ERAS N MC VS Kp



AIR COOLED CHILLERS FOR OUTDOOR INSTALLATION

WITH SEMIHERMETIC RECIPROCATED COMPRESSORS AND AXIAL FANS

Cooling capacity from 54 to 353 kW























The packaged air cooled chillers of RAS Kp series are suitable for outdoor installation and are particularly indicated to cool pure fluid solutions for industrial applications or in air conditioning systems of the service industry where it is necessary to grant excellent performances and a very low environmental impact.

The refrigerant used is Propane, a non-toxic hydrocarbon, even at high concentrations, with almost a null ozone depletion potential, negligible global warming potential and thermodynamic properties which allow to reach high efficiency values.

For this reason the units are designed for external installation, in compliance with the European standard EN 378 and his updates.

Depending on the capacity required the units are available with 1 or 2 independents cooling circuits equipped with 1 or 2 compressors for each circuit.

Thanks to the many available options, these chillers are particularly versatile and are easily adaptable to the different types of plants, where production of chilled water is required.

All the units are completely factory assembled, tested and supplied with refrigerant non-freezing oil charge; so, once on installation site, they only need to be positioned and connected to the hydraulic and power supply lines.

MAIN COMPONENTS

STRUCTURE

Strong and compact structure, made of base and frame with high-thickness galvanized steel elements assembled with stainless steel rivets. All galvanized steel surfaces externally positioned are superficially coated by an oven powder-painting with colour RAL7035. The technical section which contains compressors and the other cooling circuit elements, exept the condensing part, is closed in a cabinet; if a refrigerant leak occurs the technical vane is automatically airy using an external axial fan which is able to clean all the air inside the cabinet 4 time/minute.

To reduce the sound level it is possible to insulate the technical section with a sound and fire proof standard thickness material or higher thickness material (CFU option).

COMPRESSORS

Semi hermetic alternative type optimized to operate with the hydrocarbons and realized in compliance with the safety regulation in force. The electrical motor, arranged for starts with low inrush current (PW option), is equipped with thermal protection module (installed in the electrical cabinet); the lubricating system, of forced type, is equipped with oil filters and check valves to survey the lubricating pressure and is made through a high pressure pump. Each compressor is installed on rubber type vibration dampers and is provided with switch-off valve on suction and discharge side, electronic differential pressure switch for the oil level control, crankcase heater and temperature probe on discharge side to control the compressor's discharge temperature. If the compressors are installed in "tandem" version each one is equipped with oil level sensor and oil recuperator; this device activates automatically when in one compressor the lubricant level goes down then minimum value.

EVAPORATOR

Stainless steel plates type mono or bi circuits, thermally insulated using a flexible closed cells mattress of high thickness. Is also provided with a safety differential pressure switch which does not allows the unit operation in case of water flow lack or reduction.

COILS

The external exchanger coils are made of microchannel aluminium extruded pipes and brazed aluminium fins.

Thanks to the reduced whole volume and the high external surfaces, the microchannel coils allow a great reduction of refrigerant charge and an high heat exchange capacity.

FANS

6 poles axial fans with electrical motor and external rotor directly coupled to the impeller; aluminium blades with wings profile are suitably designed to avoid any turbulence in the iar detachment zone, granting in this way the maximum efficiency with the minimum noise level. The fan is equipped with a galvanized steel protection grid painted after the construction; the fan motors are of totally closed type and have got a protection factor IP54 and winding-flooded protection thermostat.

REGENERATIVE EXCHANGER

Heat regenerative exchanger gas/fluid of plates type, installed on each circuit to grant a suitable overheating value to the compressor sucked gas and at the same time to increase the cooling circuit efficiency thanks to higher sub-cooling of condensing coil leaving fluid. Insulated thermally using a close cells mattress of great thickness.

COOLING CIRCUIT

Indipendent cooling circuits, each provided with a shut-off valve for refrigerant charge, antifreeze probe, sight glass, dehydrating filter for R290 with wide filtering surface, high pressure side safety valve equipped with connector to the discharge refrigerant conveying piping, electronic thermostatic valve (for 10010,24020 and following bigger frames), pressure switches and high/low pressure gauges for R290 specifically.

All the units are equipped with a leak sensor which is able to turn off the compressors and turn on the extraction fan in case of a refrigerant leak occurs.

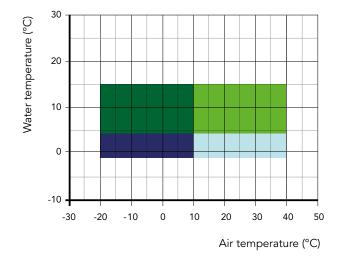
ELECTRICAL BOARD

Built in compliance with 61439-1 standards, inside of which all the control system elements and the ones required for electrical motors starting and protection are located, all the components are factory connected and testes.

The electrical cabinet has got a watertight structure, equipped with cable glands with protection factor of IP65/66.

Besides the electrical cabinet contains all the power and control devices, microprocessor electronic board complete with keyboard and display for visualizing several function available, main switch of lock-door type, isolation transformer for auxiliary circuits, automatic switches, fuses and protection switches for compressors and fans motors, terminals for general alarm and unit remote ON/OFF, spring type terminal board and the possibility to interface to BMS system.

OPERATING RANGE



Standard unit, cooling mode with variable frequency fan speed control

Standard unit, cooling mode

Standard unit, cooling mode with glycol and variable frequency fan speed control

Standard unit, cooling mode with glycol



ACCESSORIES

| Amperometer + Voltmeter Axial fan diffuser AXT Operation in cooling mode down to -20°C BF Operation in cooling mode down to -10°C Soundproofed compressors cabinet with higher thickness material CFU Compressors inrush counter CS | 0 0 0 0 0 | 0 0 0 0 | 0 0 0 | 0 0 0 | 0 |
|--|-----------------------|------------------|-------------|-------------|---|
| Operation in cooling mode down to -20°C Operation in cooling mode down to -10°C Soundproofed compressors cabinet with higher thickness material CFU Compressors inrush counter CS | 0 0 | 0 | 0 | | |
| Operation in cooling mode down to -10°C Soundproofed compressors cabinet with higher thickness material CFU Compressors inrush counter CS | 0 | 0 | | 0 | _ |
| Soundproofed compressors cabinet with higher thickness material CFU Compressors inrush counter CS | 0 | | 0 | | 0 |
| Compressors inrush counter CS | | 0 | | 0 | 0 |
| 1 | 0 | | 0 | О | 0 |
| | | 0 | 0 | 0 | 0 |
| Axial fans with electronic commutated motor | 0 | 0 | 0 | О | 0 |
| Anti-corrosive protection of the condensing coils | 0 | 0 | 0 | 0 | 0 |
| Condensing coil protection grid GP | О | О | 0 | 0 | 0 |
| High pressure double safety valve | 0 | 0 | 0 | 0 | 0 |
| Victaulic insulation on pump side | О | 0 | 0 | О | 0 |
| Victaulic insulation buffer tank side | 0 | 0 | 0 | 0 | 0 |
| RS 485 Serial interface | 0 | 0 | 0 | 0 | О |
| BACNET Protocol serial interface IH-BAC | 0 | 0 | 0 | 0 | 0 |
| TCP/IP Protocol serial interface | О | 0 | 0 | 0 | 0 |
| Phase monitor MF | 0 | 0 | 0 | 0 | 0 |
| Buffer tank module MV | О | 0 | 0 | О | 0 |
| Pump group P1 | 0 | 0 | 0 | 0 | 0 |
| Pump + tank P1+MV | / 0 | 0 | 0 | 0 | 0 |
| Higher available pressure pump group P1H | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure pump group + tank P1H+M | V 0 | О | 0 | 0 | 0 |
| Double pump group P2 | 0 | 0 | 0 | 0 | 0 |
| Double pump group + tank P2+MV | / 0 | 0 | 0 | 0 | 0 |
| Higher available pressure double pump group P2H | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure double pump group + tank P2H+M | V 0 | 0 | 0 | О | 0 |
| Rubber-type vibration dampers PA | 0 | 0 | 0 | 0 | 0 |
| Anti-corrosive protection of the condensing coils (Powder coating) | 0 | 0 | 0 | 0 | 0 |
| Spring-type vibration dampers PM | 0 | 0 | 0 | 0 | 0 |
| Remote display PQ | 0 | 0 | 0 | 0 | 0 |
| Part-Winding PW | 0 | 0 | 0 | 0 | 0 |
| Anti-freeze heater on evaporator RA | 0 | 0 | 0 | 0 | 0 |
| Power factor correction system cosfi ≥0,9 RF | 0 | 0 | 0 | 0 | 0 |
| Compressor overload relays RL | • | • | • | • | • |
| Partial heat recovery RP | 0 | 0 | 0 | 0 | 0 |
| Electronic thermostatic valve | 0 | 0 | 0 | 0 | |
| Inverter on compressor VSC | | | | | |
| Inverter for pump VSP1 | 0 | 0 | 0 | О | 0 |
| High pressure inverter for pump VSP1H | 0 | 0 | 0 | 0 | 0 |
| Inverter for parallel pumps (only one running) VSP2 | 0 | 0 | 0 | 0 | 0 |
| High pressure inverter for parallel pumps (only one running) VSP2H | 0 | 0 | 0 | 0 | 0 |

[•] Standard, o Optional, -- Non disponibile



| APPUND APPUND APPUND APPUND AVAIT APPUND AVAIT AVAIT | ERAS N MC Kp | | 14020 | 17020 | 21020 | 24020 | 29020 | 34020 |
|--|--|--------|-------|-------|-------|-------|-------|-------|
| Operation in cooling mode down to -20°C BF 0 | Amperometer + Voltmeter | A+V | 0 | 0 | 0 | 0 | 0 | 0 |
| Operation in cooling mode down to -10°C BT 0 | Axial fan diffuser | AXT | 0 | 0 | 0 | 0 | 0 | 0 |
| Soundproofed compressors cabinet with higher thickness material CFU 0 0 0 0 0 0 0 0 0 | Operation in cooling mode down to -20°C | BF | 0 | 0 | 0 | О | 0 | 0 |
| Compressors inrush counter | Operation in cooling mode down to -10°C | ВТ | 0 | 0 | 0 | 0 | 0 | 0 |
| Axial fans with electronic commutated motor EC | Soundproofed compressors cabinet with higher thickness material | CFU | 0 | 0 | 0 | О | 0 | 0 |
| Anti-corrosive protection of the condensing coils ECP 0 0 0 0 0 0 0 0 0 | Compressors inrush counter | CS | 0 | 0 | 0 | 0 | 0 | 0 |
| Condensing coil protection grid GP | Axial fans with electronic commutated motor | EC | 0 | 0 | 0 | 0 | 0 | 0 |
| High pressure double safety valve HRV2 0 0 0 0 0 0 0 0 0 | Anti-corrosive protection of the condensing coils | ECP | 0 | 0 | 0 | 0 | 0 | 0 |
| Victaulic insulation on pump side I1 0 | Condensing coil protection grid | GP | О | 0 | 0 | 0 | 0 | 0 |
| Victaulic insulation buffer ank side 12 | High pressure double safety valve | HRV2 | 0 | 0 | 0 | 0 | 0 | 0 |
| RS 485 Serial interface | Victaulic insulation on pump side | I1 | 0 | 0 | 0 | 0 | 0 | 0 |
| BACNET Protocol serial interface | Victaulic insulation buffer tank side | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| TCP/IP Protocol serial interface | RS 485 Serial interface | IH | О | 0 | 0 | 0 | 0 | 0 |
| Phase monitor MF | BACNET Protocol serial interface | IH-BAC | 0 | 0 | 0 | 0 | 0 | 0 |
| Buffer tank module | TCP/IP Protocol serial interface | IWG | 0 | 0 | 0 | 0 | 0 | 0 |
| Pump group P1 | Phase monitor | MF | 0 | 0 | 0 | 0 | 0 | 0 |
| Pump + tank P1+MV 0 | Buffer tank module | MV | 0 | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure pump group | Pump group | P1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure pump group + tank P1H+MV 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Pump + tank | P1+MV | 0 | 0 | 0 | 0 | 0 | 0 |
| Double pump group P2 0 | Higher available pressure pump group | P1H | 0 | 0 | 0 | 0 | 0 | 0 |
| Double pump group + tank P2+MV 0 | Higher available pressure pump group + tank | P1H+MV | 0 | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure double pump group P2H O O O O O O O O O O O O O O O O O O | Double pump group | P2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Higher available pressure double pump group + tank P2H+MV O O O O O O O O O Rubber-type vibration dampers PA O O O O O O O O Anti-corrosive protection of the condensing coils (Powder coating) PCP O O O O O O Spring-type vibration dampers PM O O O O O O Spring-type vibration dampers PM O O O O O O O O O Part-Winding PW O O O O O O Anti-freeze heater on evaporator RA O O O O O O Anti-freeze heater on evaporator RA O O O O O O Compressor overload relays RL O O O O O Partial heat recovery RP O O O O Compressor VSC O O O O O O O O O O O O O | Double pump group + tank | P2+MV | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubber-type vibration dampers PA 0 <t< td=""><td>Higher available pressure double pump group</td><td>P2H</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></t<> | Higher available pressure double pump group | P2H | 0 | 0 | 0 | 0 | 0 | 0 |
| Anti-corrosive protection of the condensing coils (Powder coating) PCP O O O O O O O O O O O O O O O O O | Higher available pressure double pump group + tank | P2H+MV | 0 | 0 | 0 | 0 | 0 | 0 |
| Spring-type vibration dampers PM 0 0 0 0 0 0 Remote display PQ 0 </td <td>Rubber-type vibration dampers</td> <td>PA</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> | Rubber-type vibration dampers | PA | 0 | 0 | 0 | 0 | 0 | 0 |
| Remote display PQ 0 | Anti-corrosive protection of the condensing coils (Powder coating) | PCP | 0 | 0 | 0 | 0 | 0 | 0 |
| Part-Winding PW 0 0 0 0 0 Anti-freeze heater on evaporator RA 0< | Spring-type vibration dampers | PM | 0 | 0 | 0 | 0 | 0 | 0 |
| Anti-freeze heater on evaporator RA 0 0 0 0 0 0 0 0 Power factor correction system cosfi ≥0,9 RF 0 0 0 0 0 0 0 0 Compressor overload relays RL 0 0 0 0 0 0 0 Partial heat recovery RP 0 0 0 0 0 0 0 Electronic thermostatic valve TE 0 0 0 0 0 0 0 Inverter on compressor VSC 0 0 0 0 0 0 0 Inverter for pump VSP1 0 0 0 0 0 0 Inverter for pump (only one running) VSP2 0 0 0 0 0 0 0 O 0 0 0 O 0 0 0 0 O 0 0 0 0 | Remote display | PQ | 0 | 0 | 0 | 0 | 0 | 0 |
| Power factor correction system cosfi ≥0,9 RF 0 <td>Part-Winding</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> | Part-Winding | | 0 | 0 | 0 | 0 | 0 | 0 |
| Compressor overload relays RL 0< | Anti-freeze heater on evaporator | | 0 | 0 | 0 | 0 | 0 | 0 |
| Partial heat recovery RP 0 | Power factor correction system cosfi ≥0,9 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Electronic thermostatic valve TE O O O Inverter on compressor VSC O< | Compressor overload relays | RL | 0 | 0 | 0 | 0 | 0 | 0 |
| Inverter on compressor VSC 0 <td>Partial heat recovery</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> | Partial heat recovery | | 0 | 0 | 0 | 0 | 0 | 0 |
| Inverter for pump VSP1 0 | Electronic thermostatic valve | | 0 | 0 | 0 | | | |
| High pressure inverter for pump VSP1H 0 0 0 0 0 Inverter for parallel pumps (only one running) VSP2 0 0 0 0 0 | Inverter on compressor | | 0 | 0 | 0 | 0 | 0 | 0 |
| Inverter for parallel pumps (only one running) VSP2 O O O O | Inverter for pump | | 0 | 0 | 0 | 0 | 0 | 0 |
| | High pressure inverter for pump | VSP1H | 0 | 0 | 0 | 0 | 0 | 0 |
| High pressure inverter for parallel pumps (only one running) VSP2H 0 0 0 0 0 | Inverter for parallel pumps (only one running) | | 0 | 0 | 0 | 0 | 0 | 0 |
| | High pressure inverter for parallel pumps (only one running) | VSP2H | 0 | 0 | 0 | 0 | 0 | 0 |

[•] Standard, o Optional, -- Non disponibile



TECHNICAL DATA

| Total input power | I ECHINICAL DAIA | | | | | | |
|--|-----------------------------------|---------|---------------|---------------|---------------|---------------|---------------|
| Total input power | ERAS N MC VS Kp | | 5210 | 5910 | 7210 | 8710 | 10010 |
| Naminal input current | Cooling capacity | kW | 54,2 | 61,0 | 74,8 | 92,9 | 107,1 |
| Naminal input current | Total input power | kW | 16,4 | 19,2 | 23,3 | 29,2 | 34,1 |
| SEPR® W/W 4,17 4,12 4,24 4,17 4,14 Circuits n° 1 <td< td=""><td>Nominal input current</td><td>Α</td><td>35,1</td><td>38,2</td><td>42,5</td><td>52,1</td><td>63,2</td></td<> | Nominal input current | Α | 35,1 | 38,2 | 42,5 | 52,1 | 63,2 |
| Circuits n° 1 | EER | W/W | 3,30 | 3,19 | 3,21 | 3,18 | 3,15 |
| Compressors n° 1 1 1 1 1 1 Refrigerant data R290 Tegrigarant charge kg 4 4 8 8 8 8 8 8 6 6 1 2 3 <td>SEPR (5)</td> <td>W/W</td> <td>4,17</td> <td>4,12</td> <td>4,24</td> <td>4,17</td> <td>4,14</td> | SEPR (5) | W/W | 4,17 | 4,12 | 4,24 | 4,17 | 4,14 |
| Refrigerant charge kg 4 4 8 2 2 2 | Circuits | n° | 1 | 1 | 1 | 1 | 1 |
| Refrigerant charge kg 4 4 8 8 8 Global warming potential (GWP) - 3 | Compressors | n° | 1 | 1 | 1 | 1 | 1 |
| Global warming potential (GWP) - 3 | Refrigerant data R290 | | | | | | |
| Global warming potential (GWP) - 3 | Refrigerant charge | kg | 4 | 4 | 8 | 8 | 8 |
| Axial fans (°) Quantity n° 2 3 9 3 9 2 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 | Global warming potential (GWP) | - | 3 | 3 | 3 | 3 | 3 |
| Quantity n° 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 40070 40070 70 do not provided to the power input MW 1,760 17690 20020 40220 40070 40070 70 do not provided to the power input 40070 17690 20020 40220 40070 40070 70 do not provided to the power input 40070 17690 17690 20020 40220 40070 70 do not provided to the power input 40070 17690 20020 40220 40070 70 do not provided to the power input 40070 17690 20020 50 5,2 7,8 3,9 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 <t< td=""><td>Equivalent CO₂ charge</td><td>t</td><td>12</td><td>12</td><td>24</td><td>24</td><td>24</td></t<> | Equivalent CO ₂ charge | t | 12 | 12 | 24 | 24 | 24 |
| Total air flow m³/h 17760 17690 20020 40220 40070 Total power input kW 1,2 1,2 1,2 3,9 3,9 Total input current A 5,2 5,2 5,2 7,8 7,8 Evaporator (**) Quantity n° 1 <t< td=""><td>Axial fans (1)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | Axial fans (1) | | | | | | |
| Total power input kW 1,2 1,2 1,2 3,9 3,9 Total input current A 5,2 5,2 5,2 7,8 7,8 Evaporator (a) Quantity n° 1 < | Quantity | n° | 2 | 2 | 2 | 2 | 2 |
| Total input current A 5,2 5,2 5,2 7,8 7,8 Evaporator (2) Cuantity n° 1 <t< td=""><td>Total air flow</td><td>m³/h</td><td>17760</td><td>17690</td><td>20020</td><td>40220</td><td>40070</td></t<> | Total air flow | m³/h | 17760 | 17690 | 20020 | 40220 | 40070 |
| Parish P | Total power input | kW | 1,2 | 1,2 | 1,2 | 3,9 | 3,9 |
| Quantity n° 1 1 1 1 1 Water flow m³/h 9,3 10,5 12,9 16,0 18,4 Pressure drop kPa 29 35 17 24 31 Weight kg 1094 1096 1206 1304 1310 Operating weight kg 1098 1100 1212 1310 1316 Dimensions Length mm 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2570 | Total input current | Α | 5,2 | 5,2 | 5,2 | 7,8 | 7,8 |
| Water flow m³/h 9,3 10,5 12,9 16,0 18,4 Pressure drop kPa 29 35 17 24 31 Weight Transport weight kg 1094 1096 1206 1304 1310 Operating weight kg 1098 1100 1212 1310 1316 Dimensions Length mm 2590 2570 2570 2570 2570 | Evaporator (2) | | | | | | |
| Pressure drop kPa 29 35 17 24 31 Weight Transport weight kg 1094 1096 1206 1304 1310 Operating weight kg 1098 1100 1212 1310 1316 Dimensions Use of the present of the pres | Quantity | n° | 1 | 1 | 1 | 1 | 1 |
| Weight kg 1094 1096 1206 1304 1310 1310 1310 1310 1310 1310 1310 1310 1310 1310 1310 1316 Dimersions Use of the property of the | Water flow | m³/h | 9,3 | 10,5 | 12,9 | 16,0 | 18,4 |
| Transport weight kg 1094 1096 1206 1304 1310 Operating weight kg 1098 1100 1212 1310 1316 Dimensions Length mm 2590 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 2570 | Pressure drop | kPa | 29 | 35 | 17 | 24 | 31 |
| Operating weight kg 1098 1100 1212 1310 1316 Dimensions Length mm 2590 2570 <td>Weight</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | Weight | | | | | | |
| Dimensions Length mm 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2590 2570 1370 1370 1370 1370 1370 1370 1370 1370 1370 2570 </td <td>Transport weight</td> <td>kg</td> <td>1094</td> <td>1096</td> <td>1206</td> <td>1304</td> <td>1310</td> | Transport weight | kg | 1094 | 1096 | 1206 | 1304 | 1310 |
| Length mm 2590 2590 2590 2590 2590 2590 2590 Width mm 1370 1370 1370 1370 1370 1370 Height mm 2570 2570 2570 2570 2570 2570 2570 2570 | Operating weight | kg | 1098 | 1100 | 1212 | 1310 | 1316 |
| Width mm 1370 2570 | Dimensions | | | | | | |
| Height mm 2570 <th< td=""><td>Length</td><td>mm</td><td>2590</td><td>2590</td><td>2590</td><td>2590</td><td>2590</td></th<> | Length | mm | 2590 | 2590 | 2590 | 2590 | 2590 |
| Sound data Total LWA (3) dB(A) 86,3 88,1 88,1 92,2 92,2 Total SPL 10m (4) dB(A) 54,3 56,1 56,1 60,2 60,2 Power supply Voltage/phase/frequency V/ph/Hz 400/3/50+N+PE 400/3/50+N | Width | mm | 1370 | 1370 | 1370 | 1370 | 1370 |
| Total LWA 3 | Height | mm | 2570 | 2570 | 2570 | 2570 | 2570 |
| Total SPL 10m (4) dB(A) 54,3 56,1 56,1 60,2 60,2 Power supply Voltage/phase/frequency V/ph/Hz 400/3/50+N+PE 400/ | Sound data | | | | | | |
| Power supply Voltage/phase/frequency V/ph/Hz 400/3/50+N+PE 400/3 | Total LWA (3) | dB(A) | 86,3 | 88,1 | 88,1 | 92,2 | 92,2 |
| Voltage/phase/frequency V/ph/Hz 400/3/50+N+PE 400/ | Total SPL 10m ⁽⁴⁾ | dB(A) | 54,3 | 56,1 | 56,1 | 60,2 | 60,2 |
| General electrical data Maximum input power [kW] 21.2 25.2 28.2 37.9 45.9 Maximum input current [A] 42.3 49.4 52.4 68.8 82.4 | Power supply | | | | | | |
| Maximum input power [kW] 21.2 25.2 28.2 37.9 45.9 Maximum input current [A] 42.3 49.4 52.4 68.8 82.4 | Voltage/phase/frequency | V/ph/Hz | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE |
| Maximum input current [A] 42.3 49.4 52.4 68.8 82.4 | General electrical data | | | | | | |
| | Maximum input power | [kW] | 21.2 | 25.2 | 28.2 | 37.9 | 45.9 |
| Inrush current [A] 42.3 49.4 52.4 68.8 82.4 | Maximum input current | [A] | 42.3 | 49.4 | 52.4 | 68.8 | 82.4 |
| | Inrush current | [A] | 42.3 | 49.4 | 52.4 | 68.8 | 82.4 |



⁽¹⁾ Ambient air temperature 35°C(2) Fluid: Water - In/out Temperature: 12/7°C

⁽³⁾ Sound power level in accordance with ISO 3744.
(4) Sound pressure level at 10m from the unit in free field conditions, in accordance with ISO 3744
(5) SEPR: Medium temperature process chiller.

| ERAS N MC Kp | | 14020 | 17020 | 21020 | 24020 | 29020 | 34020 |
|-----------------------------------|---------|---------------|---------------|---------------|---------------|---------------|-------------|
| Cooling capacity | kW | 155,5 | 182,8 | 215,7 | 252,1 | 289,7 | 352,9 |
| Total input power | kW | 47,5 | 56,4 | 68,2 | 77,0 | 96,5 | 114,1 |
| Nominal input current | Α | 85,5 | 103,7 | 126,6 | 145,5 | 166,3 | 205,7 |
| EER | W/W | 3,27 | 3,24 | 3,16 | 3,28 | 3,00 | 3,09 |
| SEPR (5) | W/W | 4,15 | 4,14 | 4,12 | 4,26 | 4,13 | 4,24 |
| Circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 |
| Compressors | n° | 2 | 2 | 2 | 4 | 4 | 4 |
| Refrigerant data R290 | | | | | | | |
| Refrigerant charge | kg | 15 | 15 | 17 | 17 | 16 | 21 |
| Global warming potential (GWP) | | 3 | 3 | 3 | 3 | 3 | 3 |
| Equivalent CO ₂ charge | t | 45 | 45 | 51 | 51 | 48 | 63 |
| Axial fans (1) | | | | | | | |
| Quantity | n° | 4 | 4 | 4 | 4 | 4 | 6 |
| Total air flow | m³/h | 80770 | 80470 | 80110 | 79850 | 79400 | 119920 |
| Total power input | kW | 7,8 | 7,8 | 7,8 | 7,8 | 7,8 | 11,6 |
| Total input current | Α | 15,6 | 15,6 | 15,6 | 15,6 | 15,6 | 23,4 |
| Evaporator (2) | | | | | | | |
| Quantity | n° | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow | m³/h | 26,7 | 31,4 | 37,1 | 43,4 | 49,8 | 60,7 |
| Pressure drop | kPa | 21 | 28 | 26 | 33 | 26 | 36 |
| Weight | | | | | | | |
| Transport weight | kg | 2002 | 2098 | 2156 | 2522 | 2598 | 3100 |
| Operating weight | kg | 2016 | 2112 | 2178 | 2544 | 2630 | 3132 |
| Dimensions | | | | | | | |
| Length | mm | 4840 | 4840 | 4840 | 4840 | 4840 | 4430 |
| Width | mm | 1370 | 1370 | 1370 | 1370 | 1370 | 2260 |
| Height | mm | 2570 | 2570 | 2570 | 2570 | 2570 | 2480 |
| Sound data | | | | | | | |
| Total LWA (3) | dB(A) | 92,6 | 95,7 | 95,7 | 96,0 | 96,0 | 99,2 |
| Total SPL 10m (4) | dB(A) | 60,4 | 63,4 | 63,4 | 63,7 | 63,7 | 66,9 |
| Power supply | | | | | | | |
| Voltage/phase/frequency | V/ph/Hz | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+PE | 400/3/50+N+ |
| General electrical data | · · | | | | | | |
| Maximum input power | [kW] | 59.8 | 75.8 | 91.8 | 104 | 112 | 148 |
| Maximum input current | [A] | 110 | 138 | 165 | 192 | 204 | 267 |
| Inrush current | [A] | 302 | 350 | 412 | 372 | 396 | 479 |



⁽¹⁾ Ambient air temperature 35°C(2) Fluid: Water - In/out Temperature: 12/7°C

⁽³⁾ Sound power level in accordance with ISO 3744.
(4) Sound pressure level at 10m from the unit in free field conditions, in accordance with ISO 3744
(5) SEPR: Medium temperature process chiller.