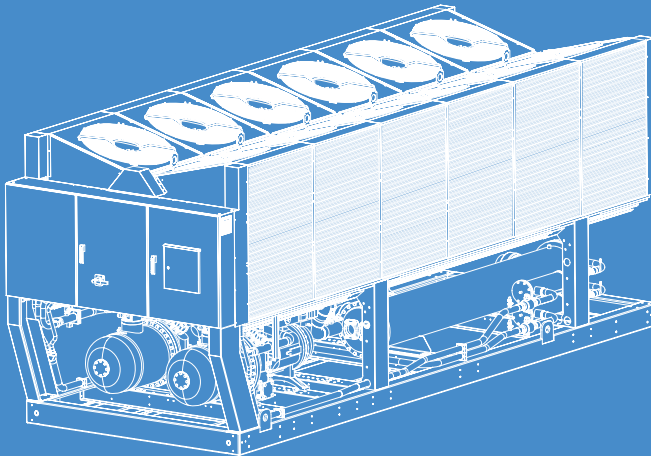


# KELVIN Clim **A282**

Cooling Capacity: 282 ~ 1513 kW



Air cooled liquid chillers in "A" class energy efficiency for outdoor installation, equipped with twin screw compressors and axial fans

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Cooling capacity: 282 ~ 1513 kW



## KELVIN AIR CONDITIONING



### MAIN FEATURES

- Air cooled liquid chiller.
- 26 models available, for a wide selection opportunity.
- Average step of 50kW.
- EER up to 3,39.
- ESEER up to 4,03.
- Twin-Screw compressors.
- R134a Refrigerant charge.
- Double refrigerant circuit.
- Shell and tube evaporator..
- AC Axial fans.
- Double air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

### MAIN BENEFITS

- High EER, A class energy efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of total or partial heat recovery system.
- Availability of EC fans for a higher efficiency.
- Components dedicated to the safety of the unity.
- Eurovent Certification.(pending)

### ELECTRONIC EXPANSION VALVE

The electronic expansion valves are synonymous of a higher energy efficiency and stability of the system.

### A CLASS ENERGY EFFICIENCY

The best and most accurate components applied to the chillers.

### WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -10~15°C  
Ambient temperature: -20~45°C



## MAIN COMPONENTS

### FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002.

### COMPRESSORS

- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated safety relief valve (overpressure inner valve).
- Replaceable cartridge oil filter.
- Valves for oil filling and discharge.
- Oil sight glass.
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors,
  - Phase sequence electronic relay,
  - Sensor on refrigerant discharge for temperature monitoring.
- 2-pole 3-phase electric motor with Part-Winding starting from model 290 V2 F06 to model 570 V2 F10 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 620 V2 F10 to model 1510 V2 F24 included.
- Capacity control, 50~100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

### EVAPORATOR

- Single pass type shell and tube evaporator, optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Antifreeze heater.
- Hydraulic connections with grooved end complete with flexible joint and adapter pipe for solder connection.

### CONDENSING COIL

- Heat exchanger coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger,
  - Minimum charge of refrigerant,
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

### FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control, with phase-cut electronic controller.
- IP54 enclosure class.

### REFRIGERANT CIRCUIT

Component for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Energy reserve module for the electronic expansion valve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on compressor gas discharge.

- Double safety valve (only one in function) on high and low pressure side. The system include two safety valves with manual changeover system.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Pressure gauge on high and low pressure.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

### ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans.
- Fuses for water pumps (if scheduled).
- Contactors for each load.
- Compressor Part-Winding starting system from model 290 V2 F06 to model 570 V2 F10 included.
- Compressor Star / Delta starting system from model 620 V2 F10 to model 1510 V2 F24 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

### CONTROL SYSTEM

- MPCOM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm,
  - Main components hour-meter,
  - Non volatile "Flash" memory for data storage,
  - Menu with protection password,
  - LAN connection.

OPTIONAL ACCESSORIES

KELVIN Clim A282 SIZE	F06	F08	F10	F12	F14	F16	F18	F20	F22	F24
739 - Pumping group (1 pump)	•	•	•	•	-	-	-	-	-	-
769 - Pumping group (1+1stby)	•	•	•	•	-	-	-	-	-	-
740 - Pumping group (2 pumps)	-	-	-	-	•	•	•	•	•	•
770 - Pumping group (1+2stby)	-	-	-	-	•	•	•	•	•	•
1004 - Antifreezing heater for pumping group	•	•	•	•	•	•	•	•	•	•
118 - Kit brine A (for glycol solution production up to °6-C)	•	•	•	•	•	•	•	•	•	•
119 - Kit brine B (for glycol solution production up to °12-C)	•	•	•	•	•	•	•	•	•	•
786 - Pipes antifreezing kit	•	•	•	•	•	•	•	•	•	•
79 - Electrical panel heating system	•	•	•	•	•	•	•	•	•	•
150 - LNO kit (noise reduction)	•	•	•	•	•	•	•	•	•	•
151 - ELN kit (extremely noise reduction)	•	•	•	•	•	•	•	•	•	•
170 - Spring antivibration holders (kit)	•	•	•	•	•	•	•	•	•	•
171 - Rubber antivibration holders (kit)	•	•	•	•	•	•	•	•	•	•
101 - EC fan	•	•	•	•	•	•	•	•	•	•
450 - Partial heat recovery	•	•	•	•	•	•	•	•	•	•
449 - Voltage free contact for partial heat recovery water pump activation	•	•	•	•	•	•	•	•	•	•
%100 - 451 heat reclaim	•	•	•	•	•	•	•	•	•	•
454 - Voltage free contact for total heat recovery water pump activation	•	•	•	•	•	•	•	•	•	•
Selection switch for operation mode for total heat recovery	•	•	•	•	•	•	•	•	•	•
351 - Coils with pre-painted fins	•	•	•	•	•	•	•	•	•	•
Condensing coil in special execution	•	•	•	•	•	•	•	•	•	•
250 - Coils protection nets (kit)	•	•	•	•	•	•	•	•	•	•
731 - Safety water flow switch	•	•	•	•	•	•	•	•	•	•
1005 - Oil flow switch	•	•	•	•	•	•	•	•	•	•
650 - Compressor thermal relay	•	•	•	•	•	•	•	•	•	•
605 - Compr. power factor capacitor - 0,9	•	•	•	•	•	•	•	•	•	•
Supply network control relay	•	•	•	•	•	•	•	•	•	•
83 - Compressor operation indicator	•	•	•	•	•	•	•	•	•	•
550 - Stop valve on compressor suction line	•	•	•	•	•	•	•	•	•	•
85 - Demand limit	•	•	•	•	•	•	•	•	•	•
88 - Analog set point compensation	•	•	•	•	•	•	•	•	•	•
1003 - Analogic flowmeter	•	•	•	•	•	•	•	•	•	•
1005 - Power supply analyzer	•	•	•	•	•	•	•	•	•	•
1009 - Multimeter kit	•	•	•	•	•	•	•	•	•	•
919 - Clock card	•	•	•	•	•	•	•	•	•	•
923 - KELVIN-Com MBUS/JBUS Serial board	•	•	•	•	•	•	•	•	•	•
926 - LON Serial board	•	•	•	•	•	•	•	•	•	•
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	•	•	•	•	•	•	•	•	•	•
932 - BACnet MS/TP Serial board	•	•	•	•	•	•	•	•	•	•
934 - MP.COM expansion card	•	•	•	•	•	•	•	•	•	•
942 - Serial card for GSM Modem	•	•	•	•	•	•	•	•	•	•
943 - Data Logger	•	•	•	•	•	•	•	•	•	•
Ambient temperature sensor	•	•	•	•	•	•	•	•	•	•
962 - Kit modem GSM	•	•	•	•	•	•	•	•	•	•
957 - Plantwatch without modem	•	•	•	•	•	•	•	•	•	•
930 - Remote graphic terminal kit	•	•	•	•	•	•	•	•	•	•
889 - Master plant SEQUENCER	•	•	•	•	•	•	•	•	•	•
KELVIN CLOUD PLATFORM	•	•	•	•	•	•	•	•	•	•

• available accessory; - not available accessory

TECHNICAL DATA KELVIN Clim A282

KELVIN Clim A282		290 V2	300 V2	320 V2	340 V2	360 V2	400 V2	450 V2	480 V2		
SIZE		F06	F06	F08	F08	F08	F08	F10	F10		
STANDARD	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>282</b>	<b>299</b>	<b>319</b>	<b>339</b>	<b>358</b>	<b>398</b>	<b>445</b>	<b>471</b>	
	Unit power input	kW	89,0	95,2	102,9	107,6	113,3	125,6	141,7	149,1	
	Evaporator water flow rate	m³/h	48,4	51,4	54,8	58,2	61,4	68,3	76,4	81,0	
	Evaporator pressure drop	kPa	36	17	18	20	17	7	12	12	
	<b>Compressors</b>		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	
	Quantity	n.	2	2	2	2	2	2	2	2	
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	
	Axial fans	n.	6	6	8	8	8	8	10	10	
	Total air flow	m³/h	131388	127614	153286	175184	170152	170152	212690	212690	
	Air circuits	n.	2	2	2	2	2	2	2	2	
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	
	Total refrigerant charge (optional excluded)	kg	74	74	96	96	96	145	120	181	
	Gas circuits	n.	2	2	2	2	2	2	2	2	
	Power supply	V/Ph/Hz	50/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/400	
	Max operating current (MOC)	A	165	181,8	193,2	204,6	204,6	232,4	259,6	282	
	Max unit operating current (FLA)	A	251,4	230,4	265,9	293,2	293,2	335,2	381,2	366,5	
	Unit starting current (LRA)	A	400,4	388,4	422,2	445,2	445,2	525,2	624,0	633,0	
	EER (1)	kW/kW	3,17	3,14	3,10	3,15	3,16	3,17	3,14	3,16	
	ESEER		3,26	3,76	3,79	3,78	3,79	3,79	3,73	3,77	
	Sound power level [Lw] (2)	dB(A)	92,0	92,5	92,7	92,9	91,5	91,9	92,1	96,2	
	Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	72,3	72,8	72,5	72,7	71,3	71,7	71,4	75,5	
	Net weight	kg	3738	4109	4515	4520	4697	4902	5428	5662	
	Hydraulic connections										
	Evaporator IN/OUT - OD (4)	Ø mm	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7	
	OPTIONAL	<b>Partial heat recovery (5)</b>									
		Heating capacity	kW	56,1	59,6	63,5	67,5	71,2	79,2	88,6	93,8
		<b>Total heat recovery (6)</b>									
	Heating capacity	kW	348	378	402	426	451	506	564	597	
	Pumping group - Power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	
	LNO KIT %100	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>282</b>	<b>299</b>	<b>319</b>	<b>339</b>	<b>358</b>	<b>398</b>	<b>445</b>	<b>471</b>
		Unit power input	kW	89,0	95,2	100,9	107,6	113,3	125,6	141,7	149,1
		Total air flow	m³/h	131388	127614	153286	175184	170152	170152	212690	212690
		EER (1)	kW/kW	3,17	3,14	3,16	3,15	3,16	3,17	3,14	3,16
		Sound power level [Lw] (2)	dB(A)	90,0	90,5	90,7	90,9	89,5	89,9	90,1	94,2
	Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	70,3	70,8	70,5	70,7	69,3	69,7	69,4	73,5	
	LNO KIT %85	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>278</b>	<b>294</b>	<b>314</b>	<b>334</b>	<b>352</b>	<b>392</b>	<b>439</b>	<b>465</b>
Unit power input		kW	88,8	95,5	100,6	107,4	112,5	126,0	142,1	149,0	
Total air flow		m³/h	111680	108472	130293	148906	144629	144629	180787	180787	
EER (1)		kW/kW	3,13	3,08	3,12	3,11	3,13	3,11	3,09	3,12	
Sound power level [Lw] (2)		dB(A)	89,0	89,5	89,7	89,9	88,5	88,9	89,1	93,2	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	69,3	69,8	69,5	69,7	68,3	68,7	68,4	72,5		
LNO KIT %70	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>272</b>	<b>286</b>	<b>307</b>	<b>327</b>	<b>345</b>	<b>383</b>	<b>430</b>	<b>455</b>	
	Unit power input	kW	89,2	96,3	101,3	107,6	117,3	127,7	141,9	150,7	
	Total air flow	m³/h	91972	89330	107300	122629	119106	119106	148883	148883	
	EER (1)	kW/kW	3,05	2,97	3,03	3,04	2,94	3,00	3,03	3,02	
	Sound power level [Lw] (2)	dB(A)	86,0	86,5	86,7	86,9	85,5	85,9	86,1	90,2	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	66,3	66,8	66,5	66,7	65,3	65,7	65,4	69,5		
ELN KIT	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>272</b>	<b>286</b>	<b>307</b>	<b>327</b>	<b>345</b>	<b>383</b>	<b>430</b>	<b>455</b>	
	Unit power input	kW	89,2	96,3	101,3	107,6	117,3	127,7	141,9	150,7	
	Total air flow	m³/h	91972	89330	107300	122629	119106	119106	148883	148883	
	EER (1)	kW/kW	3,05	2,97	3,03	3,04	2,94	3,00	3,03	3,02	
	Sound power level [Lw] (2)	dB(A)	83,0	83,5	83,7	83,9	82,5	82,9	83,1	87,2	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	63,3	63,8	63,5	63,7	62,3	62,7	62,4	66,5		

1. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lp<sub>m</sub>] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end complete with flexible joint and adapter pipe for solder connection.
5. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C; water temperature heat recovery 40/45°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
6. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature heat recovery 40/45°C – 0% glycol solution; Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.

TECHNICAL DATA KELVIN Clim A282

KELVIN Clim A282		520 V2	570 V2	620 V2	660 V2	700 V2	760 V2	830 V2	870 V2		
SIZE		F10	F10	F10	F12	F12	F14	F14	F14		
STANDARD	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>518</b>	<b>564</b>	<b>615</b>	<b>656</b>	<b>696</b>	<b>762</b>	<b>828</b>	<b>873</b>	
	Unit power input	kW	163,9	179,6	192,8	205,6	220,3	241,1	261,2	277,1	
	Evaporator water flow rate	m <sup>3</sup> /h	88,9	96,9	106,0	113,0	120,0	131,0	142,0	150,0	
	Evaporator pressure drop	kPa	11	20	49	37	38	51	51	62	
	<b>Compressors</b>		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	
	Quantity	n.	2	2	2	2	2	2	2	2	
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	
	Axial fans	n.	10	10	10	12	12	14	14	14	
	Total air flow	m <sup>3</sup> /h	212690	212690	212690	244303	262776	284674	306572	302169	
	Air circuits	n.	2	2	2	2	2	2	2	2	
	<b>Refrigerant</b>		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	
	Total refrigerant charge (optional excluded)	kg	181	181	181	217	217	252	252	295	
	Gas circuits	n.	2	2	2	2	2	2	2	2	
	Power supply	V/Ph/Hz	50/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/400	
	Max operating current (MOC)	A	304,4	326,8	369,4	393,7	418,0	443,0	468,0	492,0	
	Max unit operating current (FLA)	A	394,8	423,2	452,6	475,5	498,5	571,9	645,3	676,8	
	Unit starting current (LRA)	A	714,0	741,0	549,0	579,9	601,8	700,7	770,6	800,6	
	EER (1)	kW/kW	3,16	3,14	3,19	3,19	3,16	3,16	3,17	3,15	
	ESEER		3,76	3,77	3,76	3,82	3,76	3,74	3,74	3,72	
	Sound power level [Lw] (2)	dB(A)	96,4	96,7	96,7	99,3	100,4	101,1	101,7	101,6	
	Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	75,8	76,0	76,0	78,2	79,4	79,7	80,3	80,1	
	Net weight	kg	5999	6121	6112	6733	6743	7404	8139	8341,5	
	<b>Hydraulic connections</b>										
	Evaporator IN/OUT - OD (4)	Ø mm	139,7	139,7	139,7	139,7	139,7	168,3	168,3	168,3	
	OPTIONAL	<b>Partial heat recovery (5)</b>									
		Heating capacity	kW	103,0	112,0	122,0	130,0	139,0	152,0	165,0	174,0
		<b>Total heat recovery (6)</b>									
		Heating capacity	kW	658	719	782	836	887	971	1053	1115
	Pumping group - Power input	kW	5,5	5,5	5,5	5,5	5,5	11,0	11,0	11,0	
	LNO KIT %100	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>518</b>	<b>564</b>	<b>615</b>	<b>656</b>	<b>696</b>	<b>762</b>	<b>828</b>	<b>873</b>
		Unit power input	kW	163,9	179,6	192,8	205,6	220,3	241,1	261,2	277,1
		Total air flow	m <sup>3</sup> /h	212690	212690	212690	244303	262776	284674	306572	302169
EER (1)		kW/kW	3,16	3,14	3,19	3,19	3,16	3,16	3,17	3,15	
Sound power level [Lw] (2)		dB(A)	94,4	94,7	94,7	97,3	98,4	99,1	99,7	99,6	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	73,8	74,0	74,0	76,2	77,4	77,7	78,3	78,1		
LNO KIT %85	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>509</b>	<b>554</b>	<b>604</b>	<b>643</b>	<b>684</b>	<b>748</b>	<b>813</b>	<b>856</b>	
	Unit power input	kW	164,7	180,5	194,8	208,1	221,4	242,9	263,1	279,7	
	Total air flow	m <sup>3</sup> /h	180787	180787	180787	207658	223360	241973	260586	256844	
	EER (1)	kW/kW	3,09	3,07	3,10	3,09	3,09	3,08	3,09	3,06	
	Sound power level [Lw] (2)	dB(A)	93,4	93,7	93,7	96,3	97,4	98,1	98,7	98,6	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	72,8	73,0	73,0	75,2	76,4	76,7	77,3	77,1		
LNO KIT %70	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>497</b>	<b>540</b>	<b>588</b>	<b>626</b>	<b>666</b>	<b>729</b>	<b>791</b>	<b>832</b>	
	Unit power input	kW	166,8	183,1	198,6	212,9	225,8	248,0	268,1	285,9	
	Total air flow	m <sup>3</sup> /h	148883	148883	148883	171012	183943	199272	214600	211518	
	EER (1)	kW/kW	2,98	2,95	2,96	2,94	2,95	2,94	2,95	2,91	
	Sound power level [Lw] (2)	dB(A)	90,4	90,7	90,7	93,3	94,4	95,1	95,7	95,6	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	69,8	70,0	70,0	72,2	73,4	73,7	74,3	74,1		
ELN KIT	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>497</b>	<b>540</b>	<b>588</b>	<b>626</b>	<b>666</b>	<b>729</b>	<b>791</b>	<b>832</b>	
	Unit power input	kW	166,8	183,1	198,6	212,9	225,8	248,0	268,1	285,9	
	Total air flow	m <sup>3</sup> /h	148883	148883	148883	171012	183943	199272	214600	211518	
	EER (1)	kW/kW	2,98	2,95	2,96	2,94	2,95	2,94	2,95	2,91	
	Sound power level [Lw] (2)	dB(A)	87,4	87,7	87,7	90,3	91,4	92,1	92,7	92,6	
Average sound pressure level [Lp <sub>m</sub> ] (3)	dB(A)	66,8	67,0	67,0	69,2	70,4	70,7	71,3	71,1		

1. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lp<sub>m</sub>] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end complete with flexible joint and adapter pipe for solder connection.
5. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C; water temperature heat recovery 40/45°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
6. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature heat recovery 40/45°C – 0% glycol solution; Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.

TECHNICAL DATA KELVIN Clim A282

KELVIN Clim A282		920 V2	980 V2	1020 V2	1090 V2	1150 V2	1280 V2	1350 V2	1430 V2	
SIZE		F14	F16	F16	F18	F20	F20	F20	F20	
STANDARD	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>919</b>	<b>977</b>	<b>1024</b>	<b>1083</b>	<b>1154</b>	<b>1279</b>	<b>1356</b>	<b>1434</b>
	Unit power input	kW	290,8	306,3	320,0	341,6	364,0	398,4	425,1	452,4
	Evaporator water flow rate	m <sup>3</sup> /h	158,0	168,0	176,0	186,0	198,0	220,0	233,0	246,0
	Evaporator pressure drop	kPa	61	68	76	79	79	54	44	44
	<b>Compressors</b>		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	14	16	16	18	20	20	20	20
	Total air flow	m <sup>3</sup> /h	297766	350368	350368	401014	451660	437960	431670	425380
	Air circuits	n.	2	2	2	2	2	2	2	2
	<b>Refrigerant</b>		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	337	290	290	326	362	362	412	462
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	50/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/400
	Max operating current (MOC)	A	516,0	612,0	612,0	651,0	690,0	776,0	811,0	846,0
	Max unit operating current (FLA)	A	708,3	737,5	737,5	787,7	837,9	949,2	984,9	1020,6
	Unit starting current (LRA)	A	829,6	968,4	968,4	1040,2	1088,0	1296,0	1408,0	1442,0
	EER (1)	kW/kW	3,16	3,19	3,20	3,17	3,17	3,21	3,19	3,17
	ESEER		3,71	3,72	3,74	3,74	3,72	3,80	3,83	3,81
	Sound power level [Lw] (2)	dB(A)	101,4	99,9	99,9	101,7	103,9	103,9	104,1	104,2
Average sound pressure level [Lpm] (3)	dB(A)	80,0	78,1	78,1	79,5	81,5	81,5	81,7	81,8	
Net weight	kg	8544	9195	9318	10274	11180	11362	11972	12292	
<b>Hydraulic connections</b>										
Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3	
OPTIONAL	<b>Partial heat recovery (5)</b>									
	Heating capacity	kW	183,0	194,0	204,0	216,0	230,0	255,0	270,0	285,0
	<b>Total heat recovery (6)</b>									
Heating capacity	kW	1176	1244	1307	1386	1466	1630	1736	1844	
Pumping group - Power input	kW	11,0	11,0	11,0	11,0	11,0	11,0	11,0	11,0	
LNO KIT %100	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>919</b>	<b>977</b>	<b>1024</b>	<b>1083</b>	<b>1154</b>	<b>1279</b>	<b>1356</b>	<b>1434</b>
	Unit power input	kW	290,8	306,3	320,0	341,6	364,0	398,4	425,1	452,4
	Total air flow	m <sup>3</sup> /h	297766	350368	350368	401014	451660	437960	431670	425380
	EER (1)	kW/kW	3,16	3,19	3,20	3,17	3,17	3,21	3,19	3,17
	Sound power level [Lw] (2)	dB(A)	99,4	97,9	97,9	99,7	101,9	101,9	102,1	102,2
Average sound pressure level [Lpm] (3)	dB(A)	78,0	76,1	76,1	77,5	79,5	79,5	79,7	79,8	
LNO KIT %85	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>900</b>	<b>959</b>	<b>1005</b>	<b>1063</b>	<b>1136</b>	<b>1255</b>	<b>1328</b>	<b>1403</b>
	Unit power input	kW	294,1	310,4	324,2	345,1	367,6	402,2	431,2	460,0
	Total air flow	m <sup>3</sup> /h	253101	297813	297813	340862	383911	372266	366920	361573
	EER (1)	kW/kW	3,06	3,09	3,10	3,08	3,09	3,12	3,08	3,05
	Sound power level [Lw] (2)	dB(A)	98,4	96,9	96,9	98,7	100,9	100,9	101,1	101,2
Average sound pressure level [Lpm] (3)	dB(A)	77,0	75,1	75,1	76,5	78,5	78,5	78,7	78,8	
LNO KIT %70	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>873</b>	<b>933</b>	<b>977</b>	<b>1035</b>	<b>1109</b>	<b>1220</b>	<b>1288</b>	<b>1360</b>
	Unit power input	kW	301,0	317,3	331,2	353,2	377,2	412,2	442,6	472,2
	Total air flow	m <sup>3</sup> /h	208436	245258	245258	280710	316162	306572	302169	297766
	EER (1)	kW/kW	2,90	2,94	2,95	2,93	2,94	2,96	2,91	2,88
	Sound power level [Lw] (2)	dB(A)	95,4	93,9	93,9	95,7	97,9	97,9	98,1	98,2
Average sound pressure level [Lpm] (3)	dB(A)	74,0	72,1	72,1	73,5	75,5	75,5	75,7	75,8	
ELN KIT	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>873</b>	<b>933</b>	<b>977</b>	<b>1035</b>	<b>1109</b>	<b>1220</b>	<b>1288</b>	<b>1360</b>
	Unit power input	kW	301,0	317,3	331,2	353,2	377,2	412,2	442,6	472,2
	Total air flow	m <sup>3</sup> /h	208436	245258	245258	280710	316162	306572	302169	297766
	EER (1)	kW/kW	2,90	2,94	2,95	2,93	2,94	2,96	2,91	2,88
	Sound power level [Lw] (2)	dB(A)	92,4	90,9	90,9	92,7	94,9	94,9	95,1	95,2
Average sound pressure level [Lpm] (3)	dB(A)	71,0	69,1	69,1	70,5	72,5	72,5	72,7	72,8	

1. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end complete with flexible joint and adapter pipe for solder connection.
5. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C; water temperature heat recovery 40/45°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
6. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature heat recovery 40/45°C – 0% glycol solution; Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.

TECHNICAL DATA KELVIN Clim A282

KELVIN Clim A282		1470 V2	1510 V2		
SIZE		F22	F24		
STANDARD	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>1471</b>	<b>1513</b>	
	Unit power input	kW	449,8	446,3	
	Evaporator water flow rate	m <sup>3</sup> /h	253,0	260,0	
	Evaporator pressure drop	kPa	34	35	
	<b>Compressors</b>		twin-screw	twin-screw	
	Quantity	n.	2	2	
	Capacity control	%	25... 100%	25... 100%	
	Axial fans	n.	22	24	
	Total air flow	m <sup>3</sup> /h	467918	510456	
	Air circuits	n.	2	2	
	Refrigerant		R134a	R134a	
	Total refrigerant charge (optional excluded)	kg	530	578	
	Gas circuits	n.	2	2	
	Power supply	V/Ph/Hz	50/3/50	400/3/400	
	Max operating current (MOC)	A	846,0	846,0	
	Max unit operating current (FLA)	A	1028,8	1037,0	
	Unit starting current (LRA)	A	1449,8	1457,6	
	EER (1)	kW/kW	3,27	3,39	
	ESEER		3,92	4,03	
	Sound power level [Lw] (2)	dB(A)	104,2	104,2	
	Average sound pressure level [Lpm] (3)	dB(A)	81,6	81,3	
	Net weight	kg	12931	13090	
	Hydraulic connections				
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	
	OPTIONAL	Partial heat recovery (5)			
		Heating capacity	kW	293,0	301,0
		Total heat recovery (6)			
		Heating capacity	kW	1869	1896
	Pumping group - Power input	kW	11,0	11,0	
	LNO KIT %100	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>1471</b>	<b>1513</b>
		Unit power input	kW	449,8	446,3
		Total air flow	m <sup>3</sup> /h	467918	510456
		EER (1)	kW/kW	3,27	3,39
		Sound power level [Lw] (2)	dB(A)	102,2	102,2
	Average sound pressure level [Lpm] (3)	dB(A)	79,6	79,3	
LNO KIT %85	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>1442</b>	<b>1486</b>	
	Unit power input	kW	454,9	450,3	
	Total air flow	m <sup>3</sup> /h	397730	433888	
	EER (1)	kW/kW	3,17	3,30	
	Sound power level [Lw] (2)	dB(A)	101,2	101,2	
Average sound pressure level [Lpm] (3)	dB(A)	78,6	78,3		
LNO KIT %70	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>1400</b>	<b>1447</b>	
	Unit power input	kW	466,7	459,4	
	Total air flow	m <sup>3</sup> /h	327543	357319	
	EER (1)	kW/kW	3,00	3,15	
	Sound power level [Lw] (2)	dB(A)	98,2	98,2	
Average sound pressure level [Lpm] (3)	dB(A)	75,6	75,3		
ELN KIT	<b>Cooling capacity (1)</b>	<b>kW</b>	<b>1400</b>	<b>1447</b>	
	Unit power input	kW	466,7	459,4	
	Total air flow	m <sup>3</sup> /h	327543	357319	
	EER (1)	kW/kW	3,00	3,15	
	Sound power level [Lw] (2)	dB(A)	95,2	95,2	
Average sound pressure level [Lpm] (3)	dB(A)	72,6	72,3		

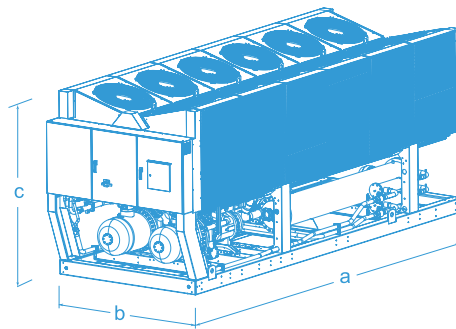
1. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end complete with flexible joint and adapter pipe for solder connection.
5. Referred to chilled water temperature 12/7°C – 0% glycol solution; air temperature to the condenser 35°C; water temperature heat recovery 40/45°C – 0% glycol solution. Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.
6. Referred to chilled water temperature 12/7°C – 0% glycol solution; water temperature heat recovery 40/45°C – 0% glycol solution; Fouling factor of the exchangers 0,043 m<sup>2</sup>K/kW.



DIMENSIONS (mm)

KELVIN Clim A282

SIZE F	a	b	c
F06	3520	2260	2550
F08	4490	2260	2550
F10	5460	2260	2550
F12	6430	2260	2550
F14	7400	2260	2550
F16	8720	2260	2550
F18	9690	2260	2550
F20	10660	2260	2550
F22	11630	2260	2550
F24	12600	2260	2550





● Note

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