

CHA 702-V÷5602-V

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 170 kW TO 1500 kW.



UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 702-V÷5602-V 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, screw 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 and the use of latest generation screw compressors, 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 frame in galvanized steel frame further protected with polyester powder painting.
- Screw compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection and intercepting valves.
- Axial fans directly coupled to a 3-phases electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, 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.

CC	Condensing control down to -20°C
HR	Desuperheater
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
RF	Cooling circuit shut off valve (included in WP)
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MIN	High and low gauges
CR	Remote control panel
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
RZ	Compressors stepless control
CT	Condensing control down to 0 °C

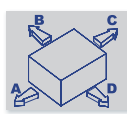
CHA			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
Cooling	Cooling capacity (1)	kW	170	198	227	259	290	338	386	433	480	541
	Absorbed power (1)	kW	67	77	87	97	107	125	141	161	171	189
Heating	Heating capacity (2)	kW	190	215	253	280	314	372	417	478	514	585
	Absorbed power (2)	kW	72	82	92	102	114	132	149	172	179	201
Compressors	Quantity / Refrigerant circuits	n°	2/2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
	Type		Screw									
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	8,12	9,46	10,85	12,37	13,86	16,15	18,44	20,69	22,93	25,85
	Pressure drops	kPa	30	34	45	50	55	25	36	42	35	42
	Water connections	"G	125	125	125	125	125	150	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	400 / 3 / 50									
	Max. running current	A	152	176	190	196	244	272	312	346	368	450
	Max. inrush current	A	324	373	382	409	493	499	523	694	695	793
STD version and with SL accessory	Fans	n°	4	4	4	4	6	6	8	8	8	10
	Air flow	m³/s	21,1	21,1	20,0	20,0	32,5	30,6	40,0	40,0	40,0	40,0
	Sound pressure (3)	dB(A)	68	68	68	68	69	69	70	70	70	71
SSL version	SL sound pressure (3)	dB(A)	65	65	65	65	66	66	67	67	67	68
	Fans	n°	4	4	6	6	6	8	10	10	10	12
	Air flow	m³/s	13,6	13,6	22,2	22,2	20,8	27,0	35,5	35,5	32,7	43,3
Unit with tank and pump	Sound pressure (3)	dB(A)	57	57	59	59	58	59	60	60	60	61
	Pump nominal power	kW	3,0	3,0	3,0	4,0	5,5	5,5	5,5	7,5	7,5	7,5
	Pump static pressure	kPa	180	160	140	155	165	195	165	175	170	160
	Storage water volume	l	1100	1100	1100	1100	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	35	35	35	35	80	80	80	80	80	80
	Water connections	DN	100	100	100	100	100	100	125	125	125	150
Weights	Transport weight	Kg	2120	2250	2270	2380	2730	3250	3870	3930	4105	4465
	Operating weight	Kg	2190	2320	2340	2450	2820	3380	4100	4160	4320	4680

CHA			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
Cooling	Cooling capacity (1)	kW	608	687	758	828	910	992	1077	1235	1397	1500
	Absorbed power (1)	kW	212	235	259	281	306	336	368	410	473	504
Heating	Heating capacity (2)	kW	640	720	809	893	936	1046	1113	1342	---	---
	Absorbed power (2)	kW	222	245	275	300	313	350	380	430	---	---
Compressors	Quantity / Refrigerant circuits	n°	2/2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
	Type		Screw									
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	29,05	32,82	36,22	39,56	43,48	47,40	51,46	59,01	66,75	71,67
	Pressure drops	kPa	46	48	33	36	40	35	35	38	43	42
	Water connections	"G	200	200	200	200	200	200	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	400 / 3 / 50									
	Max. running current	A	460	490	538	600	630	656	724	872	1016	1082
	Max. inrush current	A	554	619	667	741	779	899	985	1067	1604	1640
STD version and with SL accessory	Fans	n°	10	10	12	12	14	14	14	18	20	20
	Air flow	m³/s	51,4	48,1	60,3	60,3	68,1	68,1	73,5	93,3	104,4	98,9
	Sound pressure (3)	dB(A)	71	70	70	70	71	71	70	71	71	71
SSL version	SL sound pressure (3)	dB(A)	68	67	67	67	68	68	67	68	68	68
	Fans	n°	12	12	14	14	14	18	18	20	---	---
	Air flow	m³/s	43,3	40,7	46,3	50,2	50,2	63,8	63,8	70,8	---	---
Unit with tank and pump	Sound pressure (3)	dB(A)	61	60	61	61	61	62	61	61	---	---
	Pump nominal power	kW	7,5	7,5	11,0	11,0	11,0	18,5	18,5	18,5	18,5	18,5
	Pump static pressure	kPa	155	130	165	140	135	205	200	180	160	150
	Storage water volume	l	2000	2000	2000	2000	2000	2000	3000	3000	3000	3000
	Expansion vessel	l	80	80	80	80	80	80	80	80	80	80
	Water connections	DN	150	150	150	150	150	200	200	200	200	200
Weights	Transport weight	Kg	4505	5045	5690	5890	6240	6940	7365	8360	9240	9750
	Operating weight	Kg	4720	5240	5900	6100	6450	7240	7650	8780	9660	10230

DIMENSIONS

CHA		702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V	2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V		
L	STD	mm	3350	3350	3350	3350	4400	4400	5550	5550	5550	6700	6700	7750	7750	8900	8900	10050	10050	10050	12250	13400	13400
	WP	mm	4400	4400	4400	4400	4400	5550	5550	6700	6700	6700	7750	7750	7750	10050	10050	10050	10050	12250	13400	---	---
	SSL	mm	3350	3350	4400	4400	4400	5550	6700	6700	6700	8900	8900	8900	10050	10050	10050	10050	12250	12250	13400	---	---
	WP/SSL	mm	4400	4400	5550	5550	5550	6700	7750	7750	7750	10050	10050	10050	10050	10050	10050	10050	13400	13400	---	---	---
L(**)	STD	mm	4400	4400	4400	4400	5550	5550	5550	5550	6700	6700	7750	7750	7750	8900	8900	10050	10050	10050	12250	13400	13400
	WP	mm	5550	5550	5550	5550	5550	5550	6700	6700	6700	7750	7750	7750	10050	10050	10050	10050	12250	13400	---	---	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	WP	mm	2200	2200	2200	2200	2200	2200	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	2100	2100	2100	2100	2100	2100	2100
	WP	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2500	2500	---	---

DIMENSIONAL



CLERANCE AREA

CHA 702-V ÷ 5602-V		
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.
 (**) Length with inertial tank accessory.
 N.B. Weights of SSL and WP versions are indicated on the technical book.