

CHA/K/ST 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGERS, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.

FROM 47 kW TO 178 kW.



UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/K/ST 182-P÷604-P AQUA PLUS series, with R410A refrigerant, are intended to satisfy the needs of medium-large service sector or industrial environments.

Thanks to AQUALOGIK technology that optimises the water set point and modulates the pump, included of INVERTER, and the fans, don't needing so the use of the inertial tank because the units can work even with low content of water in the system; in order to permit immediate and efficient use, energy efficiency and outstanding silence in functioning.

Equipped with axial fans, Scroll compressors and plate-type exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.



VERSIONS

CHA/K/ST

Cooling only with AQUALOGIK technology

CHA/K/SSL/ST

Super silenced cooling only with AQUALOGIK technology

CHA/K/WP/ST

Reversible heat pump with AQUALOGIK technology

CHA/K/WP/SSL/ST

Super silenced reversible heat pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plate type: With one circuit on the refrigerant side and one on the water side in models 182-P ÷ 453-P; with two independent circuits on the refrigerant side and one on the water side in models 524-P ÷ 604-P.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system with AQUALOGIK technology.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencing
DS	Desuperheater
RT	Total heat recovery

Loose accessories:

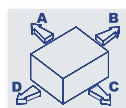
MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

CHA/K/ST			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
Cooling	Cooling capacity (1)	kW	47,6	54,9	63,5	72,9	83,4	95,9	110,4	126,8	147,4	177,8
	Absorbed power (1)	kW	16,1	18,8	21,8	25,0	28,3	31,6	37,9	43,3	50,1	58,2
Heating	Heating capacity (2)	kW	54,1	61,8	71,4	80,3	90,4	105,5	120,2	134,9	154,3	187,0
	Absorbed power (2)	kW	17,3	19,6	23,1	25,4	28,8	33,4	38,5	43,8	50,5	60,4
Compressors	Quantity	n°	2	2	2	2	2	3	3	3	4	4
	Type		<----- Scroll ----->									
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n°	2	2	2	2	2	3	3	3	4	4
Evaporator	Water flow	l/s	2,27	2,62	3,03	3,48	3,98	4,58	5,27	6,06	7,04	8,49
	Pressure drops	kPa	45	48	43	48	43	58	46	53	48	48
	Water connections	"G	1½"	1½"	1½"	1½"	1½"	2½"	2½"	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	<----- 400 / 3 / 50 ----->									
	Max. running current	A	50	61	64	76	78	94	114	117	149	157
	Max. inrush current	A	182	162	182	199	202	212	237	241	272	281
STD version and with SL accessory	Fans	n°	1	1	2	2	2	2	2	2	2	3
	Air flow	m³/s	4,8	4,7	7,1	7,1	7,3	7,1	9,7	9,7	11,4	15,0
	Sound pressure (3)	dB(A)	56	56	60	60	60	60	61	61	61	61
	SL sound pressure (3)	dB(A)	54	54	58	58	58	58	59	59	59	59
SSL version	Fans	n°	2	2	2	2	2	2	2	2	3	---
	Air flow	m³/s	4,1	3,9	5,7	5,7	6,0	7,7	9,2	8,9	11,8	---
	Sound pressure (3)	dB(A)	52	52	56	56	56	55	55	55	56	---
Circuito idraulico	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,1	1,85	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	120	110	110	100	150	125	120	110	100	70
	Expansion vessel	l	12	12	12	12	12	12	12	12	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight	Kg	610	639	678	697	806	898	947	1056	1155	1394
	Operating weight	Kg	615	645	685	705	815	910	960	1070	1170	1410

DIMENSIONS

CHA/K/ST			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
L	STD	mm	2350	2350	2350	2350	2350	2350	2350	2350	3550	3550
	SSL	mm	2350	2350	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	1920	1920	2220	2220	2220	2220	2220	2220
	SSL	mm	1920	1920	1920	1920	2220	2220	2220	2220	2220	---

DIMENSIONAL



CLEREANCE AREA

CHA/K/ST	182-P ÷ 604-P	
A	mm	300
B	mm	1800
C (*)	mm	800
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.
 - (4) Unit without tank and pump.
 - (5) Unit with tank and pump.
 - (*) C SIDE: Electrical board side.
- N.B. Weights of SSL and WP versions are indicated on the technical book.