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, explosion-proof ATEX certified, with external dedicated power supply and Modbus output signal. The sensor is provided with an alarm level set at 10% of Lower Flammability Limit (LFL). This alarm activates a red LED status indicator on the control panel and is managed by microprocessor to activate a series of emergency provisions which ensure the highest possible safety level.
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

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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	n.a.	1380	1380	1680	1680	1680	1680	2330	2980	2980	2980	2980
Depth (P)	mm	n.a.	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	n.a.	1785	1785	2075	2075	2075	2155	2175	2175	2175	2175	2175
Shipping weight	Kg	n.a.	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**

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.