

AIR PERFORMA R134A

HIGH EFFICIENCY AIR COOLED WATER CHILLERS
WITH SCREW COMPRESSORS AND AXIAL FANS



EAH 653 Ka

EAH ... Ka Series

1 or more refrigerant circuits - Cooling capacities from 213 to 1138 kW

Water chillers suitable for water cooling in air-conditioning and industrial systems and they are able, thanks to the refrigerant and to special manufacturing precautions, to reach 4,0 COP values on average

Designed for external installation

Packaged units with modular structure realized with frame of galvanized painted sections

Operating temperatures from +15 °C to +42 °C in the standard version

1, or more independent cooling circuits, according to the cooling capacity

Available versions:

EAH...Ka standard version

Made up of:

Screw compressors (semi-hermetic) equipped with capacity steps, motor thermal protection, liquid injection, oil crankcase heater, safety oil flow switch and phase monitor.

Shell & tube evaporator with counter-current dry expansion.

Heat-exchange external coil with high-efficiency aluminium fins and copper pipe designed for cooling fluids; independent circuits.

Low rpm axial fans directly coupled provided with heat protection, low sound level blades with wing profile, and safety protection grid.

Electric panel, in compliance with CE norms, supplied with a main switch and protection fuses.

The cooling circuit is composed of: thermostatic expansion valve, sight glass, dehydrating filter, high pressure safety device, high and low pressure switches, high and low pressure gauges, non return valve on discharge, shut off valve on liquid line, shut off valve on compressors discharge.

Unit management microprocessor with the following functions: chilled water temperature regulation, check of the running parameters, auto-detection failure system, remote management and supervision.

Compressors hour counter.

Accessories

A	Amperometer
AE	Electrical supply different from the standard
BT	Low temperature operation (-20 °C) with modulating fan speed regulation
CE	UV protection on water insulation
CF	Compressors soundproofed cabinet with standard material
CFU	Compressors soundproofed cabinet with lead material
CS	Compressors inrush counter
DS	Star/delta start-up
GP	Condensing coil protection grid
IG	Watch card
IH	Serial interface RS 485
KS	Lifting kit
M6	Modulating capacity regulation for the units with 4 circuits
M8	Modulating capacity regulation for the units with 3 circuits
M12	Modulating capacity regulation for the units with 2 circuits
M25	Modulating capacity regulation for the units with 1 circuit
PA	Rubber-type vibration dampers
PF	Safety water flow switch on evaporator
PM	Spring-type vibration dampers
PQ	Remote microprocessor
PW	Part-Winding start
RA	Anti-freeze heater on evaporator
RF	Power factor correction system cosφ > 0.9
RH	Shut-off valve on suction side
RL	Compressor overload relays
RM	Epoxy coating of condensing coil for sea environment
RR	Condensing coil with copper/copper fins
TE	Electronic thermostatic valve
V	Voltmeter
VB	Brine version (water temperature < 0 °C)
VS	Solenoid valve

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EAH... Technical data

MODEL	EAH ...Ka	221 Ka	251 Ka	291 Ka	302 Ka	352 Ka	432 Ka	492 Ka	572 Ka	653 Ka	733 Ka	863 Ka	984 Ka	1144 Ka	
Cooling capacity 1)	kW	213,2	243,6	284,6	297,8	346,1	428,4	487,2	569,1	642,6	730,8	853,7	974,4	1138,2	
Absorbed power	kW	49,9	56,9	65,8	72,6	80,2	98,8	113,8	131,6	148,2	170,7	197,4	227,6	263,2	
C.O.P	kW / kW	4,27	4,28	4,32	4,1	4,32	4,34	4,28	4,32	4,34	4,28	4,32	4,28	4,32	
Screw compressors															
Quantity	n	1	1	1	2	2	2	2	2	3	3	3	4	4	
Standard steps capacity	n	4	4	4	8	8	8	8	8	12	12	12	16	16	
Continuous control capacity (option)	%	0 - 25 ÷ 100				0 - 12,5 ÷ 100%				0 - 8,3 ÷ 100				0 - 6,5 ÷ 100	
Circuits	n	1	1	1	2	2	2	2	2	3	3	3	4	4	
Nominal absorbed current	A	85,4	100,4	112,5	127,6	140,4	169,6	200,8	225	254,4	301,2	337,5	401,6	450	
Maximum absorbed current	A	144	155	182	196	248	288	310	364	432	465	546	60	728	
Inrush current	A	561,6	606,6	805,5	502,1	560,5	705,6	761,6	987,5	849,6	916,6	1169,5	1071,6	1351,5	
Part-Winding inrush current (opt.)	A	434	458	619	365	414	578	613	801	722	768	983	923	1165	
Axial fans															
Quantity	n	4	4	4	4	6	6	8	8	10	12	12	16	16	
Rotation speed	rpm	870	870	870	870	870	870	870	870	870	870	870	870	870	
Motors power	kW	13,2	13,2	13,2	13,2	19,8	19,8	26,4	26,4	33	39,6	39,6	52,8	52,8	
Total air flow	l/s	30.556	28.611	28.611	28.611	45.833	42.917	61.111	57.222	73.472	89.722	85.833	114.444	114.444	
Total air flow	m ³ /h	110.002	103.000	103.000	103.000	164.999	154.501	220.000	205.999	264.499	322.999	308.999	411.998	411.998	
Nominal absorbed current	A	25,2	25,2	25,2	25,2	37,8	37,8	50,4	50,4	63	75,6	75,6	100,8	100,8	
Shell and tube evaporator															
Quantity	n	1	1	1	1	1	1	1	1	1	1	1	1	1	
Water flow rate	l/s	10,2	11,6	13,6	14,2	16,5	20,5	23,3	27,2	30,7	34,9	40,8	46,6	54,4	
Total air flow	m ³ /h	37	42	49	51	59	74	84	98	111	126	147	168	196	
Pressure drop	Kpa	52	49	48	53	51	49	48	52	52	49	48	48	52	
Electrical data															
Absorbed power	kW	63,1	70,1	79	85,8	100	118,6	140,2	158	181,2	210,3	237	280,4	316	
Nominal absorbed current	A	110,6	125,6	137,7	152,8	178,2	207,4	251,2	275,4	317,4	376,8	413,1	502,4	550,8	
Maximum absorbed current	A	169,2	180,2	207,2	221,2	285,8	325,8	360,4	414,4	495	540,6	621,6	160,8	828,8	
Sound pressure level 2)	dB(A)	83	84	84	86	86	86,5	87	87	88	88	88	90	90	
Dimensions															
Length	mm	2.900	2.900	2.900	2.900	4.035	4.035	5.170	5.170	6.585	7.720	7.720	9.990	9.990	
Width	mm	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	2.158	
Height	mm	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	2.250	
Transport weight 3)	kq	2.480	2.700	2.800	3.060	3.120	3.500	3.800	4.000	6.235	6.580	7.000	7.800	8.000	
Power supply	400 V / 50 Hz / 3 Ph + T														

1) Nominal condition referred to: air 32 °C - chilled water 7/12 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included