

CHA/FC 642÷2204

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHELL AND TUBE EXCHANGERS.

FROM 165 kW TO 600 kW.



UNIT DESCRIPTION

The water coolers of the CHA/FC 642÷2204 series offer innovative technology to meet the needs of large systems for both domestic as well as industrial applications requiring the production of cooled water continuously year-round.

During the cold months, in the FREE COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensation battery, thus saving energy by not operating the unit's semihermetic compressors. A 3-way valve system controlled by the electronic microprocessor controller that manages the entire unit allows, based on the temperature of the outdoor air, operation in CHILLER or FREE COOLING mode. The product range includes 13 models composed of versions with tank, with pump or with tank and pump.



VERSIONS

CHA/FC

Cooling only

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 a 3-phases electric motor with external rotor.
- Condenser made of FREE-COOLING 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.

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
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
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

ACCESSORIES

Factory fitted accessories:

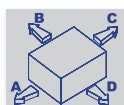
IM	Protection module
SL	Unit silencing
HRT/P	Total heat recovery in parallel
SP	Inertial tank

CHA/FC			642	702	802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204
Cooling	Cooling capacity (1)	kW	165	191	219	241	261	300	326	354	363	438	482	522	600
	Absorbed power (1)	kW	57,6	59,6	73,5	79,3	86,7	96,7	106	114	126	145	157	167	197
Free-cooling cycle	Air temperature (2)	°C	5,2	4,2	3,9	3,0	4,0	2,9	2,1	1,3	2,3	0,6	-0,3	-1,0	0,4
	Absorbed power (2)	kW	5,9	5,9	5,9	5,9	7,8	7,8	7,8	7,8	9,8	9,8	9,8	9,8	20,0
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	4	4	4	4
	Type		<----- Semi-hermetics ----->												
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	8,53	9,87	11,32	12,46	13,49	15,50	16,85	18,30	18,76	22,64	24,92	27,00	31,00
	Pressure drops	kPa	62	71	98	94	81	72	65	92	79	72	81	90	79
	Water connections	"G	100	100	100	100	100	100	125	125	125	125	150	150	150
Condenser	Fans	n°	6	6	6	6	8	8	8	8	10	10	10	10	10
	Air flow	m³/s	20,0	20,0	19,17	19,17	24,44	24,44	24,44	24,44	29,44	29,44	29,44	29,44	40,28
Electrical characteristics	Power supply	V/Ph/Hz	<----- 400 / 3 / 50 ----->												
	Max. running current	A	124	144	168	168	186	240	260	296	296	336	336	480	480
	Max. inrush current	A	195	226	300	300	332	430	440	567	567	468	468	670	670
Unit with SPU accessory	Pump nominal power	kW	4,0	4,0	4,0	4,0	4,0	5,5	5,5	5,5	5,5	5,5	7,5	7,5	7,5
	Pump static pressure	kPa	172	154	117	108	109	146	145	113	124	108	129	113	106
	Storage water volume	l	660	660	1100	1100	1100	2000	2000	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	24	24	35	35	35	80	80	80	80	80	80	80	80
	Water connections	"G	100	100	100	100	100	100	125	125	125	125	150	150	150
Sound pressure (3)	STD	dB(A)	66	66	66	66	66	66	66	67	67	67	67	67	71
Weights	Transport weight (4)	Kg	2730	2830	3000	3050	3240	3520	3800	4130	4480	4780	4830	5000	5350
	Transport weight (5)	Kg	3075	3165	3350	3400	3610	3890	4200	4550	4950	5350	5400	5480	5950
	Operating weight (4)	Kg	2930	3080	3270	3320	3530	3810	4100	4500	4900	5330	5405	5600	6000
	Operating weight (5)	Kg	3935	4075	4720	4770	5010	6235	6545	6950	7400	7800	7850	8030	8500

DIMENSIONS

CHA/FC			642	702	802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204
L	STD	mm	4400	4400	4400	4400	5500	5500	5500	5500	6700	6700	6700	6700	6700
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265

DIMENSIONAL



CLEREANCE AREA

CHA/FC	642 ÷ 2204	
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

- (1) Chilled water (with ethilenic glycol at 30%) from 15° to 10°C, ambient air temperature 35°C.
- (2) Ambient air temperature at wich the cooling capacity indicated in point (1) is reached.
- (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.
- (*) A SIDE: Electrical board side.