EN

Natural Cooling

LOW GWP

EUROKLIMAT
Cooling System Solutions


“Some things can’t be mass-produced.”
EUROKLIMAT®
Cooling System Solutions

We believe
in a job well done

When Euroklimat was founded in 1963, our mission was simple: to make the best air-conditioners in the world.

Today we have added more: efficiency maximization, energy saving and respect for the surrounding environment have become constant objectives of our everyday work.

With our sophisticated technology, constant innovation and flexible market approach, we were the first to develop the widest range of chillers with natural gas, R290.

Our mission for the future is to become a market leader in the construction of R290 chillers.

Michele Bedin
CEO EUROKLIMAT

Our plants and quality management

Over 50 years of business

Since we set up business in 1963, the company's head offices have always been in Italy, near Milan. Today, our aim is to be a market leader in chillers with natural refrigerant (propane): by doing this, we are helping the industry to become more efficient, preserving natural resources and protecting the environment.

Organization in Italy

At our Italian plant spread over an area of 6,000 square metres, with a work force of 60 people, Euroklimat designs and produces refrigeration units, heat pumps and precision air conditioners that can be used both in industrial processes and traditional comfort applications.

Infinite quality

Euroklimat firmly believes that Customer Satisfaction is an indispensable factor for success. A priority objective to achieve this result is the constant improvement of our products, services and the relative production processes. This objective means involving all of the company's resources with planned, systematic activities for Quality; for this reason, our system complies with the international standard UNI EN ISO 9001:2015.

Organization in China

Our plant covers a surface of approximately 40,000 square metres, with over 450 people and includes a large test chamber and a sophisticated R&D laboratory, in addition to real production departments, where the performance of the units is measured before being placed on the market.

Natural Cooling applications

Cooling units designed especially for all activities in which it is important to keep distribution products at a controlled temperature, such as storage areas or refrigerated goods in supermarkets.

Euroklimat's machines are able to guarantee an extremely high level of reliability and can reach negative temperatures on a medium level (-8 °C).

Market demands	Euroklimat's responses
Safety	DNV certification
Energy efficiency	Optimisation in the choice of components
100% environmentally-friendly	Machines with natural refrigerant

Natural Cooling references

Pharmaceutical industry

- **Roche Diagnostic Mannheim** | Germany
- **Regional Hospital St. Pölten** | Austria
- **Danish Technological Institute** | Taastrup

Mass retailing

- **Metro** | Padova
- **Carrefour Galati** | Romania
- **Waitrose** | England

Food industry

- **Nestlé** | France
- **Del Monte Foods** | England
- **The Coca Cola Company** | Brazil

Energy Transport

- **Metro Copenhagen** | Denmark
- **Mekanotjänst Järvsö AB** | Sweden
- **E.ON Kernkraft GmbH** | Germany

Cold stores

- **John Lewis Birmingham** | England
- **Marathon Logistic Kostrzyn** | Poland
- **Carrefour Mega Mall** | Bucharest

Market leader in R290 chillers
Here's why

It is natural

Propane is an aliphatic hydrocarbon that belongs to the series of paraffins. It is obtained by fractional distillation from oil and natural gas.

At ambient pressure and temperature, it is a colourless, odourless gas that is nonetheless easy to liquefy; it is used as fuel for cars, as well as for domestic and industrial purposes, besides supplying camping lamps and stoves.

It is ecological

Global Warming Potential (GWP) = 3

It is efficient

EER: + 12%
compared to an equivalent R410A machine. Wide range of uses:

- HVAC
- Process Cooling
- Medium Temperature

It is safe

The technical measures Euroklimat adopts for its chillers, in keeping with current regulations and directives, together with its ZERO LEAKS policy, mean it is possible to obtain extremely high levels of safety and guarantee maximum reliability in all working

Quality, performance and reliability second to none

ATEX Compressors

Guarantee maximum safety in all working conditions.

ZERO LEAK Design

A careful study of the joints and pipes makes it possible to eliminate the risk of refrigerant leaks and guarantees the highest level of safety.

Insulated electric panel

The special construction of the casing and electric wiring developed taking the appropriate measures mean the unit is fully protected in the event of a refrigerant leak.

EcoDesign READY

The performance of each unit complies with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives.

Axial fans air cooled water chillers and heat pumps for comfort applications

Natural Cooling

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PRIMA.E

004 ⟷ 064 d

R290
Refrigerant
R290 | GWP=3

Scroll
compressor

Axial fan

Brazed plate
heat exchanger

Air cooled water chillers

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling Capacity 4,7 - 67,1 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Hermetic scroll compressor ATEX certified, with spirals orbiting specially designed and optimized for use with the selected refrigerant. The compressor is complete with dedicated oil for Propane and has a fully hermetic design, safe for flammable refrigerants . The compressor is fitted on rubber antivibration mounts in order to reduce vibration to the structure. The electrical terminals of the motor are placed in a dedicated box realized with IP65 protection.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones (LN Accessory only).
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Wall mounted remote control panel
- ModBus® (RS 485) interface

PRIMA.E

004 ⟷ 064 d

Air cooled water chillers

PRIMA.E		004	006	008	009	011	013	016	019	022	026	032	022 d	026 d	032 d	037 d	043 d	054 d	064 d
									Available from Q3/2018							*Available from Q3/2018*			
COOLING																			
Cooling capacity (1)	kW	4,7	6,2	7,8	9,2	11,3	13,2	16,5	19,8	22,5	28,1	33,5	22,6	26,4	33,1	38,7	44,9	56,3	67,1
Cooling capacity (1) (EN 14511 VALUE)	kW	4,6	6,1	7,7	9,1	11,2	13,1	16,3	19,6	22,3	27,8	33,2	22,5	26,2	32,9	38,5	44,6	56,0	66,7
Total compressors power input (1)	kW	1,4	2,1	2,5	2,9	3,7	4,2	5,2	5,9	7,2	8,9	10,6	7,3	8,3	10,4	11,9	14,3	17,8	21,2
EER - Energy Efficiency Ratio	-	3,02	2,60	2,81	2,92	2,86	2,67	2,78	3,07	2,90	2,97	2,97	2,88	2,98	2,98	2,98	2,86	2,89	2,86
Saved CO2 equivalent Ton (*)	Ton	1.230	1.720	2.160	2.540	3.120	3.640	4.570	5.480	6.200	7.780	9.270	6.235	7.280	9.290	10.890	12.630	15.800	18.850
DESUPERHEATER (Option)																			
Heating capacity (2)	kW	-	-	-	2,1	2,6	3	3,8	4,5	5,1	6,4	7,7	5,2	6	7,6	8,9	10,3	12,9	15,3
Water flow	m3/h	-	-	-	0,4	0,4	0,5	0,7	0,8	0,9	1,1	1,3	0,9	1	1,3	1,5	1,8	2,2	2,7
Pressure drop	kPa	-	-	-	28	30	35	32	36	31	29	35	36	38	32	34	30	33	37
REFRIGERANT CIRCUIT																			
Refrigerant		R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Hermetic scroll																	
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Fans type	-	Axial (AC)																	
Fans quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3
Total air flow	m3/h	2.900	3.650	3.650	4.900	4.900	5.300	5.300	8.600	8.600	8.250	11.500	8.600	8.250	11.500	17.200	23.000	24.750	31.000
Fans power input (1)	kW	0,15	0,28	0,28	0,25	0,25	0,74	0,74	0,55	0,55	0,56	0,69	0,55	0,56	0,69	1,1	1,38	1,69	2,28
Evaporator water flow (1)	m3/h	0,8	1,1	1,3	1,6	1,9	2,3	2,8	3,4	3,9	4,8	5,8	3,9	4,5	5,7	6,7	7,7	9,7	11,5
Evaporator pressure drop (1)	kPa	41	35	53	34	49	33	50	27	33	33	45	22	27	40	28	34	38	40
HYDRONIC KIT - 100 kPa useful head (Option)																			
Buffer tank capacity	L	30	30	30	30	30	30	30	60	60	60	60	60	60	60	150	150	150	150
Pump type	-	Centrifugal																	
Pump motor nominal power	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,9	0,9	0,9	0,9
Electrical Data																			
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)																	
Maximum power input without pump	kW	1,9	2,7	3,2	3,7	4,5	5,6	6,8	8	9	11,3	13,7	9	10,3	13,1	16	18,6	23,1	28,2
Locked rotor current – LRA without pump	A	26,4	32,6	46,6	64,7	64,7	75,4	103,4	120	132,9	160,7	187,9	75,8	87,5	120,2	140,4	156,4	188,8	221,2
Maximum absorbed current - FLA without pump	A	4,5	5,8	7,4	8,9	10,8	13,2	17,3	20,1	22,2	26,5	31,3	21,9	25,3	34,1	40,6	45,7	54,6	64,6
Noise levels (3)																			
Total sound pressure (3) - ST Version	dB(A)	53	54	54	55	55	56	56	55	55	55	57	56	56	57	57	57	58	58
Total sound pressure (3) - LN Version	dB(A)	49	50	50	51	51	52	52	51	51	51	53	52	52	53	53	53	54	54
DIMENSIONS AND WEIGHT - Base Solution																			
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330	3.030	3.030
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155	2.155	2.155
Shipping weight	Kg	185	190	205	250	255	265	270	480	490	495	510	560	570	585	750	760	980	1010
DIMENSIONS AND WEIGHT - Integrated Solution																			
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330	3.030	3.030
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155	2.155	2.155
Shipping weight	Kg	240	250	270	325	330	350	360	640	650	655	660	730	740	760	975	990	1270	1310

Reference conditions:

(1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(3) Sound pressure level (average) at 10 m, unit in a free field on a reflective surface

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives.
The relevant information related to each model (eg.: **$SEER_{on}$, Rated cooling capacity, Seasonal space cooling energy efficiency, ….**) are published on our website **www.euroklimat.it**

wEKool Web Product Selector

Euroklimat has developed an online software called "wEKool" that allows you to select the most suitable solution to meet the specific request and all the available accessories for each model. For more information, please contact your sales representative.

PRIMA.E/PC

004 ⟷ 043 d

R290 Refrigerant R290 | GWP=3

Scroll compressor

Axial fan

Brazed plate heat exchanger

Air cooled water chillers

Solution

B - Base

I - Integrated

Version

ST - Standard

LN - Low noise

Equipment

AS - Standard equipment

Cooling Capacity 4,7 - 44,9 kW

Heating capacity 4,8 - 45,5 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Hermetic scroll compressor ATEX certified, with spirals orbiting specially designed and optimized for use with the selected refrigerant. The compressor is complete with dedicated oil for Propane and has a fully hermetic design, safe for flammable refrigerants . The compressor is fitted on rubber antivibration mounts in order to reduce vibration to the structure. The electrical terminals of the motor are placed in a dedicated box realized with IP65 protection.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, intercepting valve on the liquid line, HP and LP pressure switches, cycle reversing valve, gas separator and liquid receiver, thermostatic expansion valve. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Wall mounted remote control panel
- ModBus® (RS 485) interface

PRIMA.E/PC

004 ⟷ 043 d

Air cooled water chillers

									Available from Q3/2018							*Available from Q3/2018*	
PRIMA.E/PC		**004**	**006**	**008**	**009**	**011**	**013**	**016**	**019**	**022**	**026**	**032**	**022 d**	**026 d**	**032 d**	**037 d**	**043 d**
COOLING																	
Cooling capacity (1)	kW	4,7	6,2	7,8	9,2	11,3	13,2	16,5	19,8	22,5	28,1	33,5	22,6	26,4	33,1	38,7	44,9
Cooling capacity (1) (EN 14511 VALUE)	kW	4,6	6,1	7,7	9,1	11,2	13,1	16,3	19,6	22,3	27,8	33,1	22,5	26,2	32,9	38,5	44,6
Total compressors power input (1)	kW	1,4	2,1	2,5	2,9	3,7	4,2	5,2	5,9	7,2	8,9	10,6	7,3	8,3	10,4	11,9	14,3
EER - Energy Efficiency Ratio	-	3,03	2,61	2,81	2,92	2,86	2,67	2,78	3,07	2,9	2,97	2,97	2,88	2,98	2,98	2,98	2,86
Saved CO2 equivalent Ton (*)	Ton	1.230	1.720	2.160	2.540	3.120	3.640	4.570	5.480	6.200	7.780	9.270	6.235	7.280	9.290	10.890	12.630
HEATING																	
Heating capacity (2)	kW	4,8	6,3	7,8	9,5	11,4	13,5	16,6	20,1	22,7	28,5	34,1	22,9	26,6	33,5	39,5	45,5
Heating capacity (2) (EN 14511 VALUE)	kW	4,9	6,4	7,9	9,6	11,6	13,6	16,8	20,3	22,9	28,7	34,3	23,1	26,8	33,8	39,7	45,7
Total compressors power input (2)	kW	1,4	2,1	2,5	3,1	3,7	4,3	5,3	6,1	7,3	9,2	10,9	7,5	8,5	10,7	12,3	14,7
COP - Coefficient Of Performance	-	3,10	2,65	2,81	2,84	2,89	2,68	2,75	3,02	2,89	2,92	2,94	2,85	2,94	2,95	2,95	2,83
REFRIGERANT CIRCUIT																	
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Hermetic scroll															
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Fans type	-	Axial (AC)															
Fans quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
Total air flow	m3/h	2.900	3.650	3.650	4.900	4.900	5.300	5.300	8.600	8.600	8.250	11.500	8.600	8.250	11.500	17.200	23.000
Fans power input (1)	kW	0,15	0,28	0,28	0,25	0,25	0,74	0,74	0,55	0,55	0,56	0,69	0,55	0,56	0,69	1,1	1,38
Evaporator water flow (1)	m3/h	0,8	1,1	1,3	1,6	1,9	2,3	2,8	3,4	3,9	4,8	5,8	3,9	4,5	5,7	6,7	7,7
Evaporator pressure drop (1)	kPa	41	35	53	34	49	33	50	27	33	33	45	23	27	40	28	34
HYDRONIC KIT - 100 kPa useful head (option)																	
Buffer tank capacity	L	30	30	30	30	30	30	30	60	60	60	60	60	60	60	150	150
Pump type	-	Centrifugal															
Pump motor nominal power	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,9	0,9
Electrical Data																	
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)															
Maximum power input without pump	kW	1,9	2,7	3,2	3,7	4,5	5,6	6,8	8,0	9,0	11,3	13,7	9,0	10,3	13,1	16,0	18,6
Locked rotor current – LRA without pump	A	26,4	32,6	46,6	64,7	64,7	75,4	103,4	120,0	132,9	160,7	187,9	75,8	87,5	120,2	140,4	156,4
Maximum absorbed current - FLA without pump	A	4,5	5,8	7,4	8,9	10,8	13,2	17,3	20,1	22,2	26,5	31,3	21,9	25,3	34,1	40,6	45,7
Noise levels (3)																	
Total sound pressure (3) - ST Version	dB(A)	53	54	54	55	55	56	56	55	55	55	57	56	56	57	57	57
Total sound pressure (3) - LN Version	dB(A)	49	50	50	51	51	52	52	51	51	51	53	52	52	53	53	53
DIMENSIONS AND WEIGHT - Base Solution																	
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	205	210	225	275	280	290	300	530	540	545	560	620	630	645	825	840
DIMENSIONS AND WEIGHT - Integrated Solution																	
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	265	275	300	360	365	385	400	700	715	720	730	800	815	840	1.070	1.090

Reference conditions:

(1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(2) Evaporator air 7°C U.R. 85% - Condenser water IN/OUT 40/45°C Fluid: pure water - Condensing coil: Cu/Al

(3) Sound pressure level (average) at 10 m, unit in a free field on a reflective surface

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

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The relevant information related to each model (eg.: **$SEER_{on}$, Rated cooling capacity, Seasonal space cooling energy efficiency, ….**) are published on our website **www.euroklimat.it**

wEKool Web Product Selector

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RKO.E

21 S ⟷ 401 S

Air cooled water chillers

R290 Refrigerant R290 | GWP=3

Semi-hermetic piston compressor

Axial fan

Brazed plate heat exchanger

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling Capacity 7,8 - 83,0 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; capacity control head (from model 251), flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, sight glass and liquid moisture, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch, oil-pump differential pressure switch (from size 251). Some components are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- Part-winding soft start
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Wall mounted remote control panel
- ModBus® (RS 485) interface

RKO.E

21 S ⟷ 401 S

Air cooled water chillers

RKO.E		21 S	31 S	51 S	81 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S
COOLING												
Cooling capacity (1)	kW	7,8	12,1	16,2	22,8	28,6	35,1	39,9	48,5	59,9	70,3	83
Cooling capacity (1) (EN 14511 VALUE)	kW	7,8	12	16,1	22,6	28,5	34,9	39,6	48,3	59,6	70	82,7
Total compressors power input (1)	kW	2,4	4,3	5,2	7,2	9,1	10,9	12,2	15,3	16,9	21,5	26,2
EER - Energy Efficiency Ratio	-	3,01	2,63	2,82	2,92	2,90	2,81	2,91	2,89	3,10	2,94	2,90
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
DESUPERHEATER (option)												
Heating capacity (2)	kW	2,1	3,2	4,3	6,1	7,6	9,4	10,7	13	16	18,8	22,2
Water flow	m3/h	0,4	0,6	0,7	1,1	1,3	1,6	1,9	2,3	2,8	3,3	3,9
Pressure drop	kPa	35	38	27	30	33	29	29	31	30	33	29
REFRIGERANT CIRCUIT												
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Semihermetic reciprocating										
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial (AC)										
Fans quantity	n°	1	1	1	1	1	1	2	2	3	3	3
Total air flow	m3/h	3650	5200	6000	8600	11000	15500	22000	22000	31500	31500	29000
Fans power input (1)	kW	0,2	0,3	0,55	0,6	0,75	1,6	1,5	1,5	2,4	2,4	2,4
Evaporator water flow (1)	m3/h	1,3	2,1	2,8	3,9	4,9	6,0	6,8	8,3	10,3	12,0	14,2
Evaporator pressure drop (1)	kPa	24	32	32	33	30	29	26	28	33	26	27
HYDRONIC KIT - 100 kPa useful head (option)												
Buffer tank capacity	L	23	23	23	30	30	30	60	60	160	160	160
Pump type	-	Centrifugal										
Pump motor nominal power	kW	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,9	0,9	0,9	1,5
Electrical Data												
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)										
Maximum power input without pump	kW	3,1	6,4	8,4	12,0	13,1	16,9	19,2	21,3	26,4	32,0	36,8
Locked rotor current – LRA without pump	A	36,6	52,7	64,6	88,6	104,0	121,1	139,7	206,5	229,2	244,2	278,2
Maximum absorbed current - FLA without pump	A	7,0	12,5	15,3	21,9	23,3	32,7	39,4	40,4	49,2	59,2	66,2
Noise levels (3)												
Total sound power - ST Version	dB(A)	85	86	87	85	85	89	89	89	91	91	91
Total sound pressure - ST Version	dB(A)	54	54	55	53	53	57	57	57	59	59	59
Total sound power - LN Version	dB(A)	82	83	84	82	82	86	86	86	88	88	88
Total sound pressure - LN Version	dB(A)	51	51	52	50	50	54	54	54	56	56	56
DIMENSIONS AND WEIGHT - Base Solution												
Length (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	190	280	300	520	550	560	830	850	1010	1120	1140
DIMENSIONS AND WEIGHT - Integrated Solution												
Length (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	200	290	310	540	570	580	870	890	1070	1180	1200

Reference conditions:

(1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

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RKO.E

302 S ⟷ 1602 S

Air cooled water chillers

R290
Refrigerant R290 | GWP=3

Semi-hermetic piston compressor

Axial fan

Brazed plate heat exchanger

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater
FC - Free Cooling

Cooling Capacity 70,9 - 300,2 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; capacity control head (from model 502), flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, sight glass and liquid moisture, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch, oil-pump differential pressure switch (from size 502). Some components are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- Part-winding soft start
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Wall mounted remote control panel
- ModBus® (RS 485) interface

RKO.E

302 S ⟷ 1602 S

Air cooled water chillers

RKO.E		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1102 S	1202 S	1402 S	1502 S	1602 S
COOLING													
Cooling capacity (1)	kW	70,9	78,8	100,4	114,5	141,1	166,6	195,8	218,6	243,5	268,9	288,7	300,2
Cooling capacity (1) (EN 14511 VALUE)	kW	70,6	78,5	100	114,1	140,6	166	195,1	217,8	242,8	268	287,9	299,3
Total compressors power input (1)	kW	21,3	24,8	29,7	35,6	43,3	52,6	63,1	71,6	81,4	86,2	94	98,5
EER - Energy Efficiency Ratio	-	2,99	2,90	3,05	2,95	3,06	2,89	2,81	2,73	2,71	2,79	2,77	2,76
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
DESUPERHEATER (option)													
Heating capacity (2)	kW	18,9	21	26,8	30,6	37,7	44,5	52,3	58,4	65,1	71,9	77,2	80,3
Water flow	m3/h	3,3	3,7	4,7	5,3	6,6	7,8	9,1	10,2	11,3	12,5	13,4	14
Pressure drop	kPa	33	35	29	31	30	26	28	33	32	34	38	27
REFRIGERANT CIRCUIT													
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2	2
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial (AC)											
Fans quantity	n°	3	3	4	4	4	3	4	5	5	6	6	6
Total air flow	m3/h	28500	28500	40000	40000	48000	58500	80000	92000	92000	114000	114000	114000
Fans power input (1)	kW	2,4	2,4	3,2	3,2	2,8	5,0	6,6	8,5	8,5	10,2	10,2	10,2
Evaporator water flow (1)	m3/h	12,2	13,5	17,2	19,6	24,2	28,6	33,6	37,4	41,8	46,1	49,5	51,5
Evaporator pressure drop (1)	kPa	25	19	30	26	29	31	35	37	29	35	30	32
HYDRONIC KIT - 100 kPa useful head (option)													
Buffer tank capacity	L	160	160	290	290	460	460	460	460	460	460	460	460
Pump type	-	Centrifugal											
Pump motor nominal power	kW	0,9	1,5	1,5	2,2	2,2	2,2	2,2	3	3	3	4	4
Electrical Data													
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)											
Maximum power input without pump	kW	32,4	37,6	42,6	51,0	62,2	74,4	91,4	99,0	123,4	123,0	134,0	135,4
Locked rotor current – LRA without pump	A	151,0	177,3	246,9	275,0	300,0	346,0	412,0	476,3	575,0	675,0	716,0	719,2
Maximum absorbed current - FLA without pump	A	62,6	77,0	80,8	95,0	115,0	134,0	166,0	198,6	220,0	230,0	240,0	246,4
Noise levels (3)													
Total sound power - ST Version	dB(A)	93	93	95	95	95	97	98	100	101	102	102	102
Total sound pressure - ST Version	dB(A)	61	61	63	63	63	65	66	68	69	69	69	69
Total sound power - LN Version	dB(A)	90	90	92	92	93	95	95	97	98	99	99	100
Total sound pressure - LN Version	dB(A)	58	58	60	60	60	62	63	65	66	66	66	67
DIMENSIONS AND WEIGHT - Base Solution													
Length (L)	mm	3030	3030	3970	3970	4250	4250	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1200	1250	1800	1900	2000	2050	2300	2350	2400	2700	2750	2800
DIMENSIONS AND WEIGHT - Integrated Solution													
Length (L)	mm	3030	3030	3970	3970	5050	5050	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1260	1310	1890	1990	2200	2250	2400	2460	2510	2820	2870	2920

Reference conditions:

(1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

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RKO.E

1402 V ⟷ 2802 V

Air cooled water chillers

R290
Refrigerant
R290 | GWP=3

Screw
compressor

Axial fan

Brazed plate
heat exchanger

Solution

B - Base

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment

Cooling Capacity 249,6 - 631,9 kW

Housing	Structure specifically designed for outdoor installation. Basement and frame in galvanized shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance. Panels are internally coated to reduce the noise level (LN Accessories only).
Compressor	SCREW SEMI-HERMETIC type, complete with motor thermal protection, Part-Winding or Star Delta start, crankcase electrical heater and discharge intercepting valve. The compressor is mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tubes' air shadow to provide maximum heat exchange through our condensers. Due to their small hydraulic diameter, microchannel aluminium tubes transfer heat more efficiently than the traditional round copper tubes.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control (standard)
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Wall mounted remote control panel
- ModBus® (RS 485) interface

RKO.E

1402 V ⟷ 2802 V

Air cooled water chillers

RKO.E		1402 V	1602 V	1802 V	2002 V	2202 V	2402 V	2502 V	2802 V
COOLING									
Cooling capacity (1)	kW	249,6	315,9	346,3	412,0	444,3	492,3	529,2	631,9
Cooling capacity (1) (EN 14511 VALUE)	kW	248,8	314,9	345,2	411	443,3	491,1	528	630,1
Total compressors power input (1)	kW	99,1	109,6	128,5	140,4	153,9	158,5	175,5	207,3
EER - Energy Efficiency Ratio	-	2,37	2,66	2,52	2,70	2,68	2,84	2,78	2,80
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200
REFRIGERANT CIRCUIT									
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	2	2	2	2	2	2	2	2
Compressors type	-	Semihermetic screw							
Compressors quantity	n°	2	2	2	2	2	2	2	2
Fans type	-	Axial (AC)							
Fans quantity	n°	4	6	6	8	8	10	10	12
Total air flow	m3/h	78000	117000	117000	156000	156000	195000	195000	234000
Fans power input (1)	kW	6	9	9	12	12	15	15	18
Evaporator water flow (1)	m3/h	42,8	54,2	59,4	70,7	76,2	84,5	90,8	108,4
Evaporator pressure drop (1)	kPa	31	37	36	27	27	28	27	35
Electrical Data									
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)							
Maximum power input without pump	kW	125,6	144,8	165,0	190,6	206,0	219,4	235,4	274,8
Locked rotor current – LRA without pump	A	442,0	542,0	589,0	695,0	650,0	740,0	788,0	880,0
Maximum absorbed current - FLA without pump	A	272,0	314,0	344,0	382,0	400,0	430,0	476,0	538,0
Noise levels (2)									
Total sound power - ST Version	dB(A)	103	103	105	106	106	109	110	112
Total sound pressure - ST Version	dB(A)	71	71	73	74	74	76	77	79
Total sound power - LN Version	dB(A)	100	100	102	103	103	106	107	109
Total sound pressure - LN Version	dB(A)	68	68	70	71	71	73	74	76
DIMENSIONS AND WEIGHT - Base Solution									
Length (L)	mm	2950	4300	4300	5550	5550	6800	6800	8050
Depth (P)	mm	2345	2345	2345	2345	2345	2345	2345	2345
Height (H)	mm	2465	2465	2465	2465	2465	2465	2465	2465
Shipping weight	Kg	2510	3260	3280	3820	4560	4370	5070	5840

Reference conditions:

(1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Microchannel

(2) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

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wEKool Web Product Selector

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Axial fans air cooled water chillers for process applications

Natural Cooling

Index

EKO.E

21 S ⟷ 401 S

Air cooled water chillers

R290 Refrigerant R290 | GWP=3

Semi-hermetic piston compressor

Axial fan

Brazed plate heat exchanger

SEPR

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling Capacity 10,7 - 112,4 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; capacity control head (from model 251), flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, sight glass and liquid moisture, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch, oil-pump differential pressure switch (from size 251). Some components are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- EC condensing Fans
- Part-winding soft start
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve
- Wall mounted remote control panel
- ModBus® (RS 485) interface

EKO.E

21 S ⟷ 401 S

Air cooled water chillers

EKO.E		21 S	31 S	51 S	81 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S
COOLING												
Cooling capacity (1)	kW	10,7	16,2	22	30,6	38,3	47,5	53,1	64,6	80,8	95,3	112,4
Cooling capacity (1) (EN 14511 VALUE)	kW	10,6	16	21,8	30,4	38	47,2	52,8	64,2	80,3	94,8	111,9
Total compressors power input (1)	kW	2,2	4,4	5,4	7,6	9	10,9	12,3	15,3	16,9	21,8	26,4
EER - Energy Efficiency Ratio	-	4,46	3,45	3,70	3,73	3,93	3,80	3,85	3,85	4,19	3,94	3,90
Saved CO2 equivalent Ton (*)	Ton	2130	4080	4790	6740	8870	9760	9760	14190	19510	20400	21290
Ecodesign compliance for process application (SEPR)	-	√	√	√	√	√	√	√	√	√	√	√
DESUPERHEATER (option)												
Heating capacity (2)	kW	2,7	4,1	5,5	7,7	9,6	11,9	13,3	16,2	20,3	23,9	28,2
Water flow	m3/h	0,5	0,7	1,0	1,3	1,7	2,1	2,3	2,8	3,5	4,2	4,9
Pressure drop	kPa	37	40	30	32	35	31	31	33	32	35	31
REFRIGERANT CIRCUIT												
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Semihermetic reciprocating										
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial (AC)										
Fans quantity	n°	1	1	1	1	1	1	2	2	3	3	3
Total air flow	m3/h	3650	5200	6000	8600	11000	15500	22000	22000	31500	31500	29000
Fans power input (1)	kW	0,20	0,30	0,55	0,60	0,75	1,60	1,50	1,50	2,40	2,40	2,40
Evaporator water flow (1)	m3/h	1,8	2,8	3,8	5,3	6,6	8,2	9,1	11,1	13,9	16,4	19,3
Evaporator pressure drop (1)	kPa	37	47	48	47	43	41	37	40	47	39	40
HYDRONIC KIT - 300 kPa useful head (option)												
Buffer tank capacity	L	23	23	23	30	30	30	60	60	160	160	160
Pump type	-	Centrifugal										
Pump motor nominal power	kW	0,75	0,75	1,1	1,1	1,1	1,8	1,8	1,8	3	3	4
Electrical Data												
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)										
Maximum power input without pump	kW	3,1	6,4	8,4	12	13,1	16,9	19,2	21,3	26,4	32	36,8
Locked rotor current – LRA without pump	A	36,6	52,7	64,6	88,6	104	121,1	139,7	206,5	229,2	244,2	278,2
Maximum absorbed current - FLA without pump	A	7	12,5	15,3	21,9	23,3	32,7	39,4	40,4	49,2	59,2	66,2
Noise levels (3)												
Total sound power - ST Version	dB(A)	85	86	87	85	85	89	89	89	91	91	91
Total sound pressure - ST Version	dB(A)	54	54	55	53	53	57	57	57	59	59	59
Total sound power - LN Version	dB(A)	82	83	84	82	82	86	86	86	88	88	88
Total sound pressure - LN Version	dB(A)	51	51	52	50	50	54	54	54	56	56	56
DIMENSIONS AND WEIGHT - Base Solution												
Length (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	190	280	300	520	550	560	830	850	1010	1120	1140
DIMENSIONS AND WEIGHT - Integrated Solution												
Length (L)	mm	1230	1380	1380	1680	1680	1680	2330	2330	3030	3030	3030
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2055	2055	2075	2155	2155	2155	2155	2155
Shipping weight	Kg	200	290	310	540	570	580	870	890	1070	1180	1200

Note:

(1) Condenser air intake temperature = 25°C - Evaporator water temperature IN/OUT = 20/15°C - Fluid: pure water - Condensing coil: Cu/Al

(2) (2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 25°C - Evaporator water temperature IN/OUT = 20/15°C - Fluid: pure water - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives.
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EKO.E

302 S ⟷ 1602 S

Air cooled water chillers

R290 Refrigerant R290 | GWP=3

Semi-hermetic piston compressor

Axial fan

Brazed plate heat exchanger

SEPR

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater
FC - Free Cooling

Cooling Capacity 95,8 - 421,1 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; capacity control head (from model 502), flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, sight glass and liquid moisture, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch, oil-pump differential pressure switch (from size 502). Some components are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- EC condensing Fans
- Part-winding soft start
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve
- Wall mounted remote control panel
- ModBus® (RS 485) interface

EKO.E

302 S ⟷ 1602 S

Air cooled water chillers

EKO.E		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1102 S	1202 S	1402 S	1502 S	1602 S
COOLING													
Cooling capacity (1)	kW	95,8	103,6	134,5	153,1	191,6	224,8	270,2	295,9	336,3	375,2	403,9	421,1
Cooling capacity (1) (EN 14511 VALUE)	kW	95,3	103,2	133,9	152,4	190,8	223,9	268,9	294,5	335,0	373,5	402,3	419,3
Total compressors power input (1)	kW	21,5	25,4	29,7	36	44	53,3	62,9	69,4	83,5	84,3	92,3	96,1
EER - Energy Efficiency Ratio	-	4,01	3,73	4,09	3,91	4,09	3,86	3,89	3,80	3,66	3,97	3,94	3,96
Saved CO2 equivalent Ton (*)	Ton	20400	21290	40800	44350	60320	70960	78060	81600	83380	106440	111760	117080
Ecodesign compliance for process application (SEPR)	-	√	√	√	√	√	√	√	√	√	√	√	√
DESUPERHEATER (option)													
Heating capacity (2)	kW	24	26	33,7	38,4	48,1	56,4	67,2	74,6	84,4	94,1	101,3	105,6
Water flow	m3/h	4,2	4,5	5,9	6,7	8,4	9,8	11,7	13	14,7	16,4	17,6	18,4
Pressure drop	kPa	30	32	26	28	27	23	25	30	29	31	35	24
REFRIGERANT CIRCUIT													
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2	2
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial (AC)											
Fans quantity	n°	3	3	4	4	4	3	4	5	5	6	6	6
Total air flow	m3/h	28500	28500	40000	40000	48000	58500	80000	92000	92000	114000	114000	114000
Fans power input (1)	kW	2,40	2,40	3,20	3,20	2,80	4,95	6,60	8,50	8,50	10,20	10,20	10,20
Evaporator water flow (1)	m3/h	16,5	17,8	23,2	26,4	33	38,7	46,5	50,9	57,9	64,6	69,5	72,5
Evaporator pressure drop (1)	kPa	38	27	43	39	43	46	55	56	46	56	48	52
HYDRONIC KIT - 300 kPa useful head (option)													
Buffer tank capacity	L	160	160	290	290	460	460	460	460	460	460	460	460
Pump type	-	Centrifugal											
Pump motor nominal power	kW	3	4	4	4	7,5	7,5	7,5	7,5	9,2	11	11	11
Electrical Data													
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)											
Maximum power input without pump	kW	32,4	37,6	42,6	51	62,2	74,4	91,4	99	123,4	123	134	135,4
Locked rotor current – LRA without pump	A	151	177,3	246,9	275	300	346	412	476,3	575	675	716	719,2
Maximum absorbed current - FLA without pump	A	62,6	77	80,8	95	115	134	166	198,6	220	230	240	246,4
Noise levels (3)													
Total sound power - ST Version	dB(A)	93	93	95	95	95	97	98	100	101	102	102	102
Total sound pressure - ST Version	dB(A)	61	61	63	63	63	65	66	68	69	69	69	69
Total sound power - LN Version	dB(A)	90	90	92	92	93	95	95	97	98	99	99	100
Total sound pressure - LN Version	dB(A)	58	58	60	60	60	62	63	65	66	66	66	67
DIMENSIONS AND WEIGHT - Base Solution													
Length (L)	mm	3030	3030	3970	3970	4250	4250	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1200	1250	1800	1900	2000	2050	2300	2350	2400	2700	2750	2800
DIMENSIONS AND WEIGHT - Integrated Solution													
Length (L)	mm	3030	3030	3970	3970	5050	5050	5450	5450	5450	5250	5250	5250
Depth (P)	mm	990	990	990	990	1150	1150	1500	1500	1500	2000	2000	2000
Height (H)	mm	2155	2155	2215	2215	2135	2250	2300	2300	2300	2250	2250	2250
Shipping weight	Kg	1260	1310	1890	1990	2200	2250	2400	2460	2510	2820	2870	2920

Note:

(1) Condenser air intake temperature = 25°C - Evaporator water temperature IN/OUT = 20/15°C - Fluid: pure water - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 25°C - Evaporator water temperature IN/OUT = 20/15°C - Fluid: pure water - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

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EKO.E

1402 V ⟷ 2802 V

Air cooled water chillers

R290 Refrigerant R290 | GWP=3

Screw compressor

Axial fan

Brazed plate heat exchanger

Solution

B - Base

Version

ST - Standard

LN - Low noise

Equipment

AS - Standard equipment

Cooling Capacity 338,0 - 854,1 kW

Housing	Structure specifically designed for outdoor installation. Basement and frame in galvanized shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance. Panels are internally coated to reduce the noise level (LN Accessories only).
Compressor	SCREW SEMI-HERMETIC type, complete with motor thermal protection, Part-Winding or Star Delta start, crankcase electrical heater and discharge intercepting valve. The compressor is mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only).
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tubes' air shadow to provide maximum heat exchange through our condensers. Due to their small hydraulic diameter, microchannel aluminium tubes transfer heat more efficiently than the traditional round copper tubes.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control (standard)
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Wall mounted remote control panel
- ModBus® (RS 485) interface

RKO.E		1402 V	1602 V	1802 V	2002 V	2202 V	2402 V	2502 V	2802 V
COOLING									
Cooling capacity (1)	kW	338,0	434,6	469,2	560,6	612,6	677,0	723,5	854,1
Cooling capacity (1) (EN 14511 VALUE)	kW	336,6	432,7	467,2	558,8	610,6	674,8	721,2	850,8
Total compressors power input (1)	kW	93,6	101,5	119,5	130,5	144,0	146,5	163,2	192,4
EER - Energy Efficiency Ratio	-	3,39	3,93	3,65	3,93	3,93	4,19	4,06	4,06
Saved CO2 equivalent Ton (*)	Ton	85800	100100	114400	143000	157300	171600	185900	200200
REFRIGERANT CIRCUIT									
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	2	2	2	2	2	2	2	2
Compressors type	-	Semihermetic screw							
Compressors quantity	n°	2	2	2	2	2	2	2	2
Fans type	-	Axial (AC)							
Fans quantity	n°	4	6	6	8	8	10	10	12
Total air flow	m3/h	78000	117000	117000	156000	156000	195000	195000	234000
Fans power input (1)	kW	6,0	9,0	9,0	12,0	12,0	15,0	15,0	18,0
Evaporator water flow (1)	m3/h	58,2	74,8	80,8	96,5	105,5	116,5	124,5	147,0
Evaporator pressure drop (1)	kPa	47	57	54	41	41	43	42	54
Electrical Data									
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)							
Maximum power input without pump	kW	125,6	144,8	165	190,6	206	219,4	235,4	274,8
Locked rotor current – LRA without pump	A	442	542	589	695	650	740	788	880
Maximum absorbed current - FLA without pump	A	272	314	344	382	400	430	476	538
Noise levels (2)									
Total sound power - ST Version	dB(A)	103	103	105	106	106	109	110	112
Total sound pressure - ST Version	dB(A)	71	71	73	74	74	76	77	79
Total sound power - LN Version	dB(A)	100	100	102	103	103	106	107	109
Total sound pressure - LN Version	dB(A)	68	68	70	71	71	73	74	76
DIMENSIONS AND WEIGHT - Base Solution									
Length (L)	mm	2950	4300	4300	5550	5550	6800	6800	8050
Depth (P)	mm	2345	2345	2345	2345	2345	2345	2345	2345
Height (H)	mm	2465	2465	2465	2465	2465	2465	2465	2465
Shipping weight	Kg	2510	3260	3280	3820	4560	4370	5070	5840

Reference conditions:

(1) Condenser air intake temperature = 25°C - Evaporator water temperature IN/OUT = 20/15°C - Fluid: pure water - Condensing coil: Microchannel

(2) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tonnes saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

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The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives.
The relevant information related to each model (eg.: **$SEER_{on}$, Rated cooling capacity, Seasonal space cooling energy efficiency, ….**) are published on our website **www.euroklimat.it**

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Liquid chillers with plate heat exchanger for medium fluid temperature

Natural Cooling

Index

EKO.E/MT

20 S ⟷ 601 S

R290
Refrigerant R290 | GWP=3

Semi-hermetic piston compressor

Axial fan

Brazed plate heat exchanger

Medium temperature (-8°C)

SEPR

Air cooled liquid chillers

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling Capacity 6,9 - 63,0 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Premium-Axial-Fans with bionic shaped blades and high efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	Water pressure gauge, safety valve, centrifugal pump with seals suitable for low temperature, manual by-pass water valve, manual air venting valve, water tank, special insulation for low temperatures. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller. Technical data of the pump used for low temperature applications will be communicated by the Euroklimat sales team following a selection specifically intended for the application required.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Wall mounted remote control panel
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

EKO.E/MT

20 S ⟷ 601 S

Air cooled liquid chillers

EKO.E/MT		20 S	31 S	51 S	121 S	151 S	201 S	251 S	301 S	351 S	401 S	501 S	601 S
COOLING - ST VERSION													
Cooling capacity (1)	kW	6,9	9,3	12,6	16,6	19,9	23,1	28,9	33,7	40,6	47,3	54,7	63
Cooling capacity (1) (EN 14511 VALUE)	kW	6,8	9,2	12,4	16,4	19,7	22,9	28,7	33,4	40,3	47	54,3	62,6
Total compressors power input (1)	kW	3,4	3,9	5,4	7,2	8,6	9,5	11,6	13,3	16	19,1	23,5	30,4
Saved CO2 equivalent Ton (*)	Ton	6260	7310	8350	13570	14620	15660	17750	29230	39670	43850	48020	52200
Total air flow	m3/h	3650	5200	6000	9000	11700	11000	15000	22000	24000	31000	28500	28500
Evaporator water flow (1)	m3/h	1,7	2,3	3,1	4,0	4,8	5,6	7,0	8,2	9,8	11,5	13,3	15,3
Evaporator pressure drop (1)	kPa	30	33	35	26	24	22	26	27	31	27	28	29
Ecodesign compliance for process application (SEPR)	-	2,58	2,74	2,96	2,78	2,7	2,7	2,74	2,36	2,34	2,33	2,34	2,32
COOLING - LN VERSION													
Cooling capacity (1)	kW	6,6	8,9	12,1	16,1	19,2	22,3	27,9	32,5	39,2	45,6	52,8	60,8
Cooling capacity (1) (EN 14511 VALUE)	kW	6,5	8,8	12	16	19	22,1	27,7	32,2	38,9	45,3	52,5	60,6
Total compressors power input (1)	kW	3,5	4	5,5	7,3	8,8	9,7	11,8	13,5	16,4	19,5	23,9	31,0
Saved CO2 equivalent Ton (*)	Ton	6260	7310	8350	13570	14620	15660	17750	29230	39670	43850	48020	52200
Total air flow	m3/h	3140	4470	5160	7740	10060	9460	12900	18920	20640	26660	24510	24510
Evaporator water flow (1)	m3/h	1,6	2,2	2,9	3,9	4,7	5,4	6,8	7,9	9,5	11,1	12,8	14,7
Evaporator pressure drop (1)	kPa	30	33	35	26	24	22	26	27	31	27	28	29
DESUPERHEATER (Option)													
Heating capacity (2)	kW	1,4	1,8	2,4	4,3	5,2	6	7,5	8,8	10,6	12,3	14,2	16,4
Water flow	m3/h	0,2	0,3	0,4	0,7	0,9	1,0	1,3	1,5	1,8	2,1	2,5	2,9
Pressure drop	kPa	30	35	38	30	33	29	29	29	31	30	33	29
REFRIGERANT CIRCUIT													
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Semihermetic reciprocating											
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
Fans type	-	Axial (EC)											
Fans quantity	n°	1	1	1	1	1	1	1	2	3	3	3	3
Fans power input (1)	kW	0,2	0,3	0,6	0,6	0,9	0,9	2	1,8	1,7	2,6	2,6	2,6
ELECTRICAL DATA													
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)											
Maximum power input without pump	kW	6,4	8,1	12,1	12,9	15,8	18,3	21,6	25,6	31,0	36,8	44,3	59,3
Locked rotor current – LRA without pump	A	52,4	63,5	88,0	103,0	119,0	138,0	207,0	228,0	242,0	279,0	327,0	461,0
Maximum absorbed current - FLA without pump	A	12,2	14,3	21,6	22,6	30,7	37,9	40,9	48,0	57,0	67,0	81,0	106,0
NOISE LEVELS (3)													
Total sound power - ST Version	dB(A)	84	86	86	85	85	89	89	89	90	91	91	91
Total sound pressure - ST Version	dB(A)	53	54	54	53	53	57	57	57	58	59	59	59
Total sound power - LN Version	dB(A)	81	83	83	82	82	86	86	86	86	88	88	88
Total sound pressure - LN Version	dB(A)	50	51	51	50	50	54	54	54	55	56	56	56
DIMENSIONS AND WEIGHT - Base Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	130	150	170	250	270	480	480	500	510	520	535	710
DIMENSIONS AND WEIGHT - Integrated Solution													
Lenght (L)	mm	1240	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	650	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1320	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	160	190	210	290	320	330	330	560	570	580	600	780

Reference conditions:

(1) Condenser air intake temperature = 30°C - Evaporator water temperature IN/OUT = -4/-8°C - Fluid: Ethylene glycol 35% - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 30°C - Evaporator water temperature IN/OUT = -4/-8°C - Fluid: Ethylene glycol 35% - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives.
The relevant information related to each model (eg.: **$SEER_{on}$, Rated cooling capacity, Seasonal space cooling energy efficiency, ….**) are published on our website **www.euroklimat.it**

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EKO.E/MT

302 S ⟷ 1602 S

R290
Refrigerant
R290 | GWP=3

Semi-hermetic
piston
compressor

Axial fan

Brazed plate
heat exchanger

Medium
temperature
(-8°C)

SEPR

Air cooled liquid chillers

Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling Capacity 37,0 - 158,7 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Reciprocating semihermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater, integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. The compressor is mechanically optimized for use with Hydrocarbons and built in according to Directive ATEX 2014/34/EU for the safety requirements: Zone 2, Gas group IIB. Some components are ATEX certified.
Fan	Premium-Axial-Fans with bionic shaped blades and high efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and and it is complete with contactor and protection for compressor and fans , main isolator switch and door interlock safety device. To ensure higher level of security the the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, shut-off valve on the liquid line, electronic expansion valve, safety pressure high / low switch. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	Water pressure gauge, safety valve, centrifugal pump with seals suitable for low temperature, manual by-pass water valve, manual air venting valve, water tank, special insulation for low temperatures. **NOTE:** in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller. Technical data of the pump used for low temperature applications will be communicated by the Euroklimat sales team following a selection specifically intended for the application required.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Wall mounted remote control panel
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Oversized pump water (5 Bars)
- Open expansion tank
- Closed expansion tank with automatic filling valve

EKO.E/MT

302 S ⟷ 1602 S

Air cooled liquid chillers

EKO.E/MT		302 S	402 S	502 S	602 S	702 S	802 S	1002 S	1202 S	1402 S	1502 S	1602 S
COOLING - ST VERSION												
Cooling capacity (1)	kW	37	46,5	56,3	65,7	74,7	90,8	107,2	127	139,5	148,6	158,7
Cooling capacity (1) (EN 14511 VALUE)	kW	36,8	46,2	55,9	65,3	74,2	90,2	106,5	126,2	138,6	147,7	157,8
Total compressors power input (1)	kW	17	18	22,3	26,8	32,9	39,3	48,1	60,7	67	72,4	75,7
Saved CO2 equivalent Ton (*)	Ton	37580	48020	52200	56380	85610	91870	125280	137810	146160	154510	162860
Total air flow	m3/h	22000	28500	28500	28500	43000	40000	60000	60000	82000	82000	90000
Evaporator water flow (1)	m3/h	9,0	11,3	13,6	15,9	18,1	22,0	26,0	30,8	33,8	36,0	38,5
Evaporator pressure drop (1)	kPa	24	25	28	26	33	36	36	39	39	36	35
Ecodesign compliance for process application (SEPR)	-	2,32	2,34	2,32	2,32	2,45	2,38	2,42	2,4	2,58	2,54	2,49
COOLING - LN VERSION												
Cooling capacity (1)	kW	35,7	44,9	54,3	63,4	72,1	87,7	103,4	122,5	134,6	143,4	153,1
Cooling capacity (1) (EN 14511 VALUE)	kW	35,5	44,6	53,9	63	71,6	87,1	102,7	121,7	133,8	142,6	152,3
Total compressors power input (1)	kW	17,3	18,3	22,7	27,4	33,6	40	49,1	61,9	68,3	73,9	77,3
Saved CO2 equivalent Ton (*)	Ton	37580	48020	52200	56380	85610	91870	125280	137810	146160	154510	162860
Total air flow	m3/h	18920	24510	24510	24510	36980	34400	51600	51600	70520	70520	77400
Evaporator water flow (1)	m3/h	8,7	10,9	13,2	15,4	17,5	21,3	25,1	29,7	32,6	34,8	37,1
Evaporator pressure drop (1)	kPa	24	25	28	26	33	36	36	39	39	36	35
DESUPERHEATER (Option)												
Heating capacity (2)	kW	9,6	12,1	14,6	17,1	19,4	23,6	27,9	33	36,3	38,6	41,3
Water flow	m3/h	1,7	2,1	2,5	3,0	3,4	4,1	4,9	5,7	6,3	6,7	7,2
Pressure drop	kPa	37	40	28	32	35	30	30	33	32	35	30
REFRIGERANT CIRCUIT												
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	2	2	2	2	2	2	2	2	2	2	2
Compressors type	-	Semihermetic reciprocating										
Compressors quantity	n°	2	2	2	2	2	2	2	2	2	2	2
Fans type	-	Axial (EC)										
Fans quantity	n°	2	3	3	3	4	4	3	3	4	4	5
Fans power input (1)	kW	1,80	2,60	2,60	2,60	3,50	3,50	6,00	6,00	8,00	8,00	10,00
ELECTRICAL DATA												
Power supply	V/ph/Hz + T	400/3/50 + 230/1/50 (for gas detector)										
Maximum power input without pump	kW	31,6	37,4	41,8	50,2	62,1	71,9	89,4	119,4	119	129,8	133,8
Locked rotor current – LRA without pump	A	149,7	177,9	245,9	274,0	301,0	342,0	408,0	567,0	667,0	708,0	715,0
Maximum absorbed current - FLA without pump	A	61,4	77,8	79,8	94,0	116,0	130,0	162,0	212,0	222,0	232,0	242,0
NOISE LEVELS (3)												
Total sound power - ST Version	dB(A)	92	93	95	95	95	97	97	99	101	101	102
Total sound pressure - ST Version	dB(A)	60	61	63	63	63	65	65	67	69	69	70
Total sound power - LN Version	dB(A)	89	90	92	92	92	94	94	96	98	98	99
Total sound pressure - LN Version	dB(A)	57	58	60	60	60	62	62	64	66	66	67
DIMENSIONS AND WEIGHT - Base Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	810	850	970	1050	1210	1490	1800	1970	2220	2460	2740
DIMENSIONS AND WEIGHT - Integrated Solution												
Lenght (L)	mm	2330	2980	2980	2980	3920	3920	4200	4200	5400	5400	5400
Depth (P)	mm	990	990	990	990	990	990	1150	1150	1500	1500	1500
Height (H)	mm	2175	2175	2175	2175	2230	2230	2100	2100	2300	2300	2300
Shipping weight	Kg	860	900	1025	1105	1270	1550	1870	2040	2300	2550	2840

Reference conditions:

(1) Condenser air intake temperature = 30°C - Evaporator water temperature IN/OUT = -4/-8°C - Fluid: Ethylene glycol 35% - Condensing coil: Cu/Al

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 30°C - Evaporator water temperature IN/OUT = -4/-8°C - Fluid: Ethylene glycol 35% - Condensing coil: Cu/Al

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

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Support and assistance

Webservice² - web portal 24/7

Planned and designed for the specific competences, “webservice” is a web portal that enables customers or support centres to access the detailed documentation for each single machine: the construction drawing, electric diagram, list of spare parts, order confirmation, instructions manual, declaration of conformity and much more.

The information is consequently always available and up-todate, also when you are physically at the site of installation.

Thanks to the new features of WebService², it is now possible to check in real time the availability of spare parts for each serial number, simply by accessing the service with your own web credentials.

wEKool - Product selection software

The new wEKool selection software is able to search and select, within the wide range of Propane machines produced by Euroklimat, the most suitable solution to meet the specific request.

For more information visit our website www.euroklimat.it.

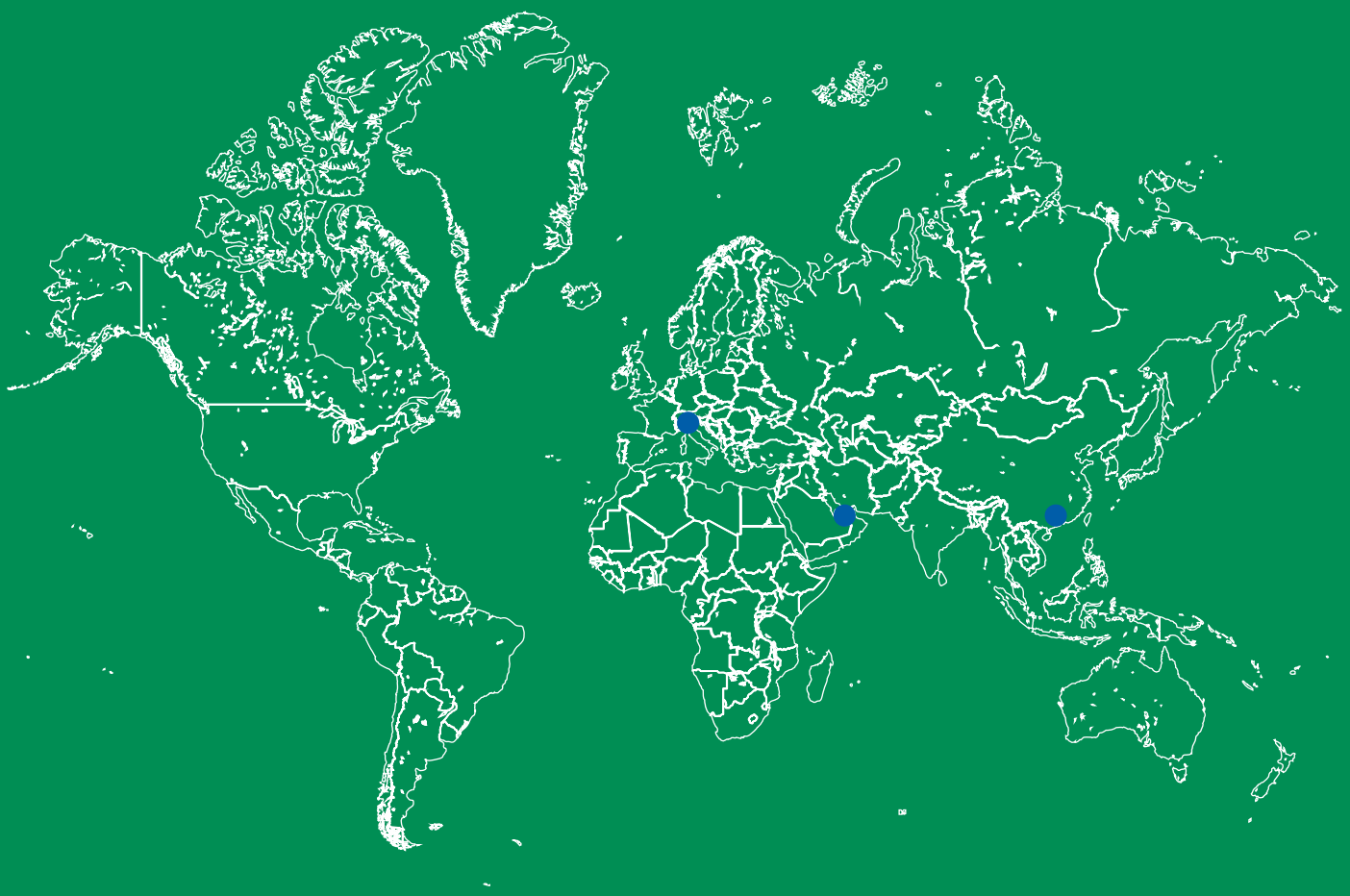
After-sales service

Our organisation includes an office dedicated to after-sales technical support that is able to offer a great number of services, such as:

- On-line technical service
- Spare parts service
- Technical intervention in situ
- Scheduled maintenance service
- Customer training courses
- External support centre training courses

Spare parts warehouse

The internal warehouse is divided into a central warehouse, which supplies the assembly lines, and the spare parts warehouse that can guarantee almost immediate availability of all “critical” components.



MV Design

The data are indicative and not binding. Euroklimat reserves the right to make changes at any time without notice.

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HYDRO CARBONS 21

green cooling initiative

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