

EKV/HE

100-1-1 ↔ 250-2-2



Refrigerant
R134a | GWP=1.430



Screw
Compressor



Shell & Tube
exchanger



Axial
fan



Braze plate
heat exchanger



SEPR



SEER

INVERTER AVAILABLE

Air-Cooled Liquid Chillers with screw compressors
High efficiency



Solution

B - Base

Version

ST - Standard

LN - Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

Cooling capacity 244 - 579 kW

EUROVENT "A" Class

Structure	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request).
Compressor	Semi-Hermetic compact screw compressor with step-less capacity control system. The sophisticated three-stage oil separation system minimises oil dragging towards the system. Fitted on rubber antivibration mounts and complete with oil charge.
EC-Fan	Premium-Axial-Fans with bionical shaped blades and high efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP 54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel Microchannel technology increases the primary to secondary surface area ratio and reduces the tube's 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	Plate-type (Desuperheater) Made of AISI 316 steel complete with water differential pressure switch. Shell covered with closed-cell neoprene anti-condensate material. Shell & tubes evaporator All extremely efficient with low refrigerant charge and very stable operating performance due to excellent refrigerant distribution, thermally insulated by vapour-proof closed cell.
Electrical board	Switchboard made according to standards IEC 204-1/EN60204-1, complete with contactor and protection for compressor and fans. Main isolator and door interlock safety device.
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 dryer, moisture-liquid sight glass, electronic expansion valve, HP and LP pressure sensors and safety valve.

MAIN ACCESSORIES

- Spring vibration isolation
- Modulating fan speed condensing control (phase-cut)
- Soft start
- Compressor suction/discharge intercepting valve
- Remote control panel
- Max and min voltage relay
- Refrigerant gas HP and LP pressure gauges
- Electromechanical flow switch
- Pumping group, 1 pump
- Additional stand-by water pump

► For the complete list of accessories please see pages 32-33

EKV/HE high efficiency

Technical data

EKV/HE high efficiency		100-1-1	110-1-1	125-1-1	140-2-2	160-2-2	180-2-2	200-2-2	220-2-2	250-2-2
Cooling										
Cooling capacity (1)	[kW]	244	259	287	341	378	412	476	510	579
Cooling capacity (1) (EN14511 VALUE)	[kW]	243	258	286	340	377	411	475	509	577
Compressors power input (1) (total)	[kW]	64	70	82	92	107	122	130	146	173
EER	-	3,34	3,28	3,14	3,26	3,17	3,08	3,27	3,16	3,06
ESEER	-	4,62	4,48	4,37	4,44	4,35	4,29	4,50	4,32	4,30
EUROVENT classification	-	A	A	A	A	A	A	A	A	A
"Ecodesign" compliance for process application (SEPR)	-	√	√	√	√	√	√	√	√	√
"Ecodesign" compliance for comfort application (SEER)	-	√	√	√	√	√	√	√	√	√
Desuperheater (option)										
Heating capacity (2)	[kW]	54	57	64	76	82	91	103	112	127
Exchanger water flow (2)	[m ³ /h]	9,2	9,8	10,9	13,0	14,1	15,6	17,8	19,3	21,9
Exchanger pressure drop (water side) - Plates	[kPa]	20	23	21	22	25	20	22	24	22
Refrigerant circuit (R134a)										
Number of refrigerant circuits	-	1	1	1	2	2	2	2	2	2
Compressors quantity	-	1	1	1	2	2	2	2	2	2
Axial fans quantity	[-]	6	6	6	8	8	8	10	10	10
Total air flow	[m ³ /h]	129.000			172.000			215.000		
Evaporator water flow (1)	[m ³ /h]	42	45	49	59	65	71	82	88	100
Evaporator pressure drop (water side)	[kPa]	33	35	34	30	33	35	22	24	27
Water connections										
Size	[-]	DN 100	DN 100	DN 100	DN 100	DN 100	DN 100	DN 125	DN 125	DN 125
Electrical data (ST Version)										
Power supply	-	400V/3ph/50Hz								
Control power supply	-	24V-1ph-50Hz / 230V-1ph-50Hz								
Maximum absorbed power without pump	[kW]	95	111	125	146	165	184	190	220	248
Locked rotor current – LRA without pump	[A]	503	449	545	424	515	563	652	624	823
Maximum absorbed current (full load)	[A]	152	179	203	233	264	296	303	355	401
Noise levels (3)										
Total sound power (ST version)	[dB(A)]	96	96	97	97	98	98	99	99	101
Total sound pressure (ST version)	[dB(A)]	64	64	65	65	66	66	67	67	69
Total sound power (LN version)	[dB(A)]	92	92	93	93	94	94	95	95	97
Total sound pressure (LN version)	[dB(A)]	60	60	61	61	62	62	63	63	65
Dimensions and weights										
Length	[mm]	4.300	4.300	4.300	5.550	5.550	5.550	6.800	6.800	6.800
Width	[mm]	2.345	2.345	2.345	2.345	2.345	2.345	2.345	2.345	2.345
Height (ST - LN)	[mm]	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)
Weight BASE unit (ST)	[Kg]	2.860	2.920	3.060	3.120	3.570	4.120	4.260	4.530	4.920
Weight BASE unit (LN)	[Kg]	2.950	3.000	3.150	3.210	3.680	4.240	4.390	4.670	5.070

Reference conditions:

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

(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: water - Condensing coil: microchannel

(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

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

EKV/HE

270-2-2 ↔ 420-2-2



Refrigerant
R134a | GWP=1.430



Screw
Compressor



Shell & Tube
exchanger



Axial
fan



Braze plate
heat exchanger



SEPR



SEER

INVERTER AVAILABLE

Air-Cooled Liquid Chillers with screw compressors
High efficiency



Solution

B - Base

Version

ST - Standard

LN - Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

Cooling capacity 636 - 990 kW

EUROVENT "A" Class

Structure	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request).
Compressor	Semi-Hermetic compact screw compressor with step-less capacity control system. The sophisticated three-stage oil separation system minimises oil dragging towards the system. Fitted on rubber antivibration mounts and complete with oil charge.
EC-Fan	Premium-Axial-Fans with bionical 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	Microchannel Microchannel technology increases the primary to secondary surface area ratio and reduces the tube's 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	Plate-type (Desuperheater) Made of AISI 316 steel complete with water differential pressure switch. Shell covered with closed-cell neoprene anti-condensate material. Shell & tubes evaporator All extremely efficient with low refrigerant charge and very stable operating performance due to excellent refrigerant distribution, thermally insulated by vapour-proof closed cell.
Electrical board	Switchboard made according to standards IEC 204-1/EN60204-1, complete with contactor and protection for compressor and fans. Main isolator and door interlock safety device.
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 dryer, moisture-liquid sight glass, electronic expansion valve, HP and LP pressure sensors and safety valve.

MAIN ACCESSORIES

- Spring vibration isolation
- Modulating fan speed condensing control (phase-cut)
- Soft start
- Compressor suction/discharge intercepting valve
- Remote control panel
- Max and min voltage relay
- Refrigerant gas HP and LP pressure gauges
- Electromechanical flow switch
- Pumping group, 1 pump
- Additional stand-by water pump

► For the complete list of accessories please see pages 32-33

EKV/HE high efficiency

Technical data

EKV/HE high efficiency		270-2-2	280-2-2	290-2-2	300-2-2	320-2-2	340-2-2	360-2-2	390-2-2	420-2-2
Cooling										
Cooling capacity (1)	[kW]	636	675	703	760	798	862	894	956	990
Cooling capacity (1) (EN14511 VALUE)	[kW]	635	674	701	758	796	861	892	954	988
Compressors power input (1) (total)	[kW]	184	201	192	214	238	247	266	276	296
EER	-	3,14	3,08	3,29	3,22	3,07	3,18	3,07	3,15	3,06
ESEER	-	4,35	4,20	4,47	4,47	4,20	4,36	4,31	4,39	4,10
EUROVENT classification	-	A	A	A	A	A	A	A	A	A
"Ecodesign" compliance for process application (SEPR)	-	√	√	√	√	√	√	√	√	√
"Ecodesign" compliance for comfort application (SEER)	-	√	√	√	√	√	√	√	√	√
Desuperheater (option)										
Heating capacity (2)	[kW]	141	148	155	166	176	189	198	210	218
Exchanger water flow (2)	[m ³ /h]	24,3	25,4	26,6	28,5	30,2	32,5	34,0	36,2	37,5
Exchanger pressure drop (water side) - Plates	[kPa]	25	25	20	24	27	28	30	25	28
Refrigerant circuit (R134a)										
Number of refrigerant circuits	-	2	2	2	2	2	2	2	2	2
Compressors quantity	-	2	2	2	2	2	2	2	2	2
Axial fans quantity	[-]	12	12	14	14	14	16	16	18	18
Total air flow	[m ³ /h]	258.000		301.000		344.000		387.000		
Evaporator water flow (1)	[m ³ /h]	109	116	121	131	137	148	154	164	170
Evaporator pressure drop (water side)	[kPa]	21	23	23	25	27	24	25	24	26
Water connections										
Size	[-]	DN 150	DN 150	DN 150	DN 150	DN 150	DN 150	DN 150	DN 200	DN 200
Electrical data (ST Version)										
Power supply	-	400V/3ph/50Hz								
Control power supply	-	24V-1ph-50Hz / 230V-1ph-50Hz								
Maximum absorbed power without pump	[kW]	265	280	283	314	345	366	383	405	424
Locked rotor current – LRA without pump	[A]	805	828	832	887	736	789	789	953	953
Maximum absorbed current (full load)	[A]	429	452	456	511	565	590	609	652	690
Noise levels (3)										
Total sound power (ST version)	[dB(A)]	101	101	102	102	102	103	103	104	104
Total sound pressure (ST version)	[dB(A)]	69	69	70	70	70	71	71	72	72
Total sound power (LN version)	[dB(A)]	97	97	98	98	98	99	99	100	100
Total sound pressure (LN version)	[dB(A)]	65	65	66	66	66	67	67	68	68
Dimensions and weights										
Length	[mm]	8.050	8.050	9.300	9.300	9.300	10.550	10.550	11.800	11.800
Width	[mm]	2.345	2.345	2.345	2.345	2.345	2.345	2.345	2.345	2.345
Height (ST - LN)	[mm]	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)	2.465 (2.525)
Weight BASE unit (ST)	[Kg]	5.630	5.720	6.200	6.230	6.380	6.990	7.470	7.760	7.840
Weight BASE unit (LN)	[Kg]	5.790	5.890	6.380	6.420	6.580	7.210	7.690	7.990	8.070

Reference conditions:

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

(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: water - Condensing coil: microchannel

(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

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