

# technical catalogue

## datatech 6 - 131 kW

Precision air conditioners for  
technological environments

BLUE  BOX  
AIR WITH CARE



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# TECHNICAL CHARACTERISTICS

## DATATECH

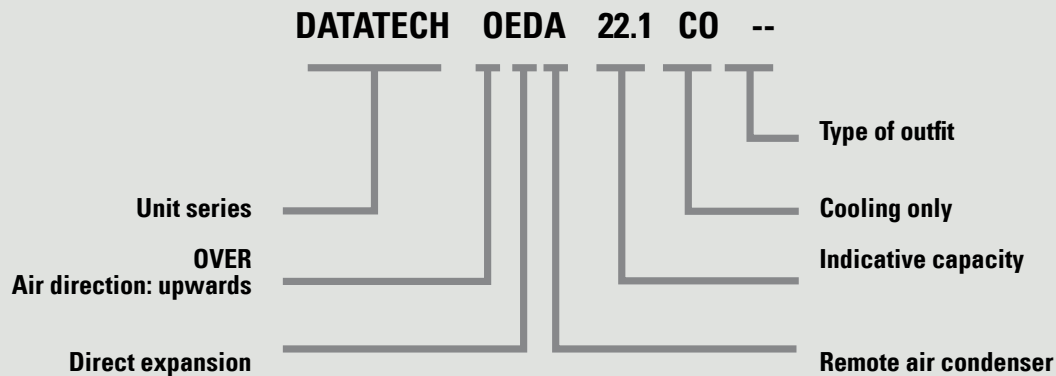
The electronic devices are the results of constantly evolving technology involving new changes all the time; this leads to increasingly technologically advanced and compact devices which, however, require precision control of environmental conditions. The DATATECH conditioners have been especially designed to create the "ideal atmosphere" for electronic systems, removing excess heat and maintaining humidity within the tolerance limits with optimal levels of reliability and safety.

### CONFIGURATION

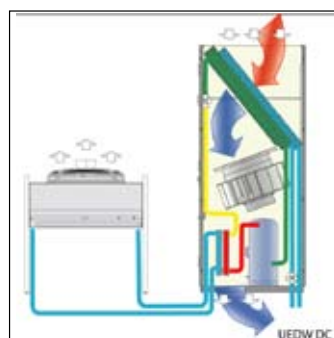
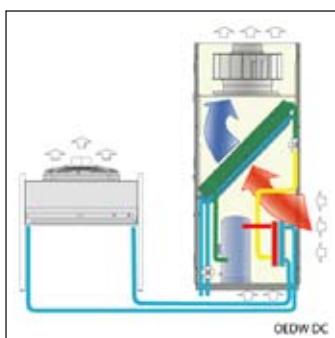
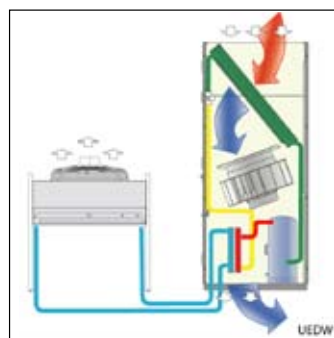
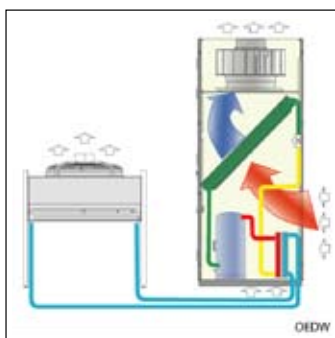
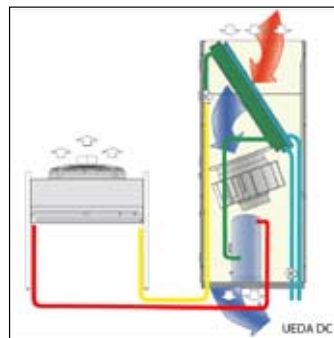
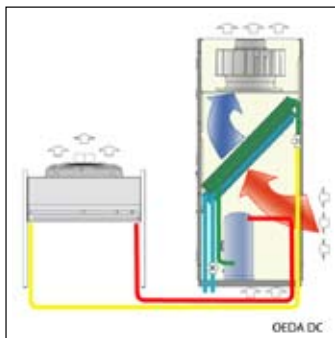
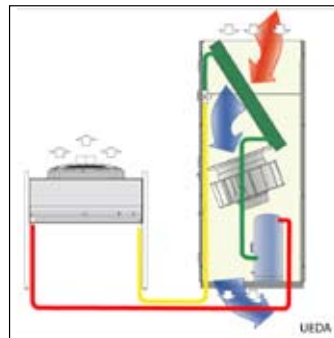
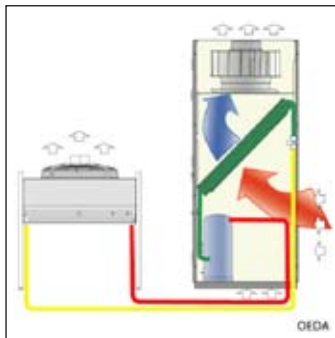
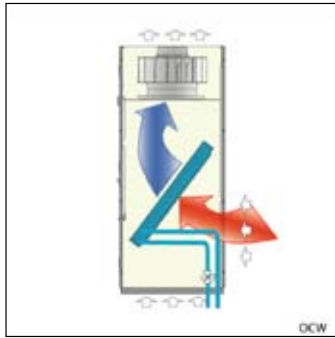
<b>Datatech</b>	<b>O</b>	<b>ED</b>	<b>A</b>	<b>22.1</b>	<b>CO</b>	<b>--</b>
1	2	3	4	5	6	7

- Series**
- Air direction**  
O = OVER upwards  
U = UNDER downwards
- Type of unit**  
ED = direct expansion with condenser  
CW = cooled water
- Type of cooler**  
A = remote air condenser  
W = incorporated water
- Indicative capacity**
- Version**  
CO = cooling  
CH = cooling + heating  
HH = cooling + heating + humidification + dehumidification
- Outfit**  
DC = Dual Cooling  
FC = Free Cooling

### EXAMPLE OF UNIT NAME



## EXAMPLE IMAGES



## STRUCTURE

The cabinet is made of sandwich panels of galvanized steel and painted with epoxy powder. The panels are insulated on the inside with glass wool, for fire insulation class 0. This type of panel provides good thermal and acoustic insulation. Air sealing is obtained by means of adhesive gaskets placed all along the perimeter of the panels. Colour is anthracite grey RAL7016, with wrinkled finishing. Struts and internal buffing are made of galvanized sheet. The closing panel of the switchboard, on the anterior side, is opened with a handle, to facilitate internal inspection. The unit components, related both to refrigeration and the electric part, can only be accessed from the front of the machine; this solution makes lateral interventions unnecessary, avoiding the need to consider "technical spaces" around the climatisation units.

All the materials which make up the structure are recyclable and devoid of CFC.

## FANS

The units are equipped with 1, 2 or 3 radial fans whose blades are curved backwards, without auger. The 4-pole electric motor is directly coupled to the fan and the rotation speed can be changed by using a self-transformer to adapt the useful prevalence supplied by the fan to the characteristics of the plant, therefore having the unit function with maximum efficiency. Useful static prevalence is 20 Pa, but up to 200-300 Pa can be obtained according to dimensions and with G4 filters, moving the electric cables to the self-transformer even in the installation position itself.

This type of fan avoids the use of belts and pulleys, which require higher maintenance.

With a more efficient filter (F5) and versions with double batteries (direct expansion plus cooled water) prevalence may be subject to limitations.

The average air output is 82 L/s for each kW of sensitive cooling power.

Energy saving option with EC fans with electronic commutation makes stepless regulation of output/prevalence possible.

Incoming air flow is constantly controlled by a differential pressure meter, and activates an alarm whenever air flow is lacking.

## FILTERS

Filters are G4 filtering class, designed to minimise loss of head and to obtain a high level of filtration (for UNDER and OVER versions alike). Filters can be 50 or 100 mm thick according to dimensions or outfits. Filters can be removed from the front part of the unit. Filter F5 or F6, F7 or F8 can be supplied on demand (the last three can only be used with UNDER units, and must be assembled on the unit above the machine).

## COMPRESSORS (ED unit - direct expansion)

Compressors are of the scroll type, functioning with R410A and 400V/3~/50 Hz supply; for models of up to 8 kW of nominal output this will be 230V/1~/50 Hz (three-phase 400 V optional).

Compressors, the humidifier and the spiral heat exchanger (if present) are located in a technical area, isolated from the air flow in the version with downward flow, and in the air flow in versions with upward output.

## REFRIGERATING CIRCUIT (ED unit - direct expansion)

- The refrigerating circuit includes:
  - Liquid receiver;
  - Expansion thermostatic valve, complete with external equaliser;
  - Solenoid valve for the interception of refrigerating liquid (only in versions with remote condenser or electronic valve);
  - Indicator of the passage of refrigerating liquid;
  - Freon filter with solid cartridge;
  - Safety valve;
  - High-pressure safety pressure meter with manual reset;
  - Low-pressure pressure meter with automatic reset;
  - Interception taps for external connections (versions with remote condenser);
  - Copper refrigeration pipes with anti-condensation insulation on the input line.

## EVAPORATION BATTERIES (ED unit - direct expansion)

The evaporation batteries are of the finned type, with copper pipes and aluminium fins with corrugated profile and hydrophilic coating. The heat sensitive ratio is as close to 1 as

possible. Average air speed through the fins is 2.4 m/s. At the base of the battery there is a tray for the collection of condensation water made of stainless steel, complete with a connection for discharge and siphon.

#### **CONDENSER (ED unit - direct expansion)**

- Unit with "EDA" remote condenser  
Units with air condensation are supplied with remote condensers with axial fans (supply: 230V/1~/50), in versions standard and silent. Protections and speed regulators are, in this case, included in the internal unit.  
The speed regulator allows for proper condensation in external temperatures of up to -20o C.
- Unit with "EDW" water condenser  
For units with water condensation, condensers are of the braze welded type, made of AISI 316 stainless steel, assembled inside the unit.
- WATER BATTERIES (units with CW refrigerated water)  
The batteries are of the finned type, with copper pipes and aluminium fins with corrugated profile and hydrophilic coating.
- HYDRAULIC CIRCUIT (unit with CW refrigerated water)  
This includes a 3-way floating valve (with three-point servo motor) which controls environmental conditions by dosing the water flow through the exchange battery.

#### **SWITCHBOARD**

The switchboard includes:

- Main switch;
- Automatic switches and protection fuses for the auxiliary and power circuits;
- Remote control switches for compressors, fans (AC versions), resistances and humidifier;
- Microprocessor for the control of the following functions:
  - Room temperature;
  - Humidity (HH versions);
  - Speed of delivery fans (EC);
  - Compressor timer with automatic rotation;
  - Alarms on two levels;
  - Automatic controlled reset of high and low pressure alarm;
  - Alarm log;
  - Management of more than one unit in local network, with automatic rotation logic and no interference;
  - Serial connection to supervision systems.
- The display shows:
  - Room temperature;
  - Humidity (HH versions);
  - Alarm description;
  - Operation counter;
  - Status of the controlled devices.

Electric supply [V/f/Hz]: 230/1~/50 ±5% for 6.1, 8.1, 400/3~/50 ±5% for the remaining models.

#### **CONTROLS AND SAFETIES**

- High-pressure safety electro-mechanic pressure meter with manual reset;
- High pressure transducer;
- Low-pressure pressure meter with automatic controlled reset;
- High-pressure safety valve;
- Thermal protection of fan and compressor motors.

#### **TESTING**

Operation tests are carried out in the factory.

The direct expansion units are supplied as follows:

- Units with "EDA" remote condenser

- with nitrogen in the cooling circuit and oil in the compressor.
- Units with “EDW” water condenser
  - complete with oil and refrigerating fluid.

### **ELECTRICAL POST-HEATING**

The CH and HH versions are equipped with a re-heating function via an electric heating element constructed from a non oxidable material. If overheating should occur, a safety thermostat cuts off the voltage supply to the heaters and triggers an alarm

### **HUMIDIFICATION (HH version)**

Electrode humidifier supplied with water from the mains, controlled by a microprocessor, for the production of steam with continuous modulation.

### **OUTFITS**

- DATATECH DC: Dual Cooling unit  
Units with Dual Cooling are equipped with two batteries: one is a direct expansion battery connected to a compressor inside the machine, and the other is a refrigerated water battery, usually connected to an external water refrigerator. The refrigerated water battery is normally the one in operation. A flow meter and a temperature probe located at the entry of the battery establish when the operation should be passed over to the direct expansion battery. The conditions which activate the direct expansion battery (and therefore the compressor) are the following:
  - Lack of flow of refrigerated water;
  - Temperature of refrigerated water exceeding the preset value;
  - Room thermal load not fulfilled by the water battery only. The direct expansion battery functions as an additional cold step. This function can be disabled via software.

When compared to \*ED\* units with basic outfit, the following extra components are present:

- Refrigerated water battery;
- Three-way valve of the modulating type through electric signal 0 ÷ 10 Vdc;
- A plate flow meter;
- An NTC temperature probe for the water;
- An NTC temperature probe for outgoing air.
- DATATECH FC: Free Cooling units  
Free Cooling units are coupled to a drycooler which uses outside air to cool the mixture of glycolate water, which is forced to circulate in closed circuit to maximise energy saving. They are equipped with two batteries: a water battery (assembled upstream to the air flow) and a direct expansion battery. The free-cooling water battery is installed serially to the plate condenser and the RAC liquid refrigerator. A three-way 0-10 V valve makes air flow pass (or not) through the free-cooling battery. The microprocessor control detects water temperature by means of a probe positioned at the entry to the battery; if this is below the air input temperature it forces the mixture to pass first through the free-cooling battery, and then through the condenser and the drycooler.  
As the compressors can also function with water at low temperatures, it is necessary to check the condensation pressure by means of a three-way water valve.

### **ACCESSORIES**

- REFRIGERATING CIRCUIT ACCESSORIES  
Electronic expansion valve  
The direct expansion ED version is available also with a thermostatic expansion valve, which offers the following advantages:
  - Fast, high precision adjustment of refrigerant flow;
  - Fast arrival of the unit at steady-state conditions;
  - Superheating value remains constant in variable thermal load conditions;
  - Efficient operating conditions of the compressor, especially in the presence of low room temperatures;
  - Wide working range with consequent extension of the unit's operating limits.  
These properties result in enhanced performance of the unit and make it possible to obtain very significant energy savings.

- AERULIC SYSTEM ACCESSORIES

- Dirty filter alarm

- Air flow in fan input is constantly controlled by a differential pressure meter, and activates an alarm when air flow is lacking.



- EC Fans

- DATATECH units can be combined with the innovative EC radial fans with electronically commutated brushless motors; the technology employed by these motors allows straightforward control of fan speed by means of the electronic controller in order to obtain stepless adjustment of air flow rate and static pressure to ensure correct distribution of the treated air. What is more, the flexibility offered by the fans makes it possible to adapt the performance of DATATECH air conditioners to comply with the needs resulting from modifications of the plant over time. Finally, the motor's high efficiency makes for less energy absorption, especially at partial loads and during starting (lowering of peak current), which means a reduction in power consumption of approximately 30% compared to AC motors.



- Forced de humidification

- To increase the quantity of condensation removed from room air it is possible to reduce the air delivery flow rate during the dehumidification cycle by using EC fans.

- High-efficiency filters with EU5 filtering capacity5



- Input and output plenum

- Metal structure with sandwich panels, for air output upwards in OVER versions with vertical flow, or for air input from above in UNDER versions.

- Plenum room output with grid

- Metal structure with sandwich panels, complete with front grid for the distribution of air in the room, for OVER versions.

- Base frame with adjustable feet

- Used for raised floor installations; it is formed by a black painted steel tubular structure and complete with rubber isolator pads. The height is adjustable  $\pm 25$  mm. in 300 and 500mm versions.

- Deflectors for base frame
- Motorised no-return gates for air  
Placed in air output, these gates close when the machine is still, avoiding air recirculation.
- HYDRAULIC CIRCUIT ACCESSORIES
  - Hot water post-heating  
Hot water post-heating coil of the copper tubes and aluminium fins type, equipped with a preassembled on/off 3way valve.
  - 2-way pressostatic valve  
To regulate condensation pressure in the condensing units with water..
- ELECTRIC ACCESSORIES
  - Humidity probe
  - Serial boards for supervision and remote assistance  
With the installation of a serial board it is possible to connect the unit to supervision and remote assistance systems. According to the communication protocol required there are different options available:
    - Serial board RS485, for connection to Carel and Modbus networks.
    - Serial board for communication to LonWorks® networks (FTT10 interface).
    - Board for connection to BACnet™ networks, type RS485.
    - Serial board RS232, for connection to a modem for standard telephone connections and PSTN, as well as GSM for SMS.
    - pCO Web board for connection to Ethernet networks with SNMP protocols, http, BACnet™ over IP.



Scheda seriale RS485  
PCOS004850



Scheda seriale  
PCO100MDM0



Scheda seriale LonWorks®  
PCO1000F0



Scheda pCO Web  
PCO1000WB0



Scheda seriale  
BacNet™

- Fittings for AIR remote condenser  
This accessory is obligatory in case the unit is coupled to the remote condenser we supplied. The fittings consist of an electric protection for the power circuit for the remote condenser and of a rotation regulation, and are placed inside the unit.

- ACCESSORIES

- Fire detectors

For the detection of fire, with sensors placed on the unit. The sensor is thermodifferential and is capable of detecting the speed at which temperature is rising, in order to react rapidly to the flow of hot air from a fire. It can protect an area of 49 m<sup>2</sup> (7x7).

- Smoke detectors

For the detection of smoke, with sensors placed on the unit. The sensor is optical and approved in Italy by the Ministry of Internal Affairs, while it has been homologated abroad according to European norms CEN EN 54 parts 7 and 8. It can protect an area of 81 m<sup>2</sup> (9x9).

- Sensor for the detection of flooding beneath the floor

For the detection of water leaks, complete with a sensor to be placed in the area to be controlled. Other sensors can be connected upon request, to control more than one area.

- Unit tray made of stainless steel

## ED UNIT - DIRECT EXPANSION

UNIT SIZE			6.1	8.1	11.1	15.1	18.1	17.1
Total cooling capacity	(1)	kW	6.4	8.5	11.4	14.9	18.7	17.4
Sensible cooling capacity	(1)	kW	6.1	7.2	11.2	13.9	16.0	17.4
SHR			0.95	0.85	0.98	0.93	0.86	1.00
EER	(1),(2)		3.34	3.50	3.37	3.47	3.60	3.69
<b>Compressors</b>								
Quantity		n°	1	1	1	1	1	1
Power consumption	(1)	kW	1.7	2.2	2.9	3.7	4.6	3.8
<b>Fans</b>								
Nominal air capacity		n°	1	1	1	1	1	1
Number		m³/h	1870	1870	3640	4000	4000	6000
Fan's AC power requirement	(2)	kW	0.2	0.2	0.5	0.6	0.6	0.9
Fan's EC power requirement	(2)	kW	0.2	0.2	0.3	0.4	0.5	0.4
Maximum AC current requirement		A	1.2	1.2	1.4	1.4	1.4	4.4
Maximum AC power requirement		kW	0.26	0.26	0.71	0.71	0.71	2.40
Maximum EC current requirement		A	2.6	2.6	2.2	2.2	2.2	3.6
Maximum EC power requirement		kW	0.44	0.44	1.00	1.00	1.00	2.30
Fan's maximum AC useful head - G4 filters		Pa	90	70	230	135	100	545
Fan's maximum EC useful head - G4 filters		Pa	360	310	400	340	300	545
Fan's maximum AC useful head - F5 filters		Pa	-	-	110	-	-	460
Fan's maximum EC useful head - F5 filters		Pa	260	220	280	200	165	460
<b>Chiller connections (EDA unit)</b>								
Gas supply		n°x mm	1 x 12	1 x 12	1 x 12	1 x 16	1 x 16	1 x 16
Liquid		n°x mm	1 x 10	1 x 10	1 x 10	1 x 12	1 x 12	1 x 12
<b>Plate condenser (EDW unit)</b>								
Number		n°	1	1	1	1	1	1
In/out connections			G1"	G1"	G1"	G1"	G1"	G1"
Pressure drops		kPa	31	32	31	35	33	37
<b>Electric heating (CH-HH version)</b>								
Potential		kW	3	3	5	5	5	5
Operation stages		n°	1	1	1	1	1	1
<b>Water heating battery (CH-HH version)</b>								
Potential	(3)	kW	6.0	6.0	12.5	13.1	13.1	23.1
Total capacity loss		kPa	12.0	12.0	19.0	21.0	21.0	27.0
<b>Humidifier (HH version)</b>								
Potential		kg/h	1.5	1.5	3.0	3.0	3.0	5.0
<b>Sound pressure levels</b>	(4)	dB(A)	47	47	50	51	51	52
<b>Coupling with remote-controlled air condensers (EDA unit)</b>								
Quantity		n°	1	1	1	1	1	1
AIR		Mod.	351A4	352A3	352A4	501A3	501A4	501A4
AIR LN (silent condenser)		Mod.	352B2	352B3	501B3	501B4	631B3	501B4
<b>Implementation with remote-controlled RAC water coolers (EDW unit)</b>								
Quantity		n°	1	1	1	1	1	1
RAC		Mod.	512	513	513	522	522	522
<b>Dimensions and weight of basic unit</b>								
Size of structure			SXS	SXS	XS	XS	XS	S
Length		mm	607	607	705	705	705	1,100
Depth		mm	500	500	650	650	650	850
Height		mm	1,850	1,850	1,990	1,990	1,990	1,990
U/O_EDA HH operating weight		kg						388
U/O_EDW HH operating weight		kg						395

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Useful head 20 Pa, EU4 filters.

(3) Inlet air temperature 20 °C water in/out 80/70 °C.

(4) Free-field noise levels at 2 metres from the unit.

## ED UNIT - DIRECT EXPANSION

UNIT SIZE			22.1	26.1	30.2	32.1	36.1	34.2
Total cooling capacity	(1)	kW	22.0	25.5	29.7	32.0	36.0	33.7
Sensible cooling capacity	(1)	kW	20.8	24.2	27.0	28.0	32.3	33.5
SHR			0.95	0.95	0.91	0.88	0.90	0.99
EER	(1),(2)		3.44	3.55	3.36	3.42	3.38	3.65
<b>Compressors</b>								
Quantity		n°	1	1	2	1	1	2
Power consumption	(1)	kW	5.4	6.0	7.5	8.0	8.8	7.6
<b>Fans</b>								
Nominal air capacity		n°	1	1	1	1	1	2
Number		m³/h	6500	7000	7650	7650	8400	10800
Fan's AC power requirement	(2)	kW	1.0	1.2	1.4	1.4	1.9	1.6
Fan's EC power requirement	(2)	kW	0.5	0.6	0.8	0.8	1.3	0.6
Maximum AC current requirement		A	4.4	4.4	4.4	4.4	4.4	8.8
Maximum AC power requirement		kW	2.40	2.40	2.40	2.40	2.40	4.80
Maximum EC current requirement		A	3.6	3.6	3.6	3.6	3.6	7.2
Maximum EC power requirement		kW	2.30	2.30	2.30	2.30	2.30	4.60
Fan's maximum AC useful head - G4 filters		Pa	510	440	380	380	175	580
Fan's maximum EC useful head - G4 filters		Pa	520	460	390	390	225	560
Fan's maximum AC useful head - F5 filters		Pa	415	340	265	265	-	495
Fan's maximum EC useful head - F5 filters		Pa	425	360	280	280	65	475
<b>Chiller connections (EDA unit)</b>								
Gas supply		n°x mm	1 x 16	1 x 18	2 x 16	1 x 18	1 x 18	2 x 16
Liquid		n°x mm	1 x 12	1 x 16	2 x 12	1 x 16	1 x 16	2 x 12
<b>Plate condenser (EDW unit)</b>								
Number		n°	1	1	2	1	1	2
In/out connections			G1"	G1 1/4"	G1"	G1 1/4"	G1 1/4"	G1"
Pressure drops		kPa	36	36	35	34	35	35
<b>Electric heating (CH-HH version)</b>								
Potential		kW	5	9	9	9	9	9
Operation stages		n°	1	2	2	2	2	2
<b>Water heating battery (CH-HH version)</b>								
Potential	(3)	kW	24.2	25.3	26.6	26.6	28.0	37.4
Total capacity loss		kPa	29.0	32.0	35.0	35.0	38.0	37.0
<b>Humidifier (HH version)</b>								
Potential		kg/h	5.0	5.0	5.0	5.0	5.0	5.0
<b>Sound pressure levels</b>								
	(4)	dB(A)	53	55	55	55	57	59
<b>Coupling with remote-controlled air condensers (EDA unit)</b>								
Quantity		n°	1	1	2	1	1	2
AIR		Mod.	502A2	502A2	501A3	502A3	502A4	501A4
AIR LN (silent condenser)		Mod.	631B3	502B4	501B4	632B2	632B2	501B4
<b>Implementation with remote-controlled RAC water coolers (EDW unit)</b>								
Quantity		n°	1	1	1	1	1	1
RAC		Mod.	524	524	623	623	623	623
<b>Dimensions and weight of basic unit</b>								
Size of structure			S	S	S	S	S	M
Length		mm	1,100	1,100	1,100	1,100	1,100	1,750
Depth		mm	850	850	850	850	850	850
Height		mm	1,990	1,990	1,990	1,990	1,990	1,990
U/O_EDA HH operating weight		kg	388	432	432	434	440	570/553
U/O_EDW HH operating weight		kg	398	443	447	447	457	585/567

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Useful head 20 Pa, EU4 filters.

(3) Inlet air temperature 20 °C water in/out 80/70 °C.

(4) Free-field noise levels at 2 metres from the unit.

## ED UNIT - DIRECT EXPANSION

UNIT SIZE			38.1	38.2	46.2	49.1	56.2	66.2
Total cooling capacity	(1)	kW	37.0	38.1	45.0	49.0	55.0	66.7
Sensible cooling capacity	(1)	kW	35.9	36.3	44.7	46.3	49.7	58.1
SHR			0.97	0.95	0.99	0.94	0.90	0.87
EER	(1),(2)		3.52	3.50	3.42	3.68	3.33	3.46
<b>Compressors</b>								
Quantity		n°	1	2	2	1	2	2
Power consumption	(1)	kW	8.8	9.2	10.8	10.9	13.9	16.0
<b>Fans</b>								
Nominal air capacity		n°	2	2	2	2	2	2
Number		m <sup>3</sup> /h	11450	11450	13500	13500	14040	14750
Fan's AC power requirement	(2)	kW	1.7	1.7	2.4	2.4	2.6	3.3
Fan's EC power requirement	(2)	kW	0.8	0.8	1.2	1.2	1.4	2.2
Maximum AC current requirement		A	8.8	8.8	8.8	8.8	8.8	8.8
Maximum AC power requirement		kW	4.80	4.80	4.80	4.80	4.80	4.80
Maximum EC current requirement		A	7.2	7.2	7.2	7.2	7.2	7.2
Maximum EC power requirement		kW	4.60	4.60	4.60	4.60	4.60	4.60
Fan's maximum AC useful head - G4 filters		Pa	550	550	440	440	405	300
Fan's maximum EC useful head - G4 filters		Pa	540	540	455	455	425	310
Fan's maximum AC useful head - F5 filters		Pa	460	455	330	325	290	135
Fan's maximum EC useful head - F5 filters		Pa	450	445	345	340	310	150
<b>Chiller connections (EDA unit)</b>								
Gas supply		n°x mm	1 x 18	2 x 16	2 x 16	1x22	2 x 18	2 x 18
Liquid		n°x mm	1 x 16	2 x 12	2 x 12	1x18	2 x 16	2 x 16
<b>Plate condenser (EDW unit)</b>								
Number		n°	1	2	2	1	2	2
In/out connections			G1 1/4"	G1"	G1"	G1 1/4"	G1 1/4"	G1 1/4"
Pressure drops		kPa	36	34	36	38	37	33
<b>Electric heating (CH-HH version)</b>								
Potential		kW	9	9	9	9	9	9
Operation stages		n°	2	2	2	2	2	2
<b>Water heating battery (CH-HH version)</b>								
Potential	(3)	kW	38.6	38.6	42.4	42.4	43.2	48.7
Total capacity loss		kPa	39.0	39.0	47.0	47.0	49.0	59.0
<b>Humidifier (HH version)</b>								
Potential		kg/h	5.0	5.0	5.0	5.0	5.0	5.0
<b>Sound pressure levels</b>								
	(4)	dB(A)	60	59	61	61	62	62
<b>Coupling with remote-controlled air condensers (EDA unit)</b>								
Quantity		n°	1	2	2	1	2	2
AIR		Mod.	502A4	501A4	502A4	562A3	502A3	502A3
AIR LN (silent condenser)		Mod.	632B2	631B3	631B3	632B4	502B4	632B2
<b>Implementation with remote-controlled RAC water coolers (EDW unit)</b>								
Quantity		n°	1	1	1	1	1	1
RAC		Mod.	623	632	632	633	633	643
<b>Dimensions and weight of basic unit</b>								
Size of structure			M	M	M	M	M	M
Length		mm	1,750	1,750	1,750	1,750	1,750	1,750
Depth		mm	850	850	850	850	850	850
Height		mm	1,990	1,990	1,990	1,990	1,990	1,990
U/O_EDA HH operating weight		kg	570/540	585/555	653/624	574/544	654/624	687/657
U/O_EDW HH operating weight		kg	586/556	601/571	675/645	593/563	679/649	717/687

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Useful head 20 Pa, EU4 filters.

(3) Inlet air temperature 20 °C water in/out 80/70 °C.

(4) Free-field noise levels at 2 metres from the unit.

## ED UNIT - DIRECT EXPANSION

UNIT SIZE			72.2	85.2	95.2
Total cooling capacity	(1)	kW	73.2	86.4	94.6
Sensible cooling capacity	(1)	kW	67.2	76.5	82.8
SHR			0.92	0.89	0.88
EER	(1),(2)		3.50	3.64	3.64
<b>Compressors</b>					
Quantity		n°	2	2	2
Power consumption	(1)	kW	17.6	19.9	21.8
<b>Fans</b>					
Nominal air capacity		n°	3	3	3
Number		m <sup>3</sup> /h	19000	21150	22850
Fan's AC power requirement	(2)	kW	3.3	3.9	4.2
Fan's EC power requirement	(2)	kW	1.7	2.0	2.5
Maximum AC current requirement		A	13.2	13.2	13.2
Maximum AC power requirement		kW	7.20	7.20	7.20
Maximum EC current requirement		A	10.8	10.8	10.8
Maximum EC power requirement		kW	6.90	6.90	6.90
Fan's maximum AC useful head - G4 filters		Pa	495	420	350
Fan's maximum EC useful head - G4 filters		Pa	495	440	375
Fan's maximum AC useful head - F5 filters		Pa	395	300	230
Fan's maximum EC useful head - F5 filters		Pa	395	325	250
<b>Chiller connections (EDA unit)</b>					
Gas supply		n°x mm	2 x 18	2 x 22	2 x 22
Liquid		n°x mm	2 x 16	2 x 18	2 x 18
<b>Plate condenser (EDW unit)</b>					
Number		n°	2	2	2
In/out connections			G1 1/4"	G1 1/4"	G1 1/4"
Pressure drops		kPa	35	59	35
<b>Electric heating (CH-HH version)</b>					
Potential		kW	14	14	14
Operation stages		n°	3	3	3
<b>Water heating battery (CH-HH version)</b>					
Potential	(3)	kW	61.8	65.8	68.7
Total capacity loss		kPa	37.0	42.0	45.0
<b>Humidifier (HH version)</b>					
Potential		kg/h	8.0	8.0	8.0
<b>Sound pressure levels</b>					
	(4)	dB(A)	63	64	64
<b>Coupling with remote-controlled air condensers (EDA unit)</b>					
Quantity		n°	2	2	2
AIR		Mod.	502A4	562A3	562A3
AIR LN (silent condenser)		Mod.	632B2	632B3	632B4
<b>Implementation with remote-controlled RAC water coolers (EDW unit)</b>					
Quantity		n°	1	1	1
RAC		Mod.	643	643	834
<b>Dimensions and weight of basic unit</b>					
Size of structure			L	L	L
Length		mm	2,655	2,655	2,655
Depth		mm	850	850	850
Height		mm	1,990	1,990	1,990
U/O_EDA HH operating weight		kg			
U/O_EDW HH operating weight		kg			

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Useful head 20 Pa, EU4 filters.

(3) Inlet air temperature 20 °C water in/out 80/70 °C.

(4) Free-field noise levels at 2 metres from the unit.

## ED UNIT - DIRECT EXPANSIONS WITH DUAL COOLING

UNIT SIZE			17.1	22.1	26.1	32.1	34.2	38.1
Total cooling capacity	(1)	kW	17.4	22.0	25.5	32.0	33.7	37.0
Sensible cooling capacity	(1)	kW	17.4	20.8	24.2	28.0	33.5	35.9
SHR			1.00	0.95	0.95	0.88	0.99	0.97
EER	(1),(3)		3.53	3.30	3.42	3.26	3.45	3.33
Total cooling capacity	(2)	kW	22.3	23.3	24.3	30.9	38.6	39.9
Sensible cooling capacity	(2)	kW	19.9	21.1	22.3	27.3	35.3	36.8
SHR			0.89	0.91	0.92	0.88	0.91	0.92
<b>Compressors</b>								
Quantity		n°	1	1	1	1	2	1
Power consumption	(1)	kW	3.81	5.39	5.98	8.00	7.64	8.80
<b>Fans</b>								
Nominal air capacity		n°	1	1	1	1	2	2
Number		m3/h	6000	6500	7000	7650	10800	11450
Fan's AC power requirement	(2)	kW	1.1	1.3	1.5	1.8	2.1	2.3
Fan's EC power requirement	(2)	kW	0.6	0.7	0.9	1.2	1.0	1.2
Maximum AC current requirement		A	4.4	4.4	4.4	4.4	8.8	8.8
Maximum AC power requirement		kW	2.4	2.4	2.4	2.4	4.8	4.8
Maximum EC current requirement		A	3.6	3.6	3.6	3.6	7.2	7.2
Maximum EC power requirement		kW	2.3	2.3	2.3	2.3	4.6	4.6
Fan's maximum AC useful head - G4 filters		Pa	480	440	360	255	520	480
Fan's maximum EC useful head - G4 filters		Pa	480	450	380	270	500	470
Fan's maximum AC useful head - F5 filters		Pa	370	315	225	110	400	355
Fan's maximum EC useful head - F5 filters		Pa	370	325	245	125	380	345
<b>Chiller connections (EDA unit)</b>								
Gas supply		n°x mm	1 x 16	1 x 16	1 x 18	1 x 18	2 x 16	1 x 18
Liquid		n°x mm	1 x 12	1 x 12	1 x 16	1 x 16	2 x 12	1 x 16
<b>Plate condenser (EDW unit)</b>								
Number		n°	1	1	1	1	2	1
In/out connections		Pollici	G1"	G1"	G1 1/4"	G1 1/4"	G1"	G1 1/4"
Pressure drops		kPa	37	36	36	34	35	36
<b>Electric heating (CH-HH version)</b>								
Potential		kW	23.1	24.2	25.3	26.6	37.4	38.6
Operation stages		n°	27	29	32	35	37	39
<b>Water heating battery (CH-HH version)</b>								
Potential	(4)	kW	23.1	24.2	25.3	26.6	37.4	38.6
Total capacity loss		kPa	27	29	32	35	37	39
<b>Humidifier (HH version)</b>								
Potential		kg/h	5	5	5	5	5	5
<b>Sound pressure levels</b>								
	(5)	dB(A)	52	53	55	55	59	60
<b>Dimensions and weight of basic unit</b>								
Size of structure			S	S	S	S	M	M
Length		mm	1,100	1,100	1,100	1,100	1,750	1,750
Depth		mm	850	850	850	850	850	850
Height		mm	1,990	1,990	1,990	1,990	1,990	1,990
U/O_EDA HH operating weight		kg	425	425	468	478	606/589	606/576
U/O_EDW HH operating weight		kg	432	434	480	493	621/603	623/593

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Inlet air 24 °C 50% UR, cooled water 7/12 °C.

(3) Useful head 20 Pa, EU4 filters.

(4) Inlet air temperature 20 °C water in/out 80/70 °C.

(5) Free-field noise levels at 2 metres from the unit.

## ED UNIT - DIRECT EXPANSIONS WITH DUAL COOLING

UNIT SIZE			38.2	46.2	49.1	56.2	72.2	85.2	95.2
Total cooling capacity	(1)	kW	38.1	45.0	49.0	55.0	73.2	86.4	94.6
Sensible cooling capacity	(1)	kW	36.3	44.7	46.3	49.7	67.2	76.5	82.8
SHR			0.95	0.99	0.94	0.90	0.92	0.89	0.88
EER	(1),(3)		3.32	3.22	3.47	3.17	3.35	3.46	3.44
Total cooling capacity	(2)	kW	39.9	52.7	52.7	54.2	72.3	90.7	95.0
Sensible cooling capacity	(2)	kW	36.8	47.5	47.5	48.9	63.6	77.7	82.3
SHR			0.92	0.90	0.90	0.90	0.88	0.86	0.87
<b>Compressors</b>									
Quantity		n°	2	2	1	2	2	2	2
Power consumption	(1)	kW	9.18	10.76	10.90	13.90	17.60	19.90	21.80
<b>Fans</b>									
Nominal air capacity		n°	2	2	2	2	3	3	3
Number		m <sup>3</sup> /h	11450	13500	13500	14040	19000	21150	22850
Fan's AC power requirement	(2)	kW	2.3	3.2	3.2	3.5	4.2	5.1	5.7
Fan's EC power requirement	(2)	kW	1.2	2.0	2.0	2.2	2.4	3.2	3.9
Maximum AC current requirement		A	8.8	8.8	8.8	8.8	13.2	13.2	13.2
Maximum AC power requirement		kW	4.8	4.8	4.8	4.8	7.2	7.2	7.2
Maximum EC current requirement		A	7.2	7.2	7.2	7.2	10.8	10.8	10.8
Maximum EC power requirement		kW	4.6	4.6	4.6	4.6	6.9	6.9	6.9
Fan's maximum AC useful head - G4 filters		Pa	480	320	320	280	390	295	215
Fan's maximum EC useful head - G4 filters		Pa	470	335	335	300	390	315	235
Fan's maximum AC useful head - F5 filters		Pa	355	175	170	125	265	150	55
Fan's maximum EC useful head - F5 filters		Pa	345	190	185	145	265	170	75
<b>Chiller connections (EDA unit)</b>									
Gas supply		n°x mm	2 x 16	2 x 16	1x22	2 x 18	2 x 18	2 x 22	2 x 22
Liquid		n°x mm	2 x 12	2 x 12	1x18	2 x 16	2 x 16	2 x 18	2 x 18
<b>Plate condenser (EDW unit)</b>									
Number		n°	2	2	1	2	2	2	2
In/out connections		Pollici	G1"	G1"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"
Pressure drops		kPa	34	36	38	37	35	59	35
<b>Electric heating (CH-HH version)</b>									
Potential		kW	38.6	42.4	42.4	43.2	61.8	65.8	68.7
Operation stages		n°	39	47	47	49	37	42	45
<b>Water heating battery (CH-HH version)</b>									
Potential	(4)	kW	38.6	42.4	42.4	43.2	61.8	65.8	68.7
Total capacity loss		kPa	39	47	47	49	37	42	45
<b>Humidifier (HH version)</b>									
Potential		kg/h	5	5	5	5	8	8	8
<b>Sound pressure levels</b>	(5)	dB(A)	59	61	61	62	63	64	64
<b>Dimensions and weight of basic unit</b>									
Size of structure			M	M	M	M	L	L	L
Length		mm	1,750	1,750	1,750	1,750	2,655	2,655	2,655
Depth		mm	850	850	850	850	850	850	850
Height		mm	1,990	1,990	1,990	1,990	1,990	1,990	1,990
U/O_EDA HH operating weight		kg	621/591	700/670	620/590	700/670			
U/O_EDW HH operating weight		kg	637/607	721/691	639/609	725/695			

(1) Air inlet 24 °C 50% UR. Condenser air 45 °C.

(2) Inlet air 24 °C 50% UR, cooled water 7/12 °C.

(3) Useful head 20 Pa, EU4 filters.

(4) Inlet air temperature 20 °C water in/out 80/70 °C.

(5) Free-field noise levels at 2 metres from the unit.

## ED UNIT

UNIT SIZE			6.1	8.1	11.1	15.1	18.1	17.1
Compressor's maximum power requirement		kW	2.8	3.9	4.8	6.0	7.6	6.2
Fan's maximum AC power requirement		kW	0.3	0.3	0.8	0.8	0.8	2.4
Fan's maximum EC power requirement		kW	0.4	0.4	1.0	1.0	1.0	2.3
Resistors' maximum power requirement		kW	3.0	3.0	4.5	4.5	4.5	4.5
Humidifier's maximum power requirement		kW	1.1	1.1	2.3	2.3	2.3	3.8
<b>AC fans</b>								
Max. starting current CO	(3)	A	59.2	83.2	49.4	67.4	70.4	60.4
Max. starting current CH/HH	(3)	A	72.2	96.2	55.9	73.9	76.9	66.9
Max. absorbed current (1) CO	(1)	A	14.1	18.7	9.7	11.7	14.0	14.8
Max. absorbed current (1) CH/HH	(1)	A	27.1	31.7	16.2	18.2	20.5	21.3
<b>EC fans</b>								
Max. starting current CO	(3)	A	60.6	84.6	50.2	68.2	71.2	59.6
Max. starting current CH/HH	(3)	A	73.6	97.6	56.7	74.7	77.7	66.1
Max. absorbed current (1) CO	(1)	A	15.5	20.1	10.5	12.5	14.8	14.0
Max. absorbed current (1) CH/HH	(1)	A	28.5	33.1	17.0	19.0	21.3	20.5
Power supply	(2)	V/ph/Hz	230/1~/50 ±5%			400/3~/50 ±5%		
Control circuits power supply		V/ph/Hz	230-24/1~/50					

UNIT SIZE			22.1	26.1	30.2	32.1	36.1	34.2
Compressor's maximum power requirement		kW	8.9	9.4	12.0	12.5	13.8	12.4
Fan's maximum AC power requirement		kW	2.4	2.4	2.4	2.4	2.4	4.8
Fan's maximum EC power requirement		kW	2.3	2.3	2.3	2.3	2.3	4.6
Resistors' maximum power requirement		kW	4.5	9.0	9.0	9.0	9.0	9.0
Humidifier's maximum power requirement		kW	3.8	3.8	3.8	3.8	3.8	3.8
<b>AC fans</b>								
Max. starting current CO	(3)	A	76.4	105.4	80.7	105.4	106.4	75.2
Max. starting current CH/HH	(3)	A	82.9	118.4	92.8	118.4	119.4	88.2
Max. absorbed current (1) CO	(1)	A	19.3	20.3	25.0	24.9	26.6	29.6
Max. absorbed current (1) CH/HH	(1)	A	25.8	33.3	38.0	38.0	39.6	42.6
<b>EC fans</b>								
Max. starting current CO	(3)	A	75.6	104.6	79.9	104.6	105.6	73.6
Max. starting current CH/HH	(3)	A	82.1	117.6	92.9	117.6	118.6	86.6
Max. absorbed current (1) CO	(1)	A	18.5	19.5	24.2	24.1	25.8	28.0
Max. absorbed current (1) CH/HH	(1)	A	25.0	32.5	37.2	37.1	38.8	41.0
Power supply	(2)	V/ph/Hz	400/3~/50 ±5%					
Control circuits power supply		V/ph/Hz	230-24/1~/50					

(1) Current at maximum permissible operating conditions. Use suitable safety coefficients for sizing the feeder cables.

(2) Three phase supply involving a remote-controlled cooler ALWAYS requires a neutral cable.

(3) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps, fans)

## ED UNIT

UNIT SIZE			38.1	38.2	46.2	49.1	56.2	66.2
Compressor's maximum power requirement		kW	13.8	15.3	17.9	16.9	21.8	25.0
Fan's maximum AC power requirement		kW	4.8	4.8	4.8	4.8	4.8	4.8
Fan's maximum EC power requirement		kW	4.6	4.6	4.6	4.6	4.6	4.6
Resistors' maximum power requirement		kW	9.0	9.0	9.0	9.0	9.0	9.0
Humidifier's maximum power requirement		kW	3.8	3.8	3.8	3.8	3.8	3.8
<b>AC fans</b>								
Max. starting current CO	(3)	A	110.8	90.4	95.7	206.8	127.9	130.3
Max. starting current CH/HH	(3)	A	123.8	103.4	108.7	219.8	140.9	143.3
Max. absorbed current (1) CO	(1)	A	31.0	34.0	38.6	36.8	45.0	49.8
Max. absorbed current (1) CH/HH	(1)	A	44.0	47.0	51.6	49.8	58.0	62.8
<b>EC fans</b>								
Max. starting current CO	(3)	A	109.2	88.8	94.1	205.2	126.3	128.7
Max. starting current CH/HH	(3)	A	122.2	101.8	107.1	218.2	139.3	141.7
Max. absorbed current (1) CO	(1)	A	29.4	32.4	37.0	35.2	43.4	48.2
Max. absorbed current (1) CH/HH	(1)	A	42.4	45.4	50.0	48.2	56.4	61.2
Power supply	(2)	V/ph/Hz	400/3~/50 ±5%					
Control circuits power supply		V/ph/Hz	230-24/1~/50					

UNIT SIZE			72.2	85.2	95.2
Compressor's maximum power requirement		kW	27.6	31.0	33.8
Fan's maximum AC power requirement		kW	7.2	7.2	7.2
Fan's maximum EC power requirement		kW	6.9	6.9	6.9
Resistors' maximum power requirement		kW	13.5	13.5	13.5
Humidifier's maximum power requirement		kW	6.0	6.0	6.0
<b>AC fans</b>					
Max. starting current CO	(3)	A	137.4	196.5	239.2
Max. starting current CH/HH	(3)	A	156.9	216.0	258.7
Max. absorbed current (1) CO	(1)	A	57.6	63.8	69.2
Max. absorbed current (1) CH/HH	(1)	A	77.1	83.3	88.7
<b>EC fans</b>					
Max. starting current CO	(3)	A	135.0	194.1	236.8
Max. starting current CH/HH	(3)	A	150.9	213.6	256.3
Max. absorbed current (1) CO	(1)	A	55.2	61.4	66.8
Max. absorbed current (1) CH/HH	(1)	A	74.7	80.9	86.3
Power supply	(2)	V/ph/Hz	400/3~/50 ±5%		
Control circuits power supply		V/ph/Hz	230-24/1~/50		

(1) Current at maximum permissible operating conditions. Use suitable safety coefficients for sizing the feeder cables.

(2) Three phase supply involving a remote-controlled cooler ALWAYS requires a neutral cable.

(3) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps, fans)

## CW UNIT

UNIT SIZE			6	9	14	18	22	30
Total cooling capacity	(1)	kW	6.7	8.2	13.3	16.7	21.2	30.9
Sensible cooling capacity	(1)	kW	6.1	6.9	12.4	14.5	17.1	27.5
SHR			0.90	0.00	0.00	0.00	0.00	0.00
<b>Fans</b>								
Number		n°	1	1	1	1	1	1
Nominal air capacity		m³/h	1800	1800	4000	4000	4000	8400
Fan's AC Under power requirement	(2)	kW	0.21	0.22	0.55	0.59	0.67	1.58
Fan's EC Under power requirement	(2)	kW	0.14	0.15	0.38	0.41	0.51	0.96
Fan's AC Over power requirement	(2)	kW	0.21	0.22	0.55	0.59	0.67	1.37
Fan's EC Over power requirement	(2)	kW	0.14	0.15	0.38	0.41	0.51	0.81
Fan's maximum AC Under power requirement	(3)	Pa	85	70	130	105	60	275
Fan's maximum EC Under power requirement	(3)	Pa	355	310	335	310	265	325
Fan's maximum AC Over power requirement	(3)	Pa	85	70	130	105	60	315
Fan's maximum EC Over power requirement	(3)	Pa	355	310	335	310	265	365
<b>Plate condenser (EDW unit)</b>								
In/out connections		kPa	33	34	48	72	71	66
Pressure drops			G1/2"	G1/2"	G3/4"	G3/4"	G1"	G1"1/4
<b>Electric heating (CH-HH version)</b>								
Potential		kW	3	3	5	5	9	9
Operation stages		n°	1	1	1	1	2	2
<b>Water heating battery (CH-HH version)</b>								
Potential	(4)	kW	5.9	5.9	13.1	13.1	13.1	24.5
Total capacity loss		kPa	10.7	10.7	21.4	21.4	21.4	29.9
<b>Humidifier (HH version)</b>								
Potential		kg/h	1.5	1.5	3.0	3.0	5.0	5.0
<b>Sound pressure levels</b>	(5)	dB(A)	47	47	50	50	50	56
<b>Dimensions and weight of basic unit</b>								
Size of structure			SXS	SXS	XS	XS	XS	S
Length		mm	607	607	705	705	705	1,100
Depth		mm	500	500	650	650	650	850
Height		mm	1,850	1,850	1,990	1,990	1,990	1,990
Under/over (HH) operating weight		kg						329

(1) Air inlet 24 °C 50% UR. water in/out 7/12 °C.

(2) Useful head 20 Pa, G4 filters.

(3) G4 filters.

(4) Inlet air temperature 20 °C water in/out 80/70 °C.

(5) 2 m front of the unit, air distribution through raised floor (UNDER) or ducted (OVER).

## CW UNIT

UNIT SIZE			35	45	55	65	85	100	130
Potencia frigorífica total	(1)	kW	37.0	45.8	56.0	67.0	83.6	106.0	131.0
Potencia frigorífica sensible	(1)	kW	31.5	36.6	50.0	57.4	66.9	89.7	104.0
SHR			0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fans</b>									
Number		n°	1	1	2	2	2	3	3
Air capacity		m³/h	8400	8400	15500	15500	15500	24000	24000
Fan's AC Under power requirement	(2)	kW	1.65	1.78	3.16	3.37	3.51	5.20	5.57
Fan's EC Under power requirement	(2)	kW	1.02	1.14	1.90	2.02	2.28	3.30	3.60
Fan's AC Over power requirement	(2)	kW	1.45	1.60	2.66	2.82	3.15	4.43	4.90
Fan's EC Over power requirement	(2)	kW	0.87	0.98	1.53	1.64	1.89	2.66	3.00
Fan's maximum AC Under power requirement	(3)	Pa	255	220	330	310	270	275	235
Fan's maximum EC Under power requirement	(3)	Pa	305	265	350	330	290	305	265
Fan's maximum AC Over power requirement	(3)	Pa	300	260	385	365	320	330	290
Fan's maximum EC Over power requirement	(3)	Pa	350	310	405	385	340	360	320
<b>Plate condenser (EDW unit)</b>									
In/out connections		kPa	67	74	76	79	91	81	91
Pressure drops			G1"1/4	G1"1/4	G1"1/2	G1"1/2	G1"1/2	G2"	G2"
<b>Electric heating (CH-HH version)</b>									
Potential		kW	9	9	9	9	9	14	14
Operation stages		n°	2	2	2	2	2	3	3
<b>Water heating battery (CH-HH version)</b>									
Potential	(4)	kW	24.5	24.5	43.8	43.8	43.8	61.8	61.8
Total capacity loss		kPa	29.9	29.9	48.1	48.1	48.1	36.7	36.5
<b>Humidifier (HH version)</b>									
Potential		kg/h	5.0	5.0	5.0	5.0	5.0	8.0	8.0
<b>Sound pressure levels</b>	(5)	dB(A)	56	56	63	63	63	65	65
<b>Dimensions and weight of basic unit</b>									
Size of structure			S	S	M	M	M	L	L
Length		mm	1,100	1,100	1,750	1,750	1,750	2,650	2,650
Depth		mm	850	850	850	850	850	850	850
Height		mm	1,990	1,990	1,990	1,990	1,990	1,990	1,990
Under/over (HH) operating weight		kg	335	347	477	489	511		

(1) Air inlet 24 °C 50% UR. water in/out 7/12 °C.

(2) Useful head 20 Pa, G4 filters.

(3) G4 filters.

(4) Inlet air temperature 20 °C water in/out 80/70 °C.

(5) 2 m front of the unit, air distribution through raised floor (UNDER) or ducted (OVER).

## CW UNIT

UNIT SIZE			6	9	14	18	22	30
Maximum power requirement CO		kW	0.25	0.25	0.71	0.71	0.71	2.40
Maximum power requirement CH		kW	3.25	3.25	5.21	5.21	5.21	11.40
Maximum power requirement HH		kW	4.38	4.38	7.46	7.46	7.46	15.15
Maximum power requirement CO	(3)	kW	0.44	0.44	1.00	1.00	1.00	2.30
Maximum power requirement CH	(3)	kW	3.44	3.44	5.50	5.50	5.50	11.3
Maximum power requirement HH	(3)	kW	4.57	4.57	7.75	7.75	7.75	15.1
Max. absorbed current CO	(1)	A	1.1	1.1	1.4	1.4	1.4	4.4
Max. absorbed current CH	(1)	A	14.2	14.2	7.9	7.9	7.9	17.4
Max. absorbed current HH	(1)	A	19.1	19.1	17.6	17.6	17.6	22.8
Max. absorbed current CO	(1),(3)	A	2.6	2.6	2.2	2.2	2.2	3.6
Max. absorbed current CH	(1),(3)	A	15.6	15.6	8.7	8.7	8.7	16.6
Max. absorbed current HH	(1),(3)	A	20.5	20.5	18.5	18.5	18.5	22.0
Power supply	(2)	V/ph/Hz	230/1~/50 ±5%			400/3~/50 ±5%		
Control circuits power supply		V/ph/Hz	230-24/1~/50					

UNIT SIZE			35	40	55	65	75	100	130
Maximum power requirement CO		kW	2.40	2.40	4.80	4.80	4.80	7.20	7.20
Maximum power requirement CH		kW	11.40	11.40	13.80	13.80	13.80	20.70	20.70
Maximum power requirement HH		kW	15.15	15.15	17.55	17.55	17.55	26.70	26.70
Maximum power requirement CO	(3)	kW	2.30	2.30	4.60	4.60	4.60	6.90	6.90
Maximum power requirement CH	(3)	kW	11.3	11.3	13.6	13.6	13.6	20.4	20.4
Maximum power requirement HH	(3)	kW	15.1	15.1	17.4	17.4	17.4	26.4	26.4
Max. absorbed current CO	(1)	A	4.4	4.4	8.8	8.8	8.8	13.2	13.2
Max. absorbed current CH	(1)	A	17.4	17.4	21.8	21.8	21.8	32.7	32.7
Max. absorbed current HH	(1)	A	22.8	22.8	27.2	27.2	27.2	41.3	41.3
Max. absorbed current CO	(1),(3)	A	3.6	3.6	7.2	7.2	7.2	10.8	10.8
Max. absorbed current CH	(1),(3)	A	16.6	16.6	20.2	20.2	20.2	30.3	30.3
Max. absorbed current HH	(1),(3)	A	22.0	22.0	25.6	25.6	25.6	38.9	38.9
Power supply	(2)	V/ph/Hz	400/3~/50 ±5%						
Control circuits power supply		V/ph/Hz	230-24/1~/50						

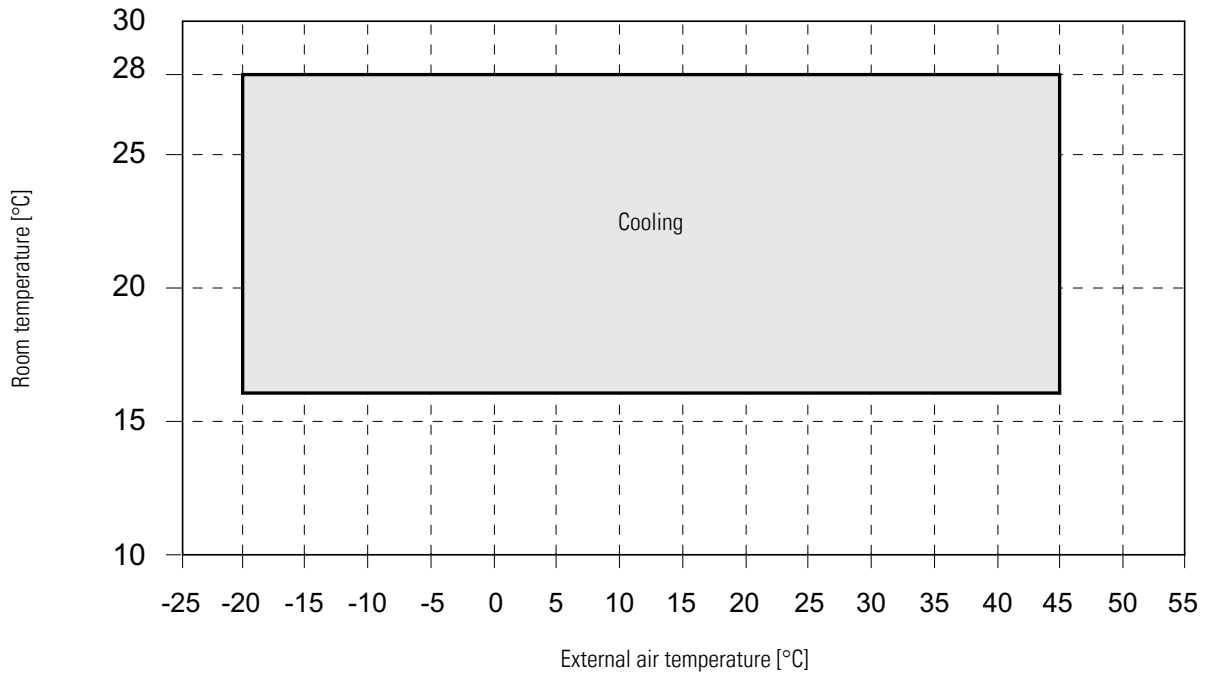
(1) Current at maximum permissible operating conditions. Use suitable safety coefficients for sizing the feeder cables.

(2) Three phase supply involving a remote-controlled cooler ALWAYS requires a neutral cable.

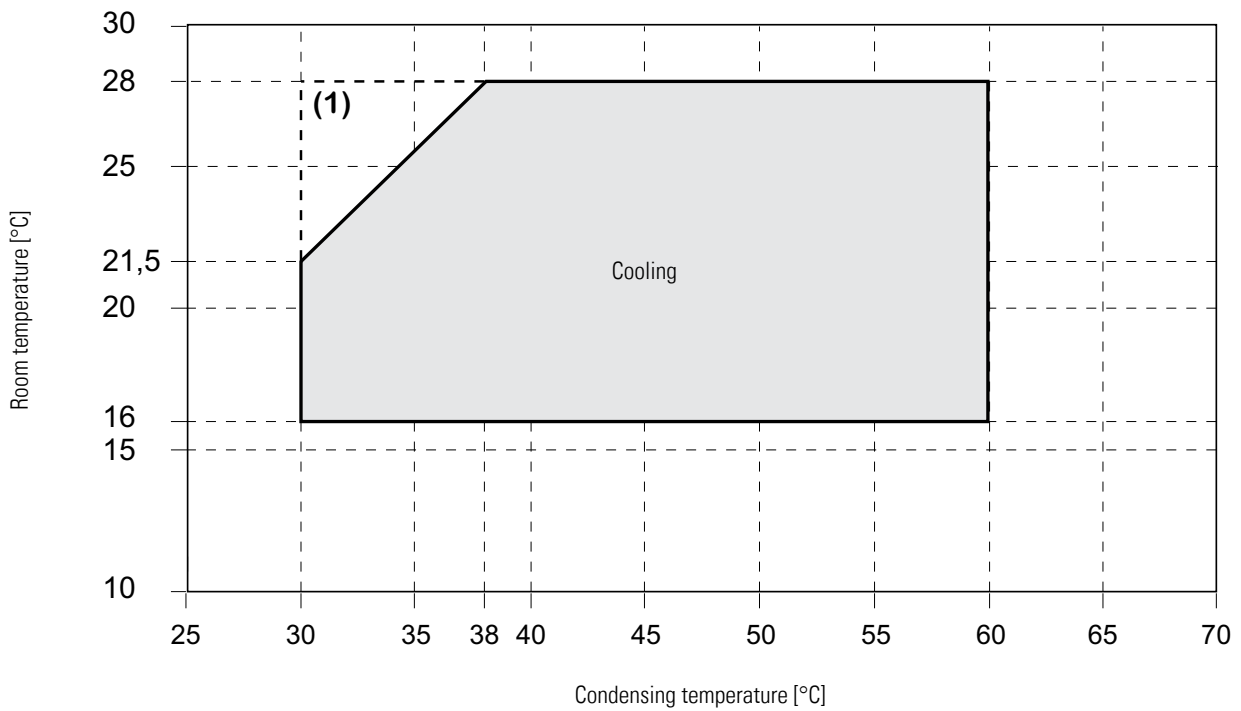
(3) EC fan.

**“EDA” DIRECT EXPANSION MODEL  
AND WATER COOLER**

**Cooler supplied by Blue Box (with speed regulator)**

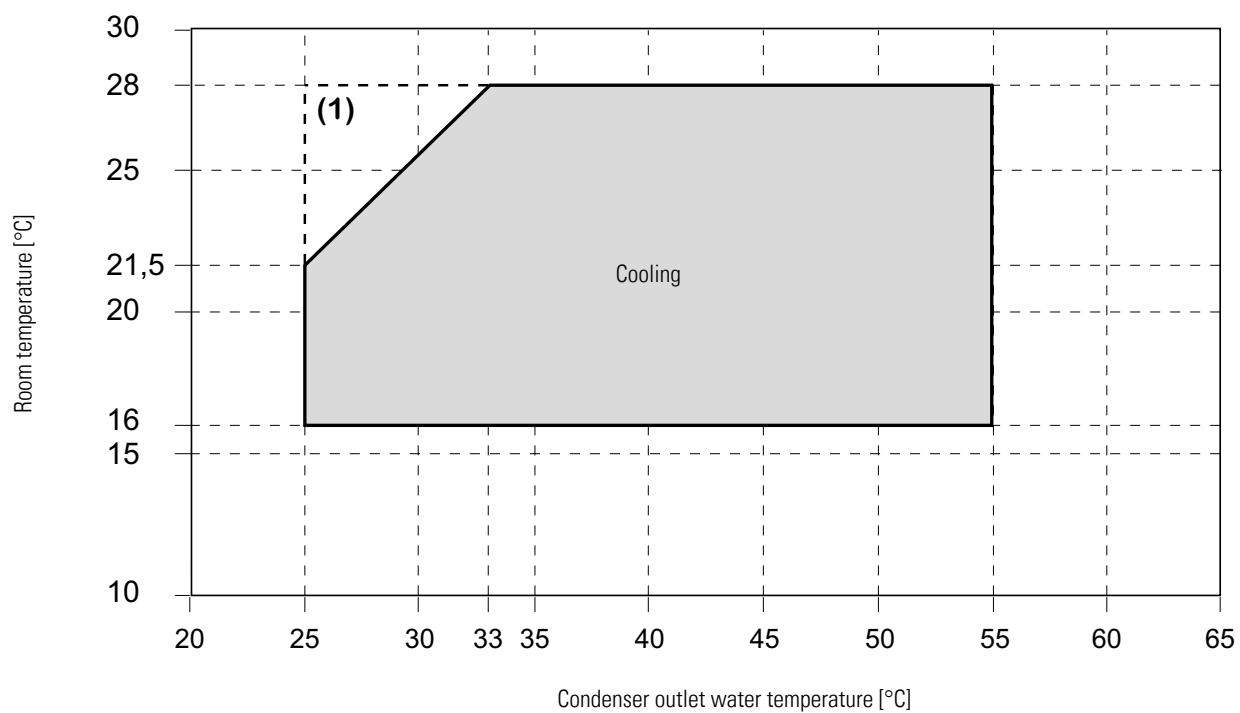


**Cooler not supplied by Blue Box**



(1) Unit model 6.1 / 8.1 / 49.1 / 85.2 / 95.2

## “EDW” DIRECT EXPANSION MODEL AND WATER COOLER



(1) Unit model 6.1 / 8.1 / 49.1 / 85.2 / 95.2





## INSTALLATIONS RECOMMENDATIONS

### LOCATION

- Strictly allow clearances as indicated in the catalogue.
- Ensure there are no obstructions in the finned pack's suction vent and the fans' discharge vent.
- Locate the unit in order to be compatible with environmental requirements (sound level, integration into the site, etc.).

### ELECTRICAL CONNECTIONS

- Check the wiring diagram enclosed with the unit, in which are always present all the instructions necessary to the electrical connections.
- Supply the unit at least 12 hours before start-up, in order to turn crankcase heaters on. Do not disconnect electrical supply during temporary stop periods (i.e. weekends).
- Before opening the main switch, stop the unit by acting on the suitable running switches or, if lacking, on the remote control.
- Before opening the main switch, stop the unit by acting on the suitable running switches or, if lacking, on the remote control.
- Before servicing the inner components, disconnect electrical supply by opening the main switch.
- The electric supply line must be equipped with an automatic circuit breaker (to be provided by the installer).

### HYDRAULIC CONNECTIONS

- Carefully vent the system, with pump turned off, by acting on the vent valves. This procedure is fundamental: little air bubbles can freeze the evaporator causing the general failure of the system.
- Drain the system during seasonal stops (wintertime) or use proper mixtures with low freezing point. In case of temporary stop periods an electric heater should be installed on the evaporator and hydraulic circuit.
- Install the hydraulic circuit including all the components indicated in the recommended hydraulic circuit diagrams (expansion vessel, flow switch, strainer, storage tank, vent valves, shut off valves, flexible connections, etc.).
- Connect the flow switch, which is furnished on all units, not fitted. Follow the instructions enclosed with the units.

### START UP AND MAINTENANCE OPERATIONS

- Strictly follow what reported in use and maintenance manual. All these operations must be carried on by trained personnel only.



BLUE  BOX  
G R O U P

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