

EKS New Gen

055-2-1 ↔ 240-6-2



Refrigerant
R454B | GWP=467



Scroll
Compressor



Shell & Tube
exchanger



Axial
fan



Brazed plate
heat exchanger



SEPR



SEER

MultiScroll Air-cooled liquid chillers



Solution

B - Base
P - Base with pump
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater

Cooling capacity 148 - 589 kW

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	Hermetic scroll compressor complete with motor over-temperature and over-current devices and protection against excessive gas discharge temperature. 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 Made of AISI 316 steel complete with water differential pressure switch. Shell covered with closed-cell neoprene anti-condensate material. Shell & tubes 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.
Water circuit	Automatic charging cock with gauge, safety valve, expansion tank, water pump(s), water tank.

MAIN ACCESSORIES

- Spring vibration isolation
- 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
- Automatic water filling valve (closed circuit)

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Technical data

EKS New Gen		055-2-1	060-2-1	070-2-1	080-4-2	090-4-2	100-4-2	110-4-2	120-4-2	140-4-2	160-4-2	180-6-2	240-6-2
Cooling mode (*P/ST/**/EC/OO configuration)													
Cooling capacity ⁽¹⁾	[kW]	148	167	183	203	227	249	294	331	362	403	489	589
Power input (total) ⁽¹⁾	[kW]	46,7	53,2	59,3	64,2	72,6	81,1	92,9	106	118	128	162	195
EER ⁽¹⁾	-	3,17	3,14	3,09	3,16	3,13	3,07	3,16	3,12	3,07	3,15	3,02	3,02
SEPR	-	5,70	5,55	5,59	5,63	5,71	5,61	5,71	5,54	5,58	5,82	5,55	5,58
SEER - ns.c	[- %]	4,508 - 177,3%	4,298 - 168,9%	4,406 - 173,3%	4,339 - 170,6%	4,444 - 174,8%	4,274 - 168,0%	4,684 - 184,4%	4,488 - 176,5%	4,573 - 179,9%	4,551 - 179%	4,619 - 181,8%	4,676 - 184,0%
Cooling mode (*P/ST/**/EC/OI configuration - optional)													
Cooling capacity ⁽¹⁾	[kW]	164	167	199	203	227	249	326	332	393	403	489	589
Power input (total) ⁽¹⁾	[kW]	53,5	53,3	66,9	64,2	72,6	81,2	106,0	106	133	128	162	195
EER ⁽¹⁾	-	3,07	3,13	2,97	3,16	3,13	3,07	3,08	3,13	2,95	3,15	3,02	3,02
SEPR	-	5,59	5,58	5,35	5,66	5,76	5,66	5,60	5,58	5,34	5,88	5,54	5,59
SEER - ns.c	[- %]	4,608 - 181,3%	4,531 - 178,2%	4,464 - 175,6%	4,456 - 175,3%	4,515 - 177,6%	4,501 - 177,1%	4,664 - 183,6%	4,636 - 182,4%	4,521 - 177,9%	4,743 - 186,7%	4,685 - 184,4%	4,748 - 186,9%
Cooling mode (*S/ST/**/EC/OO configuration)													
Cooling capacity ⁽¹⁾	[kW]	149	167	181	206	229	252	297	336	366	409	490	593
Power input (total) ⁽¹⁾	[kW]	46,6	53,1	58,8	64,5	73,0	81,7	93,2	106	118	127	162	195
EER ⁽¹⁾	-	3,20	3,15	3,08	3,19	3,14	3,08	3,19	3,17	3,10	3,22	3,02	3,04
SEPR	-	5,68	5,46	5,50	5,59	5,64	5,54	5,66	5,57	5,56	5,86	5,56	5,59
SEER - ns.c	[- %]	4,580 - 180,2%	4,296 - 168,8%	4,436 - 174,4%	4,314 - 169,5%	4,398 - 172,9%	4,263 - 167,5%	4,689 - 184,6%	4,605 - 181,2%	4,612 - 181,5%	4,691 - 184,6%	4,713 - 185,5%	4,737 - 186,5%
Cooling mode (*S/ST/**/EC/OI configuration - optional)													
Cooling capacity ⁽¹⁾	[kW]	165,0	167,0	196,0	206,0	229,0	252,0	327,0	336,0	397,0	409,0	490,0	593,0
Power input (total) ⁽¹⁾	[kW]	53,6	53,2	66,5	64,6	72,9	81,7	107,0	106,0	133,0	127,0	162,0	196,0
EER ⁽¹⁾	-	3,08	3,14	2,95	3,19	3,14	3,08	3,06	3,17	2,98	3,22	3,02	3,03
SEPR	-	5,58	5,50	5,29	5,62	5,70	5,62	5,57	5,61	5,34	5,95	5,56	5,60
SEER - ns.c	[- %]	4,682 - 184,3%	4,540 - 178,6%	4,510 - 177,4%	4,415 - 173,6%	4,451 - 175%	4,480 - 176,2%	4,652 - 183,1%	4,769 - 187,7%	4,558 - 179,3%	4,910 - 193,4%	4,775 - 188,0%	4,800 - 189,0%
Desupereather (*P/ST/DS/EC/OO configuration - optional)													
Heating capacity ⁽²⁾	[kW]	40,0	47,2	52,8	53,4	63,1	69,5	79,5	93,5	105,0	111,0	152,0	177
Heat exchanger water flow ⁽²⁾	[m3/h]	6,9	8,2	9,2	9,2	10,9	12,1	13,8	16,2	18,1	19,3	26,3	30,7
User circuit pressure drop ⁽²⁾	[kPa]	26,3	15,1	18,1	15,6	19,5	22,7	27,9	16,8	19,7	21,4	35,0	29,8
Heat Recovery (*P/ST/HR/EC/OO configuration - optional)													
Heating capacity ⁽²⁾	[kW]	184,0	210,0	233,0	251,0	284,0	315,0	365,0	417,0	461,0	505,0	630,0	760
Heat exchanger water flow ⁽²⁾	[m3/h]	31,9	36,4	40,3	43,5	49,2	54,6	63,3	72,3	79,9	87,6	109,0	132,0
User circuit pressure drop ⁽²⁾	[kPa]	40,7	45,1	48,8	51,8	48,8	50,9	56,4	60,7	63,8	65,9	65,1	67,1
Circuito frigorifero													
Refrigerant - GWP	-	R454B - 467											
Number of refrigerant circuits	N°	1			2								
Compressor type - quantity	- / N°	SCROLL - 2			SCROLL - 4						SCROLL - 6		
Fans type - quantity	- / N°	Axial (EC) - 4			Axial (EC) - 6			Axial (EC) - 8			Axial (EC) - 10		Axial (EC) - 12
Total air flow ⁽³⁾ (*P/ST/**/EC/OO)	[m³/h]	81.210	80.980	80.770	121.700	121.800	121.500	162.400	162.000	161.600	202.600	201.500	241.800
Evaporator water flow ⁽³⁾ (*P/ST/**/EC/OO)	[m³/h]	25,5	28,8	31,4	34,9	39,0	42,8	50,5	57,0	62,2	69,3	84,1	101,0
User circuit pressure drop ⁽³⁾ (*P/ST/**/EC/OO)	[kPa]	42,7	43,5	45,7	33,7	34,7	33,0	37,0	37,1	39,8	43,9	40,2	46,0
Expansion valve type	-	Electronic											
Electrical data													
Power supply (main - auxiliary services)	-	400/3/50 - 24/1/50 e 230/1/50											
Maximum absorbed power without pump	[kW]	78,8	85,8	95,8	108,0	124,0	140,0	158,0	172,0	192,0	215,0	254,0	317,0
Maximum absorbed current (full load)	[A]	131	143,6	158,6	182,6	206	229,4	261,2	287,2	317,2	353	425	520,8
Locked rotor current - LRA without pump	[A]	391	404	419	352	376	386	521	547	577	567	685	734,8
Hydronic kit - 100 kPa useful head (optional)													
Buffer tank capacity	[L]	290				470							
Pump type	-	Centrifugal											
Pump motor nominal power	[kW]	1,5	1,5	2,2	2,2	2,2	2,2	2,2	4	4	4	4	5,5
Water connections													
Size	[inch]	2 1/2" (DN65)	2 1/2" (DN65)	2 1/2" (DN65)	3" (DN80)	3" (DN80)	3" (DN80)	4" (DN100)	4" (DN100)	4" (DN100)	4" (DN100)	5" (DN125)	5" (DN125)
Sound levels (3)													
Total sound power (ST version)	[db(A)]	93	93	94	94	94	95	96	96	97	98	97	98
Total sound pressure (ST version) - at a distance of 10 m	[db(A)]	73	73	74	74	74	75	76	76	77	77	76	77
Total sound power (LN version)	[db(A)]	89	89	90	90	90	91	92	92	93	94	93	94
Total sound pressure (LN version) - at a distance of 10 m	[db(A)]	57	57	58	58	58	59	60	60	61	61	60	61
Total sound power (SL version)	[db(A)]	87	87	88	88	88	89	90	90	91	92	91	92
Total sound pressure (SL version) - at a distance of 10 m	[db(A)]	55	55	56	56	56	57	58	58	59	59	58	59
Dimensions and weights													
Lenght	[mm]	3.570	3.570	3.570	4.015	4.015	4.015	5.135	5.135	5.135	6.255	6.255	7.475
Width	[mm]	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280
Height (versions ST - LN/SL)	[mm]	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610	2.550 - 2.610
Operating weight - A BP/ST/AS/EC/OO	[Kg]	1.405	1.490	1.515	2.110	2.110	2.130	2.715	2.890	2.915	3.360	3.665	4.115
Operating weight - A BS/ST/AS/EC/OO	[Kg]	1.530	1.620	1.630	2.175	2.255	2.255	2.820	2.990	3.120	3.620	3.925	4.195
Operating weight - A BP/LN/AS/EC/OO	[Kg]	1.440	1.525	1.550	2.165	2.165	2.185	2.785	2.960	2.985	3.455	3.760	4.230
Operating weight - A BS/LN/AS/EC/OO	[Kg]	1.565	1.655	1.665	2.230	2.310	2.310	2.890	3.060	3.190	3.715	4.020	4.310
Operating weight - A BP/SL/AS/EC/OO	[Kg]	1.475	1.560	1.585	2.215	2.215	2.235	2.855	3.030	3.055	3.550	3.855	4.340
Operating weight - A BS/SL/AS/EC/OO	[Kg]	1.600	1.690	1.700	2.280	2.360	2.360	2.960	3.130	3.260	3.810	4.115	4.420

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator user fluid temperature IN/OUT = 12/7 °C - User fluid: water - Condensing coil: Microchannel - Results according to UNI EN 14511-2022

(2) Plate heat exchanger user fluid temperature IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C - Evaporator user fluid temperature IN/OUT = 12/7 °C - User fluid: water - Condensing coil: Microchannel - Results according to UNI EN 14511-2022

(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.