

ECOCHILLERS

CHILLERS FOR PROCESSING WATER



CH. A 312

CH... Series

1 or 2 refrigerant circuits – Cooling capacities from 16 to 82 kW

Chillers suitable for cooling processing water systems. These units are connected in closed circuit to the central units of powerful systems requiring water cooling procedures

They are supplied with a high pressure pump for water circulation and a gas by-pass device allowing the units to constantly produce chilled water at a steady temperature

The units provided with two compressors are especially designed to operate with a 100% fallback system: a main operating line and a stand-by line, enabled, in case of failure, by an automatic switching device; in addition a time-device guarantees an automatic self-acting turnout for a regular use of both circuits. When necessary, the 2 circuits are allowed to run simultaneously. In the units with two circuits, the 100% fallback system is granted by two totally independent regulation systems and two pumps

The following versions are available:

CH.A... 1 or 2 circuits with remote condenser

CH.A...K R407C ecological gas charge

Made up of:

STRUCTURE

Made of section irons and steel panels, finely painted with epoxy powders and sound insulated by means of polyurethane panels with a high sound absorbing degree.

COMPRESSOR

High efficient Scroll compressor with low sound level, internal heat protection, installed on rubber dampers.

EVAPORATOR

Weld-brazed plate evaporator with anti-condensate insulation.

ELECTRIC PUMP

Monobloc centrifugal pump with a motor-pump direct coupling.

Supplied with a 2 -pole motor, class F insulation, IP 54 protection.

COMPONENTS OF THE REFRIGERANT CIRCUIT

Thermostatic expansion valve, dehydrating filter, safety valve, liquid receiver, sight glass, high and low pressure switches, high and low pressure gauges, modulating condensing control device installed on the fans, hot gas valve.

COMPONENTS OF THE HYDRAULIC CIRCUIT

Electric pump, expansion vessel, filter, filling group, flow switch, safety valve.

REGULATION SYSTEM

Microprocessor with a liquid crystal display.

Accessories

AE Electrical supply different from standard
IM Seawood packing

CH... Technical data

MODEL	CH.A...	121	161	241	341	421	501	232	312	482	682	842
Cooling capacity with R407C 2)	kW	11,88	15,49	23,09	33,16	39,71	49,12	21,19	30,97	43,70	64,79	78,28
Absorbed power with R407C 2)	kW	5,22	6,4	9,3	13,02	16,38	20,58	8,88	12,79	18,6	26,04	32,76
Nominal absorbed current with R407C 2)	A	10,12	11,22	15,95	21,12	26,62	35,97	17,16	22,44	31,9	42,24	53,24
Cooling capacity with R22 1)	kW	12,5	16,3	24,3	34,9	41,8	51,7	22,3	32,6	46,0	68,2	82,4
Absorbed power with R22 1)	kW	4,35	5,33	7,75	10,85	13,65	17,15	7,4	10,66	15,5	21,7	27,3
Nominal absorbed current with R22 1)	A	9,2	10,2	14,5	19,2	24,2	32,7	15,6	20,4	29	38,4	48,4
Brazed plate evaporator												
Quantity	n	1	1	1	1	1	1	2	2	2	2	2
Pressure drop (single)	Kpa	25	25	30	32	40	20	29	25	30	32	40
Pumps												
Quantity	n	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*
Available pressure	Kpa	200	195	165	130	110	120	200	195	170	130	110
Water flow rate (single)	l/s	0,60	0,78	1,16	1,67	2,00	2,47	0,53	0,78	1,10	1,63	1,97
Motor power (single)	kW	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,55
Nominal absorbed current (single)	A	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7
Inrush current (single)	A	8	8	8	8	8	8	8	8	8	8	8
Scroll compressors												
Quantity	n	1	1	1	1	1	1	2	2	2	2	2
Circuits	n	1	1	1	1	1	1	2	2	2	2	2
Standard steps capacity	%	0-100										
Nominal absorbed current (single)	A	7,5	8,5	12,8	17,5	22,5	31,0	6,1	8,5	12,8	17,5	22,5
Inrush current (single)	A	60	71	123	167	142	146	50	71	123	167	142
Nominal absorbed power (single)	kW	3,80	4,78	7,20	10,30	13,10	16,60	3,15	4,78	7,20	10,30	13,10
Dimensions												
Length	mm	770	770	770	770	770	1.265	1.265	1.265	1.265	1.265	1.265
Width	mm	770	770	770	770	770	770	770	770	770	770	770
Height	mm	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900	1.900
Weight	Kg	320	350	380	410	450	555	470	500	530	560	600
Ø in - Ø out	inc/inc	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½	1 ½ / 1 ½
Connections on discharge side	mm	16	16	22	22	22	28	16	16	22	22	22
Connections on liquid line	mm	10	10	10	16	16	16	10	10	12	16	16
Power supply												
Remote condenser 6) 400V / 50 Hz / 3Ph + N + T												
Quantity	n	1	1	1	1	1	1	2	2	2	2	2
Standard	CR	14	27	36	46	59	71	14	27	36	46	59
Silenced	CRS	22	22	35	57	57	67	22	22	35	57	57
Ultra-silenced	CRU	18	23	32	43	68	68	18	23	32	43	68

Nominal condition referred to: water 7/12 °C - Air 35 °C

1) Condensing temperature 47 °C

2) Condensing temperature 49 °C

2* = 1 in work + 1 in stand-by

6) Remote condensers selected for 35 °C external air temperature