

TECHNICAL DATA SHEET



GHA ES

**AIR COOLED CHILLER WITH
SCREW COMPRESSORS,
AXIAL FANS AND EVAPORATIVE
SYSTEM FOR OUTDOOR
INSTALLATION**



GHA ES Range 75 - 1.900 kW

GHA ES Range

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation



Screw compressors
Dry expansion evaporator
EC axial fans 800mm
Adiabatic system

R134a

HFO
1234ze

R290

General Description

GHA ES can be equipped with an innovative evaporative system which results in considerable energy savings. Exploiting the natural process of adiabatic cooling, hot and dry air normally drawn into air cooled condensers passes through a wetted media before reaching the actual condenser coil. The evaporation effect reduces the air temperature by as much as 8 °C increasing the efficiency of the condensers. With lower condensing temperatures the efficiency of the refrigeration system is improved. During low ambient conditions the evaporative media is automatically moved away from the face of the condenser to allow a free passage of air on to the condenser reducing fan power in the 'off cycle'. Power savings up to 25% can be achieved using this system which is particularly effective in countries which have high ambient temperatures.

The units of the GHA ES series are assembled on a strong self-supporting metal screwed and welded structure, painted with epoxy powder with anti-rust coating for outdoor installation. All units are supplied completely wired and ready to be connected to the user's plant. Prior to delivery every machine is submitted to a performance test, with intervention tests of all the safety systems and components installed. Each unit is available with low-speed fans and compressor sound insulation kit (Low Noise LN version or Super Low Noise LLN) for installation in areas where sound levels must be kept to a minimum.

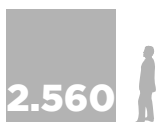
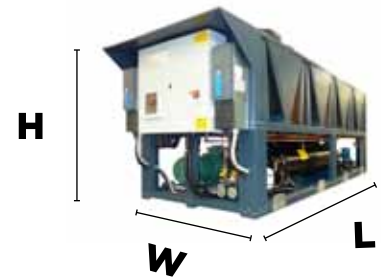
Typical units dimensions

Length : from 2.560 to 16.220 mm

Width: from 1.600 to 2.250 mm

Height: from 2.540 to 2.790 mm

Operating Weight: from 1.116 kg to 14.166 kg



Length from 2.560 mm to 16.220 mm. The bigger sizes are delivered in two sections.

GHA ES with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Energymiser		GHA B135A ES EC-34	GHA B140A ES EC-34	GHA B150A ES EC-34	GHA B160A ES EC-34	GHA B170A ES EC-34	GHA B180A ES EC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	74,2	91,7	110,4	127	138,6	172,8
Nominal power input	kW	22,25	29	33,9	38,2	43,8	52,4
E.E.R.	Coef.	3,33	3,16	3,26	3,32	3,16	3,3
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,69	5,29	5,5	5,78	5,6	6,01
Noise Pressure Level	dB(A)	56	58	59	59	60	62
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	1	1	1	1	1	1
Inlet water temp.	°C	12	12	12	12	12	12
Outlet water temp.	°C	6	6	6	6	6	6
Ambient temp.	°C	35	35	35	35	35	35
Condenser coil type (*1)	Type	M	M	M	M	M	M
Evaporator type (*2)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	22,25	29	33,9	38,2	43,8	52,4
Total running current	A	41,2	50,8	59,1	67,3	76,1	84
Total max current	A	60,8	71,6	84,6	103,6	129,6	149,6
Total starting current	A	25,8	32,9	36,5	45,7	49,1	64,7
DIMENSIONS							
Length with cabinet	mm	2560	2560	2560	2560	2560	3210
Width	mm	1600	1600	1600	1600	1600	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1110	1160	1410	1430	1450	2190
Operating weight	kg	1116	1168	1423	1445	1467	2208
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA ES with EC fans

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

GHA B190A ES EC-34	GHA B1110A ES EC-34	GHA B1125A ES EC-34	GHA B1140A ES EC-34	GHA B1160A ES EC-34	GHA B1180A ES EC-34	GHA B1210A ES EC-34	GHA B1240A ES EC-34	GHA B235A ES EC-34	GHA B240A ES EC-34	GHA B250A ES EC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
203	236,6	265	299	346,3	401,1	447	490,9	147,2	183,4	220,8
59,45	71,6	77,8	89	102,65	121,1	137,5	151,55	44,9	58	67,8
3,41	3,3	3,41	3,36	3,37	3,31	3,25	3,24	3,28	3,16	3,26
A	A	A	A	A	A	A	A	A	A	A
5,88	5,86	5,73	5,8	5,87	5,93	5,78	5,76	5,21	4,88	5,07
63	65	64	64	64	64	64	66	59	61	62
10	10	10	10	10	10	10	10	10	10	10
Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw
1	1	1	1	1	1	1	1	2	2	2
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
35	35	35	35	35	35	35	35	35	35	35
M	M	M	M	M	M	M	M	M	M	M
BPHE	BPHE	BPHE	S&T	S&T	S&T	S&T	S&T	BPHE	BPHE	BPHE
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
59,45	71,6	77,8	89	102,65	121,1	137,5	151,55	44,9	58	67,8
97,6	122	134,5	152,2	170,5	196,6	230,1	252	82,8	101,6	118,2
163,4	193,2	226,2	225,2	294	326,8	336,8	379,6	121,6	143,2	169,2
74,3	89,2	103	111	79,4	86,6	104,7	117,1	132,9	160,5	187,2
3210	3210	3210	4510	4510	4510	5810	5810	3210	3210	3210
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2540	2540	2540	2540	2540
2270	2330	2370	3010	3560	3400	3820	3990	1890	1990	2470
2294	2357	2400	3134	3673	3506	3922	4149	1901	2004	2490

GHA ES with EC fans

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Energymiser		GHA B260A ES EC-34	GHA B270A ES EC-34	GHA B280A ES EC-34	GHA B290A ES EC-34	GHA B2110A ES EC-34	GHA B2125A ES EC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	254	279,4	366,6	409	480	533,8
Nominal power input	kW	76,4	86,8	101,3	117,9	140,8	154,4
E.E.R.	Coef.	3,32	3,22	3,62	3,47	3,41	3,46
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,28	5,14	5,65	5,44	5,42	5,28
Noise Pressure Level	dB(A)	62	63	65	66	68	67
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	2	2	2	2	2	2
Inlet water temp.	°C	12	12	12	12	12	12
Outlet water temp.	°C	6	6	6	6	6	6
Ambient temp.	°C	35	35	35	35	35	35
Condenser coil type (*1)	Type	M	M	M	M	M	M
Evaporator type (*2)	Type	BPHE	BPHE	S&T	S&T	S&T	S&T
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	76,4	86,8	101,3	117,9	140,8	154,4
Total running current	A	134,6	151,2	163,8	193,8	240,6	267,4
Total max current	A	207,2	259,2	304,8	326,8	386,4	452,4
Total starting current	A	216,3	243	266,9	315,2	388,7	435,8
DIMENSIONS							
Length with cabinet	mm	3210	3210	5810	5810	5810	5810
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	2490	2520	4180	4190	4390	4430
Operating weight	kg	2513	2546	4290	4296	4549	4583
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA ES with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

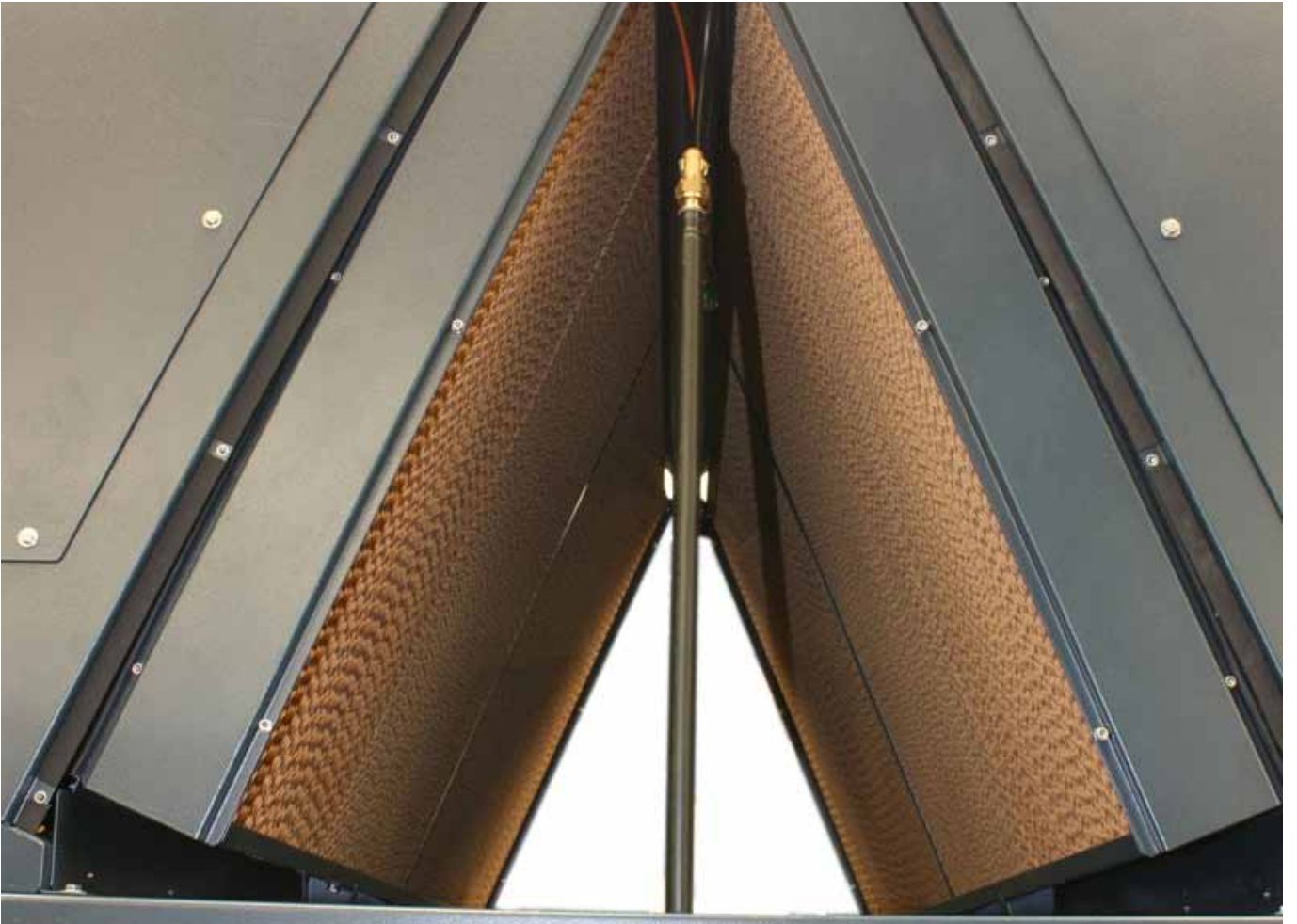
GHA B2140A ES EC-34	GHA B2160A ES EC-34	GHA B2180A ES EC-34	GHA B2210A ES EC-34	GHA B2240A ES EC-34	GHA B2280A ES EC-34	GHA B2300A ES EC-34	GHA B3160A ES EC-34	GHA B3180A ES EC-34	GHA B3210A ES EC-34	GHA B3240A ES EC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
594	671,4	819,2	881,4	968,4	932,6	1022,6	1054,5	1228,8	1350,3	1452,6
179,6	208,8	235,6	279,8	304,8	268	290,6	308,1	353,4	409,2	457,2
3,31	3,22	3,48	3,15	3,18	3,48	3,52	3,42	3,48	3,3	3,18
A	A	A	A	A	A	A	A	A	A	A
5,26	5,31	5,55	5,15	5,22	5,38	5,46	5,66	5,76	5,49	5,41
67	67	67	67	69	68	73	69	69	69	71
10	10	10	10	10	10	10	10	10	10	10
Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw
2	2	2	2	2	2	2	3	3	3	3
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
35	35	35	35	35	35	35	35	35	35	35
M	M	M	M	M	M	M	M	M	M	M
S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
179,6	208,8	235,6	279,8	304,8	268	290,6	308,1	353,4	409,2	457,2
306,8	345,6	383	467,2	506,2	465,2	496,6	512,4	574,5	685,5	759,3
450,4	582,4	653,6	673,6	753,6	944,8	944,8	890,4	980,4	1010,4	1130,4
498,9	539,9	592,6	728	791,3	735,8	782,9	1304,2	1471,3	1773,3	1973,3
5810	5810	8410	8410	8410	11010	11010	12310	12310	12310	12310
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2790	2540	2540	2540	2540
4470	5590	6510	6680	6760	7620	7700	9570	9610	9830	9960
4611	5852	6766	6928	7001	7861	7935	9976	10016	10228	10347

GHA ES with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Energymiser		GHA B3300A ES EC-34	GHA B4160A ES EC-34	GHA B4180A ES EC-34	GHA B4210A ES EC-34	GHA B4240A ES EC-34	
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	
Total cooling capacity	kW	1514,1	1406	1638,4	1800,4	1936,8	
Nominal power input	kW	443,4	410,8	471,2	545,6	609,6	
E.E.R.	Coef.	3,41	3,42	3,48	3,3	3,18	
Energy class		A	A	A	A	A	
E.S.E.E.R.	Coef.	5,56	5,62	5,44	5,28	5,25	
Noise Pressure Level	dB(A)	75	70	70	70	72	
Distance	m	10	10	10	10	10	
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	
Compressors number	n°	3	4	4	4	4	
Inlet water temp.	°C	12	12	12	12	12	
Outlet water temp.	°C	6	6	6	6	6	
Ambient temp.	°C	35	35	35	35	35	
Condenser coil type (*1)	Type	M	M	M	M	M	
Evaporator type (*2)	Type	S&T	S&T	S&T	S&T	S&T	
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	
Total power input	kW	443,4	410,8	471,2	545,6	609,6	
Total running current	A	755,1	683,2	766	914	1012,4	
Total max current	A	1417,2	1187,2	1307,2	1347,2	1507,2	
Total starting current	A	1941,9	2393,6	2705,1	3264,7	3636,1	
DIMENSIONS							
Length with cabinet	mm	16220	16220	16220	16220	16220	
Width	mm	2250	2250	2250	2250	2250	
Height	mm	2790	2540	2540	2540	2540	
Shipping weight	kg	11460	12640	12720	13050	13220	
Operating weight	kg	12003	13164	13232	13546	13702	
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							



GHA ES with EC fans



HFO
1234ze

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Greenmiser		GHA F150A ES EC-ZE	GHA F160A ES EC-ZE	GHA F170A ES EC-ZE	GHA F180A ES EC-ZE	GHA F190A ES EC-ZE	GHA F1110A ES EC-ZE
CHILLER PERFORMANCE							
Refrigerant		HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE
Total cooling capacity	kW	93,6	107,8	120	141,2	156,1	190,5
Nominal power input	kW	25,2	28,2	32,1	37,05	41,05	49,55
E.E.R.	Coef.	3,71	3,82	3,74	3,81	3,8	3,84
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,48	5,89	5,92	5,64	5,64	6,25
Noise Pressure Level	dB(A)	56	62	62	62	62	65
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	1	1	1	1	1	1
Inlet water temp.	°C	12	12	12	12	12	12
Outlet water temp.	°C	6	6	6	6	6	6
Ambient temp.	°C	35	35	35	35	35	35
Condenser coil type (*1)	Type	M	M	M	M	M	M
Evaporator type (*2)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	25,2	28,2	32,1	37,05	41,05	49,55
Total running current	A	40,8	45,6	52	60,1	66,4	80,2
Total max current	A	85,6	103,6	130,6	153,4	168,4	188,4
Total starting current	A	36,5	44,9	50,3	64,4	71,9	77
DIMENSIONS							
Length with cabinet	mm	2560	2560	2560	3210	3210	3210
Width	mm	1600	1600	1600	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1360	1390	1390	1810	1840	2260
Operating weight	kg	1366	1398	1399	1823	1855	2279
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA ES with EC fans

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

GHA F1125A ES EC-ZE	GHA F1140A ES EC-ZE	GHA F1160A ES EC-ZE	GHA F1180A ES EC-ZE	GHA F1210A ES EC-ZE	GHA F1240A ES EC-ZE	GHA F250A ES EC-ZE	GHA F260A ES EC-ZE	GHA F270A ES EC-ZE	GHA F280A ES EC-ZE	GHA F290A ES EC-ZE
HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE
220,5	247,6	292,1	333,6	375,4	410,3	187,2	215,6	240	282,4	312,2
56,6	65,8	75,15	86,75	100,1	108,2	50,4	56,4	64,2	74,1	82,1
3,9	3,76	3,89	3,85	3,75	3,79	3,71	3,82	3,74	3,81	3,8
A	A	A	A	A	A	A	A	A	A	A
5,86	6,04	6,11	6,31	6,09	6,21	5,43	5,83	5,84	5,56	5,53
67	66	67	65	67	70	59	65	65	65	65
10	10	10	10	10	10	10	10	10	10	10
Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw
1	1	1	1	1	1	2	2	2	2	2
12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	6	6	6	6	6	6	6
35	35	35	35	35	35	35	35	35	35	35
M	M	M	M	M	M	M	M	M	M	M
BPHE	BPHE	S&T	S&T	S&T	S&T	BPHE	BPHE	BPHE	BPHE	S&T
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
56,6	65,8	75,15	86,75	100,1	108,2	50,4	56,4	64,2	74,1	82,1
91,7	106,6	121,7	140,5	162,1	175,3	81,6	91,2	104	120,2	132,8
209,2	232,2	297	329	372,8	443,8	171,2	207,2	261,2	306,8	336,8
95,5	98,1	79,4	83,8	104,7	114,3	132,3	150,9	172,8	199,9	222,5
3210	3210	4510	4510	4510	5810	3210	3210	3210	5810	5810
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2540	2540	2540	2540	2540	2540	2540	2540	2540	2540	2540
2350	2370	3740	3760	3620	3980	2390	2450	2480	3280	3330
2371	2394	3873	3884	3726	4082	2401	2464	2500	3303	3356

GHA ES with EC fans

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Greenmiser		GHA F2110A ES EC-ZE	GHA F2125A ES EC-ZE	GHA F2140A ES EC-ZE	GHA F2160A ES EC-ZE	GHA F2180A ES EC-ZE	GHA F2210A ES EC-ZE
CHILLER PERFORMANCE							
Refrigerant		HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE
Total cooling capacity	kW	381	441	495,2	584,2	667,2	750,8
Nominal power input	kW	99,1	113,2	131,6	150,3	173,5	200,2
E.E.R.	Coef.	3,84	3,9	3,76	3,89	3,85	3,75
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	6,13	5,77	5,9	6,03	6,21	6,01
Noise Pressure Level	dB(A)	68	70	69	70	68	70
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	2	2	2	2	2	2
Inlet water temp.	°C	12	12	12	12	12	12
Outlet water temp.	°C	6	6	6	6	6	6
Ambient temp.	°C	35	35	35	35	35	35
Condenser coil type (*1)	Type	M	M	M	M	M	M
Evaporator type (*2)	Type	S&T	S&T	S&T	S&T	S&T	S&T
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	99,1	113,2	131,6	150,3	173,5	200,2
Total running current	A	160,4	183,4	213,2	243,4	281	324,2
Total max current	A	376,8	418,4	464,4	594	658	745,6
Total starting current	A	266,5	306,1	352	383,8	442,4	513,5
DIMENSIONS							
Length with cabinet	mm	5810	5810	5810	8410	8410	8410
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	4280	4470	4490	6680	6860	6960
Operating weight	kg	4386	4629	4643	6821	7122	7216
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA ES with EC fans



Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

GHA F2240A ES EC-ZE	GHA F3180A ES EC-ZE	GHA F3210A ES EC-ZE	GHA F3240A ES EC-ZE	GHA F4180A ES EC-ZE	GHA F4210A ES EC-ZE	GHA F4240A ES EC-ZE				
HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE				
820,6	1000,8	1126,2	1230,9	1360	1501,6	1641,2				
216,4	260,25	300,3	324,6	344,4	400,4	432,8				
3,79	3,85	3,75	3,79	3,95	3,75	3,79				
A	A	A	A	A	A	A				
6,11	6,2	5,97	6,08	6,07	5,96	6,06				
73	70	72	74	71	73	76				
10	10	10	10	10	10	10				
Screw	Screw	Screw	Screw	Screw	Screw	Screw				
2	3	3	3	4	4	4				
12	12	12	12	12	12	12				
6	6	6	6	6	6	6				
35	35	35	35	35	35	35				
M	M	M	M	M	M	M				
S&T	S&T	S&T	S&T	S&T	S&T	S&T				
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50				
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50				
216,4	260,25	300,3	324,6	344,4	400,4	432,8				
350,6	421,5	486,3	525,9	557,6	648,4	701,2				
887,6	987	1118,4	1331,4	1327,2	1491,2	1775,2				
557,9	1077,3	1242,1	1350,9	1923,6	2268,7	2469,1				
11010	12310	12310	16220	16220	16220	16220				
2250	2250	2250	2250	2250	2250	2250				
2540	2540	2540	2540	2540	2540	2540				
7700	10170	10280	11390	13580	13610	13670				
7948	10576	10686	11788	14104	14122	14166				

GHA ES with EC fans

R290

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

Greenmiser		GHA F170A ES EC-290	GHA F180A ES EC-290	GHA F190A ES EC-290	GHA F1100A ES EC-290	GHA F1120A ES EC-290	GHA F1140A ES EC-290
CHILLER PERFORMANCE							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	159,2	181,8	205,4	232,8	275,9	353,2
Nominal power input	kW	46,65	53,45	61,7	70,2	78,35	102,5
E.E.R.	Coef.	3,41	3,4	3,33	3,32	3,52	3,45
Energy class		A	A	A	A	A	A
E.S.E.E.R.	Coef.	5,15	5,43	5,15	5,23	5,51	5,57
Noise Pressure Level	dB(A)	58	60	61	61	63	65
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	1	1	1	1	1	1
Inlet water temp.	°C	12	12	12	12	12	12
Outlet water temp.	°C	6	6	6	6	6	6
Ambient temp.	°C	35	35	35	35	35	35
Condenser coil type (*1)	Type	M	M	M	M	M	M
Evaporator type (*2)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Power circuit voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Control circuit voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total power input	kW	46,65	53,45	61,7	70,2	78,35	102,5
Total running current	A	75,6	86,6	99,9	113,7	126,9	166
Total max current	A	136,4	153,4	171,2	186,2	209	261,8
Total starting current	A	53,1	64,4	74,7	71,4	87,8	103,7
DIMENSIONS							
Length with cabinet	mm	3210	3210	3210	3210	4510	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2600	2600	2600	2600	2600	2600
Shipping weight	kg	1830	1850	1940	1980	2380	2830
Operating weight	kg	1847	1869	1961	2004	2407	2860
(*1) M: Microchannels (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA ES with EC fans

Air cooled chiller with screw compressors, axial fans and Evaporative System for outdoor installation

GHA F1160A ES EC-290	GHA F270A ES EC-290	GHA F280A ES EC-290	GHA F290A ES EC-290	GHA F2100A ES EC-290	GHA F2120A ES EC-290	GHA F2140A ES EC-290	GHA F2160A ES EC-290			
R290	R290	R290	R290	R290	R290	R290	R290			
404,4	318,4	363,6	410,8	465,6	551,8	706,4	808,8			
111,5	93,3	106,9	123,4	140,4	156,7	205	223			
3,63	3,41	3,4	3,33	3,32	3,52	3,45	3,63			
A	A	A	A	A	A	A	A			
5,48	5,08	5,32	5,07	5,13	5,43	5,47	5,43			
66	61	63	64	64	66	68	69			
10	10	10	10	10	10	10	10			
Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw			
1	2	2	2	2	2	2	2			
12	12	12	12	12	12	12	12			
6	6	6	6	6	6	6	6			
35	35	35	35	35	35	35	35			
M	M	M	M	M	M	M	M			
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE			
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50			
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50			
111,5	93,3	106,9	123,4	140,4	156,7	205	223			
180,5	151,2	173,2	199,8	227,4	253,8	332	361			
304,4	272,8	306,8	342,4	372,4	418	523,6	608,8			
131,8	240,8	279,4	320,2	360	403,6	524,6	573,8			
5810	5810	5810	5810	5810	8410	8410	11010			
2250	2250	2250	2250	2250	2250	2250	2250			
2600	2600	2600	2600	2600	2600	2600	2600			
3300	3360	3400	3570	3650	4470	5360	6310			
3336	3395	3439	3612	3698	4524	5420	6382			

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