

## CHA/IK 18-31

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, INVERTER ROTARY COMPRESSORS PLATE EXCHANGERS AND PUMP KIT.

FROM 5 kW TO 9 kW.



### UNIT DESCRIPTION

CHA/IK 18-31 IDROINVERTER series, is the winning choice for ideal comfort in residential and commercial environments, equipped with R410A refrigerant and INVERTER compressors is a unit extremely functional and reliable. Thanks to the inverter device, it is able to manage the compressor running speed with a continuous modulation, keeping stable and constant the water temperature supplied to the user plant. The unit perfectly adapts its capacity to the variable thermal load of the plant, where terminal units are installed. With this technology we obtain various and important advantages, such as high seasonal medium E.S.E.E.R. values, the reduction of the starting current values, the exclusion of inertial water tank as the power supplied is constantly the same as the power required, exceptional silent unit as the fans adequate their speed to the real load of the plant, with benefits above all during the night-time. The continuous adjustment of the capacity, by managing the running speed of the compressor, avoids frequent compressor start/stop, enhancing its life time; moreover the compressor can start with lower frequency of the power supplied and with lower peaks of current. IdroInverter gives a higher reliability and the compressor's risk of damage is reduced considerably. Moreover, an innovative control device can avoid unit's block caused by accidental overloads; when active, this device reduces the cooling capacity, keeping the unit running.

### VERSIONS

#### CHA/IK

Cooling only

#### CHA/IK/WP

Reversible heat pump

### FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Rotary INVERTER compressor complete with overload protection (klixon) embedded in the motor and crankcase, installed on rubber vibrations absorbing.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser in copper tubes and aluminium finned coil, complete with moisture drain pan in the heat pump version.
- Evaporator in AISI 316 stainless steel brazewelded plates type. The evaporator is insulated with flexible closed cells material. On the heat pump units is always installed a antifreeze heater.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor contact.
- Compressor Inverter controller: allows to check the power of the compressor, the pressure of condensation and the external temperature. IDROINVERTER units are equipped with a logic able to dynamically vary machine operating parameters, adapting them to real system load requirements.
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level,

## idroinverter



with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.

- Water circuit includes circulator, safety valve, gauge and expansion vessel.

### ACCESSORIES

#### Loose accessories:

CR	Remote control panel
IS	RS 485 serial interface
RP	Reti protezione batteria

CHA/IK			18	31
Cooling	Cooling capacity (1)	kW	5,0	9,0
	Absorbed power (1)	kW	1,7	3,0
Heating	Heating capacity (2)	kW	5,5	10,0
	Absorbed power (2)	kW	1,8	3,2
Compressors	Quantity	n°	1	1
	Type		Rotary INVERTER	Rotary INVERTER
Condenser	Fans	n°	1	1
	Air flow	m³/s	0,89	0,82
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50	230/1/50
	Max. running current	A	9	18
	Max. inrush current	A	11	20
Water circuit	Water flow	l/s	0,27	0,42
	Pump nominal power	kW	0,2	0,2
	Available static pressure	kPa	48	42
	Expansion vessel	l	2	2
	Water connections	"G	3/4"	3/4"
Sound pressure (3)	STD	dB(A)	47	49
Weights	Transport weight	Kg	90	98
	Operating weight	Kg	91	99

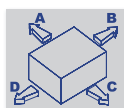
DIMENSIONS

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L	STD	mm	870	870
P	STD	mm	320	320
H	STD	mm	1100	1100

DIMENSIONAL



CLEREANCE AREA



CHA/IK 18 - 31		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800

NOTES

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