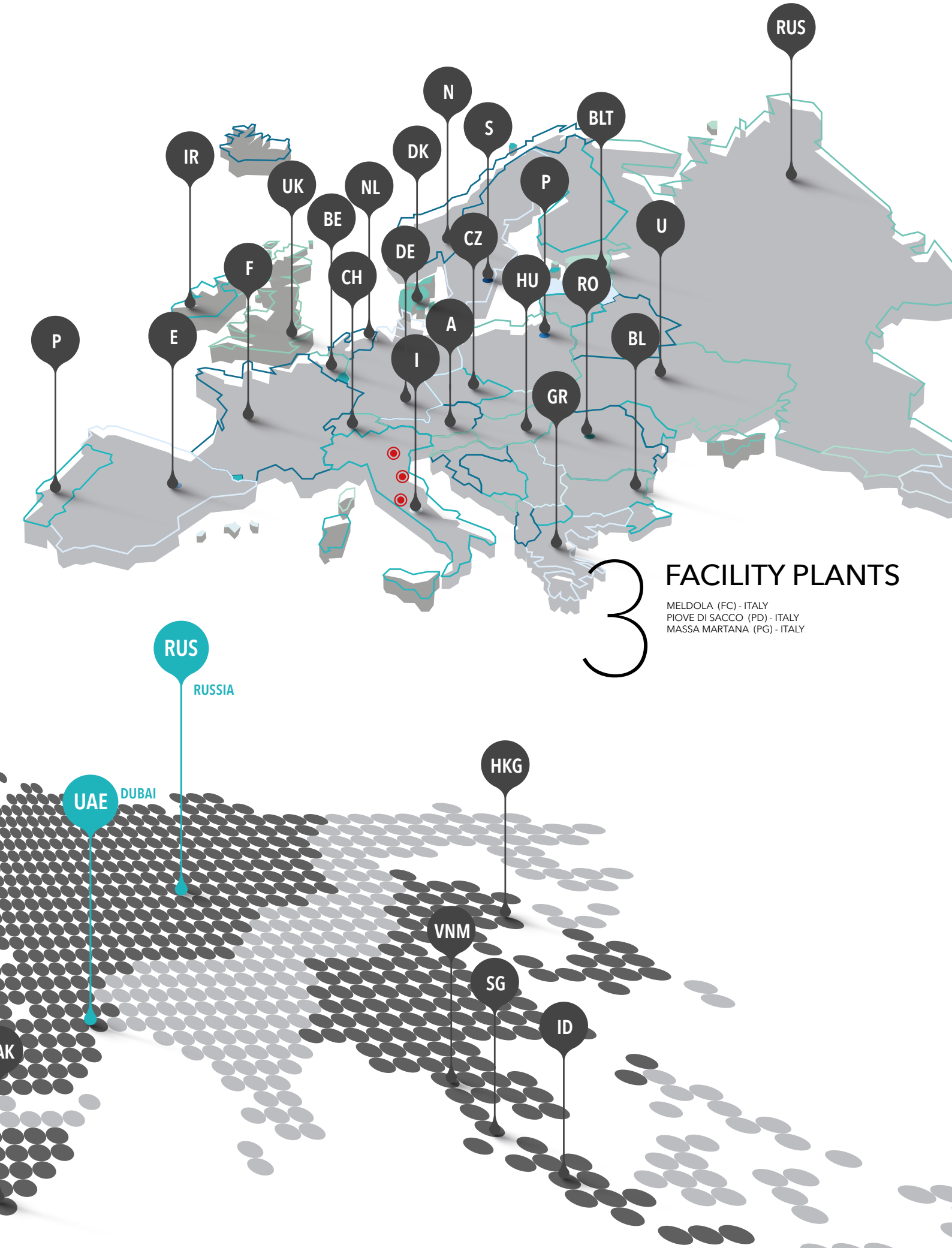
40 EXPORT COUNTRIES

EMICON WORLDWIDE

6 EMICON SALE OFFICES

ITALY
GREAT BRITAIN
UNITED ARAB EMIRATES
NETHERLAND
RUSSIA
SPAIN





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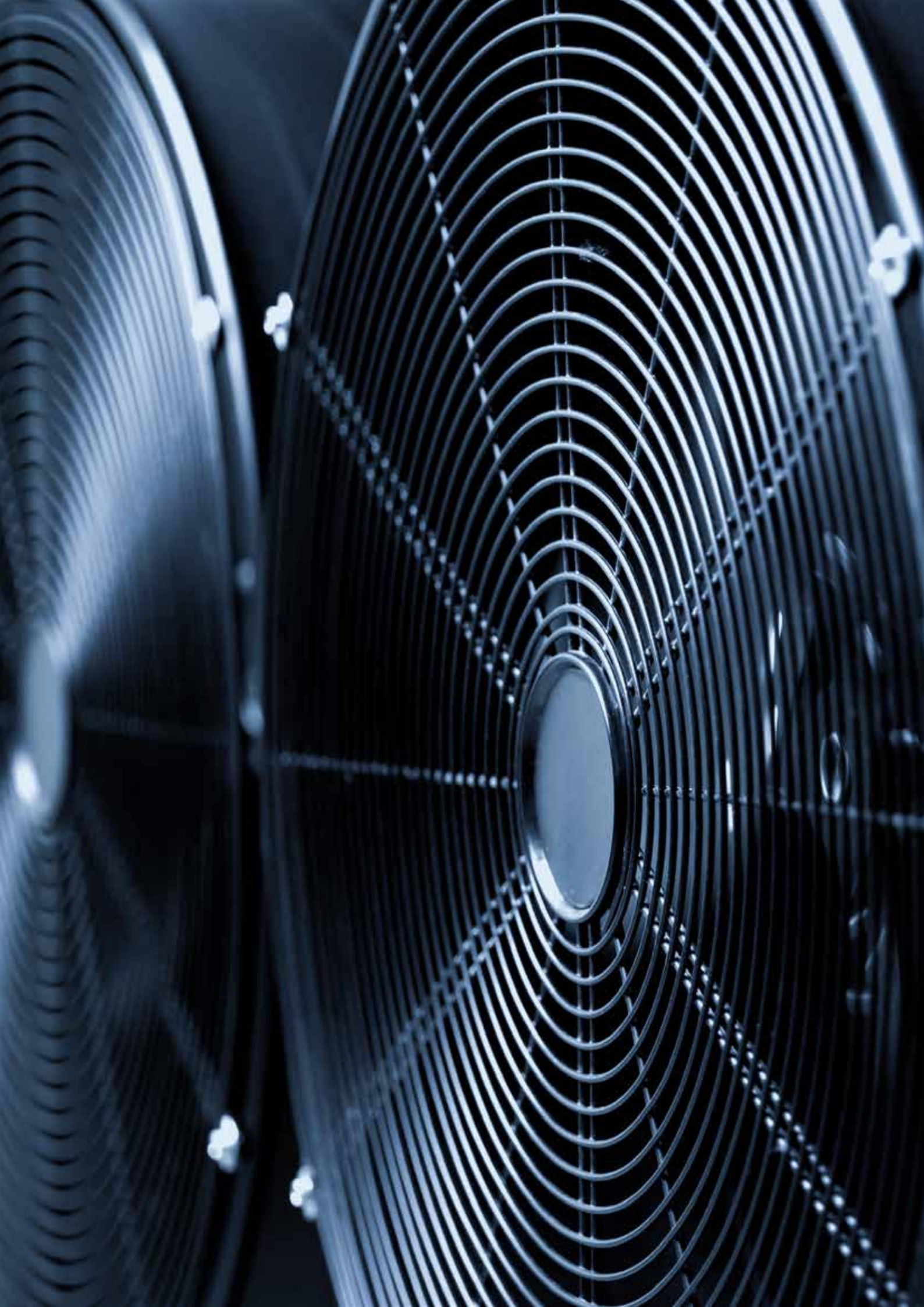
FACILITY PLANTS

MELDOLA (FC) - ITALY
PIOVE DI SACCO (PD) - ITALY
MASSA MARTANA (PG) - ITALY



PHILOSOPHY

PASSION AND EFFICIENCY

In the last decade, the **air conditioning world** has experienced a continuous, remarkable and still alive evolution process, which has led to a different approach to the market and to the products by the manufacturers. The main worldwide companies, which operate in the comfort field (mainly in residential applications), have found in the **Italian technology** the answer to a lack of know-how in chillers and air conditioning field.
In fact the companies, following a common globalization process, have started an intensive campaign of international acquisitions, but this has led some negative consequences, such as the loss of some pluses in terms of organization and production, which moreover had made the Italian companies well know all over the world in the past.

Residential air conditioning field is based on highly industrialized, standardized and large-scale productions, with distribution through mass channels; the **professional chiller** and **precision air conditioning world** follows, instead ,much more complex dynamics: the technical solutions, the production organization, as well as the choice of the distribution channel, must take care of the **"specificity of the application"**; the manufacturer must be able to grant a **flexible production system**, associated with an adequate development of technology, applied in a dynamic way, able to meet the peculiarity of the different installation needs. Unifying the two worlds would mean a pauperization of the entire European and specifically of the Mediterranean "solutions" market, the Italian industry was leader in.

EMICON, as a "historical" representative of the **Italian industry**, has never stopped its **commitment in the research and development** of its products for professional conditioning, keeping the same quality level of its worldwide competitors, also thanks to the use of national excellence with specific skills, as well as a strong partnership and acquisitions policy, maintaining in this way an open and **flexible approach to the market**, with a wide range of standard and tailor made solutions.

The **improvement** of this complex industrial model implies a very careful selection of **human resources**, paying the greatest attention to the competence and experience of all the technical, sales and production staff.

EMICON recognizes in the **talent and professionalism** of its workers, both internal and external ones, a heritage to be preserved, through the creation of a comfortable and familiar work ambient, despite the large structural dimensions achieved.
The industrial philosophy of EMICON is aimed at the acquisition of some **excellences in the air conditioning field**, the creation of new business realities -still in progress- and the continuous investments in the already existing production facilities in Italy, thereby consolidating the Group's growing leadership role in the **professional air conditioning market.**

THE EMICON LABS

CLIMATIC ROOMS

EMICON has **climatic rooms** and **testing stations** where units produced are subject to strict **functional** and **performance** tests, with the possibility of simulating the real design climatic conditions. A double hydronic circuit (hot and cold) allows to carry out **operation tests on all types** of units, both for IT Cooling and hydronic units, packaged, 2 or 4 pipes, air cooled, water cooled and split, up to a cooling capacity of 1500 kW.

It is possible, for our customers, to attend the functioning and performance test. Thanks to some webcams, it is possible to **remotely attend the test.**

CHARACTERISTICS

The climatic room is an environment inside of which, by means of auxiliary and heat recovery systems, we create a **controlled microclimate** in terms of air **temperature** and **humidity**, where the heat transfer fluids are treated according to the specific characteristics of the unit.
The types of units that can be tested are **air or water cooled units**, available as **chiller** or **reversible heat pump** versions according to **EN14511** standard.
The operating limits of fluid temperature can vary between **-5°C** and **65°C**. The ambient temperature (inside the room) can reach a maximum of 52°C for summer operation and a minimum of -7°C for winter cycle.

CLOSE CONTROL UNITS

EMICON's Laboratory allows the **performance test** of chilled water and air cooled direct expansion **close control units**, with the possibility to simulate climatic conditions from 15°C to 35°C.

PROPANE

We recently built a the test area **exclusively** dedicated to chillers and heat pumps operating with natural **Propane refrigerant (R290)**, making us able to carry out performance and functional tests of units with a cooling capacity up to 700 kW both in cooling only and in winter cycle reversible configurations. The use of **ATEX** components, refrigerant leak detection systems, connected to acoustic signals and forced-type exhaust systems guarantee a **high safety degree** in this area.

LEGEND

Air cooled

Water cooled

Remote condensing

Free cooling

High efficiency

Silenced version

Ultra-silenced version

Cooling only

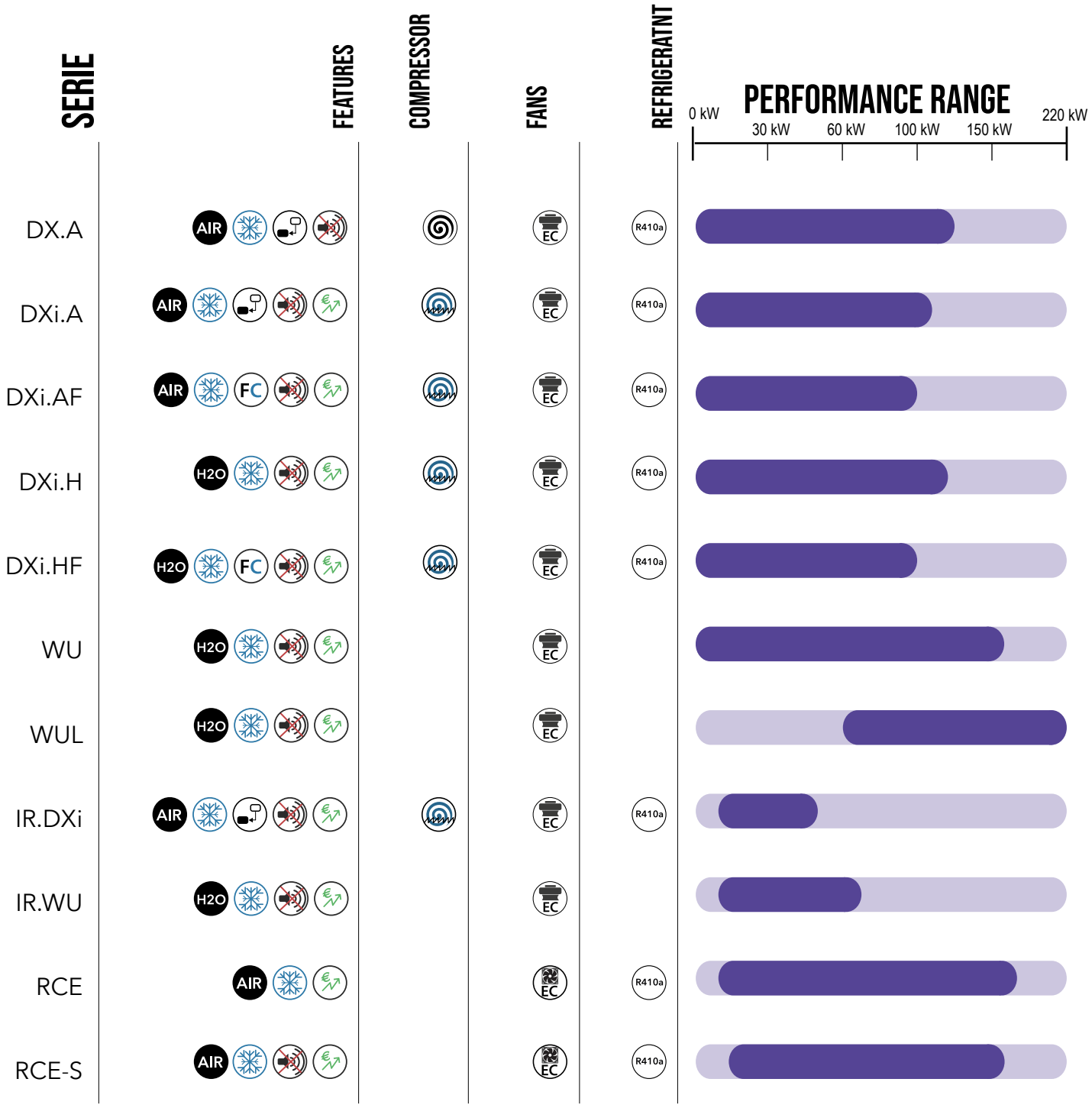
Scroll Compressors

Scroll inverter Compressors

R410a Refrigerant (Kc)

Axial fan with EC motor

Plug-fan with EC motor


SERIE
FEATURES
COMPRESSOR
FANS
REFRIGERATNT
PERFORMANCE RANGE
0 kW
30 kW
60 kW
100 kW
150 kW
220 kW
DX.A
DXi.A
DXi.AF
DXi.H
DXi.HF
WU
WUL
IR.DXi
IR.WU
RCE
RCE-S
AIR
H2O
FC
EC
R410a

COMPONENTS

FULLY CUSTOMIZABLE AND INTUITIVE

TOUCH SCREEN DISPLAY

The new 4.3" touch screen designed to maximise the users system management experience. System usability is enhanced by the web server pages shown on the display relating to each individual controller connected to the network, allowing users to monitor the situation across the entire system from just one single location. Ethernet connectivity makes installation even more practical, without any constraints in terms of location relative to the monitored system.

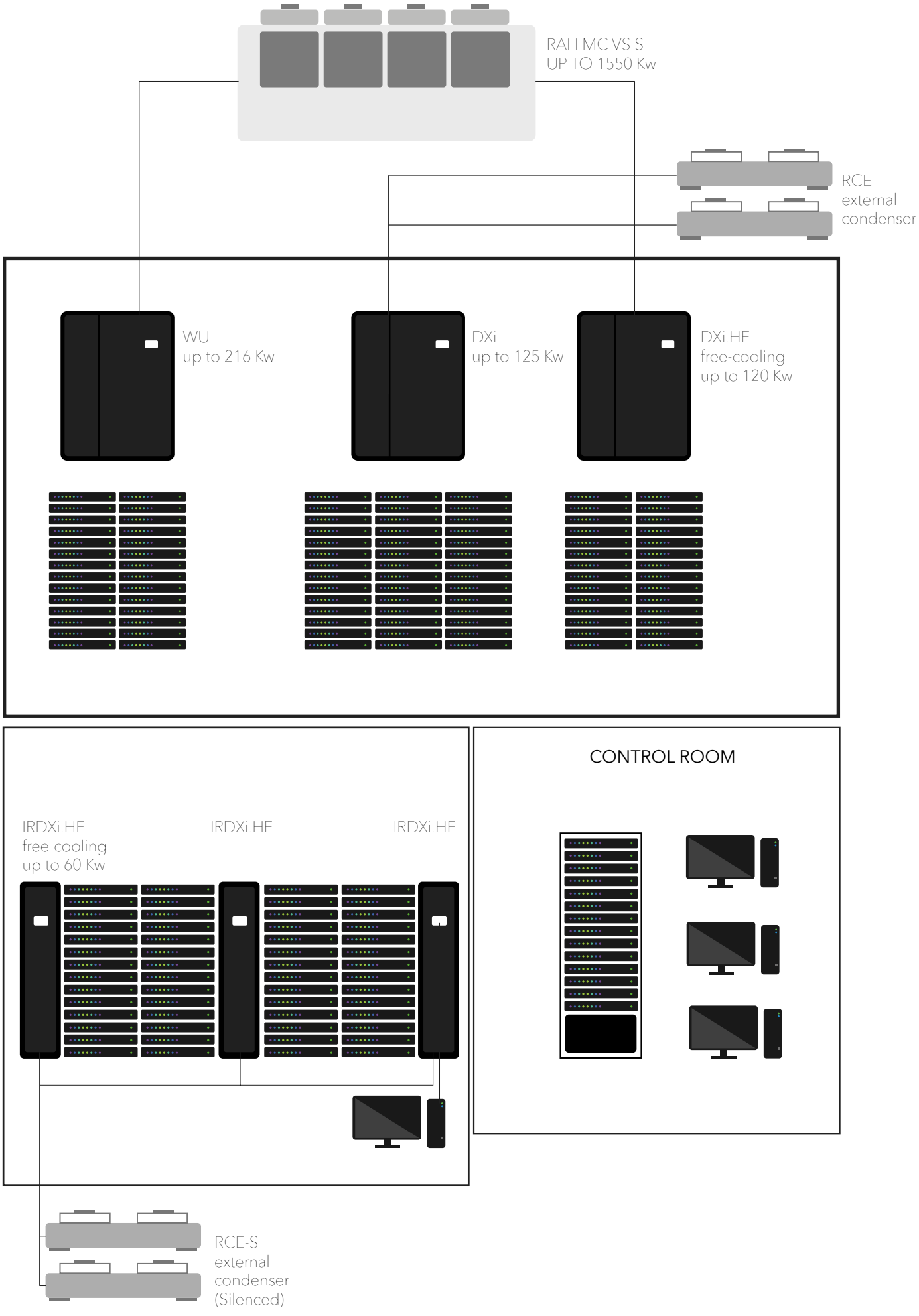
BUILT-IN TEMPERATURE AND HUMIDITY PROBE
Can share the values read with the colour display making the comprehension of operating data easier.
Micro-USB port
At the front, concealed by a faceplate, for easier access.

INVERTER SCROLL COMPRESSOR
The best solution in terms of variable cooling capacity

PRECISE TEMPERATURE CONTROL
Inverter compressor-based technology allows close monitoring and control of room temperature.

EC PREMIUM FAN
The new generation of Emicon EC Fan 2.0 is the core of EMIBYTE Precision Air Conditioner, significantly minimizing noise levels and increasing the efficiency of the unit.

ULTRASONIC HUMIDIFIER
Ultrasonic Humidifier option is the new ultrasound cool mist large room humidifier. It has been developed to control and maintain the desired level of humidity for a specific environment or in any large room or storage area constant.


RAH MC VS S
UP TO 1550 Kw
RCE
external
condenser
WU
up to 216 Kw
DXi
up to 125 Kw
DXi.HF
free-cooling
up to 120 Kw
IRDXi.HF
free-cooling
up to 60 Kw
IRDXi.HF
IRDXi.HF
CONTROL ROOM
RCE-S
external
condenser
(Silenced)

DX.A

DIRECT EXPANSION CLOSE CONTROL UNIT
AIR CONDENSER WITH ON/OFF COMPRESSOR

Close control air-conditioners for vertical installations and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general. Units fitted with EC Inverter fans, up flow or downflow. External air condenser. Emibyte equipment are fully designed and tested in the Emicon validation laboratories.

Features
Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to the galvanized sheet metal structures and panels with bevelled corner uprights to enhance its uniquae, clean and attractive design. The panels are lined with sound-insulating material to limit noise levels. New generation EC Inverter centrifugal fan made in hight class technological material with 5 backward curved blades. Impeller with bionic 3D profile thanks to an innovative design in the form of a blade geometry with specific buckling. Special V-shaped rear edge allows a wide characteristic field. Together with the rotating diffuser that opens, exceptional performances of the impeller and the entire system are thus obtained. In combination with the undulated surface of the blade surface, a diffused sound emission takes place which guarantees a very low noise level. Standard COARSE 60% (ISO EN 16890) EU4/G4 filtering section installed, The filter is self-extinguishing. The microprocessor controls the compressor activation times thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems. Refrigerant circuit consisting of Electronic Expansion Valve, sight glass filter dryer on liquid line, pressure transducer with indication, control and protection functions on low and high refrigerant pressure, high pressure safety switch with manual reset, liquid receiver with accessories

Control
Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply (Rear return)

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

ALSO AVAILABLES

DX.H - Water cooled air expansion
DX.AF - Air cooled direct expansion with Dual-Fluid
DX.HF - Water cooled direct expansion with Dual-Fluid
DX.E - Evsaporating with external condensing unit

TECHNICAL DATA

DX.A		61	71	91	111	151	181	201	221	232
Cooling capacity (Total) (1) ESP 20 Pa	kW	6,1	8,4	9,9	11,2	15,9	18,4	20,1	22,6	22,9
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	6	8	9,6	11,2	14,5	17,9	20	21,7	22,9
Tot. absorbed power (2) ESP 20 Pa	kW	1,9	2,5	2,7	3,6	4,6	5,4	5,5	6,4	6,9
SHR		0,99	0,96	0,97	1,00	0,91	0,97	1,00	0,96	1,00
Air flow	m^3/h	2700	2700	2700	3900	3900	6050	6050	6050	8150
Fan	n°	1	1	1	1	1	1	1	1	1
Max. ESP	Pa	542	521	479	506	465	655	612	612	446
Unit EER without remote condenser to max. frequency	W/W	3,2	3,3	3,7	3,1	3,5	3,4	3,7	3,5	3,3
Maximum absorbed power	Kw	3,8	4,5	5	6,2	7,6	10,5	10,5	11,8	12
Maximum absorbed current	A	12,8	16,5	18,7	10,2	12,4	17	17	19,1	19,8
Starting current	A	41,4	64,4	66,4	50,4	65,4	71	71	78	60
Power supply	V/ph/Hz	400/3/50+N+PE								
Humidifier										
Steam production (nominal)	kg/h	1,5	1,5	1,5	3	3	5	5	5	8
Steam production (max.)	kg/h	3	3	3	3	3	8	8	8	8
Max. absorbed power	kW	1,12	1,12	1,12	2,25	2,25	3,75	3,75	3,75	6,0
Max. absorbed current	A	5,0	5,0	5,0	10,0	10,0	5,5	5,5	5,5	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters										
Steps	n°	1	1	1	1	1	2	2	2	3
Power	kW	3,0	3,0	3,0	4,5	4,5	6,0	6,0	6,0	9,0
Absorbed current	A	4,3	4,3	4,3	6,5	6,5	8,7	8,7	8,7	13,0
Oversized electrical heaters										
Steps	n°	1	1	1	2	2	3	3	3	3
Power	kW	4,5	4,5	4,5	6,0	6,0	9,0	9,0	9,0	12,0
Absorbed current	A	6,5	6,5	6,5	8,7	8,7	13,0	13,0	13,0	17,3
Hot water coil										
Heating capacity (3)	kW	4,9	4,9	4,9	7,3	7,3	10,6	10,6	10,6	16,7
Water flow	m^3/h	0,85	0,85	0,85	1,3	1,3	1,86	1,86	1,86	2,91
Pressure drop (coil + 3 way valve)	kPa	36	36	36	31	31	48	48	48	56
Coil internal volume	dm^3	1,1	1,1	1,1	1,4	1,4	2,1	2,1	2,1	3,3
On / Off Compressors										
Circuits / Compressors	n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2
Condensing water pump										
Nominal flow	l/h	27,5	27,5	27,5	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	34	34	34	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	15,0	15,0	15,0	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier										
Nominal flow	l/h	-	-	-	-	-	-	-	-	600
Max. flow (prevalence = 0 m)	l/h	-	-	-	-	-	-	-	-	900
Max. discharge height (flow=0 m^3/h)	m	-	-	-	-	-	-	-	-	6,0
Dimensions and weight										
Frame	n°	1	1	1	2	2	3	3	3	4
Width	mm	550	550	550	750	750	980	980	980	1160
Depth	mm	550	550	550	550	550	750	750	750	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	169	179	182	223	230	293	301	301	385
Weight (Configuration V)	Kg	171	181	185	226	232	297	305	305	390
Weight (Configuration D)	Kg	172	182	186	228	234	299	307	307	392
Weight (Configuration B)	Kg	171	181	185	226	232	297	305	305	390

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DX.A		251	301	321	322	391	392	431	442	451
Cooling capacity (Total) (1) ESP 20 Pa	kW	24,3	29,5	33,3	32,4	39,3	39,1	42,8	44	45,7
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	23,9	29,5	30,4	30,1	39,1	39	42,1	42,1	45,5
Tot. absorbed power (2) ESP 20 Pa	kW	6,7	7,7	8,8	9	10,1	11,2	11,3	12,9	11,4
SHR		0,99	1,00	0,91	0,93	1,00	1,00	0,98	0,96	1,00
Air flow	m^3/h	8150	8150	8150	8150	11500	11500	11500	11500	14500
Fan	n°	1	1	1	1	1	1	1	1	2
Max. ESP	Pa	446	446	405	405	406	406	406	406	432
Unit EER without remote condenser to max. frequency	W/W	3,6	3,8	3,8	3,6	3,9	3,5	3,8	3,4	4
Maximum absorbed power	Kw	11,7	12,3	14,2	14,8	16,6	18,4	18,3	21	20
Maximum absorbed current	A	20,2	22,4	25,8	24,2	30,6	29,6	36,6	33,8	39,4
Starting current	A	99,2	132,2	143,2	77,2	123,6	83,6	145,6	92,7	148,4
Power supply	V/ph/Hz	400/3/50+N+PE								
Humidifier										
Steam production (nominal)	kg/h	8	8	8	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters										
Steps	n°	3	3	3	3	3	3	3	3	3
Power	kW	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	15,0
Absorbed current	A	13,0	13,0	13,0	13,0	13,0	13,0	13,0	13,0	21,7
Oversized electrical heaters										
Steps	n°	3	3	3	3	3	3	3	3	3
Power	kW	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	18,0
Absorbed current	A	17,3	17,3	17,3	17,3	17,3	17,3	17,3	17,3	26,0
Hot water coil										
Heating capacity (3)	kW	16,7	16,7	16,7	16,7	24,5	24,5	24,5	24,5	31,1
Water flow	m^3/h	2,91	2,91	2,91	2,91	4,3	4,3	4,3	4,3	5,43
Pressure drop (coil + 3 way valve)	kPa	56	56	56	56	46	46	46	46	53
Coil internal volume	dm^3	3,3	3,3	3,3	3,3	4,7	4,7	4,7	4,7	5,8
On / Off Compressors										
Circuits / Compressors	n°/n°	1/1	1/1	1/1	2/2	1/1	2/2	1/1	2/2	1/1
Condensing water pump										
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier										
Nominal flow	l/h	600	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight										
Frame	n°	4	4	4	4	4,5	4,5	4,5	4,5	5
Width	mm	1160	1160	1160	1160	1505	1505	1505	1505	1860
Depth	mm	850	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	342	360	361	398	429	454	433	454	522
Weight (Configuration V)	Kg	346	365	365	403	434	459	438	459	528
Weight (Configuration D)	Kg	349	367	368	405	437	462	441	462	531
Weight (Configuration B)	Kg	346	365	365	403	434	459	438	459	528

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DX.A		472	511	512	531	602	672	742	761
Cooling capacity (Total) (1) ESP 20 Pa	kW	47,3	51	50,9	53,2	59,8	67,3	74,3	77
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	47,1	50,8	50,7	53,1	59,7	64	66,8	76,6
Tot. absorbed power (2) ESP 20 Pa	kW	12,9	13,3	13,5	13,9	15,6	17,8	19,5	20
SHR		1,00	1,00	1,00	1,00	1,00	0,95	0,90	1,00
Air flow	m^3/h	14500	14500	14500	17600	17600	17600	17600	20900
Fan	n°	2	2	2	2	2	2	2	2
Max. ESP	Pa	432	432	432	382	383	382	383	436
Unit EER without remote condenser to max. frequency	W/W	3,7	3,8	3,8	3,8	3,8	3,8	3,8	3,8
Maximum absorbed power	Kw	22,7	22,2	23,4	22,2	24,6	28,4	31,3	33,2
Maximum absorbed current	A	36,6	42,4	40,4	42,4	44,8	51,6	58,4	61,2
Starting current	A	95,5	182,4	119,4	182,4	154,6	169,0	151,4	154,2
Power supply	V/ph/Hz				400/3/50+N+PE				
Humidifier									
Steam production (nominal)	kg/h	8	8	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	15,0	15,0	15,0	18,0	18,0	18,0	18,0	24,0
Absorbed current	A	21,7	21,7	21,7	26,0	26,0	26,0	26,0	34,6
Oversized electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	18,0	18,0	18,0	24,0	24,0	24,0	24,0	27,0
Absorbed current	A	26,0	26,0	26,0	34,6	34,6	34,6	34,6	39,0
Hot water coil									
Heating capacity (3)	kW	31,1	31,1	31,1	37,4	37,4	37,4	37,4	48,9
Water flow	m^3/h	5,43	5,43	5,43	6,5	6,5	6,5	6,5	8,5
Pressure drop (coil + 3 way valve)	kPa	53	53	53	34	34	34	34	48
Coil internal volume	dm^3	5,8	5,8	5,8	7,1	7,1	7,1	7,1	10,45
On / Off Compressors									
Circuits / Compressors	n°/n°	2/2	1/1	2/2	1/1	2/2	2/2	2/2	1/2
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Frame	n°	5	5	5	6	6	6	6	7
Width	mm	1860	1860	1860	2210	2210	2210	2210	2565
Depth	mm	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	543	521	544	579	616	618	647	738
Weight (Configuration V)	Kg	549	528	551	586	624	625	654	746
Weight (Configuration D)	Kg	552	531	554	590	627	629	658	750
Weight (Configuration B)	Kg	549	528	551	586	624	625	654	746

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DX.A		762	772	841	862	982	1002	1102	1252
Cooling capacity (Total) (1) ESP 20 Pa	kW	77	76,8	84	86,8	98,7	98,9	111,9	124,5
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	76,3	76,2	77,8	78,7	95,6	95,7	101,4	104,9
Tot. absorbed power (2) ESP 20 Pa	kW	20	22	21,9	25,2	26,8	26,4	29,9	34,2
SHR		0,99	0,99	0,93	0,91	0,97	0,97	0,91	0,84
Air flow	m^3/h	20900	20900	20900	20900	25700	25700	25700	25700
Fan	n°	2	2	2	2	3	3	3	3
Max. ESP	Pa	436	436	436	436	458	458	458	458
Unit EER without remote condenser to max. frequency	W/W	3,8	3,5	3,8	3,4	3,7	3,7	3,7	3,6
Maximum absorbed power	Kw	33,2	36,8	36,6	42	47,1	44,6	49,5	57,1
Maximum absorbed current	A	61,2	59,2	73,2	67,6	80,8	84,8	89,6	103,2
Starting current	A	154,2	113,2	182,2	126,5	159,8	224,8	199,4	220,6
Power supply	V/ph/Hz	400/3/50+N+PE							
Humidifier									
Steam production (nominal)	kg/h	8	8	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	24,0	24,0	24,0	24,0	27,0	27,0	27,0	27,0
Absorbed current	A	34,6	34,6	34,6	34,6	39,0	39,0	39,0	39,0
Oversized electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	27,0	27,0	27,0	27,0	36,0	36,0	36,0	36,0
Absorbed current	A	39,0	39,0	39,0	39,0	52,0	52,0	52,0	52,0
Hot water coil									
Heating capacity (3)	kW	48,9	48,9	48,9	48,9	60,8	60,8	60,8	60,8
Water flow	m^3/h	8,5	8,5	8,5	8,5	10,6	10,6	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	48	48	48	48	42	42	42	42
Coil internal volume	dm^3	10,45	10,45	10,45	10,45	12,6	12,6	12,6	12,6
On / Off Compressors									
Circuits / Compressors	n°/n°	2/2	2/4	1/2	2/4	2/4	2/2	2/4	2/4
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Frame	n°	7	7	7	7	8	8	8	8
Width	mm	2565	2565	2565	2565	3100	3100	3100	3100
Depth	mm	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	743	780	745	780	937	904	969	972
Weight (Configuration V)	Kg	752	788	753	788	947	914	979	982
Weight (Configuration D)	Kg	756	792	758	792	952	920	984	988
Weight (Configuration B)	Kg	752	788	753	788	947	914	979	982

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.

(2) The fans electrical power has to be added to the ambient load.

(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.A

DIRECT EXPANSION CLOSE CONTROL UNIT
AIR-CONDENSED WITH INVERTER COMPRESSOR

Close control air-conditioners for vertical installations and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control.
Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads, optimizing the power absorbed and eliminating the starting current. Electronic expansion valve and EC Inverter fans are fitted in this model as standard. External air condenser. Emibyte equipment are fully designed and tested in the Emicon validation laboratories.

Features
Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to the galvanized sheet metal structures and panels with bevelled corner uprights to enhance its unique, clean and attractive design. The panels are lined with sound-insulating material to limit noise levels. Last generation of BLDC INVERTER compressor designed to deliver maximum cooling efficiency when you ned it most This latest variable speed compressor technology allows CRAC system manufactures as Emicon to achieve superior performance. New generation EC Inverter centrifugal fan made in hight class technological material with 5 backward curved blades. Impeller with bionic 3D profile thanks to an innovative design in the form of a blade geometry with specific buckling. Special V-shaped rear edge allows a wide characteristic field. Together with the rotating diffuser that opens, exceptional performances of the impeller and the entire system are thus obtained. In combination with the undulated surface of the blade surface, a diffused sound emission takes place which guarantees a very low noise level.
Standard COARSE 60% (ISO EN 16890) EU4/G4 filtering section is fitted. The filter is self-extinguishing. The microprocessor controls the compressor activation times thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.
Refrigerant circuit consisting of Electronic Expansion Valve, sight glass filter dryer on liquid line, pressure transducer with indication, control and protection functions on low and high refrigerant pressure, high pressure safety switch with manual reset, liquid receiver with accessories

Control
Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

TECHNICAL DATA

DXi.A		61	111	121	151	181	201	251	321
Cooling capacity (Total) (1) ESP 20 Pa	kW	7,2	10,1	11,2	16,1	18,2	20,5	25,6	33,7
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	7,2	9,3	11,2	14,5	17,6	20,5	25,5	30,7
Tot. absorbed power (2) ESP 20 Pa	kW	2,3	3,5	3,7	4,6	5,1	5,3	7,2	8,6
SHR		1,00	0,92	1,00	0,91	0,97	1,00	1,00	0,91
Air flow	m^3/h	3900	3900	3900	3900	5700	5700	8150	8150
Fan	n°	1	1	1	1	1	1	1	1
Max. ESP	Pa	559	560	479	412	568	539	451	362
Unit EER without remote condenser to max. frequency	W/W	3,23	2,87	3,01	3,49	3,57	3,84	3,53	3,91
Maximum absorbed power	Kw	4	6	6	9	11	11	12	15
Maximum absorbed current	A	14	18	18	16	21	21	21	24
Starting current	A	4	4	4	4	7	7	6	6
Power supply	V/ph/Hz				400/3/50+N+PE				
Humidifier									
Steam production (nominal)	kg/h	3	3	3	3	5	5	8	8
Steam production (max.)	kg/h	3	3	3	3	8	8	8	8
Max. absorbed power	kW	2,25	2,25	2,25	2,25	3,75	3,75	6,0	6,0
Max. absorbed current	A	10,0	10,0	10,0	10,0	5,5	5,5	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	3	3	3	3	2	2	3	3
Power	kW	4,5	4,5	4,5	4,5	6,0	6,0	9,0	9,0
Absorbed current	A	6,5	6,5	6,5	6,5	8,7	8,7	13,0	13,0
Oversized electrical heaters									
Steps	n°	2	2	2	2	3	3	3	3
Power	kW	6,0	6,0	6,0	6,0	9,0	9,0	12,0	12,0
Absorbed current	A	8,7	8,7	8,7	8,7	13,0	13,0	17,3	17,3
Hot water coil									
Heating capacity (3)	kW	7,3	7,3	7,3	7,3	10,6	10,6	16,7	16,7
Water flow	m^3/h	1,3	1,3	1,3	1,3	1,8	1,8	2,9	2,91
Pressure drop (coil + 3 way valve)	kPa	31	31	31	31	48	48	56	56
Coil internal volume	dm^3	1,4	1,4	1,4	1,4	2,1	2,1	3,3	3,3
Compressors									
Circuits / Compressors	n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
On / Off Compressors	n°	--	--	--	--	--	--	--	--
Inverter Compressors	n°	1	1	1	1	1	1	1	1
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	-	-	-	-	-	-	600	600
Max. flow (prevalence = 0 m)	l/h	-	-	-	-	-	-	900	900
Max. discharge height (flow=0 m^3/h)	m	-	-	-	-	-	-	6,0	6,0
Dimensions and weight									
Frame	n°	2	2	2	2	3	3	4	4
Width	mm	750	750	750	750	980	980	1160	1160
Depth	mm	550	550	550	550	750	750	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	198	205	209	219	284	292	331	362
Weight (Configuration V)	Kg	201	208	212	222	288	296	336	367
Weight (Configuration D)	Kg	203	209	213	223	290	298	338	369
Weight (Configuration B)	Kg	201	208	212	222	288	296	336	367

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DX.A		381	392	472	491	531	532	631	652
Cooling capacity (Total) (1) ESP 20 Pa	kW	37,2	39,0	47,4	50,7	54,0	52,8	64,8	68,4
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	37,1	38,9	44,3	45,1	52,7	52,7	63,4	64,6
Tot. absorbed power (2) ESP 20 Pa	kW	10,1	10,5	13,4	13,9	14,1	14,6	16,7	17,5
SHR		1,00	1,00	0,93	0,89	0,97	1,00	0,98	0,95
Air flow	m^3/h	11500	11500	11500	11500	14500	14500	17600	17600
Fan	n°	1	1	1	1	2	2	2	2
Max. ESP	Pa	428	427	402	388	417	432	417	392
Unit EER without remote condenser to max. frequency	W/W	3,70	3,72	3,54	3,65	3,83	3,63	3,87	3,91
Maximum absorbed power	Kw	16	19	21	23	24	23	28	31
Maximum absorbed current	A	26	38	40	34	37	42	47	48
Starting current	A	8	24	25	8	10	27	156	30
Power supply	V/ph/Hz				400/3/50+N+PE				
Humidifier									
Steam production (nominal)	kg/h	8	8	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	9,0	9,0	9,0	9,0	15,0	15,0	18,0	18,0
Absorbed current	A	13,0	13,0	13,0	13,0	21,7	21,7	26,0	26,0
Oversized electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	12,0	12,0	12,0	12,0	18,0	18,0	24,0	24,0
Absorbed current	A	17,3	17,3	17,3	17,3	26,0	26,0	34,6	34,6
Hot water coil									
Heating capacity (3)	kW	24,5	24,5	24,5	24,5	31,1	31,1	37,4	37,4
Water flow	m^3/h	4,3	4,3	4,3	4,3	5,43	5,43	6,5	6,5
Pressure drop (coil + 3 way valve)	kPa	46	46	46	46	53	53	34	34
Coil internal volume	dm^3	4,7	4,7	4,7	4,7	5,8	5,8	7,1	7,1
Compressors									
Circuits / Compressors	n°/n°	1/1	2/2	2/2	1/1	1/1	2/2	1/2	2/2
On / Off Compressors	n°	--	--	--	--	--	--	1	--
Inverter Compressors	n°	1	2	2	1	1	2	1	2
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Frame	n°	4,5	4,5	4,5	4,5	5	5	6	6
Width	mm	1505	1505	1505	1505	1860	1860	2210	2210
Depth	mm	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	416	433	435	419	509	525	606	620
Weight (Configuration V)	Kg	421	439	441	425	516	531	614	627
Weight (Configuration D)	Kg	424	442	443	428	519	535	617	631
Weight (Configuration B)	Kg	421	439	441	425	516	531	614	627

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.A		691	742	761	861	931	952	1021	1142
Cooling capacity (Total) (1) ESP 20 Pa	kW	70,1	74,9	78,2	85,8	94,7	96,5	100,7	109,8
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	66,3	74,7	75,2	80,2	91,6	93,9	96,1	98,8
Tot. absorbed power (2) ESP 20 Pa	kW	18,8	19,9	20,2	23,7	24	25,9	27,6	30,8
SHR		0,95	1,00	0,96	0,94	0,97	0,97	0,95	0,90
Air flow	m^3/h	17600	20900	20900	20900	25700	25700	25700	25700
Fan	n°	2	2	2	2	3	3	3	3
Max. ESP	Pa	432	437	436	429	446	449	442	431
Unit EER without remote condenser to max. frequency	W/W	3,73	3,76	3,88	3,62	3,95	3,73	3,65	3,57
Maximum absorbed power	Kw	30	33	36	38	45	49	47	56
Maximum absorbed current	A	50	51	58	61	76	74	79	93
Starting current	A	167	33	168	179	185	47	219	203
Power supply	V/ph/Hz	400/3/50+N+PE							
Humidifier									
Steam production (nominal)	kg/h	8	8	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	18,0	24,0	24,0	24,0	27,0	27,0	27,0	27,0
Absorbed current	A	26,0	34,6	34,6	34,6	39,0	39,0	39,0	39,0
Oversized electrical heaters									
Steps	n°	3	3	3	3	3	3	3	3
Power	kW	24,0	27,0	27,0	27,0	36,0	36,0	36,0	36,0
Absorbed current	A	34,6	39,0	39,0	39,0	52,0	52,0	52,0	52,0
Hot water coil									
Heating capacity (3)	kW	37,4	48,9	48,9	48,9	60,8	60,8	60,8	60,8
Water flow	m^3/h	6,5	8,5	8,5	8,5	10,6	10,6	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	34	48	48	48	42	42	42	42
Coil internal volume	dm^3	7,1	10,45	10,45	10,45	12,6	12,6	12,6	12,6
Compressors									
Circuits / Compressors	n°/n°	1/2	2/2	1/2	1/2	1/2	2/2	1/2	2/4
On / Off Compressors	n°	1	--	1	1	1	--	1	2
Inverter Compressors	n°	1	2	1	1	1	2	1	2
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Frame	n°	6	7	7	7	8	8	8	8
Width	mm	2210	2565	2565	2565	3100	3100	3100	3100
Depth	mm	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	606	717	710	710	869	878	869	954
Weight (Configuration V)	Kg	614	725	719	719	880	888	880	965
Weight (Configuration D)	Kg	617	729	723	723	885	893	885	970
Weight (Configuration B)	Kg	614	725	719	719	880	888	880	965

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.

(2) The fans electrical power has to be added to the ambient load.

(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.AF

DIRECT EXPANSION CLOSE CONTROL UNIT

AIR CONDENSED WITH ADDITIONAL FREECOOLING COIL, INVERTER COMPRESSOR

Close control air-conditioners for vertical installations and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control.
Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general. Direct expansion FREE-COOLING unit with INVERTER compressor is water cooled and it has to be connected to a remote dry cooler. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current. Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to the galvanized sheet metal structures and panels with bevelled corner uprights to enhance its unique, clean and attractive design. The panels are lined with sound-insulating material to limit noise levels. Last generation of BLDC INVERTER compressor designed to deliver maximum cooling efficiency when you ned it most. This latest variable speed compressor technology allows CRAC system manufactures as Emicon to achieve superior performance. New generation EC Inverter centrifugal fan made in hight class technological material with 5 backward curved blades. Impeller with bionic 3D profile thanks to an innovative design in the form of a blade geometry with specific buckling. Special V-shaped rear edge allows a wide characteristic field. Together with the rotating diffuser that opens, exceptional performances of the impeller and the entire system are thus obtained. In combination with the undulated surface of the blade surface, a diffused sound emission takes place which guarantees a very low noise level.

Standard COARSE 60% (ISO EN 16890) EU4/G4 filtering section is fitted. The filter is self-extinguishing. The microprocessor controls the compressor activation times thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Refrigerant circuit consisting of Electronic Expansion Valve, sight glass filter dryer on liquid line, pressure transducer with indication, control and protection functions on low and high refrigerant pressure, high pressure safety switch with manual reset, liquid receiver with accessories. Thanks to the double coil (Free-cooling water and Direct Expansion) the unit provides the highest saving match with full availability of the DX solution. The usage of Free cooling coil and the BLDC Inverter compressor allows maximizing the saving in mixed mode operation, so whenever the free-cooling is not able to fully take the load the compressors can work just to complete the missing cooling needs. Therefore Emicon DXI-HF can provide extremely high energy saving granting the highest availability of the application.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

TECHNICAL DATA

DXi.AF		181	251	381	392	531	532
Cooling capacity (Total) (1) ESP 20 Pa	kW	18,6	24,9	35,3	37,0	51,3	49,1
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	16,5	23,3	33,2	33,4	43,4	43,1
Tot. absorbed power (2) ESP 20 Pa	kW	5,23	7,37	10,1	10,5	14,8	14,3
SHR		0,88	0,93	0,94	0,90	0,84	0,87
Air flow	m^3/h	5777	8260	11656	11656	14696	14696
Fan	n	1	1	1	1	2	2
Max. ESP	Pa	568	359	374	374	397	396
EER	W/W	3,56	3,38	3,50	3,52	3,47	3,43
Maximum absorbed power	kW	10,6	11,5	16,4	18,6	24,3	23,0
Maximum absorbed current	A	21,0	21,2	25,6	37,6	36,9	42,4
starting current	A	17,8	17,8	21,6	34,4	32,0	39,0
Power supply	V/ph/Hz			400/3/50+N+PE			
Free - cooling							
Cooling capacity (Total) (1) ESP 20 Pa	kW	17,3	25,2	35,3	35,3	45,9	45,9
Tot. absorbed power (2) ESP 20 Pa	kW	0,75	1,02	1,42	1,49	1,64	1,71
SHR		0,88	0,88	0,87	0,87	0,88	0,88
Water flow	m^3/h	3,08	4,48	6,28	6,28	8,14	8,14
Tot. pressure drop	kPa	21,7	38,5	29,8	29,8	41,9	41,9
Humidifier							
Steam production (nominal)	kg/h	5	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	3,75	6	6	6	6	6
Max. absorbed current	A	5,5	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	2	3	3	3	3	3
Power	kW	6	9	9	9	15	15
Absorbed current	A	9,12	13,7	13,7	13,7	22,8	22,8
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	9	12	12	12	18	18
Absorbed current	A	13,7	18,2	18,2	18,2	27,3	27,3
Hot water coil							
Heating capacity (3)	kW	10,6	16,7	24,5	24,5	31,1	31,1
Water flow	m^3/h	1,8	2,9	4,3	4,3	5,43	5,43
Pressure drop (coil + 3 way valve)	kPa	48	56	46	46	53	53
Coil internal volume	dm^3	2,1	3,3	4,7	4,7	5,8	5,8
Condensing water pump							
Nominal flow	l/h	390	390	390	390	390	390
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	-	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	-	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	-	6	6	6	6	6
Dimensions and weight							
Frame	n°	3	4	4,5	4,5	5	5
Width	mm	980	1160	1505	1505	1860	1860
Depth	mm	750	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	297	352	446	463	560	575
Weight (Configuration V)	Kg	301	356	452	469	566	581
Weight (Configuration D)	Kg	303	359	454	471	570	585
Weight (Configuration B)	Kg	301	356	452	469	566	581

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.AF		631	652	742	761	931	952
Cooling capacity (Total) (1) ESP 20 Pa	kW	61,3	66,8	69,2	76,2	89,0	96,8
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	52,0	53,4	61,6	63,3	78,8	81,4
Tot. absorbed power (2) ESP 20 Pa	kW	17,5	19,6	19,9	22,3	25,8	29,2
SHR		0,84	0,79	0,89	0,83	0,88	0,84
Air flow	m^3/h	17838	17838	21183	21183	26048	26048
Fan	n	2	2	2	2	3	3
Max. ESP	Pa	354	355	399	400	432	433
EER	W/W	3,50	3,41	3,48	3,42	3,45	3,32
Maximum absorbed power	kW	27,7	30,8	32,7	35,9	44,5	48,8
Maximum absorbed current	A	46,6	48,4	51,2	57,9	76,3	73,8
starting current	A	156	44,4	47,2	168	185	68,9
Power supply	V/ph/Hz			400/3/50+N+PE			
Free - cooling							
Cooling capacity (Total) (1) ESP 20 Pa	kW	54,3	54,3	65,4	65,4	80,8	80,8
Tot. absorbed power (2) ESP 20 Pa	kW	2,17	2,17	2,49	2,49	2,89	2,89
SHR		0,88	0,88	0,88	0,88	0,88	0,88
Water flow	m^3/h	9,67	9,67	11,62	11,62	14,33	14,33
Tot. pressure drop	kPa	32,2	32,2	31,0	31,0	27,3	27,3
Humidifier							
Steam production (nominal)	kg/h	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	6	6	6	6	6	6
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	18	18	24	24	27	27
Absorbed current	A	27,3	27,3	36,5	36,5	41,0	41,0
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	24	24	27	27	36	36
Absorbed current	A	36,5	36,5	41,0	41,0	54,7	54,7
Hot water coil							
Heating capacity (3)	kW	37,4	37,4	48,9	48,9	60,8	60,8
Water flow	m^3/h	6,5	6,5	8,5	8,5	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	34	34	48	48	42	42
Coil internal volume	dm^3	7,1	7,1	10,45	10,45	12,6	12,6
Condensing water pump							
Nominal flow	l/h	390	390	390	390	390	390
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow=0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow=0 m^3/h)	m	6	6	6	6	6	6
Dimensions and weight							
Frame	n°	6	6	7	7	8	8
Width	mm	2210	2210	2565	2565	3100	3100
Depth	mm	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	680	684	807	810	996	994
Weight (Configuration V)	Kg	687	692	815	818	1006	1004
Weight (Configuration D)	Kg	691	695	819	822	1011	1009
Weight (Configuration B)	Kg	687	692	815	818	1006	1004

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 48°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.H

DIRECT EXPANSION CLOSE CONTROL UNIT
WATER COOLED WITH INVERTER COMPRESSOR

Close control air-conditioners for vertical installations and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control.
Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general.

The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads, optimizing the power absorbed and eliminating the starting current. Electronic expansion valve and EC Inverter fans are fitted in this model as standard. External air condenser. Emibyte equipment are fully designed and tested in the Emicon validation laboratories

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to the galvanized sheet metal structures and panels with bevelled corner uprights to enhance its unique, clean and attractive design. The panels are lined with sound-insulating material to limit noise levels. Last generation of BLDC INVERTER compressor designed to deliver maximum cooling efficiency when you ned it most. This latest variable speed compressor technology allows CRAC system manufactures as Emicon to achieve superior performance. New generation EC Inverter centrifugal fan made in hight class technological material with 5 backward curved blades. Impeller with bionic 3D profile thanks to an innovative design in the form of a blade geometry with specific buckling. Special V-shaped rear edge allows a wide characteristic field. Together with the rotating diffuser that opens, exceptional performances of the impeller and the entire system are thus obtained. In combination with the undulated surface of the blade surface, a diffused sound emission takes place which guarantees a very low noise level.

Standard COARSE 60% (ISO EN 16890) EU4/G4 filtering section is fitted. The filter is self-extinguishing. The microprocessor controls the compressor activation times thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems. Refrigerant circuit consisting of Electronic Expansion Valve, sight glass filter dryer on liquid line, pressure transducer with indication, control and protection functions on low and high refrigerant pressure, high pressure safety switch with manual reset, liquid receiver with accessories

The condensation heat is disposed of in an internal plate heat exchanger, connected in turn to a water circuit. The condensation water can derive from a well, local water network or closed circuits such as evaporative towers and / or dry coolers.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

TECHNICAL DATA

DXi.H		61	111	121	151	181	201
Cooling capacity (Total) (1) ESP 20 Pa	kW	7,7	10,5	12,1	17,7	20,2	21,7
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	7,7	9,5	11,8	15,4	18,5	21,7
Tot. absorbed power (2) ESP 20 Pa	kW	2,1	3,0	3,2	4,5	4,7	4,8
SHR		1,00	0,91	0,97	0,88	0,91	1,00
Water flow	m^3/h	1,7	2,3	2,6	3,8	4,3	4,6
Pressure drops	kPa	46	35	45	45	33	37
Air flow	m^3/h	3900	3900	3900	3900	5700	5700
Fan	n°	1	1	1	1	1	1
Max. ESP	Pa	535	536	512	439	622	575
EER	W/W	4,0	3,8	4,1	4,2	4,7	4,9
Maximum absorbed power	Kw	4	6	6	9	11	11
Maximum absorbed current	A	14	18	18	16	21	21
Starting current	A	4	4	4	4	7	7
Power supply	V/ph/Hz			400/3/50+N+PE			
Humidifier							
Steam production (nominal)	kg/h	3	3	3	3	5	5
Steam production (max.)	kg/h	3	3	3	3	8	8
Max. absorbed power	kW	2,25	2,25	2,25	2,25	3,75	3,75
Max. absorbed current	A	10,0	10,0	10,0	10,0	5,5	5,5
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	2	2
Power	kW	4,5	4,5	4,5	4,5	6,0	6,0
Absorbed current	A	6,5	6,5	6,5	6,5	8,7	8,7
Oversized electrical heaters							
Steps	n°	2	2	2	2	3	3
Power	kW	6,0	6,0	6,0	6,0	9,0	9,0
Absorbed current	A	8,7	8,7	8,7	8,7	13,0	13,0
Hot water coil							
Heating capacity (3)	kW	7,3	7,3	7,3	7,3	10,6	10,6
Water flow	m^3/h	1,3	1,3	1,3	1,3	1,8	1,8
Pressure drop (coil + 3 way valve)	kPa	31	31	31	31	48	48
Coil internal volume	dm^3	1,4	1,4	1,4	1,4	2,1	2,1
Compressors							
Circuits / Compressors	n°/n°	1/1	1/1	1/1	1/1	1/1	1/1
On / Off Compressors	n°	--	--	--	--	--	--
Inverter Compressors	n°	1	1	1	1	1	1
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	-	-	-	-	-	-
Max. flow (prevalence = 0 m)	l/h	-	-	-	-	-	-
Max. discharge height (flow = 0 m^3/h)	m	-	-	-	-	-	-
Dimensions and weight							
Frame	n°	2	2	2	2	3	3
Width	mm	750	750	750	750	980	980
Depth	mm	550	550	550	550	750	750
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	201	209	212	223	289	297
Weight (Configuration V)	Kg	204	212	215	226	293	301
Weight (Configuration D)	Kg	205	213	217	228	295	303
Weight (Configuration B)	Kg	204	212	215	226	293	301

(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.H		251	321	381	392	472	491
Cooling capacity (Total) (1) ESP 20 Pa	kW	25,9	35,1	36,4	39,4	48,0	50,9
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	24,8	31,6	37,5	35,0	40,7	45,4
Tot. absorbed power (2) ESP 20 Pa	kW	6,4	7,6	8,0	8,0	11,0	11,8
SHR		0,96	0,90	1,00	0,89	0,85	0,89
Water flow	m^3/h	5,6	7,3	7,6	8,2	10,1	10,8
Pressure drops	kPa	29	27	21	7	10	33
Air flow	m^3/h	8150	8150	11500	11500	11500	11500
Fan	n°	1	1	1	1	1	1
Max. ESP	Pa	399	358	344	399	370	323
EER	W/W	4,4	5,0	4,9	5,4	4,7	4,7
Maximum absorbed power	Kw	12	15	16	19	21	23
Maximum absorbed current	A	21	24	26	38	40	34
Starting current	A	6	6	8	24	25	8
Power supply	V/ph/Hz				400/3/50+N+PE		
Humidifier							
Steam production (nominal)	kg/h	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	9,0	9,0	9,0	9,0	9,0	9,0
Absorbed current	A	13,0	13,0	13,0	13,0	13,0	13,0
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	12,0	12,0	12,0	12,0	12,0	12,0
Absorbed current	A	17,3	17,3	17,3	17,3	17,3	17,3
Hot water coil							
Heating capacity (3)	kW	16,7	16,7	24,5	24,5	24,5	24,5
Water flow	m^3/h	2,9	2,91	4,3	4,3	4,3	4,3
Pressure drop (coil + 3 way valve)	kPa	56	56	46	46	46	46
Coil internal volume	dm^3	3,3	3,3	4,7	4,7	4,7	4,7
Compressors							
Circuits / Compressors	n°/n°	1/1	1/1	1/1	2/2	2/2	1/1
On / Off Compressors	n°	--	--	--	--	--	--
Inverter Compressors	n°	1	1	1	2	2	1
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow = 0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	4	4	4,5	4,5	4,5	4,5
Width	mm	1160	1160	1505	1505	1505	1505
Depth	mm	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	339	372	428	456	458	435
Weight (Configuration V)	Kg	343	376	433	462	464	440
Weight (Configuration D)	Kg	345	379	436	465	466	443
Weight (Configuration B)	Kg	343	376	433	462	464	440

(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.H		531	532	631	652	691	742
Cooling capacity (Total) (1) ESP 20 Pa	kW	55,0	53,7	68,1	70,6	72,2	76,4
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	53,4	52,8	65,3	66,2	67,0	75,8
Tot. absorbed power (2) ESP 20 Pa	kW	12,2	13,0	14,6	15,5	15,7	16,9
SHR		0,97	0,98	0,96	0,94	0,93	0,99
Water flow	m^3/h	11,6	11,5	14,2	14,8	15,1	16,0
Pressure drops	kPa	37	12	28	10	31	11
Air flow	m^3/h	14500	14500	17600	17600	17600	20900
Fan	n°	2	2	2	2	2	2
Max. ESP	Pa	389	360	390	361	390	365
EER	W/W	4,9	4,5	5,0	4,9	5,0	4,9
Maximum absorbed power	Kw	24	23	28	31	30	33
Maximum absorbed current	A	37	42	47	48	50	51
Starting current	A	10	27	156	30	167	33
Power supply	V/ph/Hz			400/3/50+N+PE			
Humidifier							
Steam production (nominal)	kg/h	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	15,0	15,0	18,0	18,0	18,0	24,0
Absorbed current	A	21,7	21,7	26,0	26,0	26,0	34,6
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	18,0	18,0	24,0	24,0	24,0	27,0
Absorbed current	A	26,0	26,0	34,6	34,6	34,6	39,0
Hot water coil							
Heating capacity (3)	kW	31,1	31,1	37,4	37,4	37,4	48,9
Water flow	m^3/h	5,43	5,43	6,5	6,5	6,5	8,5
Pressure drop (coil + 3 way valve)	kPa	53	53	34	34	34	48
Coil internal volume	dm^3	5,8	5,8	7,1	7,1	7,1	10,45
Compressors							
Circuits / Compressors	n°/n°	1/1	2/2	1/2	2/2	1/2	2/2
On / Off Compressors	n°	--	--	1	--	1	--
Inverter Compressors	n°	1	2	1	2	1	1
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow = 0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	5	5	6	6	6	7
Width	mm	1860	1860	2210	2210	2210	2565
Depth	mm	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	525	548	627	652	627	749
Weight (Configuration V)	Kg	531	554	634	660	634	757
Weight (Configuration D)	Kg	535	558	638	663	638	761
Weight (Configuration B)	Kg	531	554	634	660	634	757

(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.H		761	861	931	952	1021	1142
Cooling capacity (Total) (1) ESP 20 Pa	kW	85,9	87,3	100,3	104,6	107,4	118,9
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	80,1	80,7	96,5	98,0	99,4	104,5
Tot. absorbed power (2) ESP 20 Pa	kW	18,7	19,9	21,9	23,5	22,9	26,8
SHR		0,93	0,92	0,96	0,94	0,93	0,88
Water flow	m^3/h	18,0	18,4	21,0	22,0	22,4	25,1
Pressure drops	kPa	29	21	26	12	22	15
Air flow	m^3/h	20900	20900	25700	25700	25700	25700
Fan	n°	2	2	3	3	3	3
Max. ESP	Pa	394	394	414	385	414	386
EER	W/W	5,0	4,7	4,9	4,8	5,1	4,8
Maximum absorbed power	Kw	36	38	45	49	47	56
Maximum absorbed current	A	58	61	76	74	79	93
Starting current	A	168	179	185	47	219	203
Power supply	V/ph/Hz			400/3/50+N+PE			
Humidifier							
Steam production (nominal)	kg/h	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	24,0	24,0	27,0	27,0	27,0	27,0
Absorbed current	A	34,6	34,6	39,0	39,0	39,0	39,0
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	27,0	27,0	36,0	36,0	36,0	36,0
Absorbed current	A	39,0	39,0	52,0	52,0	52,0	52,0
Hot water coil							
Heating capacity (3)	kW	48,9	48,9	60,8	60,8	60,8	60,8
Water flow	m^3/h	8,5	8,5	10,6	10,6	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	48	48	42	42	42	42
Coil internal volume	dm^3	10,45	10,45	12,6	12,6	12,6	12,6
Compressors							
Circuits / Compressors	n°/n°	1/2	1/2	1/2	2/2	1/2	2/4
On / Off Compressors	n°	1	1	1	--	1	2
Inverter Compressors	n°	1	1	1	2	1	2
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow = 0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	7	7	8	8	8	8
Width	mm	2565	2565	3100	3100	3100	3100
Depth	mm	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	735	739	900	919	904	995
Weight (Configuration V)	Kg	743	748	910	929	915	1006
Weight (Configuration D)	Kg	747	752	915	934	920	1011
Weight (Configuration B)	Kg	743	748	910	929	915	1006

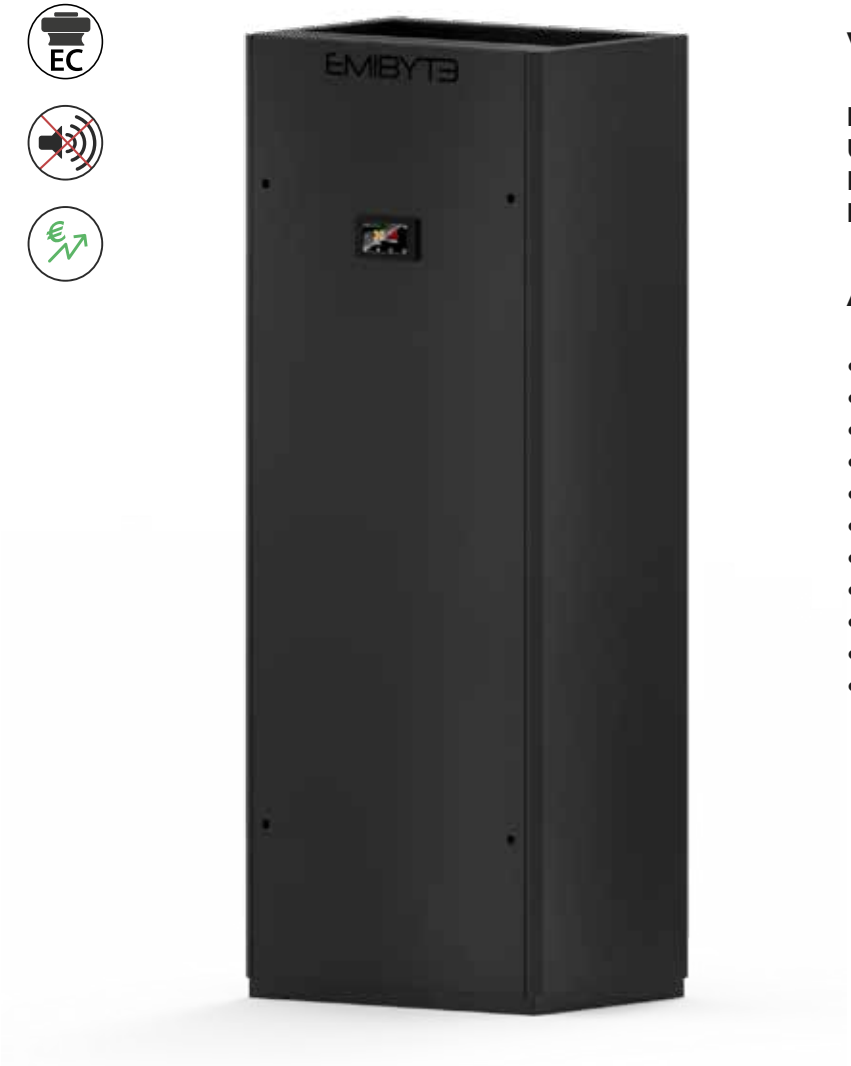
(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.HF

DIRECT EXPANSION CLOSE CONTROL UNIT
WATER COOLED WITH ADDITIONAL FREECOOLING COIL
AND INVERTER COMPRESSORS

Close control air-conditioners for vertical installations and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control.
Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general.

Direct expansion FREE-COOLING unit with INVERTER compressor is water cooled and it has to be connected to a remote dry cooler. INVERTER compressor allows the cooling capacity modulation according to the effective thermal load. This solution is suitable for applications with high partial loads and optimises the power input by reducing inrush current.
The unit is also equipped with electronic expansion valve, EC INVERTER fans, condenser and additional Free-cooling coil.



VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to the galvanized sheet metal structures and panels with bevelled corner uprights to enhance its unique, clean and attractive design. The panels are lined with sound-insulating material to limit noise levels. Last generation of BLDC INVERTER compressor designed to deliver maximum cooling efficiency when you ned it most. This latest variable speed compressor technology allows CRAC system manufactures as Emicon to achieve superior performance. New generation EC Inverter centrifugal fan made in hight class technological material with 5 backward curved blades. Impeller with bionic 3D profile thanks to an innovative design in the form of a blade geometry with specific buckling. Special V-shaped rear edge allows a wide characteristic field. Together with the rotating diffuser that opens, exceptional performances of the impeller and the entire system are thus obtained. In combination with the undulated surface of the blade surface, a diffused sound emission takes place which guarantees a very low noise level.

Standard COARSE 60% (ISO EN 16890) EU4/G4 filtering section is fitted. The filter is self-extinguishing. The microprocessor controls the compressor activation times thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Refrigerant circuit consisting of Electronic Expansion Valve, sight glass filter dryer on liquid line, pressure transducer with indication, control and protection functions on low and high refrigerant pressure, high pressure safety switch with manual reset, liquid receiver with accessories. Thanks to the double coil (Free-cooling water and Direct Expansion) the unit provides the highest saving match with full availability of the DX solution. The usage of Free cooling coil and the BLDC Inverter compressor allows maximizing the saving in mixed mode operation, so whenever the free-cooling is not able to fully take the load the compressors can work just to complete the missing cooling needs. Therefore Emicon DXI-HF can provide extremely high energy saving granting the highest availability of the application.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

TECHNICAL DATA

DXi.HF		181	251	381	392	531	532
Cooling capacity (Total) (1) ESP 20 Pa	kW	18,9	23,1	34,7	37,9	47,8	45,5
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	16,5	23,0	32,8	33,5	42,7	42,6
Tot. absorbed power (2) ESP 20 Pa	kW	4,35	5,67	4,55	8,48	10,9	10,9
SHR		0,87	0,99	0,94	0,88	0,89	0,93
Water flow	m^3/h	3,99	4,96	6,88	8,01	10,11	9,73
Air flow	m^3/h	5777	8260	11656	11656	14696	14696
Fan	n	1	1	1	1	2	2
Max. ESP	Pa	570	361	375	376	398	398
EER	W/W	4,34	4,07	7,63	4,47	4,39	4,17
Maximum absorbed power	kW	10,6	11,5	16,4	18,6	24,3	23,0
Maximum absorbed current	A	21,0	21,2	25,6	37,6	36,9	42,4
Starting current	A	17,8	17,8	21,6	34,4	32,0	39,0
Power supply	V/ph/Hz			400/3/50+N+PE			
Free-cooling data							
Cooling capacity (Total) (3) ESP 20 Pa	kW	18,8	25,9	36,3	37,9	48,9	48,7
Tot. absorbed power (2) ESP 20 Pa	kW	0,85	1,12	0,88	1,56	1,88	1,82
SHR		0,84	0,87	0,88	0,84	0,84	0,84
Water flow	m^3/h	3,98	4,94	6,85	7,98	10,07	9,69
Total pressure drops	kPa	48,3	50,5	39,3	36,0	74,3	52,6
Humidifier							
Steam production (nominal)	kg/h	5	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	3,75	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	5,5	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	2	3	3	3	3	3
Power	kW	6,0	9,0	9,0	9,0	15,0	15,0
Absorbed current	A	9,12	13,7	13,7	13,7	22,8	22,8
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	9,0	12,0	12,0	12,0	18,0	18,0
Absorbed current	A	13,7	18,2	18,2	18,2	27,3	27,3
Hot water coil							
Heating capacity (4)	kW	10,6	16,7	24,5	24,5	31,1	31,1
Water flow	m^3/h	3,98	4,94	6,85	7,98	10,08	9,69
Pressure drop (coil + 3 way valve)	kPa	48	56	46	46	53	53
Coil internal volume	dm^3	2,1	3,3	4,7	4,7	5,8	5,8
Compressors							
Circuits / Compressors	n°/n°	1/1	1/1	1/1	2/2	1/1	2/2
On / Off Compressors	n°	--	--	--	--	--	--
Inverter Compressors	n°	1	1	1	2	1	2
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	-	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	-	900	900	900	900	900
Max. discharge height (flow = 0 m3/h)	m	-	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	3	4	4,5	4,5	5	5
Width	mm	980	1160	1505	1505	1860	1860
Depth	mm	750	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	302	357	455	484	573	596
Weight (Configuration V)	Kg	306	361	461	490	579	603
Weight (Configuration D)	Kg	308	363	464	493	583	606
Weight (Configuration B)	Kg	306	361	461	490	579	603

(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Free cooling: Ambient temperature 24°C, Relative humidity 50%, water inlet temperature 7°C, constant water flow
(4) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

DXi.HF		631	652	742	761	931	952
Cooling capacity (Total) (1) ESP 20 Pa	kW	61,3	59,1	64,7	73,2	86,9	86,4
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	51,4	51,4	60,5	61,9	77,4	77,2
Tot. absorbed power (2) ESP 20 Pa	kW	13,9	13,2	14,6	16,6	19,9	19,7
SHR		0,83	0,87	0,93	0,84	0,89	0,89
Water flow	m^3/h	12,97	12,48	13,67	15,47	18,41	18,33
Air flow	m^3/h	17838	17838	21183	21183	26048	26048
Fan	n	2	2	2	2	3	3
Max. ESP	Pa	356	356	401	401	434	434
EER	W/W	4,41	4,48	4,43	4,41	4,37	4,39
Maximum absorbed power	kW	45,7	48,8	56,7	59,9	45	49
Maximum absorbed current	A	73,9	75,7	87,7	94,4	76	74
Starting current	A	184	71,7	83,7	204	185	47
Power supply	V/ph/Hz			400/3/50+N+PE			
Free-cooling data							
Cooling capacity (Total) (3) ESP 20 Pa	kW	59,4	59,0	68,7	71,1	87,1	86,9
Tot. absorbed power (2) ESP 20 Pa	kW	2,43	2,31	2,66	2,81	3,25	3,02
SHR		0,85	0,844	0,84	0,84	0,84	0,84
Water flow	m^3/h	12,92	12,43	13,62	15,41	18,33	18,25
Total pressure drops	kPa	62,6	45,8	37,3	56,6	52,3	30,4
Humidifier							
Steam production (nominal)	kg/h	8	8	8	8	8	8
Steam production (max.)	kg/h	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	18,0	18,0	24,0	24,0	27,0	27,0
Absorbed current	A	27,3	27,3	36,5	34,6	39,0	39,0
Oversized electrical heaters							
Steps	n°	3	3	3	3	3	3
Power	kW	24,0	24,0	27,0	27,0	36,0	36,0
Absorbed current	A	36,5	36,5	41,0	39,0	52,0	52,0
Hot water coil							
Heating capacity (4)	kW	37,4	37,4	48,9	48,9	60,8	60,8
Water flow	m^3/h	12,92	12,43	13,62	8,5	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	34	34	48	48	42	42
Coil internal volume	dm^3	7,1	7,1	10,5	10,5	12,6	12,6
Compressors							
Circuits / Compressors	n°/n°	1/2	2/2	2/2	1/2	1/2	2/2
On / Off Compressors	n°	1	--	--	1	1	--
Inverter Compressors	n°	1	2	1	1	1	2
Condensing water pump							
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow = 0 m3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	6	6	7	7	8	8
Width	mm	2210	2210	2565	2565	3100	3100
Depth	mm	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980
Weight (Configuration U)	Kg	686	711	833	819	1003	1022
Weight (Configuration V)	Kg	693	718	841	828	1014	1032
Weight (Configuration D)	Kg	696	722	845	832	1019	1037
Weight (Configuration B)	Kg	693	718	841	828	1014	1032

(1) Ambient temperature 24°C, Relative humidity 50%, Water temperature 30/35°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Free cooling: Ambient temperature 24°C, Relative humidity 50%, water inlet temperature 7°C, constant water flow
(4) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

WU

WATER COOLED CLOSE CONTROL UNIT

Ductable close control air-conditioners for vertical installation and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general.

Units fitted with EC INVERTER fans, upflow or downflow. These units are provided with 2 way modulating valve and servomotor. Unit has to be connected with an external chiller.

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels. The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector.
Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels. The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector. NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions. The fan section is contained within the machine and includes: centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-fans), directly coupled to external rotor EC electric motor brushless type with integrated electronic commutated system and continuous variation of the rotation speed.
Standard G4, M5 filtering section is to CEN-EN 779 with average degree of separation 90,1% ASHRAE. The filter is self-extinguishing. Switchboard to IEC 204-1 / EN60204-1.

Chilled water coil with copper tube and aluminium Blue-fins with hydrophilic coating treatment surface to reduce the pressure drops on the air side. Water circuit realized with pipes entirely coated with insulated material and bronze fittings, complete temperature probe and with 2 or 3-way modulating valve.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

TECHNICAL DATA

WU		80	150	190	250	310	440	550	640	700	840
Cooling capacity (Total) (1) ESP 20 Pa	kW	6,3	10,1	13	16,7	20,9	29,6	37	42,9	48	55,3
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	5,8	8,6	10,6	14,2	16,8	24,9	29,8	35,2	38,4	47,4
Tot. absorbed power (2) ESP 20 Pa	kW	0,3	0,3	0,4	0,6	0,7	0,9	1,1	1,2	1,2	1,7
SHR		0,92	0,85	0,81	0,84	0,8	0,84	0,80	0,81	0,79	0,85
Air flow	m^3/h	2550	2550	2550	4100	4100	7200	7200	9100	9100	13400
N° Fans		1	1	1	1	1	1	1	1	1	1
ESP max.	Pa	563	517	480	445	405	570	522	349	337	338
Pressure drop coil + 2 way valve (standard)	kPa	32	20	28	41	31	31	31	34	40	34
Water flow	m^3/h	1,1	1,7	2,2	2,9	3,6	5,1	6,4	7,4	8,3	9,5
Power supply	V/ph/Hz					400/3/50+N+PE					
Humidifier											
Steam production (nominal)	kg/h	1,5	1,5	1,5	3,0	3,0	5,0	5,0	8,0	8,0	8,0
Steam production (max.)	kg/h	3	3	3	3	3	8	8	8	8	8
Max. absorbed power	kW	1,12	1,12	1,12	2,25	2,25	3,75	3,75	6,0	6,0	6,0
Max. absorbed current	A	5,0	5,0	5,0	10,0	10,0	5,5	5,5	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters											
Steps	n°	1	1	1	1	1	2	2	3	3	3
Power	kW	3,0	3,0	3,0	4,5	4,5	6,0	6,0	9,0	9,0	9,0
Absorbed current	A	4,3	4,3	4,3	6,5	6,5	8,7	8,7	13,0	13,0	13,0
Oversized electrical heaters											
Steps	n°	1	1	1	2	2	3	3	3	3	3
Power	kW	4,5	4,5	4,5	6,0	6,0	9,0	9,0	12,0	12,0	12,0
Absorbed current	A	6,5	6,5	6,5	8,7	8,7	13,0	13,0	17,3	17,3	17,3
Hot water coil											
Heating capacity (4)	kW	4,9	4,9	4,9	7,3	7,3	10,67	10,67	16,7	16,7	24,5
Water flow	m^3/h	0,85	0,85	0,85	1,3	1,3	1,86	1,86	2,91	2,91	4,3
Pressure drop (coil + 3 way valve)	kPa	36	36	36	31	31	48	48	56	56	46
Coil internal volume	dm^3	1,1	1,1	1,1	1,4	1,4	2,1	2,1	3,3	3,3	4,7
Condensing water pump											
Nominal flow	l/h	27,5	27,5	27,5	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	34	34	34	500	500	500	500	500	500	500
Max. discharge height (flow = 0 m3/h)	m	15,0	15,0	15,0	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier											
Nominal flow	l/h	-	-	-	-	-	-	-	600	600	600
Max. flow (prevalence = 0 m)	l/h	-	-	-	-	-	-	-	900	900	900
Max. discharge height (flow = 0 m3/h)	m	-	-	-	-	-	-	-	6,0	6,0	6,0
Dimensions and weight											
Frame	n°	1	1	1	2	2	3	3	4	4	4,5
Width	mm	550	550	550	750	750	980	980	1160	1160	1505
Depth	mm	550	550	550	550	550	750	750	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	Kg	139	143	148	173	179	237	248	312	318	360

(1) Ambient temperature 24°C, Relative humidity 50%, Water 7/12°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

WU		960	1050	1300	1450	1600	1710	1900	2100	2300
Cooling capacity (Total) (1) ESP 20 Pa	kW	63,2	68,9	88,2	95,2	106,9	115,4	126,2	140,1	157,5
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	51,6	55,4	70,4	77,6	85,2	93,9	100,7	114,3	125,6
Tot. absorbed power (2) ESP 20 Pa	kW	1,9	2	2,2	2,7	2,9	3,1	3,3	3,5	3,8
SHR		0,81	0,80	0,79	0,81	0,79	0,81	0,79	0,81	0,79
Air flow	m^3/h	13400	13400	16600	20100	20100	23800	23800	29500	29500
N° Fans		1	1	2	2	2	2	2	3	3
ESP max.	Pa	308	291	369	277	293	371	366	398	413
Pressure drop (coil + 2 way valve) (standard)	kPa	41	42	35	40	43	47	50	37	40
Water flow	m^3/h	10,9	11,9	15,2	16,4	18,4	19,8	21,7	24,1	27,1
Power supply	V/ph/Hz	400/3/50+N+PE								
Humidifier										
Steam production (nominal)	kg/h	8,0	8,0	8,0	8,0	8,0	8,0	8,0	8,0	8,0
Steam production (max.)	kg/h	8	8	8	8	8	8	8	8	8
Max. absorbed power	kW	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Max. absorbed current	A	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters										
Steps	n°	3	3	3	3	3	3	3	3	3
Power	kW	9,0	9,0	15,0	18,0	18,0	24,0	24,0	27,0	27,0
Absorbed current	A	13,0	13,0	21,7	26,0	26,0	34,6	34,6	39,0	39,0
Oversized electrical heaters										
Steps	n°	3	3	3	3	3	3	3	3	3
Power	kW	12,0	12,0	18,0	24,0	24,0	27,0	27,0	36,0	36,0
Absorbed current	A	17,3	17,3	26,0	34,6	34,6	39,0	39,0	52,0	52,0
Hot water coil										
Heating capacity (4)	kW	24,5	24,5	31,1	37,4	37,4	48,9	48,9	60,8	60,8
Water flow	m^3/h	4,3	4,3	5,43	6,5	6,5	8,5	8,5	10,6	10,6
Pressure drop (coil + 3 way valve)	kPa	46	46	53	34	34	48	48	42	42
Coil internal volume	dm^3	4,7	4,7	5,8	7,1	7,1	10,45	10,45	12,6	12,6
Condensing water pump										
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500	500
Max. discharge height (flow = 0 m3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier										
Nominal flow	l/h	600	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900	900
Max. discharge height (flow = 0 m3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight										
Frame	n°	4,5	4,5	5	6	6	7	7	8	8
Width	mm	1505	1505	1860	2210	2210	2565	2565	3100	3100
Depth	mm	850	850	850	850	850	850	850	850	850
Height	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	Kg	366	373	456	503	520	600	617	715	751

(1) Ambient temperature 24°C, Relative humidity 50%, Water 7/12°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

WUL

WATER COOLED CLOSE CONTROL UNIT
(EXTENDED VERSION)

Close control air-conditioners for vertical installation and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control.
Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general.
Units consist of two modules: the first housing the heat exchanger, usually placed over the floor, the second where EC inverter fans are fitted. Downflow air supply. These units are provided with modulating 2 way valve and servomotor. Unit has to be connected with an external chiller.

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels. The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector. NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions. The fan section includes: centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-fans), directly coupled to external rotor EC electric motor brushless type with integrated
electronic commutated system and continuous variation of the rotation speed.
Standard G4, M5 filtering section, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing. Switchboard to IEC 204-1/EN60204-1.
Chilled water coil with copper tube and aluminium Blue-fins with hydrophilic coating treatment surface to reduce the pressure drops on the air side. Water circuit realized with pipes entirely coated with insulated material and bronze fittings, complete temperature probe and with 2 or 3-way modulating valve.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

VERSIONS

D - Downflow air supply
U - Up flow air supply
E - Front supply (Displacement)
B - Up supply, Rear return

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, motbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard

TECHNICAL DATA

WUL		900	1350	1800	2200	2500	3200
Cooling capacity (Total) (1) ESP 20 Pa	kW	59,5	85	115,3	136,9	169,1	216,5
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	48,6	69,4	95	111,6	138,6	176,5
Tot. absorbed power (2) ESP 20 Pa	kW	1,6	2,5	2,9	3,8	5,2	5,4
SHR		0,82	0,82	0,82	0,82	0,82	0,82
Air flow	m^3/h	12000	16500	22000	26000	33000	41000
N° Fans		1	1	2	2	2	3
ESP max.	Pa	239	161	295	160	150	318
Pressure drop coil + 2 way valve (standard)	kPa	28	24	37	24	33	52
Water flow	m^3/h	10,2	14,6	19,8	23,5	29,1	37,2
Power supply	V/ph/Hz			400/3/50+N+PE			
Humidifier							
Steam production (nominal)	kg/h	8	8	15	15	15	15
Steam production (max.)	kg/h	8	8	15	15	15	15
Max. absorbed power	kW	6	6	11,2	11,2	11,2	11,2
Max. absorbed current	A	8,7	8,7	16,2	16,2	16,2	16,2
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	2	2	2	2	3	3
Power	kW	7,4	7,4	14,8	14,8	22,2	29,6
Absorbed current	A	10,7	10,7	21,4	21,4	32,0	42,7
Hot water coil							
Heating capacity (4)	kW	29,7	41,37	54,98	65,62	81,32	101,37
Water flow	m^3/h	5,18	7,21	9,58	11,43	14,2	17,66
Pressure drop (coil + 3 way valve)	kPa	51	50	71	73	61	86
Coil internal volume	dm^3	7,6	11,54	13,47	15,28	17,27	22,23
Condensing water pump							
Nominal flow	l/h	390	390	390	390	390	390
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow = 0 m3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow = 0 m3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	4	4,5	5	6	7	8
Width	mm	1160	1505	1860	2210	2565	3100
Depth	mm	850	850	850	850	850	850
Height	mm	1980 + 550	1980 + 550	1980 + 550	1980 + 550	1980 + 550	1980 + 550
Weight	Kg	383	485	577	646	775	959

(1) Ambient temperature 24°C, Relative humidity 50%, Water 7/12°C.
(2) The fans electrical power has to be added to the ambient load.
(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.

A BIG
BREATH
FOR YOUR
TECHNOLOGY

INROV

A BIG
BREATH
FOR YOUR
TECHNOLOGY

INROW

IRDXi

DIRECT EXPANSION CLOSE CONTROL UNIT

AIR CONDENSED FOR HIGH DENSITY RACKS

30 - 60 cm

The indoor vertical air conditioning unit RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack ´up and over 40 kW/m2 rack.

In the air cooled direct expansion version, the indoor unit is equipped with a hermetic inverter scroll compressor optimized for R410A refrigerant, EC fans with last generation electronically commutated brushless motors, to be matched to external condensers in standard or silenced version.

Efficiency
The unit combines the efficiency of use of last EC fans generation and a direct expansion system with inverter compressor allowing a great EER value. (Energy Efficiency Ratio). Thanks to the adoption of inverter DC brushless compressors, these units can reduce consumptions at part load, if compared to a traditional ON/OFF compressor.

Flexibility
The IR-DXi unit are both equipped with predisposition for passing refrigerant connections and power supply from both above and below, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of access floor.

Control management
The units are supplied with a new management algorithm capable of modulating the air flow and compressor capacity according to the effective environment heating load requirements. This system provides considerable benefits in terms of system management costs.

Compartization
Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.

Control
Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

SPECIAL SERIES

IRDXi HF : Free-cooling water units
IRDXi AF : Free-cooling air units
IRDXi XF : DUAL FLUID version units
(Details on request c/o Emicon Ac Spa)

TECHNICAL DATA

IRDXi		IR30.DXi 12	IR30.DXi 22	IR30.DXi 27	IR60.DXi 40	IR60.DXi 50
Net Cooling capacity (Total) (1)	kW	12,9	20,6	27,8	40,0	52,7
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	12,9	20,6	27,8	40,0	52,7
Tot. absorbed power (2) ESP 20 Pa	kW	3,88	5,21	7,59	9,65	13,10
SHR		1,00	1,00	1,00	1,00	1,00
Air flow	m^3/h	3000	4000	5000	8000	9000
Fans	n	3	4	4	4	4
ESP max.	Pa	194	179	218	142	72
Unit EER without remote condenser to max. frequency	W/W	3,6	4,3	4,1	4,5	4,4
Maximum absorbed power	kW	5,1	8,2	10,7	14,8	21,1
Maximum absorbed current	A	21,0	22,6	25,8	30,0	38,5
Power supply	V/ph/Hz			400/3/50+N+PE		
Humidifier						
Steam production (nominal)	kg/h	3	3	3	5	5
Steam production (max.)	kg/h	3	3	3	8	8
Max. absorbed power	kW	2,25	2,25	2,25	3,75	3,75
Max. absorbed current	A	10,0	10,0	10,0	5,5	5,5
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400
Electrical heaters						
Steps	n°	1	1	1	3	3
Power	kW	3,0	3,0	3,0	9,0	9,0
Absorbed current	A	4,3	4,3	4,3	13,0	13,0
Condensing water pump						
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier						
Nominal flow	l/h	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900
Max. discharge height (flow = 0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0
Dimensions and weight						
Width	mm	300	300	300	600	600
Depth	mm	1100	1100	1100	1100	1100
Height	mm	2000	2000	2000	2000	2000
Weight	Kg	175	185	200	270	280

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 50°C
(2) The fans electrical power has to be added to the ambient load.
(3) In the LL, LR and CL versions, the depth is 1200 mm.

IRWU

WATER COOLED CLOSE CONTROL UNIT

FOR HIGH DENSITY RACKS

30 - 60 cm

The indoor vertical air conditioning units RACK COOLER "IRUW" is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack ´up and over 40 kW/m2 rack.
In hydronic version where the cooling is ensured by the use of an external chiller. The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption.
Available as standard with the dynamic management of N +1 EC fans to optimize consumption and redundancy of the cooling system. These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers.

Flexibility
Air conditioners are both equipped with predisposition for passing refrigerant connections and power supply from both above and below, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of access floor.

Control management
The units are supplied with a new management algorithm capable of avoiding temperature stratification inside the rack using 4 integrated and independent sensors (2 on suction and 2 on discharge) to optimize ventilation and chilled water valve opening in order to maximize energy benefits.

Redundancy
The IR-WU cooling units are designed for maximum system reliability, provide the possibility of hot back-up fan replacement, and can be equipped with dual coils and their control valve and dual power supply, ensuring 100% system back-up.

Compartization
Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.

Control
Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

TECHNICAL DATA

IRWU		IR30.WU 10	IR30.WU 15	IR30.WU 20	IR30.WU 25	IR30.WU 33	IR60.WU 42	IR60.WU 47	IR60.WU 56
Net Cooling capacity (Total) (1)	kW	11,1	17,8	25,9	30,4	42,4	50,7	56,4	68,9
Cooling cpacity (Sensible) (1) ESP 20 Pa	kW	11,0	17,6	23,6	29,0	40,0	48,4	56,4	64,5
Tot. absorbed power (2) ESP 20 Pa	kW	0,15	0,33	0,33	0,47	1,02	0,49	0,73	0,84
SHR		0,99	0,99	0,91	0,95	0,94	0,95	1,00	0,94
Air flow	m^3/h	2000	3300	3300	4400	5600	7500	9000	9000
Fans	n	2	3	3	4	4	3	4	4
ESP max.	Pa	232	139	160	115	95	90	92	66
Water flow		1,9	3,1	4,5	5,2	7,3	8,7	9,7	11,8
Maximum absorbed power	kW	0,34	0,51	0,51	0,68	1,76	1,50	2,00	2,00
Maximum absorbed current	A	3,30	4,95	4,95	6,60	8,80	7,50	10,00	10,00
Power supply	V/ph/Hz	400/3/50+N+PE							
Humidifier									
Steam production (nominal)	kg/h	1,5	2	3	3	3	5	5	5
Steam production (max.)	kg/h	3	3	3	3	3	8	8	8
Max. absorbed power	kW	2,25	2,25	2,25	2,25	2,25	3,75	3,75	3,75
Max. absorbed current	A	10,0	10,0	10,0	10,0	10,0	5,5	5,5	5,5
Specific conducibility at 20°C (min/max)	µS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l $CaCO_3$	100/400	100/400	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters									
Steps	n°	1	1	1	1	1	3	3	3
Power	kW	3,0	3,0	3,0	3,0	3,0	9,0	9,0	9,0
Absorbed current	A	4,3	4,3	4,3	4,3	4,3	13,0	13,0	13,0
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow = 0 m^3/h)	m	5,4	5,4	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier									
Nominal flow	l/h	600	600	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow = 0 m^3/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Width	mm	300	300	300	300	300	600	600	600
Depth	mm	1100	1100	1100	1100	1100	1100	1100	1100
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000
Weight	Kg	150	160	165	170	180	245	250	260

(1) Ambient temperature 38°C, Water 7/12°C
(2) The fans electrical power has to be added to the ambient load.
(3) In the LL, LR and CL versions, the depth is 1200 mm.

RCE / RCE-S

EXTERNAL CONDENSING
FOR PRECISION AIR CONDITIONING UNITS

R410a

AIR

EC

External condensing units for precision air conditioning units.
Remote condensers with axial-type fans for outdoor installation. The condensers can be installed either in vertical position (horizontal air flow) or in horizontal position (vertical air flow) by using the appropriate feet.
The very low noise, adjustable-speed fans are excellent for those projects where acoustical emissions play a central role.

Features
Heat exchanger with a special configuration of fins very close one to the other, optimizing and increasing heat exchange performance, thanks to the use of special high-efficiency tubes with internal grooves.
The new RCE-RCES remote condensers can be supplied with special Nanocoating protection which gradually slows down the deposit of dust and pollution on the fin surface, keeping the heat exchange surface clean and the maximum efficiency and giving an additional resistance against corrosion.
All models are available in standard, silenced and super-silenced versions.

ACCESSORIES

- Operation down to -40°C
- Fan speed regulation
- Copper/copper battery
- Axial fans with electronically switched motor

TECHNICAL DATA

Single circuit remote condenser - Standard version

RCE		091	111	211	311	421	571	671	991	1101	1501
Heating capacity (1)	kW	9,3	11,1	19,2	29,4	44,2	60,5	66,5	97,4	100,2	150,6
Axial Fans											
Quantity	n°	1	1	2	1	4	2	2	3	4	6
Rotation speed	g/min	1450	1450	1450	1300	1400	1300	1300	1300	1300	1300
Air flow	m^3/h	2600	2400	5200	6620	9600	13250	12500	18760	29440	37530
Total input power	kW	0,14	0,14	0,29	0,68	0,58	1,36	1,36	2,04	2,72	4,08
Total nominal current	A	0,68	0,68	1,36	3,00	2,72	6,00	6,00	9,00	12,00	18,00
Diameter	mm	350	350	350	500	350	500	500	500	500	500
Sound pressure level (2)	dB(A)	40	40	43	48	46	51	51	52	53	54
Sound power level (3)	dB(A)	71	71	74	79	77	82	82	83	85	86
Dimension (4)											
Length - horizontal air flow	mm	882	882	1582	1203	2980	2203	2203	3203	4373	2705
Depth - horizontal air flow	mm	480	480	480	570	480	570	570	570	705	600
Height - horizontal air flow	mm	510	510	510	830	510	830	830	830	1110	1645
Length - vertical air flow	mm	882	882	1582	1219	2980	2219	2219	3219	4393	2705
Depth - vertical air flow	mm	550	550	550	895	550	895	895	895	1110	1717
Height - vertical air flow	mm	811	811	811	1099	811	1099	1099	1099	1230	1070
Weight	kg	25	27	44	67	88	112	120	170	282	250
Battery capacity	dm^3	0,9	1,2	1,5	3,0	4,5	5,9	7,2	11,1	17,7	28,2
Input/output connections	mm/mm	16/16	16/16	16/16	22/22	28/28	28/28	28/28	42/35	42/35	54/42
Power supply	V/ph/Hz	230/1/50+T									

Single circuit remote condenser - Low noise version

RCE-S		151	261	351	501	571	651	1001	1101	1301
Heating capacity (1)	kW	15,8	22,8	30,9	46,2	57,1	66	78,4	108,7	140,1
Axial Fans										
Quantity	n°	1	1	2	2	3	3	4	6	6
Rotation speed	g/min	665	865	665	865	865	865	865	665	865
Air flow	m^3/h	3590	4040	7180	8080	14100	12970	19930	20370	28200
Total input power	kW	0,13	0,22	0,26	0,44	0,66	0,66	0,88	0,78	1,32
Total nominal current	A	0,59	0,97	1,18	1,94	2,91	2,91	3,88	3,54	5,82
Diameter	mm	500	500	500	500	500	500	500	500	500
Sound pressure level (2)	dB(A)	30	37	33	40	41	41	42	37	44
Sound power level (3)	dB(A)	61	68	64	71	72	72	74	69	76
Dimension (4)										
Length - horizontal air flow	mm	1203	1203	2203	2203	3203	3203	4373	3393	3393
Depth - horizontal air flow	mm	570	570	570	570	570	570	705	990	990
Height - horizontal air flow	mm	830	830	830	830	830	830	1110	2110	2110
Length - vertical air flow	mm	1219	1219	2219	2219	3219	3219	4393	3393	3393
Depth - vertical air flow	mm	895	895	895	895	895	895	1110	2110	2110
Height - vertical air flow	mm	1099	1099	1099	1099	1099	1099	1230	1230	1230
Weight	kg	62	71	104	120	146	157	282	425	425
Battery capacity	dm^3	1,9	4,2	3,7	7,2	5,6	8,2	17,7	41,8	41,8
Input/output connections	mm/mm	16/16	28/28	28/28	28/28	28/28	35/28	42/35	54/42	54/42
Power supply	V/ph/Hz	230/1/50+T								

(1) Performances are referred to the following conditions: Ambient temperature 35°C, Condensing temperature 50°C.
(2) Sound pressure level measured at 10 mt from the unit in free field conditions according to ISO 3744.
(3) Sound power level according to ISO 3744.
(4) Including support brackets.

Double circuit remote condenser - Standard version

RCE		302	482	602	752	862	1052	1152	1252	1602	1702
Heating capacity (1)	kW	29,4	44,2	60,5	66,5	87,8	97,4	100,2	124,4	150,6	170,2
Axial Fans											
Quantity	n°	1	4	2	2	3	3	4	4	6	6
Rotation speed	g/min	1300	1400	1300	1300	1300	1300	1300	1300	1300	1300
Air flow	m^3/h	6620	9600	13240	12510	19870	18770	29440	27970	37540	35330
Total input power	kW	0,68	0,58	1,36	1,36	2,04	2,04	2,72	2,72	4,08	4,08
Total nominal current	A	3	2,72	6	6	9	9	12	12	18	18
Diameter	mm	500	350	500	500	500	500	500	500	500	500
Sound pressure level (2)	dB(A)	48	46	51	51	52	52	53	53	54	54
Sound power level (3)	dB(A)	79	77	82	82	83	83	85	85	86	86
Dimension (4)											
Length - horizontal air flow	mm	1203	2980	2203	2203	3203	3203	4373	4373	2705	2705
Depth - horizontal air flow	mm	570	480	570	570	570	570	705	705	600	600
Height - horizontal air flow	mm	830	510	830	830	830	830	1110	1110	1645	1645
Length - vertical air flow	mm	1219	2980	2219	2219	3219	3219	4393	4393	2705	2705
Depth - vertical air flow	mm	895	550	895	895	895	895	1110	1110	1717	1717
Height - vertical air flow	mm	1099	811	1099	1099	1099	1099	1230	1230	1070	1070
Weight	kg	67	88	112	120	157	170	282	312	250	274
Battery capacity	dm^3	3,0	4,5	5,9	7,2	8,2	11,1	17,7	26,6	28,2	35,9
Input/output connections	mm/mm	22/22	28/28	28/28	28/28	35/28	42/35	42/35	54/42	54/42	54/42
Power supply	V/ph/Hz	230/1/50+T									

Double circuit remote condenser - Low noise version

RCE-S		382	482	602	752	862	1252	1602	1702
Heating capacity (1)	kW	37,1	46,2	57,1	68,4	93,3	114,3	116,6	157,8
Axial Fans									
Quantity	n°	2	2	3	3	4	6	5	8
Rotation speed	g/min	865	865	865	865	865	865	865	865
Air flow	m^3/h	9400	8084	14100	12120	18800	24810	23500	39850
Total input power	kW	0,44	0,44	0,66	0,66	0,88	1,32	1,1	1,76
Total nominal current	A	1,94	1,94	2,91	2,91	3,88	5,82	4,85	7,76
Diameter	mm	500	500	500	500	500	500	500	500
Sound pressure level (2)	dB(A)	40	40	41	41	42	44	43	45
Sound power level (3)	dB(A)	71	71	72	72	74	76	75	77
Dimension (4)									
Length - horizontal air flow	mm	2203	2203	3203	3203	4373	2705	5373	4393
Depth - horizontal air flow	mm	570	570	570	570	705	600	705	2110
Height - horizontal air flow	mm	830	830	830	830	1110	1645	1100	990
Length - vertical air flow	mm	2219	2219	3219	3219	4393	2705	5393	4393
Depth - vertical air flow	mm	895	895	895	895	1110	1717	1110	2110
Height - vertical air flow	mm	1099	1099	1099	1099	1230	1070	1230	1230
Weight	kg	104	120	146	170	312	250	370	490
Battery capacity	dm^3	4,0	7,2	5,6	11,1	26,6	28,2	32,4	37,6
Input/output connections	mm/mm	28/28	28/28	28/28	42/35	54/42	54/42	54/42	54/42
Power supply	V/ph/Hz	230/1/50+T							

(1) Performances are referred to the following conditions: Ambient temperature 35°C, Condensing temperature 50°C.
(2) Sound pressure level measured at 10 mt from the unit in free field conditions according to ISO 3744.
(3) Sound power level according to ISO 3744.
(4) Including support brackets.

MATCHING BETWEEN INDOOR UNIT AND REMOTE CONDENSER

Standard remote condenser

	Single circuit	Double circuit	Oversize - Single circuit	Oversize - Double circuit
DX.A 61	RCE 091 Kc	--	RCE 091 Kc	--
DX.A 71	RCE 091 Kc	--	RCE 111 Kc	--
DX.A 91	RCE 111 Kc	--	RCE 211 Kc	--
DX.A 111	RCE 111 Kc	--	RCE 211 Kc	--
DX.A 151	RCE 211 Kc	--	RCE 311 Kc	--
DX.A 181	RCE 211 Kc	--	RCE 311 Kc	--
DX.A 201	RCE 211 Kc	--	RCE 311 Kc	--
DX.A 221	RCE 311 Kc	--	RCE 421 Kc	--
DX.A 251	RCE 311 Kc	--	RCE 421 Kc	--
DX.A 232	2 x RCE 111 Kc	RCE 302 Kc	2 x RCE 211 Kc	RCE 482 Kc
DX.A 301	RCE 311 Kc	--	RCE 421 Kc	--
DX.A 321	RCE 421 Kc	--	RCE 421 Kc	--
DX.A 322	2 x RCE 211 Kc	RCE 302 Kc	2 x RCE 311 Kc	RCE 482 Kc
DX.A 391	RCE 421 Kc	--	RCE 571 Kc	--
DX.A 392	2 x RCE 211 Kc	RCE 482 Kc	2 x RCE 311 Kc	RCE 602 Kc
DX.A 431	RCE 421 Kc	--	RCE 571 Kc	--
DX.A 442	2 x RCE 311 Kc	RCE 482 Kc	2 x RCE 421 Kc	RCE 602 Kc
DX.A 451	RCE 421 Kc	--	RCE 571 Kc	--
DX.A 472	2 x RCE 311 Kc	RCE 482 Kc	2 x RCE 421 Kc	RCE 752 Kc
DX.A 511	RCE 571 Kc	--	RCE 671 Kc	--
DX.A 512	2 x RCE 311 Kc	RCE 602 Kc	2 x RCE 421 Kc	RCE 752 Kc
DX.A 531	RCE 571 Kc	--	RCE 991 Kc	--
DX.A 602	2 x RCE 311 Kc	RCE 602 Kc	2 x RCE 421 Kc	RCE 862 Kc
DX.A 672	2 x RCE 421 Kc	RCE 602 Kc	2 x RCE 571 Kc	RCE 862 Kc
DX.A 742	2 x RCE 421 Kc	RCE 752 Kc	2 x RCE 571 Kc	RCE 1052 Kc
DX.A 761	RCE 671 Kc	--	RCE 991 Kc	--
DX.A 762	2 x RCE 421 Kc	RCE 862 Kc	2 x RCE 571 Kc	RCE 1052 Kc
DX.A 772	2 x RCE 421 Kc	RCE 862 Kc	2 x RCE 571 Kc	RCE 1152 Kc
DX.A 841	RCE 991 Kc	--	RCE 1101 Kc	--
DX.A 862	2 x RCE 421 Kc	RCE 862 Kc	2 x RCE 571 Kc	RCE 1252 Kc
DX.A 982	2 x RCE 421 Kc	RCE 1052 Kc	2 x RCE 671 Kc	RCE 1602 Kc
DX.A 1002	2 x RCE 421 Kc	RCE 1052 Kc	2 x RCE 671 Kc	RCE 1602 Kc
DX.A 1102	2 x RCE 571 Kc	RCE 1252 Kc	2 x RCE 991 Kc	RCE 1602 Kc
DX.A 1252	2 x RCE 571 Kc	RCE 1252 Kc	2 x RCE 991 Kc	RCE 1702 Kc
DXi.A 61	RCE 091 Kc	--	RCE 111 Kc	--
DXi.A 111	RCE 111 Kc	--	RCE 211 Kc	--
DXi.A 121	RCE 111 Kc	--	RCE 211 Kc	--
DXi.A 151	RCE 211 Kc	--	RCE 311 Kc	--
DXi.A 181	RCE 211 Kc	--	RCE 311 Kc	--
DXi.A 201	RCE 211 Kc	--	RCE 311 Kc	--
DXi.A 251	RCE 311 Kc	--	RCE 421 Kc	--
DXi.A 321	RCE 421 Kc	--	RCE 571 Kc	--
DXi.A 381	RCE 421 Kc	--	RCE 571 Kc	--
DXi.A 392	2 x RCE 211 Kc	RCE 482 Kc	2 x RCE 311 Kc	RCE 602 Kc
DXi.A 472	2 x RCE 311 Kc	RCE 482 Kc	2 x RCE 421 Kc	RCE 752 Kc
DXi.A 491	RCE 571 Kc	--	RCE 991 Kc	--
DXi.A 531	RCE 571 Kc	--	RCE 991 Kc	--
DXi.A 532	2 x RCE 311 Kc	RCE 602 Kc	2 x RCE 421 Kc	RCE 862 Kc
DXi.A 631	RCE 571 Kc	--	RCE 991 Kc	--
DXi.A 652	2 x RCE 421 Kc	RCE 702 Kc	2 x RCE 571 Kc	RCE 1052 Kc
DXi.A 691	RCE 671 Kc	--	RCE 991 Kc	--
DXi.A 742	2 x RCE 421 Kc	RCE 862 Kc	2 x RCE 571 Kc	RCE 1052 Kc
DXi.A 761	RCE 991 Kc	--	RCE 1101 Kc	--
DXi.A 861	RCE 991 Kc	--	RCE 1501 Kc	--
DXi.A 931	RCE 991 Kc	--	RCE 1501 Kc	--
DXi.A 952	2 x RCE 421 Kc	RCE 1052 Kc	2 x RCE 671 Kc	RCE 1602 Kc
DXi.A 1021	RCE 991 Kc	--	RCE 1501 Kc	--
DXi.A 1142	2 x RCE 571 Kc	RCE 1252 Kc	2 x RCE 991 Kc	RCE 1602 Kc
IR30.DXi 12	RCE 211 Kc	--	RCE 211 Kc	--
IR30.DXi 22	RCE 211 Kc	--	RCE 311 Kc	--
IR30.DXi 27	RCE 311 Kc	--	RCE 421 Kc	--
IR60.DXi 40	RCE 421 Kc	--	RCE 571 Kc	--
IR60.DXi 50	RCE 571 Kc	--	RCE 671 Kc	--

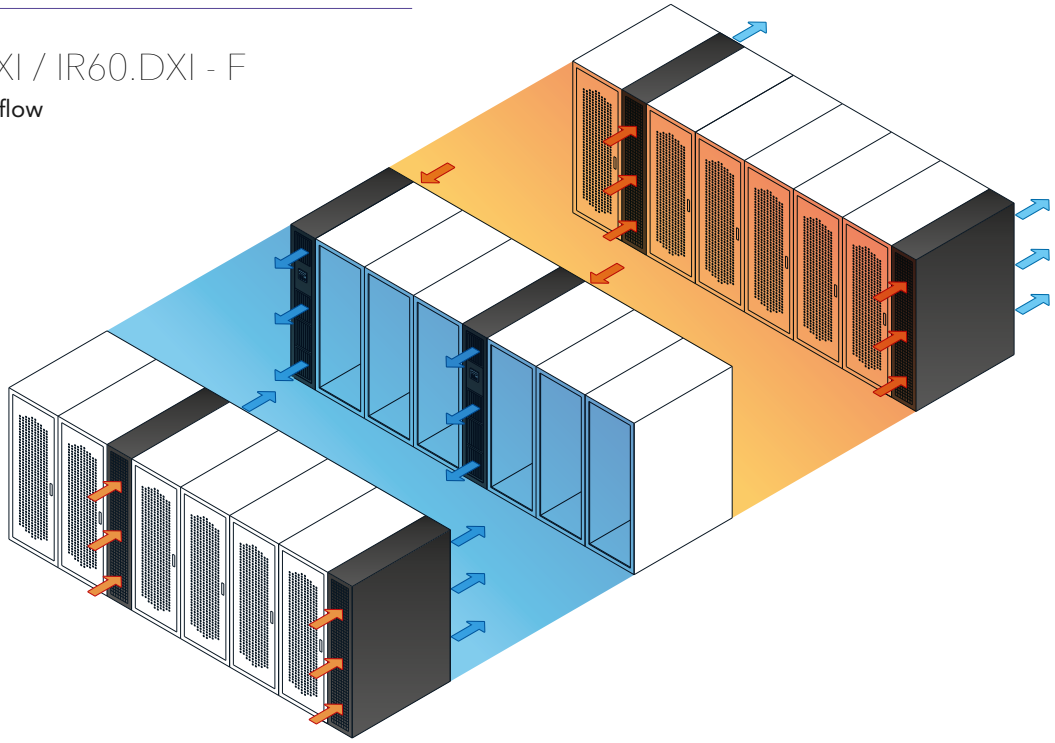
Low noise version remote condenser

	Single circuit	Double circuit	Oversize - Single circuit	Oversize - Double circuit
DX.A 61	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DX.A 71	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DX.A 91	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DX.A 111	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DX.A 151	RCE-S 151 Kc	--	RCE-S 261 Kc	--
DX.A 181	RCE-S 261 Kc	--	RCE-S 351 Kc	--
DX.A 201	RCE-S 261 Kc	--	RCE-S 351 Kc	--
DX.A 221	RCE-S 261 Kc	--	RCE-S 501 Kc	--
DX.A 251	RCE-S 261 Kc	--	RCE-S 501 Kc	--
DX.A 232	2 x RCE-S 151 Kc	RCE-S 382 Kc	2 x RCE-S 151 Kc	RCE-S 482 Kc
DX.A 301	RCE-S 351 Kc	--	RCE-S 501 Kc	--
DX.A 321	RCE-S 351 Kc	--	RCE-S 501 Kc	--
DX.A 322	2 x RCE-S 151 Kc	RCE-S 382 Kc	2 x RCE-S 261 Kc	RCE-S 482 Kc
DX.A 391	RCE-S 501 Kc	--	RCE-S 571 Kc	--
DX.A 392	2 x RCE-S 261 Kc	RCE-S 382 Kc	2 x RCE-S 351 Kc	RCE-S 602 Kc
DX.A 431	RCE-S 501 Kc	--	RCE-S 501 Kc	--
DX.A 442	2 x RCE-S 261 Kc	RCE-S 482 Kc	2 x RCE-S 351 Kc	RCE-S 752 Kc
DX.A 451	RCE-S 501 Kc	--	RCE-S 651 Kc	--
DX.A 472	2 x RCE-S 261 Kc	RCE-S 482 Kc	2 x RCE-S 501 Kc	RCE-S 752 Kc
DX.A 511	RCE-S 501 Kc	--	RCE-S 651 Kc	--
DX.A 512	2 x RCE-S 261 Kc	RCE-S 482 Kc	2 x RCE-S 501 Kc	RCE-S 752 Kc
DX.A 531	RCE-S 571 Kc	--	RCE-S 1001 Kc	--
DX.A 602	2 x RCE-S 351 Kc	RCE-S 602 Kc	2 x RCE-S 501 Kc	RCE-S 862 Kc
DX.A 672	2 x RCE-S 351 Kc	RCE-S 752 Kc	2 x RCE-S 501 Kc	RCE-S 862 Kc
DX.A 742	2 x RCE-S 501 Kc	RCE-S 752 Kc	2 x RCE-S 571 Kc	RCE-S 1252 Kc
DX.A 761	RCE-S 1001 Kc	--	RCE-S 1001 Kc	--
DX.A 762	2 x RCE-S 501 Kc	RCE-S 752 Kc	2 x RCE-S 571 Kc	RCE-S 1252 Kc
DX.A 772	2 x RCE-S 501 Kc	RCE-S 862 Kc	2 x RCE-S 571 Kc	RCE-S 1252 Kc
DX.A 841	RCE-S 1001 Kc	--	RCE-S 1001 Kc	--
DX.A 862	2 x RCE-S 501 Kc	RCE-S 1052 Kc	2 x RCE-S 651 Kc	RCE-S 1252 Kc
DX.A 982	2 x RCE-S 501 Kc	RCE-S 1052 Kc	2 x RCE-S 651 Kc	RCE-S 1602 Kc
DX.A 1002	2 x RCE-S 501 Kc	RCE-S 1052 Kc	2 x RCE-S 651 Kc	RCE-S 1602 Kc
DX.A 1102	2 x RCE-S 571 Kc	RCE-S 1252 Kc	2 x RCE-S 1001 Kc	RCE-S 1702 Kc
DX.A 1252	2 x RCE-S 571 Kc	RCE-S 1252 Kc	2 x RCE-S 1101 Kc	RCE-S 1702 Kc
DXi.A 61	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DXi.A 111	RCE-S 151 Kc	--	RCE-S 151 Kc	--
DXi.A 121	RCE-S 151 Kc	--	RCE-S 261 Kc	--
DXi.A 151	RCE-S 261 Kc	--	RCE-S 261 Kc	--
DXi.A 181	RCE-S 261 Kc	--	RCE-S 351 Kc	--
DXi.A 201	RCE-S 261 Kc	--	RCE-S 351 Kc	--
DXi.A 251	RCE-S 261 Kc	--	RCE-S 501 Kc	--
DXi.A 321	RCE-S 501 Kc	--	RCE-S 571 Kc	--
DXi.A 381	RCE-S 501 Kc	--	RCE-S 571 Kc	--
DXi.A 392	2 x RCE-S 261 Kc	RCE-S 382 Kc	2 x RCE-S 351 Kc	RCE-S 602 Kc
DXi.A 472	2 x RCE-S 261 Kc	RCE-S 482 Kc	2 x RCE-S 501 Kc	RCE-S 752 Kc
DXi.A 491	RCE-S 571 Kc	--	RCE-S 1001 Kc	--
DXi.A 531	RCE-S 571 Kc	--	RCE-S 1001 Kc	--
DXi.A 532	2 x RCE-S 351 Kc	RCE-S 602 Kc	2 x RCE-S 501 Kc	RCE-S 752 Kc
DXi.A 631	RCE-S 651 Kc	--	RCE-S 1101 Kc	--
DXi.A 652	2 x RCE-S 501 Kc	RCE-S 752 Kc	2 x RCE-S 571 Kc	RCE-S 1252 Kc
DXi.A 691	RCE-S 651 Kc	--	RCE-S 1101 Kc	--
DXi.A 742	2 x RCE-S 501 Kc	RCE-S 862 Kc	2 x RCE-S 571 Kc	RCE-S 1252 Kc
DXi.A 761	RCE-S 1001 Kc	--	RCE-S 1101 Kc	--
DXi.A 861	RCE-S 1001 Kc	--	RCE-S 1301 Kc	--
DXi.A 931	RCE-S 1101 Kc	--	RCE-S 1301 Kc	--
DXi.A 952	2 x RCE-S 501 Kc	RCE-S 1052 Kc	2 x RCE-S 651 Kc	RCE-S 1602 Kc
DXi.A 1021	RCE-S 1101 Kc	--	RCE-S 1301 Kc	--
DXi.A 1142	2 x RCE-S 571 Kc	RCE-S 1252 Kc	2 x RCE-S 1001 Kc	RCE-S 1702 Kc
IR30.DXi 12	RCE-S 151 Kc		RCE-S 261 Kc	
IR30.DXi 22	RCE-S 261 Kc		RCE-S 351 Kc	
IR30.DXi 27	RCE-S 351 Kc		RCE-S 501 Kc	
IR60.DXi 40	RCE-S 501 Kc		RCE-S 571 Kc	
IR60.DXi 50	RCE-S 571 Kc		RCE-S 1001 Kc	

CONFIGURATIONS

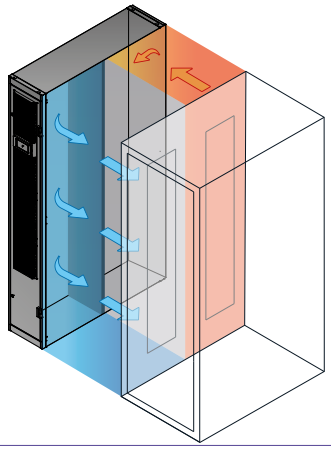
IR30.DXI / IR60.DXI - F

Frontal air flow



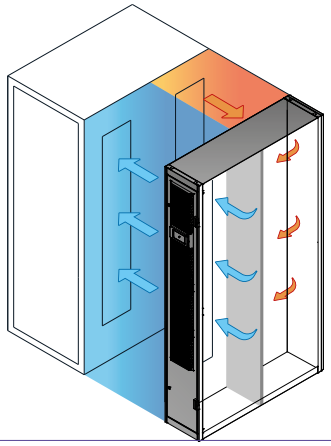
IR30.DXI - LR

Side air flow to the right



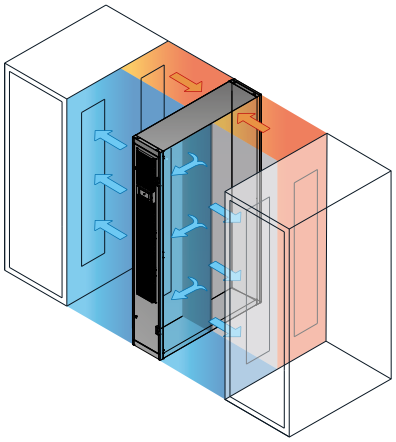
IR30.DXI - LL

Side air flow to the left

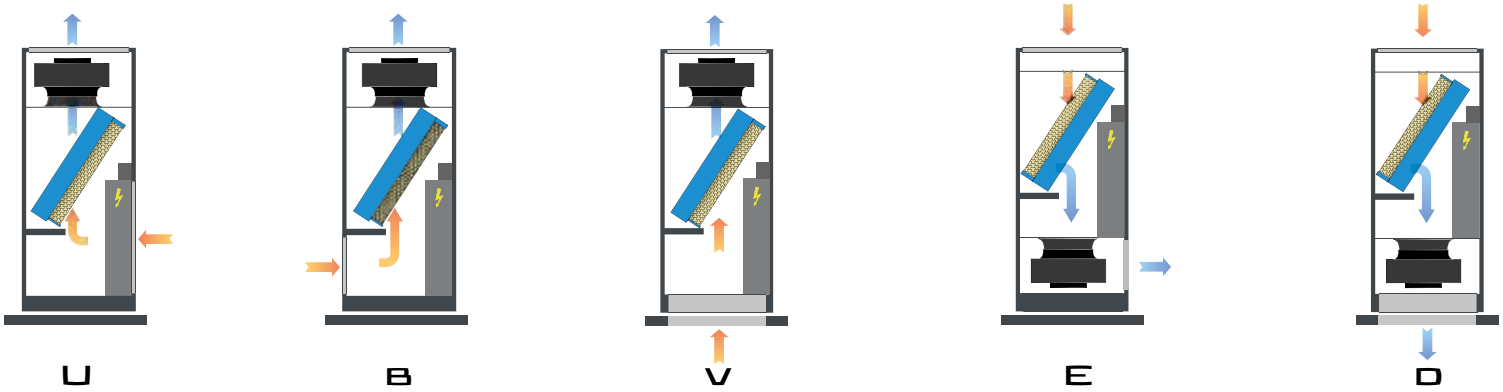


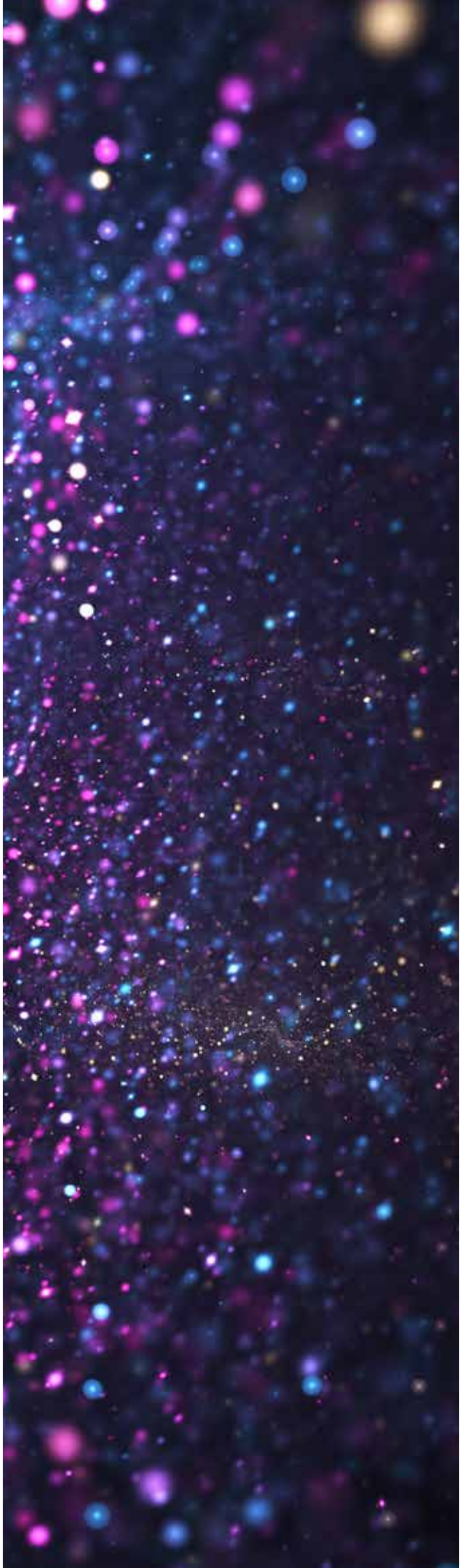
IR30.DXI - CL

Side air flow right and left (Close Loop)



AIR FLOW CONFIGURATIONS: DX / DXI / WU





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