

EPSILON ECHOS

Air/water cooled chillers and heat pumps 6÷41



General

An extensive and complete range composed of twelve models, conceived and developed for providing the maximum comfort and the highest levels of environmental well-being.

Configurations

HP: Reversible heat pump

LE: For connection to remote evaporator

DK: With fan, possibility for duct connection (see specific documentation)

LN: Low sound level

Optional pump-/tank module

Quick facts

- ▶ Eco-friendly cooling
- ▶ Long-lasting reliability
- ▶ Extremely quiet operation
- ▶ Compact dimensions
- ▶ High performance at any temperature
- ▶ Efficient energy performance
- ▶ Fast and quick installation

INDEX

| | |
|--|----|
| Technical Features | 3 |
| Versions | 4 |
| Standard Equipment | 4 |
| Accessories | 4 |
| EPSILON ECHOS - Technical Data | 8 |
| EPSILON ECHOS - Electrical Data | 10 |
| EPSILON ECHOS - Cooling Capacity | 11 |
| EPSILON ECHOS /HP - Heating Capacity | 14 |
| EPSILON ECHOS /LE - Cooling Capacity | 16 |
| EPSILON ECHOS /LE /HP - Heating Capacity | 18 |
| Noise Levels - EPSILON ECHOS | 20 |
| Noise Levels - EPSILON ECHOS /SLN | 20 |
| Dimensional Drawing | 21 |
| Installations Recommendations Location | 33 |
| Electrical Connections | 33 |
| Hydraulic Connections | 33 |
| Start Up And Maintenance Operations | 33 |

TECHNICAL FEATURES

EPSILON ECHOS water chiller

Air/water cooled water chillers and heat pumps with axial fans.

EPSILON ECHOS\LE

Motocondensing and reversible motocondensing units with axial fans.

STRUCTURE

Made in galvanised steel sheet and painted at 180 °C with RAL 7035 polyester powder, which ensures high weather resistance.

The panels can easily be removed to provide full access to internal parts.

COMPRESSOR

The sizes 6 and 8 are equipped with rotary vane compressors, complete with thermal protection inside the electric engine and rubber anti-vibration mounts.

The sizes 10 and 41 are hermetic scroll type, complete with thermal protection inside the electric engine and rubber anti-vibration mounts.

CONDENSER

The condenser is composed of an aluminium-finned copper-tube multi-row coil, of high efficiency.

The finned coil pack is protected by a metal mesh.

FANS

Helical fans coupled directly to the 6-pole electric motor with external rotor, IP 54 degree of protection.

Each fan has shaped nozzles and is fitted with protection grille in compliance with UNI EN 294.

EVAPORATOR (For EPSILON ECHOS only)

Plate type heat exchanger in AISI 316 stainless steel covered with closed-cell foam.

The heat exchanger is fitted with temperature probe for anti-freeze protection and vane operated flow switch supplied as standard.

COOLING CIRCUIT

BASIC VERSION

Comprises: feeding plug on fluid and suction line, fluid sight glass, dehydrating filter, thermostatic expansion valve for pressure external control, pressure transducer, high and low pressure switches and safety valve (except for sizes 6, 8, 10).

\LE VERSION

Comprises: feeding plug on fluid and suction line, fluid sight glass, dehydrating filter, pressure transducer, high and low pressure switches and safety valve (except for sizes 6, 8, 10).

ELECTRICAL PANEL

With main disconnect switch, breakers for auxiliary and main power circuit protection, remote disconnect switch for compressors. The unit is controlled via microprocessor with display of the main functions.

The electrical panel consists of:

- Automatic disconnect switch for the main and auxiliary power circuits (sizes 6 and 10);
- Main disconnect switch and fuses for main and auxiliary power circuit protection (sizes 14 to 41);
- Compressor remote switches;
- Regulator of fan turns for condensate control;
- Pump relay and remote disconnect switch (sizes from 16 to 34, versions ST1P -ST1PS);
- General alarm dry contacts;
- Microprocessor to control the following functions:
 - Control of ingoing water temperature
 - Anti-freeze protection;
 - Compressor operation timers;
 - Control of high pressure pre-alarm (to avoid in many cases the unit blockage);
 - Alarm signals;
 - Alarm reset;
 - Self-adjusting control to provide proper operation when the plant water content is low;
 - External ON-OFF digital input;
- Display of:
 - Outgoing water temperature;
 - Condensation temperature;
 - Currently set temperature and differential;
 - Alarm description;
 - Hour counter for compressor and pump operation;

CONTROL AND SAFETY DEVICES

- Cooled water temperature control probe (on evaporator intake);
- Anti-freeze probe on evaporator outtake which activates the anti-freeze alarm (with limited trip automatic reset);
- Manual reset high pressure controller;
- Low pressure controller (with limited trip automatic reset);
- Vane actuated mechanical flow switch (supplied as standard);
- Condensing pressure controlled by operation circuit regulator with low external temperatures;
- High pressure safety valve (except for sizes 6, 8, 10);
- Compressor overtemperature protection.

TESTING

BASIC VERSION

The units are factory-tested and supplied complete with oil and refrigerant.

\LE VERSION

The units are factory-tested and supplied with the cooling circuit complete with nitrogen.

VERSIONS

/DC:

Unit with recovery condenser

The condenser is brazed plate type.

The recovery enablement occurs automatically depending on the

water temperature; the safety disablement

of the recovery, in case of high pressure, is also automatically controlled.

It is not available for the HP version.

/HP:

Reversible heat pump

In addition to the basic version components, the unit comprises:

4-way reversing valve, fluid collector, check valves, a second thermostatic valve.

Enablement via microprocessor of the following: summer/winter mode switch, automatic defrosting, digital input for summer/winter mode remote switch.

/LE /HP:

Reversible motocondensing unit (heat pump)

In addition to the basic version components, the unit comprises:

4-way reversing valve, fluid collector, check valves, thermostatic valve.

Enablement via microprocessor of the following: summer/winter mode switch, automatic defrosting, digital input for summer/winter mode remote switch.

/SLN:

Super Low Noise unit

Unit is comprised of an oversized condensing coil and low speed fans with subsequent reduction of noise level.

HYDRAULIC SYSTEM OPTIONS

/ST 1P:

Unit with pump

The unit consists of one circulator (sizes from 6 to 18) or a circulation pump (sizes from 20 to 41), expansion vessel, hydraulic circuit water discharge valve, safety valve calibrated at 6 bar, value corresponding to the maximum allowed operation pressure.

/ST 1PS:

Unit with pump and tank

In addition to the /ST 1P version components, the unit has an insulated storage tank.

STANDARD EQUIPMENT

- Main switch
- Compressor fuses
- Hour meter
- Coil protection guard
- Microprocessor control
- Condensing pressure control with fan speed control
- Self-adaptable control logic
- Flow switch (equipped as standard)
- Certification to directive 97/23 EEC (PED)
- Summer/Winter selection from digital input (enabled by customer from the control device)
- Remote On/Off control from standard-supply digital input
- Condensate drain pan (standard for models 6 to 18)
- Phase monitor

ACCESSORIES

REFRIGERANT CIRCUIT ACCESSORIES

- Liquid line valve
- Liquid line solenoid valve
- Electronic expansion valve
- Brine Kit

HYDRAULIC CIRCUIT ACCESSORIES

- Automatic filling kit with pressure gauge (for ST 1P-1PS version)
- No-frost heater (version ST excluded)
- No-frost heater (for ST 1P version)
- No-frost heater (for ST 1PS version)
- Integration heaters (for HP/ST 1PS version)
- Electronic modulation of the water flow

ELECTRICAL ACCESSORIES

- Power supply: 230/1/50
- Power supply: 400/3/50+N
- RS485 serial interface
- Remote control terminal
- Single voltage-free operating contacts
- User interface
- Electronic soft-starter
- Set point compensated according to external air temperature

VARIOUS ACCESSORIES

- Rubber antivibration mounts (for basic - ST 1P version)
- Rubber antivibration mounts (for ST 1PS version)
- Pre-painted aluminium condensing coil
- Condensing coil treated with anti-corrosion paint
- Packing in wooden crate
- Condensate drain pan
- Vaschetta raccogli condensa

“BRINE KIT”ACCESSORY

It is applied if the evaporator output temperature is included within +3°C and -8°C. It consists in a higher thermal insulation of the exchanger and piping, a specific calibration of the low pressure switches and of the anti-freeze alarm, and dimensioning check of the mechanical thermostatic valve.

If it is not included in the set-up, the “Check condensation” accessory must be added.

ELECTRONIC THERMOSTATIC VALVE

L'utilizzo di questo accessorio è particolarmente indicato sulle unità che si trovano ad operare in condizioni di carico termico molto variabile o di modalità di funzionamento variabili, come nel caso della gestione congiunta di condizionamento e produzione di acqua ad alta temperatura. L'impiego della valvola termostatica elettronica infatti permette di:

- massimizzare lo scambio termico all'evaporatore
- minimizzare i tempi di risposta alle variazioni del carico e di condizioni operative
- ottimizzare la regolazione del surriscaldamento
- garantire la massima efficienza energetica

PRESSOSTATIC CONDENSATION/EVAPORATION CONTROL WITH FAN REV. REGULATOR

The unit microprocessor control verifies all its functioning parameters and carries out a continuous fan speed adjustment by means of a fan rev. regulator, in order to optimise the operative conditions and the unit efficiency.

Moreover, this adjustment has a sound level reduction effect on the unit. In fact, the typical conditions where the control will modulate the fan speed are at night and mid-seasons. This means that every time there is a chance, the machine will reduce the fan speed and also its sound level to its minimum.

SELF-ADAPTABLE REGULATION LOGIC

This function allows the unit control to dynamically vary the outlet water set point according to the stop and functional cycles of the machine: in practice, by increasing and reducing the water outlet temperature, the control avoids that compressor start-ups are too close in time, decreasing the number of peaks and protecting the unit components

REMOTE ON/OFF FROM DIGITAL INPUT

This function is standard on all units and consists in a remote contact that allows to switch on and off the machine through a signal that can be taken inside the building by a BMS (Building Management System) system.

SUMMER/WINTER SELECTION FROM DIGITAL INPUT

This function is standard on all heat pumps. When the unit is switched on, a functioning mode must be set, which can be either the heat pump or the chiller one. Through this remote contact, the functioning mode can be modified even inside the building and without a direct access to the microprocessor control.

FILLING SYSTEM WITH MANOMETER

This accessory allows the automatic load of the hydraulic system, the adjustment of the correct working pressure, which can always be verified by using the manometer, and enables the continuous maintenance of such pressure, reintegrating the missing water if necessary.

RS-485 INTERFACE

The growing diffusion of both domotic and BMS (Building Management System) systems led to the integration of all the system components under an only supervision. To respond to this request, the unit can be equipped with a serial board that allows the correct machine integration in the “building-system”, by using MODBUS or CAREL communication protocols..

REMOTE CONTROL USER TERMINAL

Intended for a professional user, it consists in a faithful reproduction of the control panel, from where the unit can be completely set and all its parameters visualised on the display. Insertion of passwords, which enable different access levels, are required to access the parameters.

The type of terminal depends on the control installed on the unit

USER INTERFACE µAD

By using a simple and intuitive interface, this device allows to carry out the following main functions:

- Switching on and off the unit
- The unit function mode switch-over from heat pump to chiller and vice versa
- Enabling the sleep function
- The weekly timer thermostat function with automatic ON/OFF management of the unit
- Displaying unit functioning conditions

SOFT-STARTER

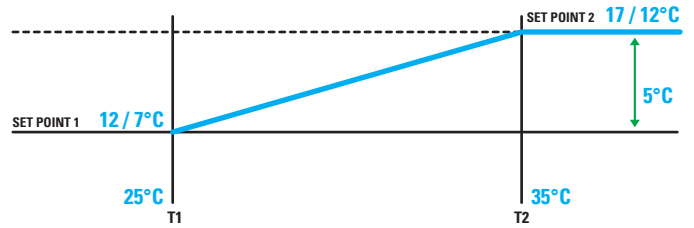
Blue Box units adopt all the required functioning set-ups and logics to minimise peak currents. The Soft-Starter accessory allows a further 40% reduction of normal current peaks, through an electronic control of the electric motor start-up.

COMPENSATION OF THE SET-POINT according to the external air temperature

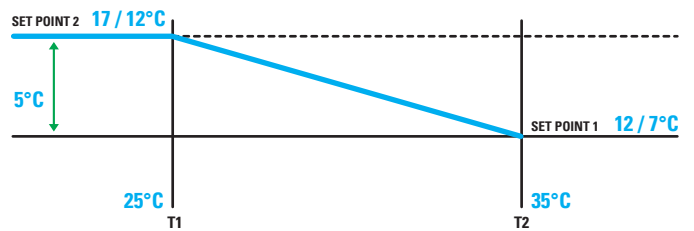
The unit microprocessor control can compensate the set point in a dynamic way, on variation of the external air temperature. The compensation can be positive or negative: with positive compensation, on increase of the air temperature the functioning set also increases. With negative compensation on increase of the air temperature the set decreases. Compensation can be made either on the summer set point or on the winter set point (heat pumps).

By default, both summer and winter negative compensation is set, but this configuration can be modified from the microprocessor keyboard. Unless otherwise specified, default values are indicated in the graphics below.

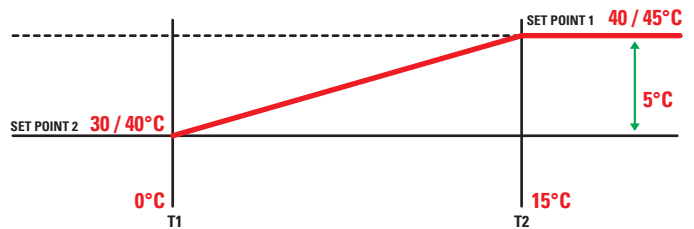
SUMMER COMPENSATION - POSITIVE



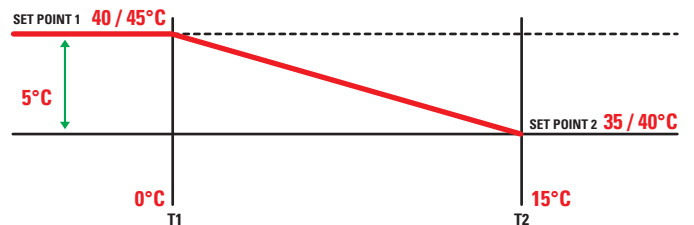
SUMMER COMPENSATION - NEGATIVE



WINTER COMPENSATION - POSITIVE



WINTER COMPENSATION - NEGATIVE



EPSILON ECHOS - TECHNICAL DATA

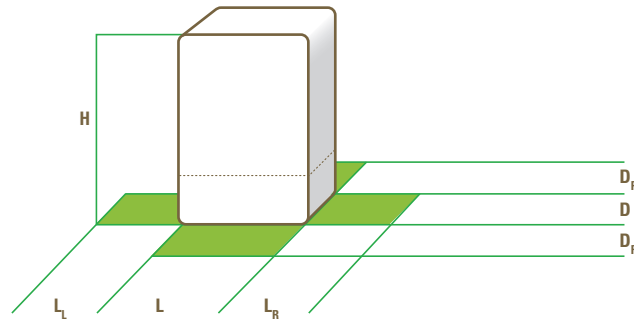
| UNIT SIZE | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|--------------------------------------|---------|-------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Cooling (Gross values) | | | | | | | | | | | | | | |
| Nominal cooling capacity | (1) | kW | 5,7 | 7,1 | 8,8 | 13,0 | 14,9 | 17,7 | 19,0 | 23,7 | 27,1 | 30,2 | 35,6 | 40,1 |
| Total power input for cooling | (1),(2) | kW | 2,1 | 2,8 | 3,5 | 4,6 | 5,6 | 6,5 | 6,2 | 8,3 | 9,6 | 10,7 | 12,1 | 13,6 |
| EER | (1) | | 2,76 | 2,54 | 2,48 | 2,81 | 2,66 | 2,73 | 3,09 | 2,85 | 2,84 | 2,83 | 2,94 | 2,94 |
| ESEER | | | 3,31 | 3,12 | 2,93 | 3,29 | 3,16 | 3,26 | 3,64 | 3,29 | 3,29 | 3,25 | 3,37 | 3,39 |
| Efficiency class | | | C | D | E | C | D | C | B | C | C | C | B | B |
| Cooling (EN 14511 values) | | | | | | | | | | | | | | |
| Nominal cooling capacity | (1),(8) | kW | 5,7 | 7,0 | 8,8 | 12,8 | 14,7 | 17,6 | 18,9 | 23,4 | 26,9 | 30,0 | 35,3 | 39,7 |
| EER | (1),(8) | | 2,73 | 2,51 | 2,46 | 2,70 | 2,56 | 2,64 | 3,00 | 2,75 | 2,75 | 2,75 | 2,85 | 2,85 |
| ESEER | (8) | | 3,11 | 2,93 | 2,75 | 2,96 | 2,84 | 2,93 | 3,21 | 2,96 | 2,96 | 2,93 | 3,04 | 3,02 |
| Efficiency class | | | C | D | E | D | D | D | B | C | C | C | C | C |
| Heating (Gross values) | | | | | | | | | | | | | | |
| Nominal heating capacity | (3) | kW | 6,5 | 8,0 | 10,0 | 14,1 | 16,4 | 19,5 | 20,5 | 26,3 | 30,5 | 33,5 | 38,1 | 43,6 |
| Total power input for heating | (2),(3) | kW | 2,3 | 2,8 | 3,5 | 4,7 | 5,5 | 6,4 | 6,4 | 8,0 | 9,2 | 10,6 | 11,9 | 13,5 |
| COP | (3) | | 2,81 | 2,86 | 2,88 | 3,03 | 2,97 | 3,04 | 3,19 | 3,26 | 3,33 | 3,17 | 3,21 | 3,24 |
| Efficiency class | | | C | C | C | B | C | B | B | A | A | B | A | A |
| Heating (EN 14511 values) | | | | | | | | | | | | | | |
| Nominal heating capacity | (3),(8) | kW | 6,5 | 8,1 | 10,1 | 14,2 | 16,6 | 19,7 | 20,7 | 26,5 | 30,7 | 33,8 | 38,4 | 43,9 |
| COP | (3),(8) | | 2,80 | 2,84 | 2,86 | 2,97 | 2,92 | 2,99 | 3,14 | 3,20 | 3,27 | 3,12 | 3,15 | 3,18 |
| Efficiency class | | | D | C | C | C | C | C | B | A | A | B | B | B |
| Compressors | | | | | | | | | | | | | | |
| Quantity/Refrigerant circuits | | n°/n° | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| Capacity steps | | % | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 |
| Fans | | | | | | | | | | | | | | |
| Quantity | | n° | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Air flow | | m ³ /h | 4.000 | 4.000 | 3.800 | 8.000 | 8.000 | 7.600 | 14.000 | 14.000 | 13.200 | 19.000 | 19.000 | 17.800 |
| Evaporator | | | | | | | | | | | | | | |
| Water flow rate | | l/h | 982 | 1.214 | 1.512 | 2.229 | 2.557 | 3.047 | 3.273 | 4.067 | 4.666 | 5.192 | 6.119 | 6.889 |
| Pressure drop | | kPa | 5 | 7 | 6 | 46 | 46 | 46 | 32 | 47 | 46 | 44 | 45 | 56 |
| Hydraulic module | | | | | | | | | | | | | | |
| Available pump pressure | | kPa | 55 | 51 | 50 | 44 | 42 | 40 | 153 | 108 | 93 | 76 | 135 | 104 |
| Storage tank capacity | | l | 70 | 70 | 70 | 70 | 70 | 70 | 140 | 140 | 140 | 140 | 140 | 140 |
| Sound level | | | | | | | | | | | | | | |
| Sound power value (standard unit) | (4) | dB(A) | 65 | 67 | 68 | 70 | 72 | 75 | 76 | 76 | 76 | 76 | 77 | 77 |
| Sound pressure value (standard unit) | (5) | dB(A) | 34 | 36 | 37 | 39 | 41 | 44 | 45 | 45 | 45 | 45 | 46 | 46 |
| Sound power value (SLN version) | (4) | dB(A) | 58 | 60 | 62 | 63 | 65 | 66 | 67 | 68 | 68 | 69 | 70 | - |
| Sound pressure value (SLN version) | (5) | dB(A) | 27 | 29 | 31 | 32 | 34 | 35 | 36 | 37 | 37 | 37 | 38 | - |

1) External air temperature 35°C; evaporator ingoing-outgoing water temperature 12-7°C
 2) The total capacity is represented by the sum of the power absorbed by compressors and that absorbed by fans
 3) External air temperature 7°C BS, 6°C BU; condenser ingoing-outgoing water temperature 40-45 °C
 4) Noise power levels measured according to ISO 3744, under nominal operating conditions

5) Sound pressure levels measured at 10 metres from the unit in free field under nominal operating conditions, according to ISO 3744
 6) Values according to EN 14511-3:2011

The values and pictures reported in the document are purely indicative and can be modified by the Manufacturer without any prior notice. For further information refer to the specific documentation. The reproduction, even partial, is strictly prohibited.

EPSILON ECHOS - TECHNICAL DATA



| BASIC VERSION E ST1P | | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|----------------------|------------------|-----|----|-----|----|----|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| L | Length | | mm | 925 | | | 925 | | | 1.105 | | | 1.305 | | |
| D | Depth | | mm | 375 | | | 375 | | | 505 | | | 505 | | |
| H | Height | | mm | 700 | | | 1.350 | | | 1.385 | | | 1.585 | | |
| W | Operating weight | (1) | kg | 74 | 82 | 89 | 118 | 135 | 147 | 178 | 190 | 224 | 324 | 326 | 337 |

| VERSION ST1PS | | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|---------------|------------------|-----|----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|
| L | Length | | mm | 925 | | | 925 | | | 1.105 | | | 1.305 | | |
| D | Depth | | mm | 375 | | | 375 | | | 505 | | | 505 | | |
| H | Height | | mm | 1.049 | | | 1.699 | | | 1.850 | | | 2.050 | | |
| W | Operating weight | (1) | kg | 123 | 131 | 138 | 183 | 200 | 212 | 312 | 318 | 332 | 417 | 424 | 435 |

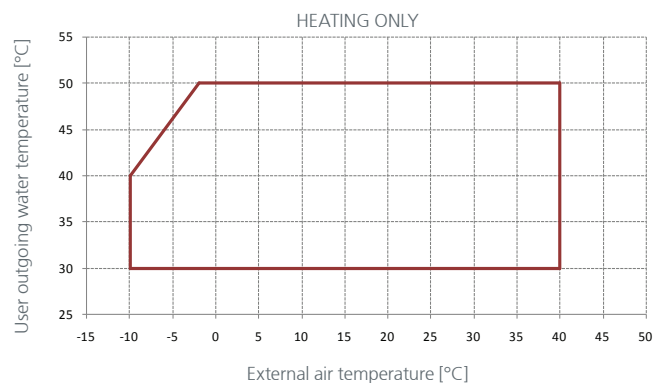
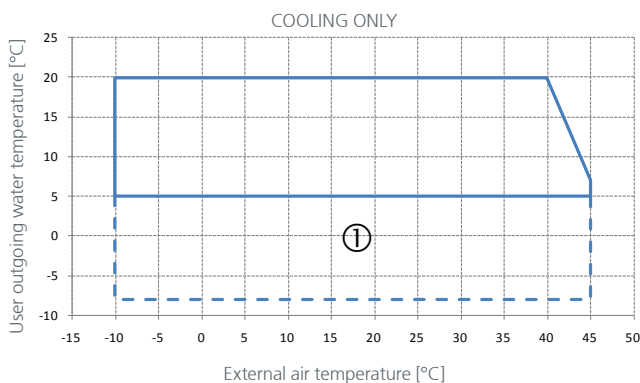
| VERSION SLN AND SLN/ST1P | | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | |
|--------------------------|------------------|-----|----|-----|----|-----|-------|-----|-----|-------|-----|-----|-------|-----|--|
| L | Length | | mm | 925 | | | 925 | | | 1.105 | | | 1.305 | | |
| D | Depth | | mm | 375 | | | 375 | | | 505 | | | 505 | | |
| H | Height | | mm | 700 | | | 1.350 | | | 1.385 | | | 1.585 | | |
| W | Operating weight | (1) | kg | 74 | 82 | 119 | 118 | 135 | 178 | 178 | 190 | 322 | 324 | 326 | |

| VERSION SLN/ST1PS | | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | |
|-------------------|------------------|-----|----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|--|
| L | Length | | mm | 925 | | | 925 | | | 1.105 | | | 1.305 | | |
| D | Depth | | mm | 375 | | | 375 | | | 505 | | | 505 | | |
| H | Height | | mm | 1.049 | | | 1.699 | | | 1.850 | | | 2.050 | | |
| W | Operating weight | (1) | kg | 123 | 131 | 182 | 183 | 200 | 310 | 306 | 298 | 415 | 417 | 424 | |

| CLEARANCE AREAS | | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|-----------------|------------|-----|----|-----|---|----|-----|----|----|-----|----|----|-----|----|----|
| LL | Left side | (2) | mm | 300 | | | 300 | | | 300 | | | 300 | | |
| LR | Right side | (2) | mm | 600 | | | 600 | | | 600 | | | 600 | | |
| DF | Front | (2) | mm | 900 | | | 900 | | | 900 | | | 900 | | |
| DR | Back | (2) | mm | 300 | | | 300 | | | 300 | | | 300 | | |

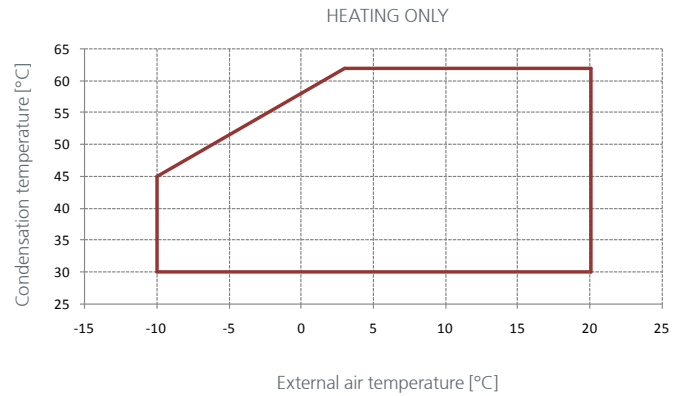
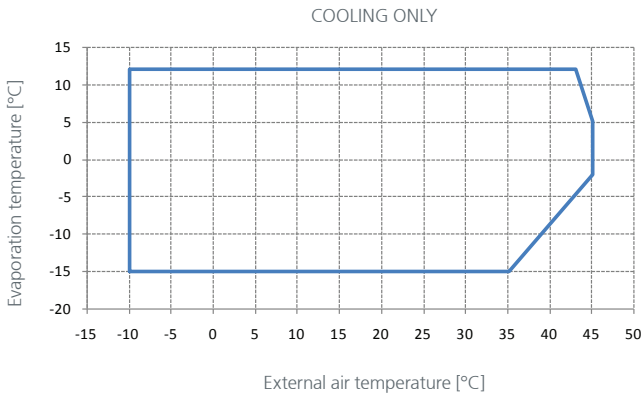
(1)The reported weight is only indicative and may be different depending on unit outfit

(2)The clearance areas are reported considering as front side the side with the fans



The heat exchanger on the user side must have a thermal expansion leap between 4°C and 7°C

Ⓛ the unit can operate within these values only with glycol/ water mixture on the evaporator side



EPSILON ECHOS - ELECTRICAL DATA

| BASIC VERSION | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|--|-----|----|------|------|-----|------|------|------|------|------|------|------|------|------|
| Maximum absorbed power | (1) | kW | 3.1 | 3.9 | 5.0 | 6.6 | 8.0 | 9.3 | 9.5 | 11.6 | 13.1 | 15.1 | 16.7 | 18.7 |
| Maximum absorbed current | (2) | A | 16.8 | 19.8 | 9.1 | 11.9 | 14.1 | 16.4 | 18.3 | 21.5 | 24.4 | 28.0 | 40.0 | 41.0 |
| Maximum input current | (3) | A | 61 | 82 | 67 | 67 | 68 | 74 | 76 | 99 | 99 | 101 | 163 | 165 |
| Maximum input current with soft-starter (option) | (3) | A | 3 | 49 | 40 | 40 | 41 | 44 | 45 | 59 | 59 | 60 | 97 | 99 |
| Additional electric resistance (optional) | (4) | kW | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 9.0 | 9.0 | 9.0 |

| VERSION ST1P OR ST1PS | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|--|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|
| Maximum absorbed power | (1) | kW | 3.3 | 4.1 | 5.2 | 6.8 | 8.2 | 9.5 | 10.0 | 12.1 | 13.6 | 15.6 | 17.6 | 19.6 |
| Maximum absorbed current | (2) | A | 17.7 | 20.7 | 10.0 | 13.1 | 15.3 | 17.6 | 21.1 | 24.3 | 27.2 | 30.8 | 42.6 | 43.6 |
| Maximum input current | (3) | A | 62 | 83 | 68 | 68 | 69 | 75 | 79 | 102 | 102 | 103 | 165 | 167 |
| Maximum input current with soft-starter (option) | (3) | A | 37 | 50 | 41 | 41 | 41 | 45 | 47 | 61 | 61 | 62 | 99 | 100 |
| Additional electric resistance (optional) | (4) | kW | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 9.0 | 9.0 | 9.0 |

| POWER SUPPLY | | | 6 | 8 | 10 | 14 | 16 | 18 | 21 | 25 | 28 | 31 | 37 | 41 |
|-----------------------|-----|------|------------|---|-----------|------------|----|----|----|----|----|----|----|----|
| Standard power supply | | V~Hz | 230/1~/50 | | | 400/3N~/50 | | | | | | | | |
| Optional power supply | (4) | V~Hz | 400/3N~/50 | | 230/1~/50 | | | | | | | | | |

All reported data refer to unit with standard power supply.

- (1)Electrical power that must be supplied by the mains to power the unit
- (2)Tripping current of unit internal breakers. This value is never exceeded and must be used to size the line and its protections (refer to the electric diagram supplied with the unit)
- (3)Maximum input current calculated considering the compressor start and the maximum current absorbed by all other devices

(4)To be requested when ordering

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EPSILON ECHOS - COOLING CAPACITY

| Model | To | EXTERNAL AIR TEMPERATURE [°C] | | | | | | | | | |
|-------|------|-------------------------------|-----|------|-----|------|-----|------|-----|------|-----|
| | [°C] | 25 | | 30 | | 35 | | 40 | | 45 | |
| | | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe |
| 6 | 5 | 6,1 | 1,4 | 5,8 | 1,6 | 5,5 | 1,9 | 5,1 | 2,1 | 4,9 | 2,3 |
| | 6 | 6,3 | 1,5 | 6,0 | 1,7 | 5,6 | 1,9 | 5,3 | 2,1 | 5,0 | 2,3 |
| | 7 | 6,5 | 1,5 | 6,1 | 1,7 | 5,8 | 1,9 | 5,4 | 2,1 | 5,2 | 2,3 |
| | 8 | 6,7 | 1,5 | 6,3 | 1,7 | 6,0 | 1,9 | 5,6 | 2,1 | - | - |
| | 9 | 6,9 | 1,5 | 6,5 | 1,7 | 6,1 | 1,9 | 5,7 | 2,1 | - | - |
| | 10 | 7,1 | 1,5 | 6,7 | 1,7 | 6,3 | 1,9 | 5,9 | 2,1 | - | - |
| | 13 | 7,7 | 1,5 | 7,3 | 1,7 | 6,9 | 1,9 | 6,4 | 2,2 | - | - |
| | 14 | 7,9 | 1,5 | 7,5 | 1,7 | 7,1 | 1,9 | 6,6 | 2,2 | - | - |
| | 15 | 8,1 | 1,5 | 7,7 | 1,7 | 7,2 | 1,9 | 6,8 | 2,2 | - | - |
| | 16 | 8,4 | 1,5 | 7,9 | 1,7 | 7,4 | 1,9 | 7,0 | 2,2 | - | - |
| 8 | 5 | 7,6 | 2,0 | 7,2 | 2,3 | 6,7 | 2,6 | 6,3 | 2,9 | 6,0 | 3,2 |
| | 6 | 7,8 | 2,0 | 7,4 | 2,3 | 6,9 | 2,6 | 6,4 | 3,0 | 6,1 | 3,2 |
| | 7 | 8,0 | 2,0 | 7,6 | 2,3 | 7,1 | 2,6 | 6,6 | 3,0 | 6,3 | 3,2 |
| | 8 | 8,3 | 2,0 | 7,8 | 2,3 | 7,3 | 2,6 | 6,8 | 3,0 | - | - |
| | 9 | 8,5 | 2,0 | 8,0 | 2,3 | 7,5 | 2,6 | 7,0 | 3,0 | - | - |
| | 10 | 8,7 | 2,0 | 8,2 | 2,3 | 7,7 | 2,6 | 7,2 | 3,0 | - | - |
| | 13 | 9,4 | 2,0 | 8,9 | 2,3 | 8,3 | 2,6 | 7,7 | 3,0 | - | - |
| | 14 | 9,7 | 2,0 | 9,1 | 2,3 | 8,5 | 2,6 | 7,9 | 3,0 | - | - |
| | 15 | 9,9 | 2,1 | 9,4 | 2,3 | 8,8 | 2,7 | 8,1 | 3,0 | - | - |
| | 16 | 10,2 | 2,1 | 9,6 | 2,4 | 9,0 | 2,7 | 8,3 | 3,0 | - | - |
| 10 | 5 | 9,4 | 2,7 | 8,8 | 3,0 | 8,2 | 3,3 | 7,7 | 3,7 | 7,3 | 3,9 |
| | 6 | 9,7 | 2,7 | 9,1 | 3,0 | 8,5 | 3,3 | 7,9 | 3,7 | 7,6 | 4,0 |
| | 7 | 10,1 | 2,7 | 9,4 | 3,0 | 8,8 | 3,3 | 8,2 | 3,7 | 7,8 | 4,0 |
| | 8 | 10,4 | 2,7 | 9,7 | 3,0 | 9,1 | 3,4 | 8,5 | 3,7 | - | - |
| | 9 | 10,7 | 2,7 | 10,1 | 3,0 | 9,4 | 3,4 | 8,8 | 3,8 | - | - |
| | 10 | 11,1 | 2,8 | 10,4 | 3,1 | 9,7 | 3,4 | 9,0 | 3,8 | - | - |
| | 13 | 12,2 | 2,8 | 11,4 | 3,1 | 10,7 | 3,5 | 10,0 | 3,9 | - | - |
| | 14 | 12,5 | 2,8 | 11,8 | 3,1 | 11,0 | 3,5 | 10,3 | 3,9 | - | - |
| | 15 | 12,9 | 2,8 | 12,1 | 3,1 | 11,4 | 3,5 | 10,6 | 3,9 | - | - |
| | 16 | 13,3 | 2,9 | 12,5 | 3,2 | 11,7 | 3,5 | 11,0 | 3,9 | - | - |
| 14 | 5 | 14,0 | 3,4 | 13,0 | 3,8 | 12,2 | 4,2 | 11,3 | 4,7 | 10,8 | 5,0 |
| | 6 | 14,4 | 3,4 | 13,5 | 3,8 | 12,6 | 4,2 | 11,7 | 4,7 | 11,2 | 5,0 |
| | 7 | 14,8 | 3,4 | 13,9 | 3,8 | 13,0 | 4,2 | 12,1 | 4,7 | 11,6 | 5,0 |
| | 8 | 15,3 | 3,4 | 14,3 | 3,8 | 13,4 | 4,2 | 12,5 | 4,7 | - | - |
| | 9 | 15,8 | 3,5 | 14,8 | 3,8 | 13,8 | 4,3 | 12,9 | 4,8 | - | - |
| | 10 | 16,3 | 3,5 | 15,2 | 3,9 | 14,3 | 4,3 | 13,3 | 4,8 | - | - |
| | 13 | 17,8 | 3,6 | 16,7 | 3,9 | 15,7 | 4,4 | 14,6 | 4,9 | - | - |
| | 14 | 18,3 | 3,6 | 17,2 | 4,0 | 16,1 | 4,4 | 15,1 | 4,9 | - | - |
| | 15 | 18,8 | 3,6 | 17,7 | 4,0 | 16,6 | 4,5 | 15,6 | 5,0 | - | - |
| | 16 | 19,4 | 3,6 | 18,3 | 4,0 | 17,2 | 4,5 | 17,2 | 4,5 | - | - |

Pf: cooling capacity [kW]
 Pe: electrical power absorbed by the compressors [kW]
 To: evaporator outgoing water temperature [°C]

EPSILON ECHOS - COOLING CAPACITY

| Model | To | EXTERNAL AIR TEMPERATURE [°C] | | | | | | | | | |
|-------|------|-------------------------------|------|------|------|------|------|------|-----|------|-----|
| | [°C] | 25 | | 30 | | 35 | | 40 | | 45 | |
| | | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe |
| 16 | 5 | 16,1 | 4,1 | 15,0 | 4,6 | 14,0 | 5,1 | 12,9 | 5,8 | 12,3 | 6,2 |
| | 6 | 16,6 | 4,2 | 15,5 | 4,6 | 14,4 | 5,2 | 13,4 | 5,8 | 12,8 | 6,2 |
| | 7 | 17,1 | 4,2 | 16,0 | 4,7 | 14,9 | 5,2 | 13,8 | 5,8 | 13,2 | 6,2 |
| | 8 | 17,7 | 4,2 | 16,5 | 4,7 | 15,4 | 5,2 | 14,3 | 5,9 | - | - |
| | 9 | 18,2 | 4,2 | 17,0 | 4,7 | 15,8 | 5,3 | 14,7 | 5,9 | - | - |
| | 10 | 18,8 | 4,3 | 17,5 | 4,8 | 16,3 | 5,3 | 15,2 | 5,9 | - | - |
| | 13 | 20,5 | 4,4 | 19,2 | 4,9 | 17,9 | 5,4 | 16,7 | 6,1 | - | - |
| | 14 | 21,1 | 4,4 | 19,8 | 4,9 | 18,5 | 5,5 | 17,2 | 6,1 | - | - |
| | 15 | 21,7 | 4,5 | 20,4 | 5,0 | 19,0 | 5,5 | 17,8 | 6,2 | - | - |
| | 16 | 22,3 | 4,5 | 21,0 | 5,0 | 19,6 | 5,6 | 19,6 | 5,6 | - | - |
| 18 | 5 | 19,2 | 4,8 | 17,9 | 5,4 | 16,6 | 6,0 | 15,4 | 6,7 | 14,7 | 7,2 |
| | 6 | 19,8 | 4,9 | 18,5 | 5,4 | 17,2 | 6,0 | 15,9 | 6,8 | 15,2 | 7,3 |
| | 7 | 20,4 | 4,9 | 19,1 | 5,4 | 17,7 | 6,1 | 16,4 | 6,8 | 15,7 | 7,3 |
| | 8 | 21,1 | 4,9 | 19,7 | 5,5 | 18,3 | 6,1 | 17,0 | 6,9 | - | - |
| | 9 | 21,7 | 5,0 | 20,3 | 5,5 | 18,9 | 6,2 | 17,5 | 6,9 | - | - |
| | 10 | 22,4 | 5,0 | 20,9 | 5,6 | 19,5 | 6,2 | 18,1 | 7,0 | - | - |
| | 13 | 24,4 | 5,1 | 22,9 | 5,7 | 21,3 | 6,4 | 19,9 | 7,1 | - | - |
| | 14 | 25,1 | 5,2 | 23,5 | 5,7 | 22,0 | 6,4 | 20,5 | 7,2 | - | - |
| | 15 | 25,8 | 5,2 | 24,2 | 5,8 | 22,7 | 6,5 | 21,1 | 7,2 | - | - |
| | 16 | 26,6 | 5,2 | 25,0 | 5,8 | 23,4 | 6,5 | 23,4 | 6,5 | - | - |
| 21 | 5 | 20,6 | 4,5 | 19,2 | 4,9 | 17,8 | 5,5 | 16,5 | 6,2 | 15,8 | 6,6 |
| | 6 | 21,3 | 4,5 | 19,8 | 5,0 | 18,4 | 5,5 | 17,1 | 6,2 | 16,3 | 6,6 |
| | 7 | 21,9 | 4,5 | 20,5 | 5,0 | 19,0 | 5,6 | 17,7 | 6,2 | 16,9 | 6,7 |
| | 8 | 22,6 | 4,5 | 21,1 | 5,0 | 19,7 | 5,6 | 18,3 | 6,2 | - | - |
| | 9 | 23,3 | 4,5 | 21,8 | 5,0 | 20,3 | 5,6 | 18,9 | 6,3 | - | - |
| | 10 | 24,1 | 4,6 | 22,5 | 5,1 | 21,0 | 5,6 | 19,5 | 6,3 | - | - |
| | 13 | 26,4 | 4,6 | 24,7 | 5,1 | 23,1 | 5,7 | 21,5 | 6,4 | - | - |
| | 14 | 27,2 | 4,7 | 25,5 | 5,2 | 23,9 | 5,8 | 22,3 | 6,4 | - | - |
| | 15 | 28,0 | 4,7 | 26,3 | 5,2 | 24,6 | 5,8 | 23,0 | 6,5 | - | - |
| | 16 | 22,0 | 6,9 | 22,0 | 6,9 | 22,0 | 6,9 | 22,0 | 6,9 | - | - |
| 25 | 5 | 24,9 | 6,2 | 23,6 | 6,9 | 22,3 | 7,6 | 21,1 | 8,5 | 20,4 | 9,0 |
| | 6 | 25,6 | 6,2 | 24,3 | 6,9 | 23,0 | 7,7 | 21,8 | 8,5 | 21,0 | 9,1 |
| | 7 | 26,3 | 6,2 | 25,0 | 6,9 | 23,7 | 7,7 | 22,4 | 8,6 | 21,6 | 9,2 |
| | 8 | 27,1 | 6,3 | 25,7 | 7,0 | 24,3 | 7,8 | 23,0 | 8,7 | - | - |
| | 9 | 27,9 | 6,3 | 26,4 | 7,0 | 25,0 | 7,8 | 23,7 | 8,7 | - | - |
| | 10 | 28,6 | 6,4 | 27,2 | 7,1 | 25,7 | 7,9 | 24,3 | 8,8 | - | - |
| | 13 | 31,1 | 6,5 | 29,5 | 7,2 | 27,9 | 8,1 | 26,4 | 9,0 | - | - |
| | 14 | 31,9 | 6,6 | 30,3 | 7,3 | 28,7 | 8,1 | 27,1 | 9,1 | - | - |
| | 15 | 32,8 | 6,6 | 31,2 | 7,4 | 29,5 | 8,2 | 27,9 | 9,1 | - | - |
| | 16 | 33,7 | 6,7 | 32,0 | 7,4 | 30,3 | 8,3 | 30,3 | 8,3 | - | - |
| 17 | 30,3 | 8,3 | 30,3 | 8,3 | 30,3 | 8,3 | 30,3 | 8,3 | - | - | |
| 18 | 30,3 | 8,3 | 30,3 | 8,3 | 30,3 | 8,3 | 30,3 | 8,3 | - | - | |

Pf: cooling capacity [kW]
 Pe: electrical power absorbed by the compressors [kW]
 To: evaporator outgoing water temperature [°C]

EPSILON ECHOS - COOLING CAPACITY

| Model | To | EXTERNAL AIR TEMPERATURE [°C] | | | | | | | | | |
|-------|------|-------------------------------|------|------|------|------|------|------|------|------|------|
| | [°C] | 25 | | 30 | | 35 | | 40 | | 45 | |
| | | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe |
| 28 | 5 | 28,5 | 7,2 | 27,1 | 7,9 | 25,6 | 8,8 | 24,3 | 9,8 | 23,4 | 10,5 |
| | 6 | 29,4 | 7,2 | 27,9 | 8,0 | 26,4 | 8,9 | 25,0 | 9,9 | 24,1 | 10,6 |
| | 7 | 30,2 | 7,2 | 28,7 | 8,0 | 27,1 | 9,0 | 25,7 | 10,0 | 24,8 | 10,7 |
| | 8 | 31,1 | 7,3 | 29,5 | 8,1 | 27,9 | 9,0 | 26,4 | 10,1 | - | - |
| | 9 | 31,9 | 7,3 | 30,3 | 8,2 | 28,7 | 9,1 | 27,1 | 10,1 | - | - |
| | 10 | 32,8 | 7,4 | 31,2 | 8,2 | 29,5 | 9,2 | 27,9 | 10,2 | - | - |
| | 13 | 35,6 | 7,6 | 33,8 | 8,4 | 32,0 | 9,4 | 30,2 | 10,5 | - | - |
| | 14 | 36,6 | 7,6 | 34,7 | 8,5 | 32,9 | 9,5 | 31,0 | 10,5 | - | - |
| | 15 | 37,6 | 7,7 | 35,7 | 8,6 | 33,8 | 9,5 | 31,9 | 10,6 | - | - |
| | 16 | 38,6 | 7,8 | 36,6 | 8,6 | 34,7 | 9,6 | 34,7 | 9,6 | - | - |
| 31 | 5 | 31,7 | 7,7 | 30,1 | 8,5 | 28,6 | 9,5 | 27,0 | 10,5 | 26,1 | 11,2 |
| | 6 | 32,7 | 7,7 | 31,0 | 8,5 | 29,4 | 9,5 | 27,8 | 10,6 | 26,9 | 11,3 |
| | 7 | 33,6 | 7,7 | 31,9 | 8,6 | 30,3 | 9,6 | 28,6 | 10,7 | 27,6 | 11,4 |
| | 8 | 34,6 | 7,8 | 32,9 | 8,6 | 31,1 | 9,6 | 29,4 | 10,7 | - | - |
| | 9 | 35,6 | 7,8 | 33,8 | 8,7 | 32,0 | 9,7 | 30,3 | 10,8 | - | - |
| | 10 | 36,6 | 7,9 | 34,8 | 8,8 | 32,9 | 9,8 | 31,1 | 10,9 | - | - |
| | 13 | 39,8 | 8,0 | 37,8 | 9,0 | 35,8 | 10,0 | 33,8 | 11,1 | - | - |
| | 14 | 40,9 | 8,1 | 38,8 | 9,0 | 36,8 | 10,1 | 34,7 | 11,2 | - | - |
| | 15 | 42,0 | 8,2 | 39,9 | 9,1 | 37,8 | 10,1 | 35,7 | 11,3 | - | - |
| | 16 | 43,2 | 8,2 | 41,0 | 9,2 | 38,8 | 10,2 | 38,8 | 10,2 | - | - |
| 37 | 5 | 37,8 | 8,9 | 35,8 | 9,8 | 33,6 | 10,8 | 31,3 | 12,0 | 29,8 | 12,8 |
| | 6 | 38,9 | 9,0 | 36,9 | 9,9 | 34,6 | 10,9 | 32,3 | 12,1 | 30,7 | 12,9 |
| | 7 | 40,1 | 9,1 | 38,0 | 10,0 | 35,7 | 11,0 | 33,2 | 12,2 | 31,6 | 13,0 |
| | 8 | 41,3 | 9,1 | 39,1 | 10,1 | 36,7 | 11,1 | 34,2 | 12,3 | - | - |
| | 9 | 42,4 | 9,2 | 40,2 | 10,1 | 37,8 | 11,2 | 35,2 | 12,4 | - | - |
| | 10 | 43,6 | 9,3 | 41,3 | 10,2 | 38,8 | 11,3 | 36,2 | 12,5 | - | - |
| | 13 | 47,3 | 9,6 | 44,8 | 10,5 | 42,2 | 11,6 | 39,3 | 12,8 | - | - |
| | 14 | 48,6 | 9,7 | 46,1 | 10,6 | 43,3 | 11,7 | 40,3 | 12,9 | - | - |
| | 15 | 49,9 | 9,8 | 47,3 | 10,7 | 44,5 | 11,8 | 41,4 | 13,0 | - | - |
| | 16 | 51,2 | 9,9 | 48,5 | 10,8 | 45,6 | 11,9 | 42,5 | 13,1 | - | - |
| 41 | 5 | 42,6 | 10,1 | 40,3 | 11,2 | 37,8 | 12,4 | 35,2 | 13,7 | 33,5 | 14,6 |
| | 6 | 43,9 | 10,2 | 41,5 | 11,3 | 39,0 | 12,4 | 36,3 | 13,8 | 34,7 | 14,7 |
| | 7 | 45,2 | 10,3 | 42,8 | 11,3 | 40,2 | 12,5 | 37,4 | 13,9 | 35,7 | 14,8 |
| | 8 | 46,5 | 10,3 | 44,0 | 11,4 | 41,4 | 12,6 | 38,6 | 14,0 | - | - |
| | 9 | 47,9 | 10,4 | 45,3 | 11,5 | 42,6 | 12,7 | 39,7 | 14,1 | - | - |
| | 10 | 49,3 | 10,5 | 46,6 | 11,6 | 43,8 | 12,8 | 40,9 | 14,2 | - | - |
| | 13 | 53,5 | 10,8 | 50,7 | 11,9 | 47,7 | 13,1 | 44,5 | 14,5 | - | - |
| | 14 | 54,9 | 10,9 | 52,1 | 12,0 | 49,0 | 13,2 | 45,7 | 14,6 | - | - |
| | 15 | 56,4 | 11,0 | 53,5 | 12,1 | 50,3 | 13,3 | 47,0 | 14,7 | - | - |
| | 16 | 57,9 | 11,1 | 54,9 | 12,2 | 51,7 | 13,4 | 48,3 | 14,8 | - | - |
| 17 | 59,5 | 11,2 | 56,4 | 12,3 | 53,1 | 13,5 | 49,6 | 15,0 | - | - | |
| 18 | 61,0 | 11,3 | 57,8 | 12,4 | 54,5 | 13,7 | 50,9 | 15,1 | - | - | |

Pf: cooling capacity [kW]
 Pe: electrical power absorbed by the compressors [kW]
 To: evaporator outgoing water temperature [°C]

EPSILON ECHOS /HP - HEATING CAPACITY

| Model | CONDENSER INGOING/ OUTGOING WATER TEMPERATURE [°C] | | | | | | | | | |
|-------|--|---------|-------|-----|-------|-----|-------|-----|-------|-----|
| | Ta [°C] | RH % | 30/35 | | 35/40 | | 40/45 | | 45/50 | |
| | | | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe |
| 6 | -10 | 95 | 4,5 | 1,7 | 4,6 | 2,0 | -- | -- | -- | -- |
| | -5 | 90 | 5,0 | 1,7 | 5,1 | 1,9 | 5,2 | 2,2 | -- | -- |
| | 0 | 90 | 5,6 | 1,7 | 5,7 | 1,9 | 5,7 | 2,2 | 5,8 | 2,5 |
| | 5 | 80 | 6,2 | 1,6 | 6,2 | 1,9 | 6,2 | 2,1 | 6,3 | 2,4 |
| | 8 | 70 | 6,5 | 1,6 | 6,5 | 1,9 | 6,5 | 2,1 | 6,5 | 2,4 |
| | 10 | 70 | 6,7 | 1,6 | 6,7 | 1,9 | 6,7 | 2,1 | 6,8 | 2,4 |
| 8 | -10 | 95 | 5,6 | 2,1 | 5,7 | 2,4 | -- | -- | -- | -- |
| | -5 | 90 | 6,2 | 2,1 | 6,3 | 2,4 | 6,4 | 2,7 | -- | -- |
| | 0 | 90 | 6,9 | 2,0 | 7,0 | 2,3 | 7,1 | 2,7 | 7,2 | 3,1 |
| | 5 | 80 | 7,6 | 2,0 | 7,6 | 2,3 | 7,7 | 2,6 | 7,8 | 3,0 |
| | 8 | 70 | 8,0 | 2,0 | 8,0 | 2,3 | 8,0 | 2,6 | 8,1 | 3,0 |
| | 10 | 70 | 8,3 | 2,0 | 8,3 | 2,3 | 8,3 | 2,6 | 8,4 | 3,0 |
| 10 | -10 | 95 | 7,0 | 1,6 | 7,0 | 2,9 | -- | -- | -- | -- |
| | -5 | 90 | 7,8 | 2,6 | 7,8 | 2,9 | 7,9 | 3,3 | -- | -- |
| | 0 | 90 | 8,8 | 2,6 | 8,8 | 2,9 | 8,7 | 3,3 | 8,8 | 3,7 |
| | 5 | 80 | 9,7 | 2,7 | 9,6 | 3,0 | 9,6 | 3,3 | 9,6 | 3,7 |
| | 8 | 70 | 10,2 | 2,7 | 10,1 | 3,0 | 10,0 | 3,3 | 10,1 | 3,7 |
| | 10 | 70 | 10,6 | 2,7 | 10,5 | 3,0 | 10,4 | 3,3 | 10,5 | 3,7 |
| 14 | -10 | 95 | 10,0 | 3,4 | 9,9 | 3,7 | -- | -- | -- | -- |
| | -5 | 90 | 11,2 | 3,4 | 11,1 | 3,8 | 11,1 | 4,2 | -- | -- |
| | 0 | 90 | 12,5 | 3,4 | 12,4 | 3,8 | 12,3 | 4,2 | 12,3 | 4,8 |
| | 5 | 80 | 13,8 | 3,4 | 13,6 | 3,8 | 13,5 | 4,3 | 13,4 | 4,8 |
| | 8 | 70 | 14,5 | 3,4 | 14,3 | 3,8 | 14,1 | 4,3 | 14,0 | 4,8 |
| | 10 | 70 | 15,1 | 3,4 | 14,8 | 3,8 | 14,7 | 4,3 | 14,6 | 4,8 |
| 16 | -10 | 95 | 11,7 | 4,0 | 11,6 | 4,5 | -- | -- | -- | -- |
| | -5 | 90 | 13,0 | 4,0 | 12,9 | 4,5 | 13,0 | 5,1 | -- | -- |
| | 0 | 90 | 14,6 | 4,0 | 14,4 | 4,5 | 14,3 | 5,1 | 14,4 | 5,8 |
| | 5 | 80 | 16,0 | 4,1 | 15,8 | 4,6 | 15,7 | 5,1 | 15,7 | 5,8 |
| | 8 | 70 | 16,8 | 4,1 | 16,6 | 4,6 | 16,4 | 5,1 | 16,4 | 5,8 |
| | 10 | 70 | 17,5 | 4,1 | 17,2 | 4,6 | 17,1 | 5,1 | 17,0 | 5,8 |
| 18 | -10 | 95 | 13,9 | 4,7 | 13,7 | 5,3 | -- | -- | -- | -- |
| | -5 | 90 | 15,5 | 4,7 | 15,3 | 5,3 | 15,3 | 6,0 | -- | -- |
| | 0 | 90 | 17,4 | 4,8 | 17,1 | 5,3 | 17,0 | 6,0 | 17,0 | 6,8 |
| | 5 | 80 | 19,1 | 4,8 | 18,8 | 5,3 | 18,6 | 6,0 | 18,6 | 6,8 |
| | 8 | 70 | 20,1 | 4,8 | 19,7 | 5,4 | 19,5 | 6,0 | 19,4 | 6,8 |
| | 10 | 70 | 20,9 | 4,8 | 20,5 | 5,4 | 20,3 | 6,0 | 20,2 | 6,8 |

Pt: heating capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Ta: dry bulb evaporator intake air temperature[°C]

RH : evaporator intake air relative humidity [%]

EPSILON ECHOS /HP - HEATING CAPACITY

| Model | CONDENSER INGOING/ OUTGOING WATER TEMPERATURE [°C] | | | | | | | | | |
|-------|--|---------|-------|------|-------|------|-------|------|-------|------|
| | Ta [°C] | RH % | 30/35 | | 35/40 | | 40/45 | | 45/50 | |
| | | | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe |
| 21 | -10 | 95 | 14,7 | 4,6 | 14,4 | 5,2 | -- | -- | -- | -- |
| | -5 | 90 | 16,4 | 4,6 | 16,0 | 5,2 | 15,9 | 5,8 | -- | -- |
| | 0 | 90 | 18,4 | 4,6 | 18,0 | 5,2 | 17,7 | 5,8 | 17,6 | 6,6 |
| | 5 | 80 | 20,4 | 4,6 | 19,9 | 5,2 | 19,5 | 5,8 | 19,3 | 6,6 |
| | 8 | 70 | 21,4 | 4,7 | 20,9 | 5,2 | 20,5 | 5,8 | 20,3 | 6,6 |
| 25 | -10 | 95 | 19,2 | 6,9 | 19,0 | 7,1 | -- | -- | -- | -- |
| | -5 | 90 | 21,4 | 6,6 | 21,2 | 7,0 | 21,1 | 7,4 | -- | -- |
| | 0 | 90 | 23,4 | 6,4 | 23,2 | 6,9 | 23,1 | 7,4 | 23,2 | 8,1 |
| | 5 | 80 | 25,4 | 6,2 | 25,2 | 6,8 | 25,2 | 7,4 | 25,2 | 8,2 |
| | 8 | 70 | 26,6 | 6,2 | 26,4 | 6,8 | 26,3 | 7,4 | 26,3 | 8,2 |
| 28 | -10 | 95 | 22,3 | 7,9 | 22,0 | 8,2 | -- | -- | -- | -- |
| | -5 | 90 | 24,8 | 7,6 | 24,5 | 8,0 | 24,4 | 8,6 | -- | -- |
| | 0 | 90 | 27,2 | 7,3 | 27,0 | 7,9 | 26,8 | 8,5 | 26,8 | 9,3 |
| | 5 | 80 | 29,6 | 7,2 | 29,3 | 7,8 | 29,2 | 8,6 | 29,2 | 9,4 |
| | 8 | 70 | 30,9 | 7,1 | 30,6 | 7,8 | 30,5 | 8,6 | 30,5 | 9,5 |
| 31 | -10 | 95 | 24,5 | 8,7 | 24,2 | 9,0 | -- | -- | -- | -- |
| | -5 | 90 | 27,3 | 8,4 | 27,0 | 8,9 | 26,9 | 9,5 | -- | -- |
| | 0 | 90 | 29,9 | 8,1 | 29,6 | 8,7 | 29,5 | 9,4 | 29,6 | 10,3 |
| | 5 | 80 | 32,5 | 7,9 | 32,2 | 8,6 | 32,2 | 9,4 | 32,2 | 10,4 |
| | 8 | 70 | 34,0 | 7,8 | 33,7 | 8,6 | 33,5 | 9,5 | 33,5 | 10,5 |
| 37 | -10 | 95 | 26,2 | 8,5 | 26,3 | 9,5 | -- | -- | -- | -- |
| | -5 | 90 | 29,4 | 8,6 | 29,4 | 9,6 | 29,4 | 10,7 | -- | -- |
| | 0 | 90 | 33,2 | 8,6 | 33,1 | 9,6 | 32,9 | 10,7 | 32,8 | 12,0 |
| | 5 | 80 | 36,9 | 8,7 | 36,6 | 9,7 | 36,3 | 10,8 | 36,0 | 12,1 |
| | 8 | 70 | 38,9 | 8,8 | 38,5 | 9,7 | 38,1 | 10,8 | 37,7 | 12,1 |
| 41 | -10 | 95 | 29,9 | 10,1 | 29,9 | 11,2 | -- | -- | -- | -- |
| | -5 | 90 | 33,7 | 10,0 | 33,5 | 11,2 | 33,4 | 12,4 | -- | -- |
| | 0 | 90 | 38,2 | 10,0 | 37,8 | 11,1 | 37,4 | 12,4 | 37,2 | 13,8 |
| | 5 | 80 | 42,3 | 10,0 | 41,8 | 11,1 | 41,4 | 12,4 | 41,0 | 13,8 |
| | 8 | 70 | 44,7 | 10,0 | 44,1 | 11,1 | 43,6 | 12,4 | 43,0 | 13,8 |
| | 10 | 70 | 46,6 | 10,0 | 46,0 | 11,1 | 45,4 | 12,4 | 44,8 | 13,8 |

Pt: heating capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Ta: dry bulb evaporator intake air temperature[°C]

RH : evaporator intake air relative humidity [

EPSILON ECHOS /LE - COOLING CAPACITY

| Model | To | EXTERNAL AIR TEMPERATURE [°C] | | | | | | | | | |
|-------|------|-------------------------------|-----|------|-----|------|-----|------|-----|------|-----|
| | [°C] | 25 | | 30 | | 35 | | 40 | | 45 | |
| | | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe |
| 6 | 0 | 5,8 | 1,4 | 5,5 | 1,6 | 5,1 | 1,9 | 4,7 | 2,1 | 4,3 | 2,4 |
| | 2,5 | 6,3 | 1,5 | 5,9 | 1,6 | 5,5 | 1,9 | 5,1 | 2,1 | 4,7 | 2,4 |
| | 5 | 6,8 | 1,5 | 6,4 | 1,7 | 6,0 | 1,9 | 5,6 | 2,1 | 5,1 | 2,4 |
| | 7,5 | 7,4 | 1,5 | 7,0 | 1,7 | 6,5 | 1,9 | 6,0 | 2,1 | -- | -- |
| | 10 | 8,0 | 1,5 | 7,5 | 1,7 | 7,0 | 1,9 | 6,5 | 2,2 | -- | -- |
| 8 | 0 | 7,2 | 2,0 | 6,8 | 2,2 | 6,3 | 2,6 | 5,8 | 2,9 | 5,3 | 3,3 |
| | 2,5 | 7,8 | 2,0 | 7,4 | 2,3 | 6,8 | 2,6 | 6,3 | 2,9 | 5,7 | 3,4 |
| | 5 | 8,5 | 2,0 | 8,0 | 2,3 | 7,4 | 2,6 | 6,8 | 3,0 | 6,2 | 3,4 |
| | 7,5 | 9,1 | 2,0 | 8,6 | 2,3 | 8,0 | 2,6 | 7,4 | 3,0 | -- | -- |
| | 10 | 9,8 | 2,1 | 9,2 | 2,3 | 8,6 | 2,7 | 8,0 | 3,0 | -- | -- |
| 10 | 0 | 9,0 | 2,7 | 8,3 | 3,0 | 7,7 | 3,3 | 7,2 | 3,7 | 6,6 | 4,1 |
| | 2,5 | 9,8 | 2,7 | 9,1 | 3,0 | 8,5 | 3,3 | 7,8 | 3,7 | 7,2 | 4,2 |
| | 5 | 10,7 | 2,8 | 10,0 | 3,1 | 9,2 | 3,4 | 8,5 | 3,8 | 7,9 | 4,2 |
| | 7,5 | 11,7 | 2,8 | 10,9 | 3,1 | 10,1 | 3,4 | 9,3 | 3,8 | -- | -- |
| | 10 | 12,7 | 2,8 | 11,8 | 3,2 | 11,0 | 3,5 | 10,2 | 3,9 | -- | -- |
| 14 | 0 | 13,4 | 3,4 | 12,4 | 3,7 | 11,5 | 4,1 | 10,6 | 4,6 | 9,8 | 5,1 |
| | 2,5 | 14,6 | 3,4 | 13,5 | 3,8 | 12,5 | 4,2 | 11,6 | 4,7 | 10,7 | 5,2 |
| | 5 | 15,8 | 3,5 | 14,7 | 3,8 | 13,6 | 4,3 | 12,6 | 4,7 | 11,7 | 5,3 |
| | 7,5 | 17,1 | 3,5 | 16,0 | 3,9 | 14,9 | 4,3 | 13,8 | 4,8 | -- | -- |
| | 10 | 18,6 | 3,6 | 17,3 | 4,0 | 16,2 | 4,4 | 15,0 | 4,9 | -- | -- |
| 16 | 0 | 15,5 | 4,1 | 14,3 | 4,5 | 13,2 | 5,1 | 12,1 | 5,7 | 11,1 | 6,4 |
| | 2,5 | 16,8 | 4,2 | 15,6 | 4,6 | 14,4 | 5,2 | 13,2 | 5,8 | 12,1 | 6,5 |
| | 5 | 18,2 | 4,2 | 16,9 | 4,7 | 15,6 | 5,3 | 14,4 | 5,9 | 13,2 | 6,6 |
| | 7,5 | 19,7 | 4,3 | 18,4 | 4,8 | 17,0 | 5,4 | 15,7 | 6,0 | -- | -- |
| | 10 | 21,4 | 4,4 | 19,9 | 4,9 | 18,5 | 5,5 | 17,1 | 6,1 | -- | -- |
| 18 | 0 | 18,5 | 4,8 | 17,1 | 5,3 | 15,7 | 5,9 | 14,4 | 6,7 | 13,2 | 7,5 |
| | 2,5 | 20,0 | 4,9 | 18,6 | 5,4 | 17,1 | 6,0 | 15,8 | 6,8 | 14,4 | 7,6 |
| | 5 | 21,7 | 5,0 | 20,2 | 5,5 | 18,6 | 6,1 | 17,2 | 6,9 | 15,8 | 7,7 |
| | 7,5 | 23,5 | 5,1 | 21,9 | 5,6 | 20,3 | 6,3 | 18,7 | 7,0 | -- | -- |
| | 10 | 25,5 | 5,2 | 23,7 | 5,7 | 22,0 | 6,4 | 20,3 | 7,2 | -- | -- |

Pf: cooling capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

To: evaporator outgoing water temperature [°C]

EPSILON ECHOS /LE - COOLING CAPACITY

| Model | To | EXTERNAL AIR TEMPERATURE [°C] | | | | | | | | | |
|-------|------|-------------------------------|------|------|------|------|------|------|------|------|------|
| | [°C] | 25 | | 30 | | 35 | | 40 | | 45 | |
| | | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe | Pf | Pe |
| 21 | 0 | 19,4 | 4,4 | 17,9 | 4,9 | 16,5 | 5,5 | 15,2 | 6,1 | 13,9 | 6,9 |
| | 2,5 | 21,1 | 4,5 | 19,5 | 4,9 | 18,0 | 5,5 | 16,6 | 6,2 | 15,3 | 6,9 |
| | 5 | 22,9 | 4,5 | 21,3 | 5,0 | 19,7 | 5,6 | 18,2 | 6,2 | 16,7 | 7,0 |
| | 7,5 | 24,9 | 4,6 | 23,2 | 5,1 | 21,5 | 5,7 | 19,9 | 6,3 | -- | -- |
| 25 | 10 | 27,0 | 4,6 | 25,2 | 5,1 | 23,4 | 5,7 | 21,7 | 6,4 | -- | -- |
| | 0 | 23,9 | 6,2 | 22,5 | 6,8 | 21,3 | 7,5 | 20,0 | 8,4 | 18,9 | 9,3 |
| | 2,5 | 25,8 | 6,2 | 24,3 | 6,9 | 22,9 | 7,7 | 21,6 | 8,5 | 20,3 | 9,5 |
| | 5 | 27,8 | 6,3 | 26,2 | 7,0 | 24,7 | 7,8 | 23,3 | 8,7 | 21,8 | 9,7 |
| 28 | 7,5 | 29,9 | 6,4 | 28,3 | 7,2 | 26,6 | 8,0 | 25,0 | 8,9 | -- | -- |
| | 10 | 32,2 | 6,6 | 30,4 | 7,3 | 28,6 | 8,1 | 26,9 | 9,0 | -- | -- |
| | 0 | 27,4 | 7,1 | 25,9 | 7,9 | 24,4 | 8,7 | 23,0 | 9,7 | 21,6 | 10,8 |
| | 2,5 | 29,6 | 7,2 | 27,9 | 8,0 | 26,3 | 8,9 | 24,8 | 9,9 | 23,3 | 11,0 |
| 31 | 5 | 31,9 | 7,3 | 30,1 | 8,1 | 28,4 | 9,1 | 26,7 | 10,1 | 25,0 | 11,3 |
| | 7,5 | 34,3 | 7,5 | 32,4 | 8,3 | 30,5 | 9,3 | 28,7 | 10,3 | -- | -- |
| | 10 | 36,9 | 7,7 | 34,8 | 8,5 | 32,8 | 9,5 | 30,8 | 10,5 | -- | -- |
| | 0 | 30,4 | 7,7 | 28,7 | 8,4 | 27,1 | 9,4 | 25,6 | 10,4 | 24,1 | 11,6 |
| 37 | 2,5 | 32,9 | 7,7 | 31,1 | 8,6 | 29,3 | 9,5 | 27,6 | 10,6 | 25,9 | 11,8 |
| | 5 | 35,5 | 7,8 | 33,5 | 8,7 | 31,6 | 9,7 | 29,7 | 10,8 | 27,9 | 12,0 |
| | 7,5 | 38,3 | 8,0 | 36,1 | 8,8 | 34,1 | 9,9 | 32,0 | 11,0 | -- | -- |
| | 10 | 41,2 | 8,1 | 38,9 | 9,0 | 36,7 | 10,0 | 34,4 | 11,2 | -- | -- |
| 41 | 0 | 36,2 | 8,8 | 34,1 | 9,7 | 31,9 | 10,7 | 29,4 | 11,9 | 26,9 | 13,2 |
| | 2,5 | 39,2 | 9,0 | 36,9 | 9,9 | 34,5 | 10,9 | 31,9 | 12,1 | 29,2 | 13,4 |
| | 5 | 42,3 | 9,2 | 39,9 | 10,1 | 37,3 | 11,2 | 34,5 | 12,3 | 31,5 | 13,7 |
| | 7,5 | 45,6 | 9,5 | 43,0 | 10,4 | 40,2 | 11,4 | 37,2 | 12,6 | -- | -- |
| 41 | 10 | 49,0 | 9,7 | 46,2 | 10,6 | 43,2 | 11,7 | 40,0 | 12,9 | -- | -- |
| | 0 | 40,8 | 10,0 | 38,3 | 11,1 | 35,7 | 12,2 | 33,0 | 13,6 | 30,2 | 15,1 |
| | 2,5 | 44,2 | 10,2 | 41,6 | 11,3 | 38,8 | 12,4 | 35,9 | 13,8 | 32,8 | 15,3 |
| | 5 | 47,7 | 10,4 | 45,0 | 11,5 | 42,0 | 12,7 | 38,9 | 14,0 | 35,6 | 15,5 |
| 41 | 7,5 | 51,5 | 10,7 | 48,5 | 11,7 | 45,4 | 12,9 | 42,0 | 14,3 | -- | -- |
| | 10 | 55,4 | 10,9 | 52,2 | 12,0 | 48,8 | 13,2 | 45,3 | 14,6 | -- | -- |

Pf: cooling capacity [kW]
 Pe: electrical power absorbed by the compressors [kW]
 To: evaporator outgoing water temperature [°C]

EPSILON ECHOS /LE /HP - HEATING CAPACITY

| Model | CONDENSATION TEMPERATURE [°C] | | | | | | | | | | | |
|-------|-------------------------------|---------|------|-----|------|-----|------|-----|------|-----|------|-----|
| | Ta [°C] | RH % | 40 | | 45 | | 50 | | 55 | | 60 | |
| | | | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe |
| 6 | -10 | 95 | 4,5 | 1,8 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 5,0 | 1,8 | 5,1 | 2,0 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 5,6 | 1,7 | 5,7 | 2,0 | 5,7 | 2,2 | -- | -- | -- | -- |
| | 5 | 80 | 6,2 | 1,7 | 6,2 | 1,9 | 6,2 | 2,2 | 6,3 | 2,5 | -- | -- |
| | 8 | 70 | 6,5 | 1,7 | 6,5 | 1,9 | 6,5 | 2,2 | 6,5 | 2,5 | 6,6 | 2,8 |
| | 10 | 70 | 6,7 | 1,7 | 6,7 | 1,9 | 6,7 | 2,2 | 6,8 | 2,4 | 6,8 | 2,8 |
| 8 | -10 | 95 | 5,6 | 2,2 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 6,2 | 2,2 | 6,3 | 2,5 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 6,9 | 2,1 | 7,0 | 2,4 | 7,1 | 2,8 | -- | -- | -- | -- |
| | 5 | 80 | 7,6 | 2,1 | 7,6 | 2,4 | 7,7 | 2,7 | 7,8 | 3,1 | -- | -- |
| | 8 | 70 | 8,0 | 2,0 | 8,0 | 2,3 | 8,0 | 2,7 | 8,1 | 3,1 | 8,1 | 3,5 |
| | 10 | 70 | 8,3 | 2,0 | 8,3 | 2,3 | 8,3 | 2,7 | 8,4 | 3,0 | 8,4 | 3,5 |
| 10 | -10 | 95 | 7,0 | 2,7 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 7,8 | 2,7 | 7,8 | 3,0 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 8,8 | 2,7 | 8,7 | 3,0 | 8,7 | 3,4 | -- | -- | -- | -- |
| | 5 | 80 | 9,6 | 2,7 | 9,6 | 3,0 | 9,6 | 3,4 | 9,6 | 3,8 | -- | -- |
| | 8 | 70 | 10,1 | 2,7 | 10,0 | 3,0 | 10,0 | 3,4 | 10,1 | 3,8 | 10,1 | 4,2 |
| | 10 | 70 | 10,6 | 2,7 | 10,5 | 3,0 | 10,4 | 3,4 | 10,4 | 3,8 | 10,5 | 4,2 |
| 14 | -10 | 95 | 9,9 | 3,5 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 11,1 | 3,5 | 11,1 | 3,9 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 12,5 | 3,5 | 12,3 | 3,9 | 12,3 | 4,4 | -- | -- | -- | -- |
| | 5 | 80 | 13,7 | 3,5 | 13,6 | 3,9 | 13,5 | 4,4 | 13,4 | 4,9 | -- | -- |
| | 8 | 70 | 14,5 | 3,5 | 14,2 | 3,9 | 14,1 | 4,4 | 14,0 | 4,9 | 14,0 | 5,5 |
| | 10 | 70 | 15,1 | 3,5 | 14,8 | 3,9 | 14,6 | 4,3 | 14,6 | 4,9 | 14,6 | 5,5 |
| 16 | -10 | 95 | 11,6 | 4,2 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 13,0 | 4,2 | 12,9 | 4,7 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 14,5 | 4,2 | 14,4 | 4,7 | 14,3 | 5,3 | -- | -- | -- | -- |
| | 5 | 80 | 16,0 | 4,2 | 15,8 | 4,7 | 15,7 | 5,3 | 15,7 | 5,9 | -- | -- |
| | 8 | 70 | 16,8 | 4,2 | 16,5 | 4,7 | 16,4 | 5,2 | 16,4 | 5,9 | 16,4 | 6,7 |
| | 10 | 70 | 17,5 | 4,1 | 17,2 | 4,7 | 17,0 | 5,2 | 17,0 | 5,9 | 17,0 | 6,7 |
| 18 | -10 | 95 | 13,8 | 4,9 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 15,4 | 4,9 | 15,3 | 5,5 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 17,3 | 4,9 | 17,1 | 5,5 | 17,0 | 6,2 | -- | -- | -- | -- |
| | 5 | 80 | 19,0 | 4,9 | 18,7 | 5,5 | 18,6 | 6,2 | 18,6 | 7,0 | -- | -- |
| | 8 | 70 | 20,0 | 4,9 | 19,7 | 5,5 | 19,5 | 6,2 | 19,4 | 6,9 | 19,4 | 7,8 |
| | 10 | 70 | 20,8 | 4,9 | 20,5 | 5,5 | 20,3 | 6,1 | 20,2 | 6,9 | 20,2 | 7,8 |

Pt: heating capacity [kW]

Pe: electrical power absorbed by the compressors [kW]

Ta: dry bulb evaporator intake air temperature[°C]

RH : evaporator intake air relative humidity [%]

EPSILON ECHOS /LE /HP - HEATING CAPACITY

| Model | CONDENSATION TEMPERATURE [°C] | | | | | | | | | | | |
|-------|-------------------------------|---------|------|------|------|------|------|------|------|------|------|------|
| | Ta [°C] | RH % | 40 | | 45 | | 50 | | 55 | | 60 | |
| | | | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe | Pt | Pe |
| 21 | -10 | 95 | 14,3 | 5,0 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 16,1 | 5,0 | 15,9 | 5,6 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 18,1 | 5,0 | 17,8 | 5,6 | 17,6 | 6,3 | -- | -- | -- | -- |
| | 5 | 80 | 20,0 | 5,0 | 19,6 | 5,6 | 19,4 | 6,3 | 19,3 | 7,1 | -- | -- |
| | 8 | 70 | 21,1 | 5,0 | 20,6 | 5,6 | 20,4 | 6,3 | 20,2 | 7,1 | 20,1 | 8,0 |
| | 10 | 70 | 22,1 | 5,0 | 21,6 | 5,6 | 21,3 | 6,3 | 21,1 | 7,1 | 20,9 | 7,9 |
| 25 | -10 | 95 | 19,2 | 6,9 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 21,4 | 6,7 | 21,1 | 7,1 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 23,4 | 6,5 | 23,2 | 7,0 | 23,1 | 7,6 | -- | -- | -- | -- |
| | 5 | 80 | 25,4 | 6,3 | 25,2 | 6,9 | 25,2 | 7,6 | 25,3 | 8,4 | -- | -- |
| | 8 | 70 | 26,5 | 6,3 | 26,3 | 6,9 | 26,3 | 7,6 | 26,3 | 8,4 | 26,4 | 9,3 |
| | 10 | 70 | 27,5 | 6,2 | 27,3 | 6,9 | 27,2 | 7,6 | 27,2 | 8,4 | 27,4 | 9,4 |
| 28 | -10 | 95 | 22,3 | 8,0 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 24,7 | 7,7 | 24,4 | 8,2 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 27,2 | 7,4 | 26,9 | 8,0 | 26,8 | 8,7 | -- | -- | -- | -- |
| | 5 | 80 | 29,5 | 7,3 | 29,3 | 7,9 | 29,2 | 8,7 | 29,3 | 9,7 | -- | -- |
| | 8 | 70 | 30,9 | 7,2 | 30,6 | 7,9 | 30,5 | 8,7 | 30,5 | 9,7 | 30,6 | 10,8 |
| | 10 | 70 | 32,1 | 7,2 | 31,8 | 7,9 | 31,6 | 8,7 | 31,6 | 9,7 | 31,8 | 10,8 |
| 31 | -10 | 95 | 24,5 | 8,8 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 27,2 | 8,5 | 26,9 | 9,0 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 29,8 | 8,2 | 29,6 | 8,9 | 29,5 | 9,7 | -- | -- | -- | -- |
| | 5 | 80 | 32,5 | 8,0 | 32,2 | 8,8 | 32,2 | 9,7 | 32,2 | 10,7 | -- | -- |
| | 8 | 70 | 33,9 | 8,0 | 33,7 | 8,7 | 33,5 | 9,7 | 33,5 | 10,7 | 33,7 | 11,9 |
| | 10 | 70 | 35,2 | 7,9 | 34,9 | 8,7 | 34,8 | 9,7 | 34,8 | 10,7 | 35,0 | 12,0 |
| 37 | -10 | 95 | 26,2 | 8,9 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 29,4 | 8,8 | 29,4 | 9,9 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 33,2 | 8,9 | 33,0 | 9,9 | 32,9 | 11,1 | -- | -- | -- | -- |
| | 5 | 80 | 36,8 | 8,9 | 36,5 | 9,9 | 36,2 | 11,0 | 36,0 | 12,4 | -- | -- |
| | 8 | 70 | 38,9 | 8,9 | 38,5 | 9,9 | 38,1 | 11,0 | 37,6 | 12,4 | 37,2 | 13,9 |
| | 10 | 70 | 40,5 | 8,9 | 40,1 | 9,9 | 39,6 | 11,1 | 39,2 | 12,4 | 38,8 | 13,9 |
| 41 | -10 | 95 | 29,9 | 10,5 | -- | -- | -- | -- | -- | -- | -- | -- |
| | -5 | 90 | 33,6 | 10,4 | 33,5 | 11,6 | -- | -- | -- | -- | -- | -- |
| | 0 | 90 | 38,1 | 10,3 | 37,8 | 11,4 | 37,4 | 12,8 | -- | -- | -- | -- |
| | 5 | 80 | 42,2 | 10,2 | 41,7 | 11,4 | 41,3 | 12,7 | 40,9 | 14,2 | -- | -- |
| | 8 | 70 | 44,6 | 10,2 | 44,0 | 11,3 | 43,5 | 12,6 | 42,9 | 14,1 | 42,4 | 15,8 |
| | 10 | 70 | 46,5 | 10,2 | 45,9 | 11,3 | 45,3 | 12,6 | 44,7 | 14,1 | 44,2 | 15,7 |

Pt: heating capacity [kW]
 Pe: electrical power absorbed by the compressors [kW]
 Ta: dry bulb evaporator intake air temperature[°C]
 RH : evaporator intake air relative humidity [

NOISE LEVELS - EPSILON ECHOS

| MODEL | Octave Bands [Hz] | | | | | | | | | | | | | | | | Total | |
|-------|-------------------|----|----------|----|----------|----|----------|----|-----------|----|-----------|----|-----------|----|-----------|----|-------|----|
| | 63 [dB] | | 125 [dB] | | 250 [dB] | | 500 [dB] | | 1000 [dB] | | 2000 [dB] | | 4000 [dB] | | 8000 [dB] | | dB(A) | |
| | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp |
| 6 | 69 | 38 | 69 | 38 | 68 | 37 | 64 | 33 | 58 | 27 | 54 | 23 | 47 | 16 | 40 | 9 | 65 | 34 |
| 8 | 70 | 39 | 70 | 39 | 69 | 38 | 66 | 35 | 59 | 28 | 56 | 25 | 50 | 19 | 42 | 11 | 67 | 36 |
| 10 | 74 | 43 | 71 | 40 | 72 | 41 | 66 | 35 | 62 | 31 | 58 | 27 | 51 | 20 | 44 | 13 | 68 | 37 |
| 14 | 74 | 43 | 74 | 43 | 72 | 41 | 69 | 38 | 64 | 33 | 58 | 27 | 53 | 22 | 43 | 12 | 70 | 39 |
| 16 | 77 | 46 | 76 | 45 | 76 | 45 | 71 | 40 | 65 | 34 | 61 | 30 | 56 | 25 | 46 | 15 | 72 | 41 |
| 18 | 80 | 49 | 79 | 48 | 79 | 48 | 73 | 42 | 68 | 37 | 64 | 33 | 57 | 26 | 50 | 19 | 75 | 44 |
| 21 | 81 | 50 | 79 | 48 | 80 | 49 | 74 | 43 | 70 | 39 | 65 | 34 | 57 | 26 | 51 | 20 | 76 | 45 |
| 25 | 81 | 50 | 79 | 48 | 79 | 48 | 75 | 44 | 67 | 36 | 64 | 33 | 59 | 28 | 50 | 19 | 76 | 45 |
| 28 | 81 | 50 | 80 | 49 | 79 | 48 | 75 | 44 | 68 | 37 | 65 | 34 | 60 | 29 | 51 | 20 | 76 | 45 |
| 31 | 81 | 49 | 79 | 47 | 80 | 48 | 74 | 42 | 69 | 37 | 65 | 33 | 58 | 26 | 51 | 19 | 76 | 45 |
| 37 | 83 | 51 | 82 | 50 | 80 | 48 | 77 | 45 | 70 | 38 | 66 | 34 | 60 | 28 | 53 | 21 | 77 | 46 |
| 41 | 82 | 50 | 82 | 50 | 80 | 48 | 76 | 44 | 71 | 39 | 65 | 33 | 60 | 28 | 52 | 20 | 77 | 46 |

NOISE LEVELS - EPSILON ECHOS /SLN

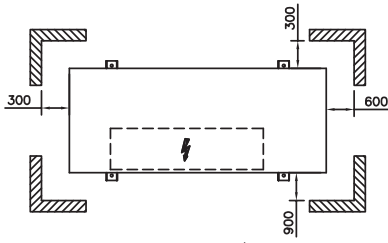
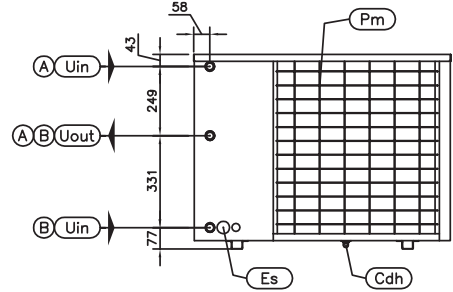
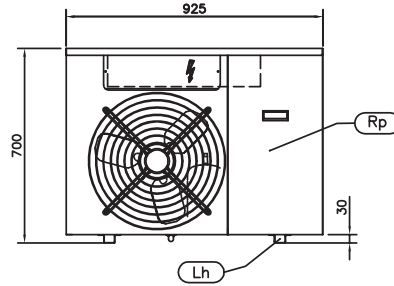
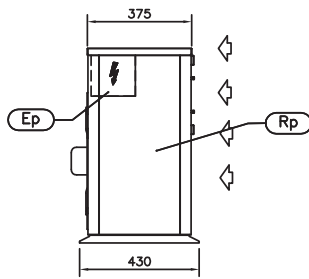
| MODEL | Octave Bands [Hz] | | | | | | | | | | | | | | | | Total | |
|-------|-------------------|----|----------|----|----------|----|----------|----|-----------|----|-----------|----|-----------|----|-----------|----|-------|----|
| | 63 [dB] | | 125 [dB] | | 250 [dB] | | 500 [dB] | | 1000 [dB] | | 2000 [dB] | | 4000 [dB] | | 8000 [dB] | | dB(A) | |
| | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp | Lw | Lp |
| 6 | 62 | 31 | 62 | 31 | 61 | 30 | 57 | 26 | 52 | 21 | 47 | 16 | 40 | 9 | 32 | 1 | 58 | 27 |
| 8 | 64 | 33 | 63 | 32 | 63 | 32 | 59 | 28 | 52 | 21 | 49 | 18 | 41 | 10 | 36 | 5 | 60 | 29 |
| 10 | 66 | 35 | 66 | 35 | 65 | 34 | 61 | 30 | 55 | 24 | 52 | 21 | 45 | 14 | 39 | 8 | 62 | 31 |
| 14 | 67 | 36 | 67 | 36 | 66 | 35 | 62 | 31 | 57 | 26 | 52 | 21 | 46 | 15 | 38 | 7 | 63 | 32 |
| 16 | 69 | 38 | 68 | 37 | 68 | 37 | 63 | 32 | 58 | 27 | 53 | 22 | 49 | 18 | 40 | 9 | 65 | 34 |
| 18 | 71 | 40 | 70 | 39 | 69 | 38 | 65 | 34 | 59 | 28 | 55 | 24 | 49 | 18 | 40 | 9 | 66 | 35 |
| 21 | 72 | 41 | 70 | 39 | 70 | 39 | 64 | 33 | 60 | 29 | 55 | 24 | 49 | 18 | 42 | 11 | 67 | 36 |
| 25 | 73 | 42 | 71 | 40 | 71 | 40 | 67 | 36 | 59 | 28 | 56 | 25 | 52 | 21 | 43 | 12 | 68 | 37 |
| 28 | 73 | 42 | 72 | 41 | 72 | 41 | 66 | 35 | 61 | 30 | 58 | 27 | 51 | 20 | 44 | 13 | 68 | 37 |
| 31 | 75 | 43 | 73 | 41 | 72 | 40 | 69 | 37 | 62 | 30 | 58 | 26 | 53 | 21 | 45 | 13 | 69 | 37 |
| 37 | 75 | 43 | 74 | 42 | 73 | 41 | 69 | 37 | 62 | 30 | 59 | 27 | 53 | 21 | 46 | 14 | 70 | 38 |

Lw: noise power levels measured in free field according to standard ISO 3744.

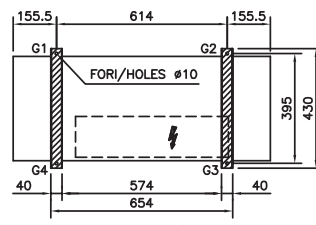
Lp: noise pressure levels measured at 10 m from the unit in free field, according to standard ISO 3744.

DIMENSIONAL DRAWING

EPSILON ECHOS 6-10



SPAZI DI INSTALLAZIONE / CLEARANCES



IMPRONTA A TERRA / FOOTPRINT

CONNESSIONI IDRAULICHE/HYDRAULIC CONNECTIONS

- Ⓐ SENZA MODULO IDRAULICO
WITHOUT HYDRAULIC MODULE
- Ⓑ MODULO IDRAULICO ST1P
HYDRAULIC MODULE ST1P

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 700 |

| | |
|----|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH |

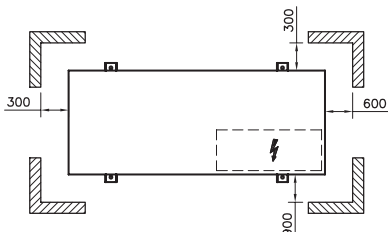
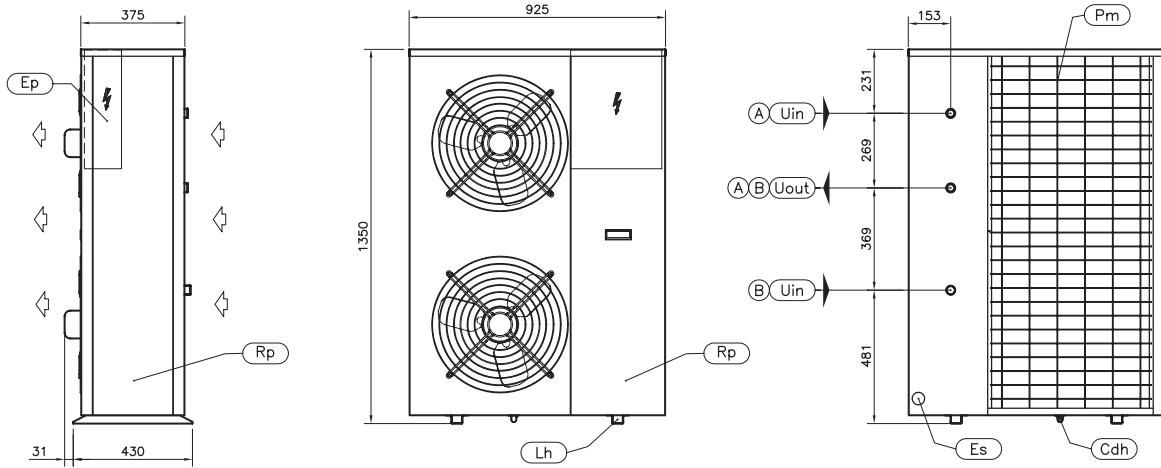
| | | |
|------|---|---------|
| Rp | PANNELLO ASPORTABILE REMOVABLE PANEL | |
| Cdh | SCARICO CONDENSA VERS.HP CONDENSATE DRAIN HP VERSION | Ø18 |
| Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET | 1" BSPM |
| Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET | 1" BSPM |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|--------------------------|------------------------|--|
| EPSILON ECHOS 6 | 74 | 74 |
| EPSILON ECHOS 8 | 82 | 82 |
| EPSILON ECHOS 10 | 89 | 89 |
| EPSILON ECHOS ST1P 6 | 83 | 84 |
| EPSILON ECHOS ST1P 8 | 91 | 92 |
| EPSILON ECHOS ST1P 10 | 98 | 99 |
| EPSILON ECHOS HP 6 | 86 | 86 |
| EPSILON ECHOS HP 8 | 91 | 91 |
| EPSILON ECHOS HP 10 | 95 | 95 |
| EPSILON ECHOS HP ST1P 6 | 95 | 96 |
| EPSILON ECHOS HP ST1P 8 | 100 | 101 |
| EPSILON ECHOS HP ST1P 10 | 104 | 105 |

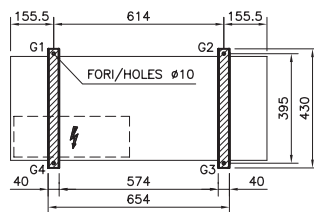
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DIMENSIONAL DRAWING

EPSILON ECHOS 14-18



SPAZI DI INSTALLAZIONE / CLEARANCES



IMPRONTA A TERRA / FOOTPRINT

CONNESSIONI IDRAULICHE/HYDRAULIC CONNECTIONS

- (A) SENZA MODULO IDRAULICO
WITHOUT HYDRAULIC MODULE
- (B) MODULO IDRAULICO ST1P
HYDRAULIC MODULE ST1P

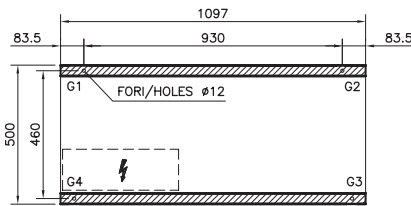
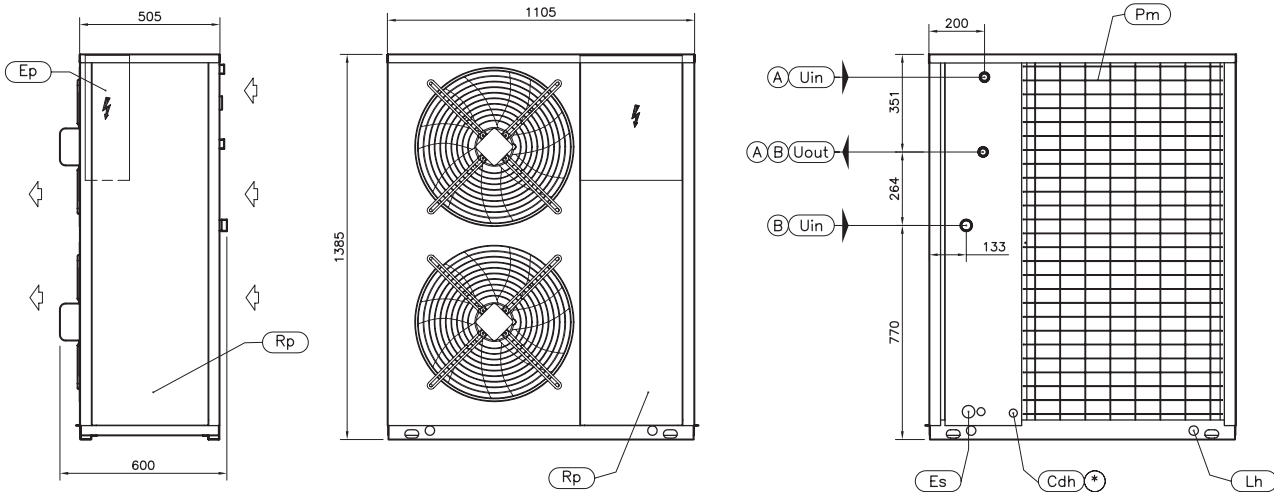
| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 1350 |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|--------------------------|------------------------|--|
| EPSILON ECHOS 14 | 118 | 119 |
| EPSILON ECHOS 16 | 135 | 136 |
| EPSILON ECHOS 18 | 147 | 148 |
| EPSILON ECHOS ST1P 14 | 133 | 134 |
| EPSILON ECHOS ST1P 16 | 150 | 151 |
| EPSILON ECHOS ST1P 18 | 162 | 163 |
| EPSILON ECHOS HP 14 | 131 | 132 |
| EPSILON ECHOS HP 16 | 145 | 146 |
| EPSILON ECHOS HP 18 | 161 | 162 |
| EPSILON ECHOS HP ST1P 14 | 146 | 147 |
| EPSILON ECHOS HP ST1P 16 | 160 | 161 |
| EPSILON ECHOS HP ST1P 18 | 176 | 177 |

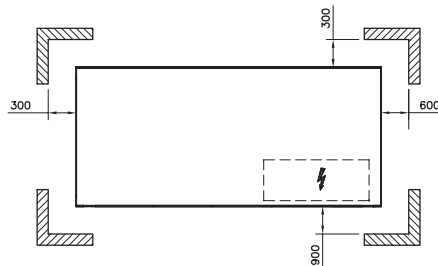
| | | | |
|----|---|------|--|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | Cdh | SCARICO CONDENSATE VERS.HP CONDENSATE DRAIN HP VERSION Ø18 |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES | Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET 1" BSPM |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET 1" BSPM |

DIMENSIONAL DRAWING

EPSILON ECHOS 21-28



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

CONNESSIONI IDRAULICHE/HYDRAULIC CONNECTIONS

- (A) SENZA MODULO IDRAULICO / WITHOUT HYDRAULIC MODULE
- (B) MODULO IDRAULICO ST1P / HYDRAULIC MODULE ST1P
- (* OPZIONALE / OPTIONAL)

| | | |
|---------|-------------|---------|
| Uin | | Uout |
| (A) | (B) | (A) (B) |
| 1" BSPM | 1 1/4" BSPM | 1" BSPM |

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|---------------------|------------------|
| LUNGHEZZA / WIDTH | PROFONDITA' / DEPTH | ALTEZZA / HEIGHT |
| 1105 | 505 | 1385 |

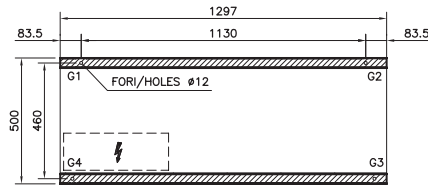
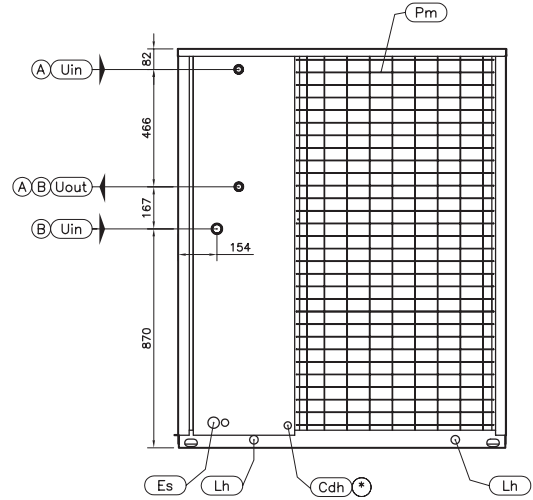
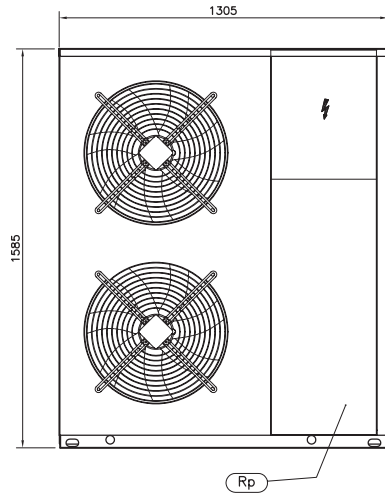
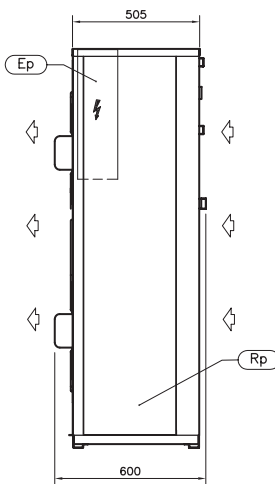
| | | | |
|----|--|------|---|
| Ep | QUADRO ELETTRICO / ELECTRICAL PANEL | Rp | PANNELLO ASPORTABILE / REMOVABLE PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA / ELECTRICAL SUPPLY INLET | Cdh | SCARICO CONDENSATI VERS. HP / CONDENSATE DRAIN HP VERSION |
| LH | FORI DI SOLLEVAMENTO / LIFTING HOLES | Uin | INGRESSO ACQUA UTILIZZO / USER WATER INLET |
| Pm | GRIGLIE DI PROTEZIONE / PROTECTIVE METAL MESH | Uout | USCITA ACQUA UTILIZZO / USER WATER OUTLET |

| MODELLO / MODEL | PESO / WEIGHT (Kg) | PESO IN FUNZIONE / OPERATING WEIGHT (Kg) |
|--------------------------|--------------------|--|
| EPSILON ECHOS 21 | 178 | 180 |
| EPSILON ECHOS 25 | 190 | 192 |
| EPSILON ECHOS 28 | 224 | 226 |
| EPSILON ECHOS ST1P 21 | 198 | 200 |
| EPSILON ECHOS ST1P 25 | 210 | 212 |
| EPSILON ECHOS ST1P 28 | 244 | 246 |
| EPSILON ECHOS HP 21 | 210 | 212 |
| EPSILON ECHOS HP 25 | 218 | 220 |
| EPSILON ECHOS HP 28 | 245 | 247 |
| EPSILON ECHOS HP ST1P 21 | 230 | 232 |
| EPSILON ECHOS HP ST1P 25 | 238 | 240 |
| EPSILON ECHOS HP ST1P 28 | 265 | 267 |

SD00003D

DIMENSIONAL DRAWING

EPSILON ECHOS 31-41



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

CONNESSIONI IDRAULICHE/HYDRAULIC CONNECTIONS

- (A) SENZA MODULO IDRAULICO / WITHOUT HYDRAULIC MODULE
- (B) MODULO IDRAULICO ST1P / HYDRAULIC MODULE ST1P
- (*) OPZIONALE / OPTIONAL

| | |
|-------------|-------------|
| Uin | Uout |
| (A) (B) | (A) (B) |
| 1 1/4" BSPM | 1 1/4" BSPM |

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|---------------------|------------------|
| LUNGHEZZA / WIDTH | PROFONDITA' / DEPTH | ALTEZZA / HEIGHT |
| 1305 | 505 | 1585 |

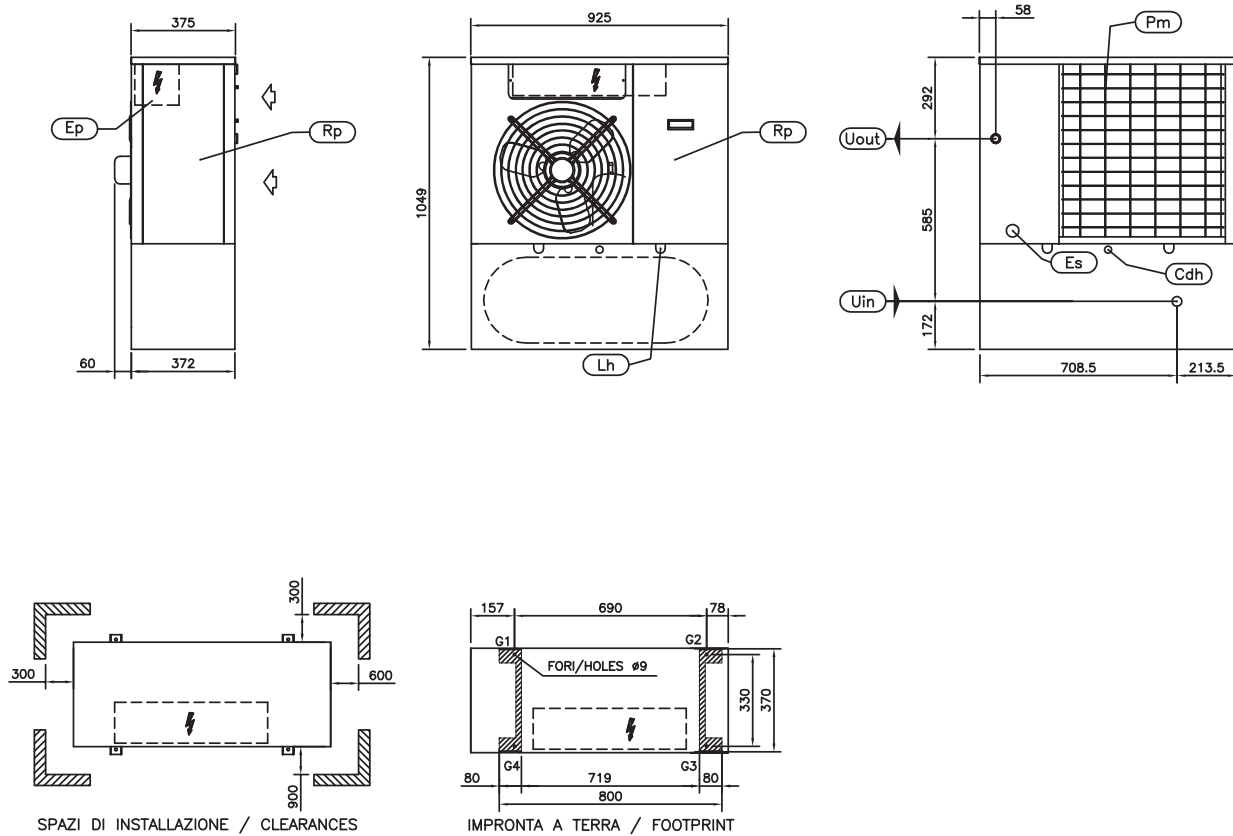
| | | | |
|----|--|------|---|
| Ep | QUADRO ELETTRICO / ELECTRICAL PANEL | Rp | PANNELLO ASPORTABILE / REMOVABLE PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA / ELECTRICAL SUPPLY INLET | Cdh | SCARICO CONDENSATE VERS. HP / CONDENSATE DRAIN HP VERSION <small>OPTIONAL Ø22</small> |
| LH | FORI DI SOLLEVAMENTO / LIFTING HOLES $\varnothing 34$ | Uin | INGRESSO ACQUA UTILIZZO / USER WATER INLET |
| Pm | GRIGLIE DI PROTEZIONE / PROTECTIVE METAL MESH | Uout | USCITA ACQUA UTILIZZO / USER WATER OUTLET |

| MODELLO / MODEL | PESO / WEIGHT (Kg) | PESO IN FUNZIONE / OPERATING WEIGHT (Kg) |
|--------------------------|--------------------|--|
| EPSILON ECHOS 31 | 324 | 326 |
| EPSILON ECHOS 37 | 326 | 328 |
| EPSILON ECHOS 41 | 337 | 339 |
| EPSILON ECHOS ST1P 31 | 344 | 346 |
| EPSILON ECHOS ST1P 37 | 351 | 353 |
| EPSILON ECHOS ST1P 41 | 362 | 364 |
| EPSILON ECHOS HP 31 | 353 | 355 |
| EPSILON ECHOS HP 37 | 358 | 360 |
| EPSILON ECHOS HP 41 | 374 | 376 |
| EPSILON ECHOS HP ST1P 31 | 373 | 375 |
| EPSILON ECHOS HP ST1P 37 | 383 | 385 |
| EPSILON ECHOS HP ST1P 41 | 399 | 401 |

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DIMENSIONAL DRAWING

EPSILON ECHOS /ST 1PS 6-10



| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 1049 |

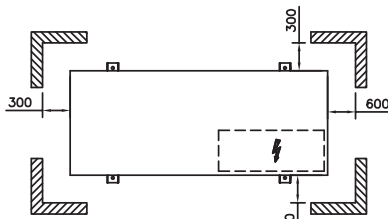
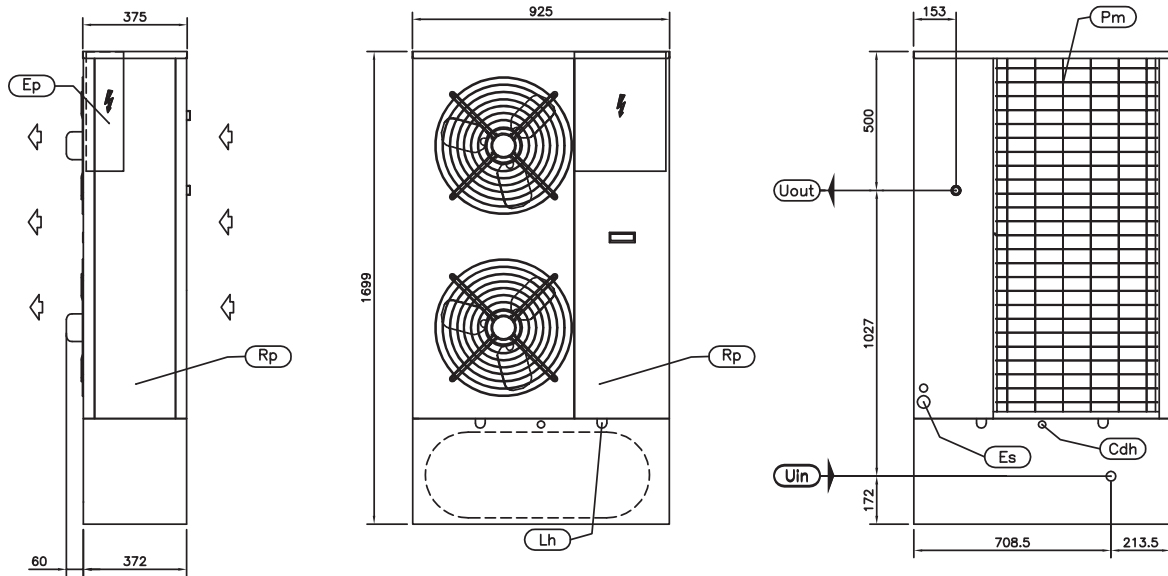
| | | | |
|----|---|------|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | Cdh | SCARICO CONDENSA CONDENSATE DRAIN $\varnothing 18$ |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES $\varnothing 35$ | Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET 1" BSPM |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET 1" BSPM |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|---------------------------|------------------------|--|
| EPSILON ECHOS ST1PS 6 | 123 | 188 |
| EPSILON ECHOS ST1PS 8 | 131 | 198 |
| EPSILON ECHOS ST1PS 10 | 138 | 206 |
| EPSILON ECHOS HP ST1PS 6 | 135 | 191 |
| EPSILON ECHOS HP ST1PS 8 | 140 | 201 |
| EPSILON ECHOS HP ST1PS 10 | 144 | 208 |

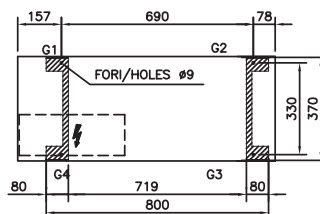
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DIMENSIONAL DRAWING

EPSILON ECHOS /ST 1PS 14-18



SPAZI DI INSTALLAZIONE / CLEARANCES



IMPRONTA A TERRA / FOOTPRINT

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 1700 |

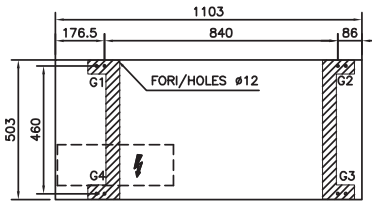
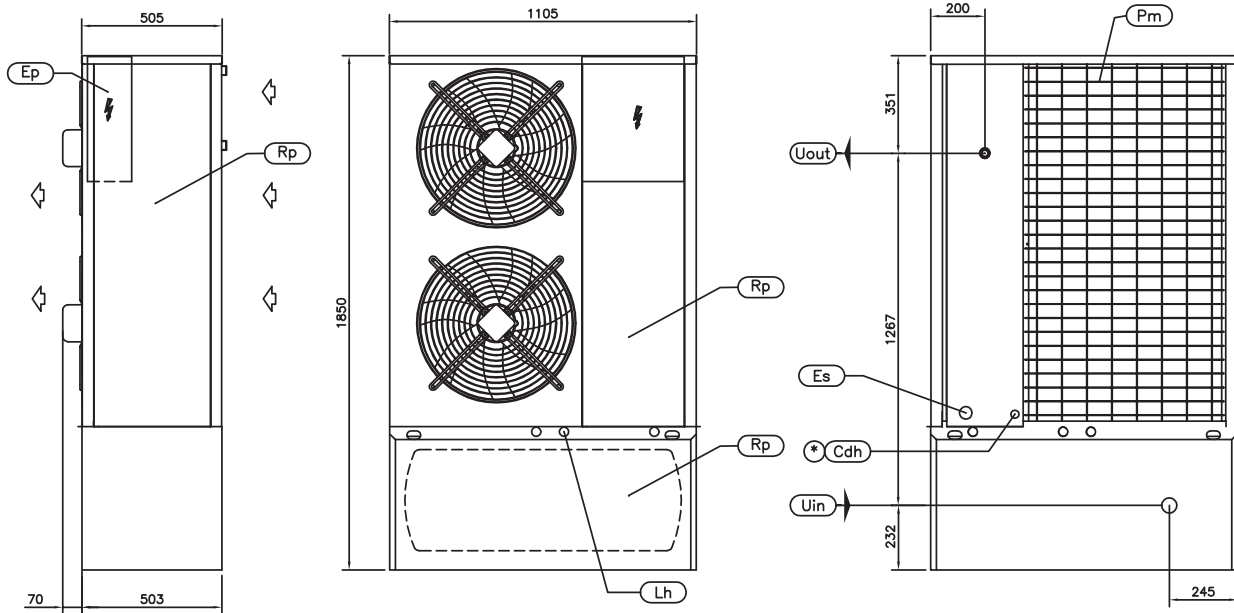
| | | | |
|----|---|------|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | Cdh | SCARICO CONDENSA CONDENSATE DRAIN $\varnothing 18$ |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES $\varnothing 35$ | Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET 1" BSPM |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET 1" BSPM |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|---------------------------|------------------------|--|
| EPSILON ECHOS ST1PS 14 | 183 | 253 |
| EPSILON ECHOS ST1PS 16 | 200 | 270 |
| EPSILON ECHOS ST1PS 18 | 212 | 282 |
| EPSILON ECHOS HP ST1PS 14 | 196 | 266 |
| EPSILON ECHOS HP ST1PS 16 | 210 | 280 |
| EPSILON ECHOS HP ST1PS 18 | 226 | 296 |

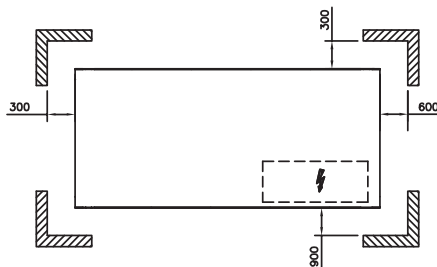
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DIMENSIONAL DRAWING

EPSILON ECHOS /ST 1PS 21-28



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

* OPZIONALE
OPTIONAL

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 1105 | 505 | 1850 |

| | |
|----|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET |
| LH | FORI DI SOLLEVAMENTO LIFTING HOLES $\varnothing 34$ |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH |

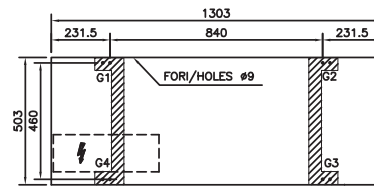
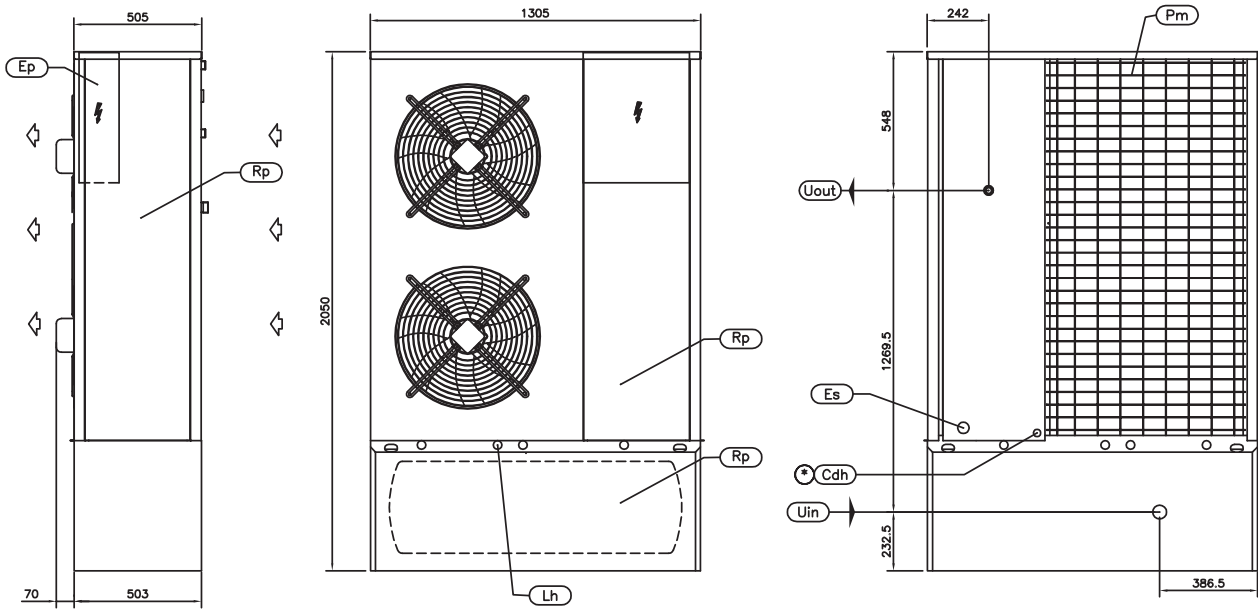
| | |
|------|---|
| Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Cdh | SCARICO CONDENSA CONDENSATE DRAIN <small>OPTIONAL</small> $\varnothing 22$ |
| Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET 1 1/4" BSPM |
| Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET 1" BSPM |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|----------------------------|------------------------|--|
| EPSILON ECHOS ST 1PS 21 | 312 | 422 |
| EPSILON ECHOS ST 1PS 25 | 318 | 448 |
| EPSILON ECHOS ST 1PS 28 | 332 | 462 |
| EPSILON ECHOS HP ST 1PS 21 | 295 | 425 |
| EPSILON ECHOS HP ST 1PS 25 | 331 | 461 |
| EPSILON ECHOS HP ST 1PS 28 | 339 | 469 |

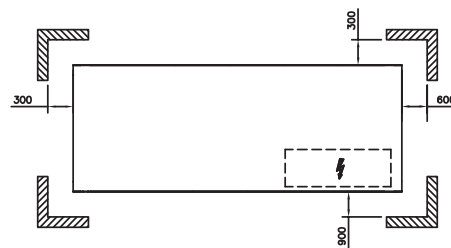
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DIMENSIONAL DRAWING

EPSILON ECHOS /ST 1PS 31-41



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

⊛ OPZIONALE
OPTIONAL

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 1305 | 505 | 2050 |

| | |
|----|--|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET |
| LH | FORI DI SOLLEVAMENTO LIFTING HOLES Ø34 |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH |

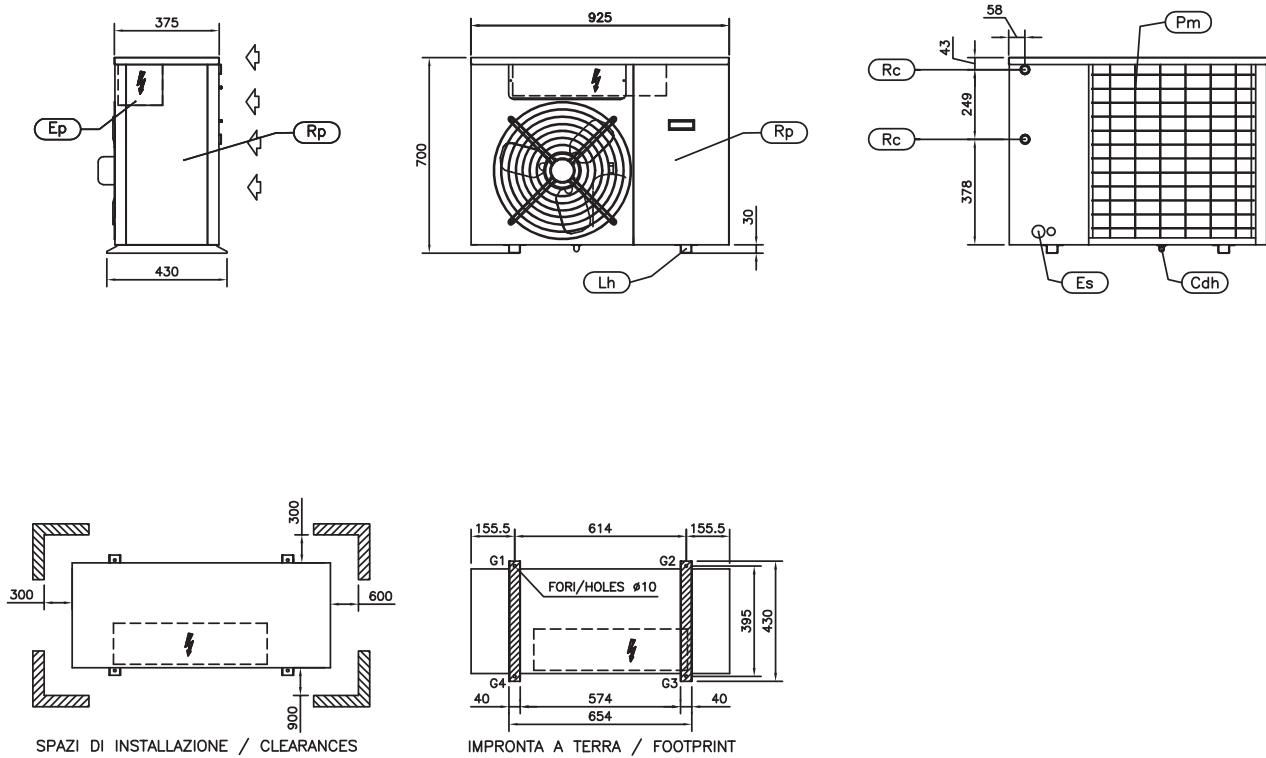
| | |
|------|---|
| Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Cdh | SCARICO CONDENSATE VERS.HP CONDENSATE DRAIN HP VERSION OPTIONAL Ø22 |
| Uin | INGRESSO ACQUA UTILIZZO USER WATER INLET 1 1/4" BSPM |
| Uout | USCITA ACQUA UTILIZZO USER WATER OUTLET 1 1/4" BSPM |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|----------------------------|------------------------|--|
| EPSILON ECHOS ST 1PS 31 | 417 | 557 |
| EPSILON ECHOS ST 1PS 37 | 424 | 564 |
| EPSILON ECHOS ST 1PS 41 | 435 | 472 |
| EPSILON ECHOS HP ST 1PS 31 | 446 | 586 |
| EPSILON ECHOS HP ST 1PS 37 | 456 | 596 |
| EPSILON ECHOS HP ST 1PS 41 | 472 | 612 |

SD00008E

DIMENSIONAL DRAWING

EPSILON ECHOS /LE 6-10



SPAZI DI INSTALLAZIONE / CLEARANCES

IMPRONTA A TERRA / FOOTPRINT

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 700 |

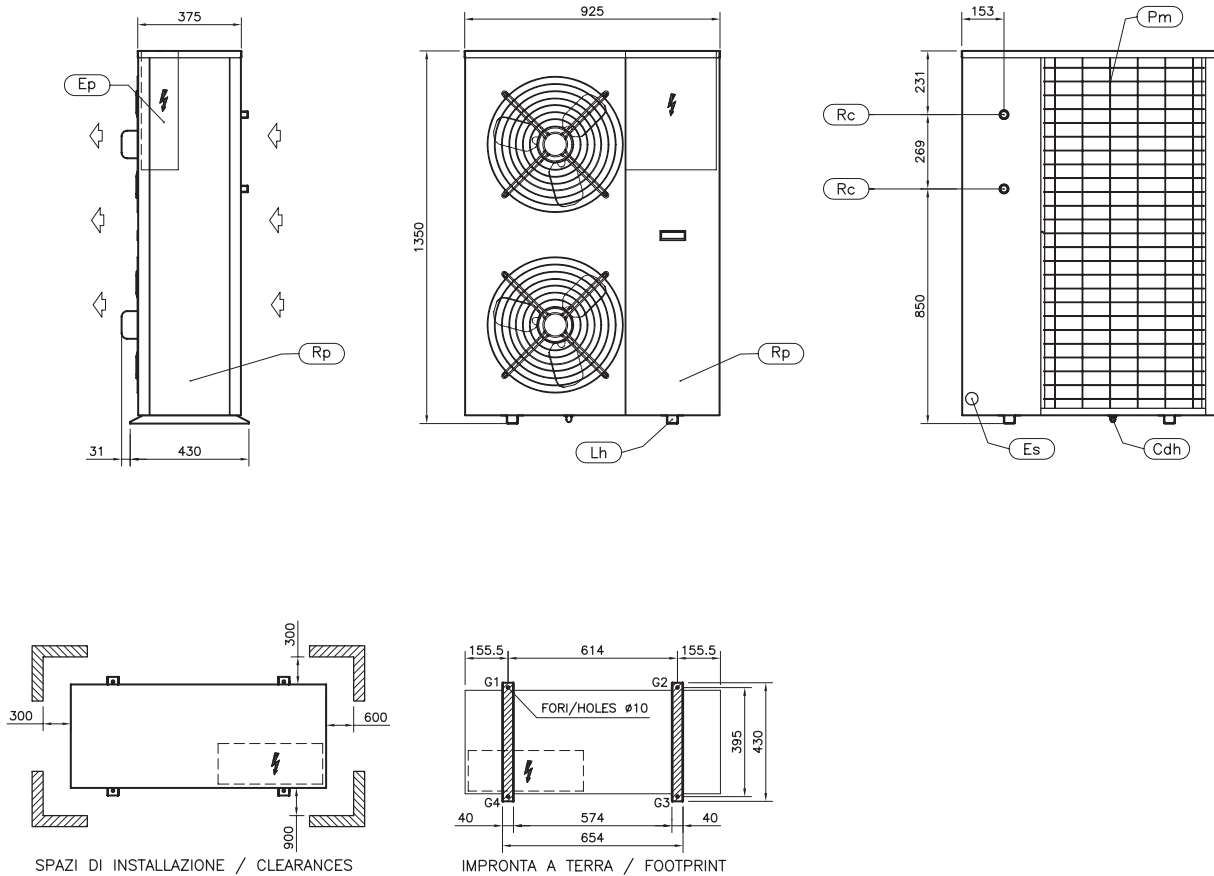
| | | | |
|----|---|-----|--|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | | |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | Rc | CONNESSIONI REFRIGERANTE REFRIGERANT CONNECTIONS |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES | Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | Cdh | SCARICO CONDENSA VERS.HP CONDENSATE DRAIN HP VERSION $\varnothing 18$ |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|------------------------|------------------------|--|
| EPSILON ECHOS LE 6 | 71 | 71 |
| EPSILON ECHOS LE 8 | 78 | 78 |
| EPSILON ECHOS LE 10 | 85 | 85 |
| EPSILON ECHOS LE/HP 6 | 83 | 83 |
| EPSILON ECHOS LE/HP 8 | 87 | 87 |
| EPSILON ECHOS LE/HP 10 | 91 | 91 |

SD00017C

DIMENSIONAL DRAWING

EPSILON ECHOS /LE 14-18



| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 925 | 375 | 1350 |

| | |
|----|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET |
| Lh | FORI DI SOLLEVAMENTO LIFTING HOLES |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH |

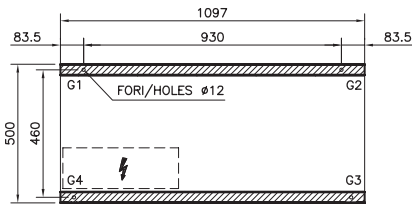
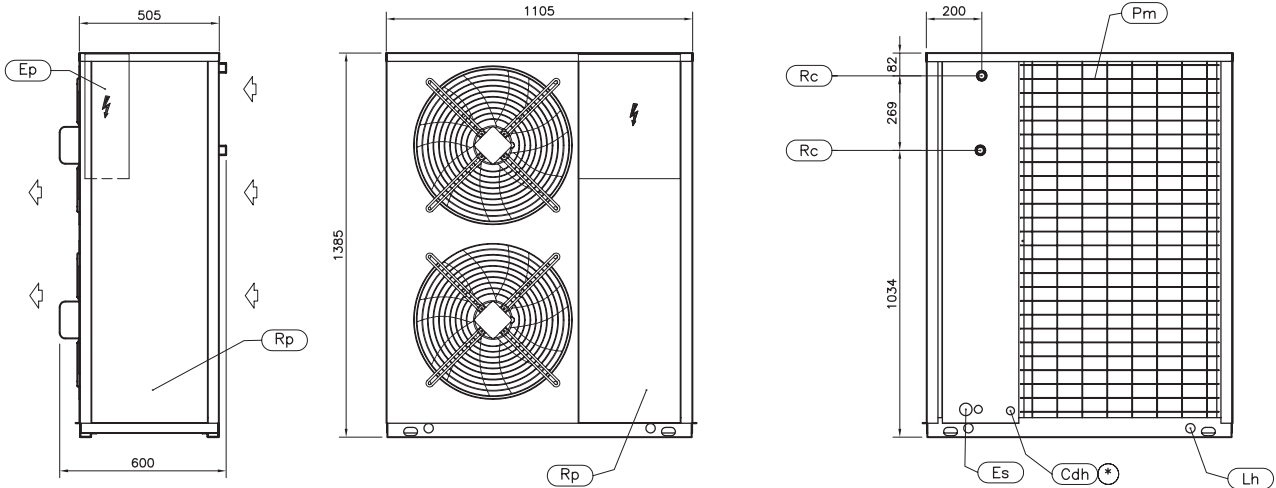
| | |
|-----|---|
| Rc | CONNESSIONI REFRIGERANTE REFRIGERANT CONNECTIONS |
| Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| Cdh | SCARICO CONDENSA VERS.HP CONDENSATE DRAIN HP VERSION |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|------------------------|------------------------|--|
| EPSILON ECHOS LE 14 | 114 | 114 |
| EPSILON ECHOS LE 16 | 131 | 131 |
| EPSILON ECHOS LE 18 | 142 | 142 |
| EPSILON ECHOS LE HP 14 | 127 | 127 |
| EPSILON ECHOS LE HP 16 | 141 | 141 |
| EPSILON ECHOS HP LE 18 | 156 | 156 |

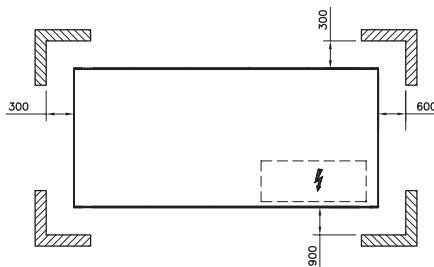
SD00018B

DIMENSIONAL DRAWING

EPSILON ECHOS /LE 21-28



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

⊛ OPZIONALE
OPTIONAL

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 1105 | 505 | 1385 |

| | | |
|----|---|-----|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | |
| LH | FORI DI SOLLEVAMENTO LIFTING HOLES | Ø34 |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | |

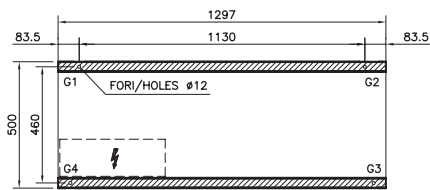
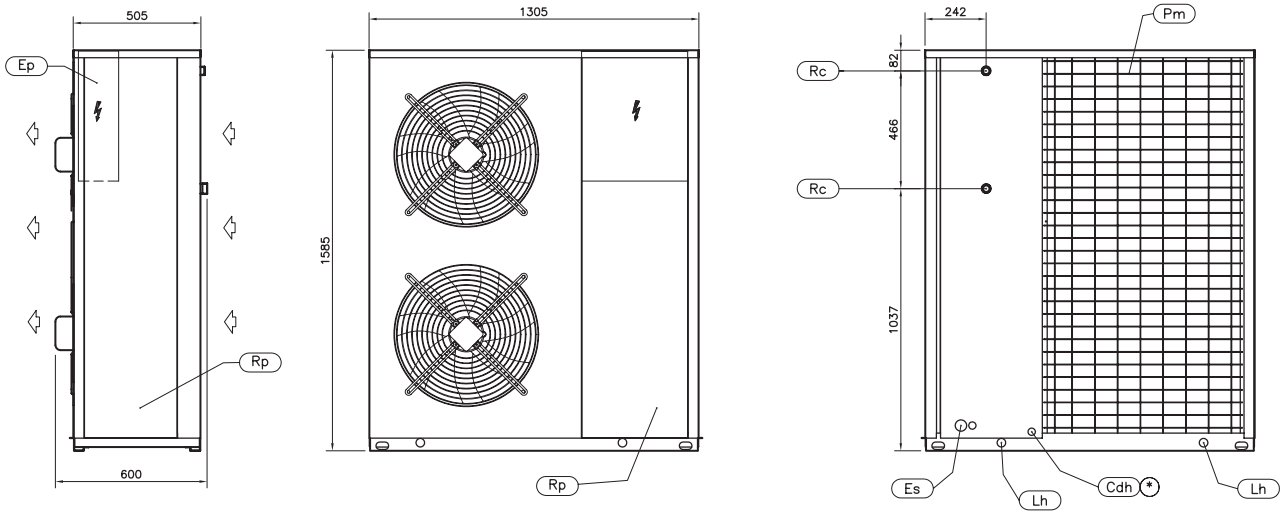
| | | |
|-----|---|--------------|
| Rc | CONNESSIONI REFRIGERANTE REFRIGERANT CONNECTIONS | |
| Rp | PANNELLO ASPORTABILE REMOVABLE PANEL | |
| Cdh | SCARICO CONDENSA VERS.HP CONDENSATE DRAIN HP VERSION | OPTIONAL Ø22 |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (Kg) |
|------------------------|------------------------|--|
| EPSILON ECHOS LE 21 | 171 | 171 |
| EPSILON ECHOS LE 25 | 183 | 183 |
| EPSILON ECHOS LE 28 | 216 | 216 |
| EPSILON ECHOS LE/HP 21 | 203 | 203 |
| EPSILON ECHOS LE/HP 25 | 211 | 211 |
| EPSILON ECHOS LE/HP 28 | 237 | 237 |

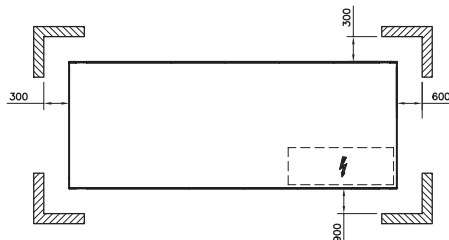
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DIMENSIONAL DRAWING

EPSILON ECHOS /LE 31-41



IMPRONTA A TERRA / FOOTPRINT



SPAZI DI INSTALLAZIONE / CLEARANCES

⊛ OPZIONALE
OPTIONAL

| DIMENSIONI - DIMENSIONS | | |
|-------------------------|----------------------|-------------------|
| LUNGHEZZA WIDTH | PROFONDITA' DEPTH | ALTEZZA HEIGHT |
| 1305 | 505 | 1585 |

| | | | |
|----|---|-----|---|
| Ep | QUADRO ELETTRICO ELECTRICAL PANEL | | |
| Es | INGRESSO ALIMENTAZIONE ELETTRICA ELECTRICAL SUPPLY INLET | Rc | CONNESSIONI REFRIGERANTE REFRIGERANT CONNECTIONS |
| LH | FORI DI SOLLEVAMENTO LIFTING HOLES | Rp | PANNELLO ASPORTABILE REMOVABLE PANEL |
| | Ø34 | | |
| Pm | GRIGLIE DI PROTEZIONE PROTECTIVE METAL MESH | Cdh | SCARICO CONDENSA VERS.HP CONDENSATE DRAIN HP VERSION |
| | | | OPTIONAL Ø22 |

| MODELLO MODEL | PESO WEIGHT (Kg) | PESO IN FUNZIONE OPERATING WEIGHT (kg) |
|------------------------|------------------------|--|
| EPSILON ECHOS LE 31 | 312 | 312 |
| EPSILON ECHOS LE 37 | 318 | 318 |
| EPSILON ECHOS LE 41 | 323 | 323 |
| EPSILON ECHOS LE/HP 31 | 341 | 341 |
| EPSILON ECHOS LE/HP 37 | 344 | 344 |
| EPSILON ECHOS LE/HP 41 | 360 | 360 |

INSTALLATIONS RECOMMENDATIONS

LOCATION

Strictly allow clearances as indicated in the catalogue.

Please check that there isn't any obstructions on the suction of the finned coil and on the discharge of the fans

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 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.

