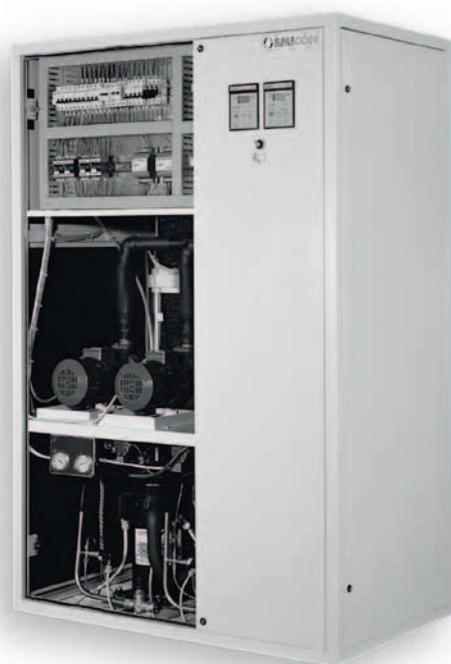


# CH.A K

## ECOCHILLERS CHILLERS FOR PROCESSING WATER

COOLING CAPACITY FROM 16 TO 82 kW

CH.A 312 K



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.

They are available with 1 or 2 cooling circuits.

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

### MAIN COMPONENTS

**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.

High-efficiency scroll **compressor** (COP 3.37 under ARI conditions), with low sound level, internal heat protection, installed on rubber vibration dampers.

Weld-brazed plate **evaporator** in AISI 316 stainless steel, with pipes and patented manifold so to reach a high heat exchange coefficient. Its design allows a uniform water distribution, compatibly with pressure drops. The exchanger is provided with close-cell insulating material.

**Electric pump** of packaged centrifugal type with a motor-pump direct coupling. It is supplied with a 2 -pole motor, class F insulation, IP 54 protection.

**Cooling circuit** made of: 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.

**Water circuit** made of: electric pump, expansion vessel, filter, filling group, flow switch, safety valve.

**Regulation system** composed of microprocessor with a liquid crystal display, complete with compressors hour counter.

## ACCESSORIES

- AE** **Electrical power supply different from standard:** mainly, 230V triphase, 460V triphase. Frequency 50/60 Hz.
- IM** **Seawood packing:** seawood case and protection bag with hygroscopic salts, suitable for long sea transports.

## Technical data with refrigerant R407C - CH.A K

| CH.A   |         | 121 K                      | 161 K     | 241 K     | 341 K     | 421 K     | 501 K     | 232 K     | 312 K     | 482 K     | 682 K     | 842 K     |
|--|---------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cooling capacity   |         |                            |           |           |           |           |           |           |           |           |           |           |
| Cooling capacity   | kW      | 11,9                       | 15,5      | 23,1      | 33,2      | 39,7      | 49,1      | 21,2      | 31,0      | 43,7      | 64,8      | 78,3      |
| Absorbed power   | kW      | 5,2                        | 6,4       | 9,3       | 13,0      | 16,4      | 20,6      | 8,9       | 12,8      | 18,6      | 26,0      | 32,8      |
| Nominal absorbed current                                     | A       | 10                         | 11        | 16        | 21        | 27        | 36        | 17        | 22        | 32        | 42        | 53        |
| Braze 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       | 1                          | 1         | 1         | 1         | 1         | 1         | 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   |         |                            |           |           |           |           |           |           |           |           |           |           |
| Power supply   | V/ph/Hz | 400V / 50 Hz / 3Ph + N + T |           |           |           |           |           |           |           |           |           |           |
| Remote condenser   |         |                            |           |           |           |           |           |           |           |           |           |           |
| 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        |
| REMARKS  |         |                            |           |           |           |           |           |           |           |           |           |           |
| Nominal condition referred to: water 7/12 °C - Air 35 °C     |         |                            |           |           |           |           |           |           |           |           |           |           |
| Condensing temperature 49 °C                                 |         |                            |           |           |           |           |           |           |           |           |           |           |
| *2 = 1 in work + 1 in stand-by                               |         |                            |           |           |           |           |           |           |           |           |           |           |
| Remote condenser selected for 35 °C external air temperature |         |                            |           |           |           |           |           |           |           |           |           |           |