

# CHA 802÷3204

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 200 kW TO 720 kW.



## UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 802÷3204 series are intended to satisfy the needs of large-sized service sector or industrial environments.

They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. Equipped with axial fans, semihermetic compressors and tube-bundle 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. The use of large condensing batteries and fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.

A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.



## VERSIONS

### CHA

Cooling only

### CHA/SSL

Super silenced cooling only

### CHA/WP

Reversible heat pump

### CHA/WP/SSL

Super silenced reversible heat pump

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with crankcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two independent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

### Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

## ACCESSORIES

### Factory fitted accessories:

IM	Protection module
SL	Unit silencing
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater

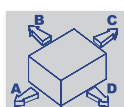
CHA			802	902	1002	1102	1202	1502	1602
Cooling	Cooling capacity (1)	kW	200	220	246	273	297	322	360
	Absorbed power (1)	kW	71	77	86	96	104	112	129
Heating	Heating capacity (2)	kW	218	238	267	295	322	346	373
	Absorbed power (2)	kW	73	79	88	99	107	115	133
Compressors	Quantity / Refrigerant circuits	n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
	Type		----- Semi-hermetics -----						
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	9,56	10,51	11,75	13,04	14,19	15,38	17,20
	Pressure drops	kPa	37	44	50	45	32	34	40
	Water connections	"G	125	125	125	125	150	150	150
Electrical characteristics	Power supply	V/Ph/Hz	----- 400 / 3 / 50 -----						
	Max. running current	A	178	178	196	256	276	312	320
	Max. inrush current	A	310	310	341	446	456	582	590
STD version and with SL accessory	Fans	n°	4	4	4	6	6	6	6
	Air flow	m³/s	19,4	18,3	18,3	29,4	29,4	27,8	30,6
	Sound pressure (3)	dB(A)	66	66	66	68	68	68	70
	SL sound pressure (3)	dB(A)	63	63	63	64	64	64	66
SSL version	Fans	n°	4	6	6	6	6	8	8
	Air flow	m³/s	13,6	21,9	21,9	20,5	20,5	28,9	27,1
	Sound pressure (3)	dB(A)	57	59	59	59	59	60	60
Unit with tank and pump	Pump nominal power	kW	3,0	3,0	4,0	4,0	5,5	5,5	5,5
	Pump static pressure	kPa	160	145	160	155	190	185	170
	Storage water volume	l	1100	1100	1100	2000	2000	2000	2000
	Expansion vessel	l	35	35	35	80	80	80	80
	Water connections	DN	100	100	100	100	100	100	100
Weights	Transport weight	Kg	2070	2170	2210	2580	2715	2885	2995
	Operating weight	Kg	2140	2240	2280	2680	2860	3020	3130

CHA			1604	1804	2004	2204	2404	3004	3204
Cooling	Cooling capacity (1)	kW	401	439	492	546	595	644	720
	Absorbed power (1)	kW	143	155	172	190	206	227	255
Heating	Heating capacity (2)	kW	435	477	532	590	635	692	738
	Absorbed power (2)	kW	147	159	176	196	211	232	260
Compressors	Quantity / Refrigerant circuits	n°	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
	Type		----- Semi-hermetics -----						
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	19,16	20,97	23,51	26,09	28,43	30,77	34,40
	Pressure drops	kPa	55	57	48	41	38	45	42
	Water connections	"G	150	150	200	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	----- 400 / 3 / 50 -----						
	Max. running current	A	357	357	393	512	547	632	632
	Max. inrush current	A	488	488	538	702	727	902	902
STD version and with SL accessory	Fans	n°	8	8	8	8	10	10	10
	Air flow	m³/s	38,9	36,1	36,1	38,4	45,8	50,0	47,9
	Sound pressure (3)	dB(A)	68	68	68	70	69	71	71
	SL sound pressure (3)	dB(A)	64	64	64	66	65	67	67
SSL version	Fans	n°	8	10	10	10	12	12	12
	Air flow	m³/s	27,1	33,9	33,9	38,3	46,1	46,1	43,7
	Sound pressure (3)	dB(A)	59	60	60	60	61	61	61
Unit with tank and pump	Pump nominal power	kW	5,5	7,5	7,5	7,5	7,5	7,5	7,5
	Pump static pressure	kPa	145	170	165	160	155	145	140
	Storage water volume	l	2000	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	80	80	80	80	80	80	80
	Water connections	DN	125	125	125	125	150	150	150
Weights	Transport weight	Kg	3650	3830	3980	4545	4755	4855	5120
	Operating weight	Kg	3780	3960	4210	4760	4950	5050	5330

DIMENSIONS

CHA			802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204	2404	3004	3204
L	STD	mm	3350	3350	3350	4400	4400	4400	4400	5550	5550	5550	5550	6700	6700	6700
	WP	mm	3350	3350	3350	4400	4400	4400	4400	6700	6700	6700	6700	7750	7750	8900
	SSL	mm	3350	4400	4400	4400	4400	5550	5550	5550	6700	6700	6700	7750	7750	7750
	WP/SSL	mm	3350	4400	4400	4400	4400	5550	5550	6700	7750	7750	7750	8900	8900	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	WP/SSL	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	---
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	WP/SSL	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	---

DIMENSIONAL



CLEREANCE AREA

CHA 802 - 3204		
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

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.
- (\*) A SIDE: Electrical board side.  
N.B. Weights of SSL and WP versions are indicated on the technical book.