

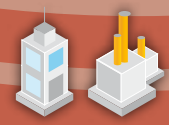
Air cooled chillers and heat pumps
With scroll compressors



**RAE/PAE Kc Series - 1 and 2 cooling circuits
capacity from 78,7 to 618 kW**



- External installation
- High capacities and compact dimensions
- Wide range of options



Air cooled chillers and heat pumps

scroll compressors air cooled unit only cooling and heat pump units units available in low noise versions

 **EMICON**
AIR CONDITIONING AND INDUSTRIAL APPLICATION

Accessories

A - Amperometer: Electrical device to measure the electrical current absorbed by the unit.

AE - Electrical power supply different from standard: 230V three-phase, 460V three-phase. Frequency 50/60 Hz.

BT - Low temperature operation: electronic device for the continuous modulating voltage control of the condensing pressure through the variation of the fan rotation speed, allowing the unit operation down to -20°C ambient temperature. (included in U version).

CF - Soundproofed compressors cabinet with standard material: Insulation of compressors by a cabinet coated with 25 mm thick sound and fireproofing material (included in S version).

CFU - Soundproofed compressors cabinet with higher thickness material: Compressor insulation with high-density sound and fireproofing materials of higher thickness. (included in U version).

CS - Compressors inrush counter: Electromechanical device positioned inside the electrical board, recording the total inrush starts of compressors.

GP - Condensing coil protection grid: metal protection grid against accidental impacts.

GP2 - Anti-intrusion grid: Metal protection grid to protect compressors and exchangers. (not available with CF and CFU).

GP3 - Anti-intrusion grid with compressors cabinet: Anti-intrusion metal protection grid coupled with soundproofed compressor cabinet (only available with CF and CFU).

I1 - Victaulic insulation on pump side: insulation of the joints by close-cell polyurethane material, to prevent condense, pump side.

I2 - Victaulic insulation on buffer tank side: insulation of the joints by close-cell polyurethane material, to prevent condense, buffer tank side.

IH - RS 485 serial interface: electronic card to be connected to the microprocessor, to allow connection of the units to supervision system, for a remote control and monitoring of the unit. (Alternative to IH LON or IWG).

IHLON - LON Protocol serial interface: Electronic card to be connected to the microprocessor to allow connection of the units to supervision systems with LON protocol, for a remote control and monitoring of the unit. (Alternative to IH or IWG).

IM - Seawood packing: fumigated seawood case and protection bag with hygroscopic salts, suitable for long sea transports.

IWG - SNMP or TCP/IP Protocol serial interface: Electronic card to be connected to the microprocessor to allow connection of the units to supervision systems with SNMP or TCP/IP protocol, for a remote control and monitoring of the unit. (Alternative to IH or IH LON).

MF - Phase monitor: electronic device controlling the correct sequence and/or the eventual lack of one of the 3 phases, switching off the unit if necessary.

MV - Buffer tank of suitable capacity complete with expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, check valves for filter service operations.

P1 - Pump group: chilled water pump group composed of single pump, expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, electrical control of the pump. The pump is of enbloc 2-pole type for standard and RAE S versions, 4-pole for RAE U and PAE S versions.

P1H - Higher available pressure pump group: chilled water higher available pressure pump group composed of single pump, expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, electrical control of the pump. The pump is of enbloc 2-pole type for standard and RAE S versions, 4-pole for RAE U and PAE S versions.

P2 - Double pump group (only one working): Chilled water pump group made by two pumps in parallel, expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, water shut-off valve on suction and check valve on discharge for each single pump, electric control of the pump. The pumps are of enbloc 2-pole type for standard and RAE S versions, 4-pole for RAE U and PAE S versions.

P2H - Higher available pressure double pump group (only one working): Chilled water pump group made by two higher available pressure pumps in parallel, expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, water shut-off valve on suction and check valve on discharge for each single pump, electric control of the pump. The pumps are of enbloc 2-pole type for standard and RAE S versions, 4-pole for RAE U and PAE S versions.

PT - In-line Twin pump group (only one working): chilled water pump group made by a twin pump group with a single impeller body and two separate electric motors. The hydronic kit is made by an expansion vessel, safety valve, water gauge, water charge and discharge valves, air purging valves, electrical control of the pump. The pumps are of enbloc 2-pole type for standard and RAE S versions, 4-pole for RAE U and PAE S versions. (Not available for one-fan units).

PA - Rubber-type vibration dampers: bell-shaped vibration dampers supports for insulating the unit (supplied in kit), made of base and bell in galvanized steel and natural rubber mixture.

PM - Spring-type vibration dampers: spring-type vibration dampers support, for insulating the unit (supplied in kit), mainly indicated for installation in difficult and aggressive environments. Made of two steel plates containing a suitable quantity of harmonic steel springs.

PQ - Remote display: remote terminal, allowing to display the temperature and humidity values

detected by probes, the status of digital inputs and outputs, alarm condition, remote ON/OFF of the unit and also the possibility to remotely program parameters in microprocessor.

RA - Anti-freeze heater on evaporator: electrical heater installed on the evaporator, in order to prevent freezing and provided with thermostat.

RD - Shut-off valve on discharge side: They are used to isolate compressors during service operation.

RF - Power factor correction system cosfi $\geq 0,9$: Electrical device made of suitable condensers for compressors rephasing, ensuring a cosfi value $\geq 0,9$, so to reduce the power absorption from the electrical network.

RH - Shut-off valve on suction side: They are used to isolate compressors during service operation.

RL - Compressors overload relays: electromechanical protection devices against compressors overload.

RM - Condensing coil with pre-painted fins: Double-layer treatment of the condensing coils with epoxy coating.

RP - Partial heat recovery (about 20%) of the condensing heat, through a refrigerant/water plate exchanger (desuperheater), always in series to the compressors. It is used when you want to partially recover condensing heat capacity for production of sanitary water

RR - Copper/Copper coil: Special condensing coils with copper pipes and fins

RT - Total heat recovery (100%) of condensing heat, by of a refrigerant/water plate exchanger and in parallel to the condensing air section. It is used when you want to completely recover condensing heat capacity for production of sanitary water or for heating applications. It is necessary to consider option BT. (Not available for PAE configuration).

RV - Personalized frame painting in alternative RAL colour.

TE - Electronic thermostatic valve: Electronic thermostatic valve that reduces the response times of the unit. Useful in case of frequent changes on cooling demand, so as to improve efficiency.

V - Voltmeter: Electrical device measuring the electrical voltage in the power supply of the unit.

VB - Brine version: unit suitable for working with evaporator outlet water temperatures lower than 0°C. A 20 mm evaporator insulation will be provided.

VS - Solenoid valve: electromagnetic solenoid valve on each cooling circuit to prevent cut off the liquid line at compressors switch-off.

Air cooled chillers and heat pumps with scroll compressors

The air cooled chillers and heat pumps of **RAE/PAE...Kc series**, are designed for outdoor installation and can be used to cool or to heat pure fluid solutions for air conditioning or in industrial applications. Multiscroll technology allows to reach great efficiency improvements at part load, if compared to the other traditional systems for cooling capacity control. The coupling of high-efficiency finned exchangers and the thermo physical purity of R410A refrigerant, particularly glide-free at state exchanges, allows this range to attain EER nominal values close to 3 with ESEER higher than 4,5. The units have been designed to reduce their footprint as much as possible, keeping high cooling performances, thanks to the use of excellent quality and new technology components. All units are completely assembled and tested in the factory in compliance with specific quality procedures; they are still provided with all cooling, water and electrical connections so to quickly install them, once on site. Before the factory test, the cooling circuits are tested under pressure and then supplied with refrigerant and non-freezing oil charge.

Available versions are:

- RAE/PAE Kc - standard version
- RAE/PAE S Kc - silenced version
- RAE U Kc - ultrasilenced version
(not available for PAE configuration)

For versions S and U, the reduction of the sound level is due to the use of refrigerant/air exchangers with wider surfaces than the standard units, as well as soundproofed compressor cabinets. On the U version, the electronic fans speed control is also standard provided.

Operation limits (standard units):

- SUMMER OPERATION: Air from 15 to 45°C (RAE); Air from 10 to 42°C (PAE); Water (out from evaporator): from 5 to 15°C.
- WINTER OPERATION (PAE): Air from 20 to -8°C; Water (out from exchanger) 45°C.

Main components

Structure made of base and frame realized in high thickness galvanized steel, assembled by means of stainless steel rivets. All the galvanized steel surfaces are coated with powder painting of RAL 7035 colour.

Scroll compressor for refrigerant R410A, operating on one single circuit or on two independent circuits in either tandem or trio version. The compressors are installed on rubber vibration dampers, provided with direct start motors, cooled by the suction gas and fitted with both overload protections and crankcase heaters. They are charged with polyester oil and their compressors terminal board is IP54. The on-board microprocessor automatically controls the individual compressors to regulate the cooling capacity.

Stainless steel plate evaporator/user side exchanger (for PAE configuration) of single or dual circuit type, with high thickness close-cell insulation. The max operating pressure limits are 6 bar for water side and 45 bar for refrigerant side. The evaporator is also equipped with safety water flow switch switching off the unit in case of low water flow through the evaporator.

Heat-exchange external coils with micro-finned copper tubes, positioned in staggered rows and mechanically expanded into an aluminium finned pack. Fins are designed with such a shape so to give the highest heat exchange efficiency (turbo-fin for RAE configuration). For PAE configuration, the exchangers are provided with an electric heater ensuring the non-freezing of condensing water at the bottom of the coil, after defrost cycles in winter operation. The defrost cycle of the hot gas finned exchangers is pressure controlled. The max operating pressure refrigerant side is 45 bar rel.

Axial fans, of directly coupled type, with wing-profile aluminium blades, are designed not to create air turbulence. This ensures the max efficiency with the lowest sound level. Each fan is provided with galvanized steel protection grid, which is painted after construction. The IP54 fans motors are completely closed and provided with in-built overload protection thermostat, incorporated to the motor windings.

Independent cooling circuits, each provided with a shut-off valve for refrigerant charge, antifreeze sensor, shut-off valves on liquid lines, sight glass, dehydrating filter, high pressure safety device on high pressure refrigerant side and mechanical thermostatic expansion valve, high and low pressure switches and gauges, and for heat pump units, 4-way valve for refrigerant cycle inversion and certified liquid receiver.

Electric board realized in compliance with 60204-1/IEC 204-1 standards, inside of which are placed the control system and the components for motors starting, wired and tested in the factory. It is made by a cabinet suitable for outdoor installation, containing power and control devices, microprocessor electronic board complete with keypad and display, for visualizing the several functions available, main switch of lock-door type, isolation transformer for auxiliary circuits, automatic switches, fuses and protection switches for compressors and fans, terminals for general alarm and remote ON/OFF, terminal board, relais for phase sequencing, possibility to interface to EMS/BMS systems. For heat pumps, an electric heater with thermostat for condensing water is also provided.

References

- Centro Congressi "Dental Trey" – Forlì (Italy)
- Azienda Sanitaria Locale Roma B – Roma (Italy)
- Shopping Mall "Tesco" – Zdunska Wola (Poland)
- Centro Oncologico – Bydgoszcz (Poland)
- Residenza per Anziani "Ex Roverella" – Cesena (Italy)
- Centro RAI CPTV – Saxa Rubra Roma (Italy)

- Centro Commerciale "Il Gigante" – Forlì (Italy)
- Ospedale S. Andrea – La Spezia (Italy)
- Hotel "Holiday Inn" – Sestri Ponente (Italy)
- Hotel Universal – Cervia (Italy)
- Centrale TELECOM – Carmagnola (Italy)

RAE Kc - Standard version

RAE		801 Kc	1001 Kc	1301 Kc	1501 Kc	1702 Kc	2002 Kc	2302 Kc	2502 Kc	2902 Kc	3202 Kc	3402 Kc	3602 Kc	3802 Kc	4102 Kc	4902 Kc	5202 Kc	5602 Kc	6102 Kc	
Cooling capacity	kW	78,7	102,2	130,6	151,8	170,2	208,0	237,0	257,0	293,0	325,0	346,0	367,0	388,0	416,0	492,0	526,0	565,0	618,0	
Input power	kW	26,8	37,2	42,8	47,3	53,6	72,4	77,6	87,6	99,4	113,2	117,2	120,6	127,2	132,0	167,4	193,2	191,2	200,4	
EER		2,94	2,75	3,05	3,21	3,18	2,87	3,06	2,93	2,95	2,87	2,95	3,03	3,05	3,15	2,94	2,71	2,94	3,07	
Weld-brazed plate evaporator	n.	1																		
Water flow	m ³ /h	13,5	17,5	22,4	26,1	29,2	35,7	40,7	44,1	50,3	55,8	59,4	63,0	66,6	71,4	84,4	90,3	96,9	106,0	
Pressure drop	kPa	58	54	60	65	72	72	75	83	81	85	72	77	63	72	76	81	72	90	
Axial fans	n.	1	1	2	2	2	3	3	3	3	3	4	4	4	5	5	6	8	8	
Scroll compressors	n.	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6	
Circuits	n.	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Standard capacity steps	n.	2									4									
Electrical data																				
Total input power	kW	29,3	39,7	47,8	52,3	58,6	79,8	85,0	95,0	106,8	120,6	127,1	130,5	137,1	144,4	179,8	205,2	207,2	216,4	
Total nominal input current	A	48,6	65,2	78,3	86,5	97,3	132,7	140,1	154,7	174,7	197,9	214,0	225,0	232,4	242,6	295,2	349,8	353,6	363,4	
Total max input current	A	71,2	93,1	116,2	129,2	142,2	191,5	209,5	227,5	253,5	279,5	304,5	324,5	334,6	350,0	422,0	487,0	507,2	527,2	
Total inrush current	A	181,0	245,0	254,0	331,0	341,0	313,0	327,0	330,0	417,0	439,0	449,0	441,0	476,0	486,0	537,0	563,0	596,0	606,0	
Sound pressure level at 1 m	dB(A)	75	75	77	78	78	78	79	79	79	81	81	80	82	83	82	81	83	85	
Sound pressure level at 10 m	dB(A)	60	60	63	64	64	65	66	66	66	67	69	68	69	71	71	68	71	72	
Dimensions																				
Length	mm	1.620	1.620	2.660	2.660	2.660	3.700	3.700	3.700	3.700	3.700	4.740	4.740	4.740	5.780	5.780	3.770	4.750	4.750	
Width	mm	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	2.375	2.375	2.375	
Height	mm	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.530	2.530	2.530	
Weight	kg	977	1.035	1.168	1.256	1.313	1.698	1.813	1.815	1.955	2.050	2.081	2.204	2.407	2.349	2.845	3.540	3.459	3.773	
Electrical power supply	V/ph/Hz	400 / 3 / 50 + T																		

RAE S Kc - Silenced version

RAE S		801 Kc	1001 Kc	1301 Kc	1501 Kc	1702 Kc	2002 Kc	2302 Kc	2502 Kc	2902 Kc	3202 Kc	3402 Kc	3602 Kc	3802 Kc	4102 Kc	4902 Kc	5202 Kc	5602 Kc	6102 Kc	
Cooling capacity	kW	77,4	101,6	131,7	146,9	168,1	206,2	228,0	250,0	291,0	323,0	346,0	367,0	383,0	406,0	496,0	538,0	572,0	623,0	
Input power	kW	27,6	34,4	42,2	49,6	54,0	73,2	82,2	91,2	100,4	114,8	117,2	120,8	129,4	136,0	166,2	187,8	192,8	198,0	
EER		2,80	2,95	3,12	2,96	3,11	2,82	2,78	2,74	2,90	2,81	2,95	3,04	2,96	2,98	2,97	2,85	2,97	3,13	
Weld-brazed plate evaporator	n.	1																		
Water flow	m ³ /h	13,3	17,4	22,6	25,2	28,8	35,4	39,1	42,9	49,9	55,4	59,4	63,0	65,7	69,7	85,1	92,3	98,2	106,9	
Pressure drop	kPa	54	55	58	65	72	66	69	76	79	83	65	77	60	64	76	81	72	81	
Axial fans	n.	1	2	2	2	3	3	3	3	4	4	5	5	5	5	8	8	10	10	
Scroll compressors	n.	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6	
Circuits	n.	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Standard capacity steps	n.	2									4									
Electrical data																				
Total input power	kW	29,2	37,5	45,3	52,7	58,7	77,9	86,9	95,9	106,7	121,1	125,1	128,7	137,3	143,9	176,4	198,0	205,0	210,7	
Total nominal input current	A	47,3	63,2	73,8	85,2	96,1	127,1	140,1	153,1	171,8	196,4	207,9	218,5	229,5	237,7	287,6	335,6	337,4	350,2	
Total max input current	A	68,9	93,8	111,8	124,8	140,7	184,7	202,7	220,7	249,6	275,6	298,5	318,5	328,5	338,5	416,0	476,0	491,0	511,0	
Total inrush current	A	179,0	244,0	250,0	328,0	339,0	307,0	314,0	327,0	414,0	437,0	443,0	435,0	472,0	480,0	530,0	550,0	581,0	594,0	
Sound pressure level at 1 m	dB(A)	72	72	73	75	75	75	76	75	77	77	78	77	78	80	79	78	80	81	
Sound pressure level at 10 m	dB(A)	57	58	59	61	62	62	63	61	65	64	65	65	66	67	67	66	67	68	
Dimensions																				
Length	mm	1.620	2.660	2.660	2.660	3.700	3.700	3.700	3.700	4.740	4.740	5.780	5.780	5.780	5.780	4.750	4.750	5.700	5.700	
Width	mm	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	2.375	2.375	2.375	2.375	
Height	mm	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.530	2.530	2.530	2.530	
Weight	kg	1.127	1.231	1.373	1.455	1.473	1.886	1.995	2.086	2.147	2.379	2.389	2.496	2.583	2.730	3.585	3.818	4.428	4.529	
Electrical power supply	V/ph/Hz	400 / 3 / 50 + T																		

RAE U Kc - Ultra-silenced version

RAE U		801 Kc	1001 Kc	1301 Kc	1501 Kc	1702 Kc	2002 Kc	2302 Kc	2502 Kc	2902 Kc	3202 Kc	3402 Kc	3602 Kc	3802 Kc	4102 Kc	4902 Kc	5202 Kc	5602 Kc	6102 Kc	
Cooling capacity	kW	77,0	104,6	130,2	147,7	164,8	202,7	226,0	248,0	288,0	324,0	328,0	358,0	378,0	401,0	486,0	533,0	560,0	615,0	
Input power	kW	27,6	35,8	42,8	49,3	55,6	75,2	83,0	92,0	101,6	113,2	118,6	124,4	131,8	138,4	169,8	189,0	192,8	200,4	
EER		2,80	2,95	3,12	2,96	3,11	2,82	2,78	2,74	2,90	2,81	2,95	3,04	2,96	2,98	2,97	2,85	2,97	3,13	
Weld-brazed plate evaporator	n.	1																		
Water flow	m ³ /h	13,2	17,9	22,3	25,3	28,3	34,8	38,8	42,6	49,4	55,6	56,3	61,4	64,9	68,8	83,4	91,5	96,1	105,5	
Pressure drop	kPa	54	55	67	65	68	64	68	79	75	92	66	74	59	66	72	78	77	90	
Axial fans	n.	1	2	2	2	3	3	3	3	4	4	5	5	5	5	8	8	10	10	
Scroll compressors	n.	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6	
Circuits	n.	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Standard capacity steps	n.	2									4									
Electrical data																				
Total input power	kW	29,2	38,9	45,9	52,4	60,3	79,9	87,7	96,7	107,9	119,5	126,5	132,3	139,7	146,3	180,0	199,2	205,5	213,1	
Total nominal input current	A	47,3	63,6	73,8	84,8	98,3	129,5	140,9	155,1	174,2	194,0	209,9	223,7	233,3	241,3	293,6	337,4	349,0	359,0	
Total max input current	A	68,9	93,8	111,8	124,8	140,7	184,7	202,7	220,7	249,6	275,6	298,5	318,5	328,5	338,5	416,0	476,0	491,0	511,0	
Total inrush current	A	179,0	245,0	250,0	327,0	340,0	309,0	321,0	329,0	416,0	435,0	444,0	438,0	475,0	483,0	535,0	552,0	588,0	597,0	
Sound pressure level at 1 m	dB(A)	64	65	65	68	68	68	68	67	70	69	70	70	72	73	73	73	75	75	
Sound pressure level at 10 m	dB(A)	50	51	51	54	55	54	55	53	58	57	58	57	59	61	61	61	62	63	
Dimensions																				
Length	mm	1.620	2.660	2.660	2.660	3.700	3.700	3.700	3.700	4.740	4.740	5.780	5.780	5.780	5.780	4.750	4.750	5.700	5.700	
Width	mm	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	2.375	2.375	2.375	2.375	
Height	mm	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.530	2.530	2.530	2.530	
Weight	kg	1.127	1.231	1.373	1.455	1.483	1.886	1.995	2.086	2.147	2.379	2.389	2.496	2.583	2.730	3.585	3.818	4.428	4.529	
Electrical power supply	V/ph/Hz	400 / 3 / 50 + T																		

- Operating conditions: Water temperature 12/7°C - External air temperature 35°C.
 - Sound pressure levels calculated according to ISO 3744.

PAE Kc - Standard version

PAE		801 Kc	1002 Kc	1302 Kc	1502 Kc	1702 Kc	2002 Kc	2302 Kc	2502 Kc	2902 Kc	3202 Kc	3402 Kc	3602 Kc	3802 Kc	4102 Kc	4902 Kc	5202 Kc	5602 Kc	6102 Kc
Cooling capacity	kW	77,6	110,2	135,6	158,1	179,0	216,3	241,3	276,4	314,2	344,9	368,2	386,7	407,0	426,0	521,0	570,0	606,0	661,0
Input power	kW	27,1	34,5	42,3	47,2	51,2	72,3	80,3	85,1	97,4	113,3	116,2	120,7	128,9	140,0	170,4	190,8	190,2	201,6
EER		2,86	3,20	3,20	3,35	3,50	2,99	3,00	3,25	3,23	3,04	3,17	3,20	3,16	3,04	3,06	2,99	3,19	3,28
Heating capacity	kW	101,5	136,0	166,2	192,2	218,1	269,0	300,4	335,7	381,5	420,1	443,5	473,1	496,7	515,2	633,4	699,8	738,1	801,0
Input power (heating)	kW	25,9	37,5	45,4	49,9	54,6	71,1	78,6	85,2	96,4	107,2	113,4	119,6	125,2	126,0	159,0	180,0	186,0	195,6
COP		3,91	3,92	3,66	3,85	3,99	3,78	3,82	3,94	3,96	3,92	3,91	3,96	3,97	4,09	3,98	3,89	3,97	4,10
Weld-brazed plate evaporator	n.	1																	
Water flow	m ³ /h	13,3	18,9	23,3	27,1	30,7	37,1	41,4	47,4	53,9	59,2	63,2	66,4	69,8	73,1	89,4	97,8	104,0	113,4
Pressure drop	kPa	49	61	66	67	73	69	74	68	73	68	72	70	72	70	65	66	74	65
Axial fans	n.	1	2	2	2	3	3	3	4	4	4	5	5	5	5	8	8	10	10
Scroll compressors	n.	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6
Circuits	n.	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Standard capacity steps	n.	2						4											
Electrical data																			
Total input power	kW	29,6	39,5	47,3	52,2	58,6	79,7	87,8	95,0	107,3	123,2	128,6	133,1	141,4	152,4	186,4	206,8	210,2	221,6
Total nominal input current	A	49,6	67,3	79,1	87,8	100,1	134,3	146,5	158,6	179,6	207,0	221,2	233,4	244,0	255,0	308,6	354,8	360,6	373,6
Total max input current	A	71,1	98,3	116,3	129,3	142,3	191,4	209,4	232,6	258,6	284,6	309,7	329,7	339,7	349,7	430,4	490,4	509,0	529,0
Total inrush current	A	181,0	250,0	256,0	342,0	346,0	315,0	321,0	334,0	422,0	447,0	456,0	468,0	486,0	495,0	550,0	568,0	603,0	616,0
Sound pressure level at 1 m	dB(A)	75	77	78	78	79	79	79	80	81	80	82	81	82	84	82	82	83	85
Sound pressure level at 10 m	dB(A)	60	63	63	64	65	65	66	68	69	68	70	69	70	72	70	69	71	82
Dimensions																			
Length	mm	1.620	2.660	2.660	2.660	3.700	3.700	3.700	4.740	4.740	4.740	5.780	5.780	5.780	5.780	4.750	4.750	5.720	5.720
Width	mm	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	2.375	2.375	2.375	2.375
Height	mm	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.530	2.530	2.530	2.530
Weight	kg	1.054	1.145	1.304	1.383	1.497	1.905	2.019	2.093	2.266	2.278	2.373	2.540	2.603	2.653	3.343	3.954	4.008	4.479
Electrical power supply	V/ph/Hz	400 / 3 / 50 + T																	

PAE S Kc - Silenced version

PAE S		801 Kc	1002 Kc	1302 Kc	1502 Kc	1702 Kc	2002 Kc	2302 Kc	2502 Kc	2902 Kc	3202 Kc	3402 Kc	3602 Kc	3802 Kc	4102 Kc	4902 Kc	5202 Kc	5602 Kc	6102 Kc
Cooling capacity	kW	79,4	102,6	128,4	146,9	166,8	204,5	234,4	256,8	296,3	325,3	340,3	358,4	388,3	415,0	488,0	539,0	565,0	602,0
Input power	kW	26,1	35,9	42,9	48,6	53,5	72,9	77,6	85,9	96,0	110,9	117,6	122,7	125,2	132,4	169,8	187,2	191,2	207,6
EER		3,04	2,86	2,99	3,02	3,12	2,80	3,02	2,99	3,08	2,93	2,89	2,92	3,10	3,13	2,87	2,88	2,96	2,90
Heating capacity	kW	101,5	136,0	166,2	192,2	218,1	269,0	300,4	335,7	381,5	420,1	443,5	473,1	496,7	515,2	633,4	699,8	738,1	801,0
Input power (heating)	kW	25,4	33,8	40,8	46,2	51,6	67,6	74,6	81,6	92,4	103,2	109,2	115,2	120,6	126,0	154,8	172,8	178,2	189,0
COP		4,04	3,99	4,09	4,15	4,14	3,99	4,09	4,13	4,23	4,12	4,12	4,12	4,17	4,27	4,11	4,12	4,06	4,10
Weld-brazed plate evaporator	n.	1																	
Water flow	m ³ /h	13,6	17,6	22,0	25,2	28,6	35,1	40,2	44,1	50,8	55,8	58,4	61,5	66,6	71,2	83,7	92,5	96,9	103,3
Pressure drop	kPa	51	54	59	59	64	62	89	60	65	61	62	60	66	66	57	59	78	55
Axial fans	n.	2	2	2	3	3	3	4	4	5	5	5	8	8	8	8	10	10	10
Scroll compressors	n.	2	2	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6
Circuits	n.	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Standard capacity steps	n.	2						4											
Electrical data																			
Total input power	kW	29,2	39,0	46,1	53,3	58,2	77,6	83,9	92,1	103,9	118,8	125,5	132,9	135,4	142,6	180,0	199,9	203,9	220,3
Total nominal input current	A	48,8	64,4	75,4	88,1	97,1	128,7	138,4	150,8	171,7	196,9	212,1	230,4	232,6	237,6	293,6	339,4	344,2	365,2
Total max input current	A	71,8	93,8	111,8	127,7	140,7	184,7	205,6	223,6	252,5	278,5	298,5	324,0	334,0	344,0	416,0	481,0	491,0	511,0
Total inrush current	A	181,0	245,0	251,0	330,0	340,0	309,0	314,0	326,0	414,0	438,0	446,0	465,0	476,0	481,0	535,0	554,0	587,0	606,0
Sound pressure level at 1 m	dB(A)	68	68	71	72	72	71	72	72	74	73	74	74	76	77	75	75	77	78
Sound pressure level at 10 m	dB(A)	54	54	57	59	59	58	60	60	62	61	62	61	63	65	63	63	65	66
Dimensions																			
Length	mm	2.660	2.660	2.660	3.700	3.700	3.700	4.740	4.740	5.780	5.780	5.780	4.750	4.750	4.750	4.750	5.720	5.720	5.720
Width	mm	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	1.370	2.375	2.375	2.375	2.375	2.375	2.375	2.375
Height	mm	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.530	2.530	2.530	2.530	2.530	2.530	2.530
Weight	kg	1.139	1.310	1.454	1.478	1.642	2.090	2.174	2.308	2.453	2.464	2.658	2.731	3.015	3.248	4.108	4.174	4.764	4.953
Electrical power supply	V/ph/Hz	400 / 3 / 50 + T																	

-Operating conditions: Summer operation water temperature 12/7°C - External air temperature 35°C - Winter operation water temperature 40/45°C - External air temperature 10°C.
 - Sound pressure levels calculated according to ISO 3744.



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