

# EKO.E/MT

302 S ↔ 1602 S



Refrigerant  
R290 | GWP=3



SEPR



Semi-hermetic  
piston  
compressor



Axial fan



Brazen plate  
heat exchanger



Medium  
temperature  
(-8°C)

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

<b>Housing</b>	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).
<b>Compressor</b>	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.
<b>Fan</b>	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.
<b>Air heat exchanger</b>	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
<b>Water heat exchanger</b>	Brazen 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.
<b>Electrical board</b>	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 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 panel is hung outside the unit, on one side of the machine.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	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.
<b>Additional safety device</b>	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.
<b>Water circuit</b>	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

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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
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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	-	Semihhermetic 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												
Length (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												
Length (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

**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<sub>on</sub>**, **Rated cooling capacity**, **Seasonal space cooling energy efficiency**, ...) are published on our website [www.euroklimat.it](http://www.euroklimat.it)



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.