

TECHNICAL DATA SHEET



GHA FC

**AIR COOLED CHILLER
WITH SCREW COMPRESSORS,
AXIAL FANS AND FREE COOLING
FOR OUTDOOR INSTALLATION**



GHA FC Range 68 - 1.700 kW

GHA FC Range

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation



Screw compressors
Dry expansion evaporator
AC or EC axial fans 800 mm
Free Cooling

R134a**HFO
1234ze****R290**

General Description

Whenever it is required to maintain liquid cooling all year round, GHA FC chillers are clearly the best choice. The average yearly yield is much superior to that of traditional water chillers, and the initial investment costs are recovered in a very short time. These units are therefore indicated for conditioning systems for data processing centers or for the refrigeration of industrial processes and for all applications which require a production of chilled water even during the winter.

A free cooling refrigeration device consists in using finned exchangers positioned uphill to the condenser coils. The air crosses the coils before hitting the refrigeration condensers of the refrigerant. When the temperature of the outdoor air is below the temperature of the water inside the plant, it is possible to obtain either partial or total chilling of the water, thanks to the heat released due to the thermal exchange in the water chilling coils. The higher the difference of temperature between the circulating water and the outdoor air, the better the system will perform. GHA FC is available in LN (low noise) or LLN (low low noise) for installation in a plant rooms where sound levels must be kept to a minimum.

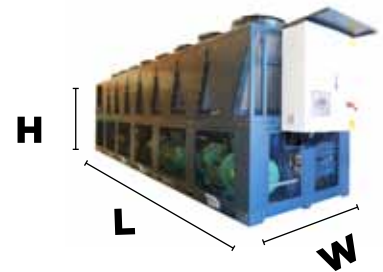
Typical units dimensions

Length: from 1.360 to 12.910 mm

Width: 2.250 mm

Height: 2.790 mm

Operating Weigth: from 1.419 kg to 17.757 kg



Length from 1.360 mm to 12.910 mm. The bigger sizes are delivered in two sections.

GHA FC with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Energymiser		GHA B135A EC FC-34	GHA B140A EC FC-34	GHA B150A EC FC-34	GHA B160A EC FC-34	GHA B170A EC FC-34	GHA B180A EC FC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	67,5	85,1	95,5	110,6	120,2	167,7
Nominal power input	kW	24,55	31,3	37,9	43,9	51	57,8
E.E.R.	Coef.	2,75	2,72	2,52	2,52	2,36	2,9
Energy class		C	C	D	D	E	B
E.S.E.E.R.	Coef.	4,77	4,33	4,29	4,53	4,38	4,62
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	FC	FC	FC	FC	FC	FC
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	22,8	27,8	34,4	40,4	47,5	50,8
Total running current	A	44,3	54	64,7	75	86,2	92,2
Total max current	A	60,8	71,6	84,6	103,6	129,6	155,2
Total starting current	A	155,8	187,6	211,6	272,6	295,6	405,2
DIMENSIONS							
Length with cabinet	mm	2560	2560	2560	2560	2560	2410
Width	mm	1050	1050	1050	1050	1050	2250
Height	mm	2540	2540	2540	2540	2540	2540
Shipping weight	kg	1110	1160	1390	1420	1430	2150
Operating weight	kg	1116	1168	1399	1433	1445	2167
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA B190A EC FC-34	GHA B1110A EC FC-34	GHA B1125A EC FC-34	GHA B1140A EC FC-34	GHA B1160A EC FC-34	GHA B1180A EC FC-34	GHA B1210A EC FC-34	GHA B1240A EC FC-34	GHA B235A EC FC-34	GHA B240A EC FC-34	GHA B250A EC FC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
187,9	215,9	230,7	282,8	314,3	357,9	415,5	450,4	135	170,2	191
66,3	79,4	89,6	98,9	115,2	139,4	152,9	169,5	49,1	62,6	75,8
2,83	2,72	2,57	2,86	2,73	2,57	2,72	2,66	2,75	2,72	2,52
C	C	D	C	C	D	C	D	C	C	D
2,69	2,69	2,52	2,7	2,66	2,65	2,66	2,64	3,43	3,15	3,16
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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
BPHE	BPHE	BPHE	BPHE	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
59,3	72,4	82,6	88,4	104,7	128,9	138,9	155,5	45,6	55,6	68,8
111,6	137	155,1	172,5	194,8	229,7	260,5	286,2	90,4	111,6	133
169,8	196,8	229,8	236,2	302,2	332,2	349,6	389,6	123,4	146,8	172,8
453,8	534,8	626,8	687,2	458,2	487,2	615,6	679,6	208,4	251	295,1
2410	2410	2410	3460	3460	3460	4510	4510	2410	2410	2410
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
2860	2990	3020	3740	4310	4350	5140	5370	2530	2640	3090
2929	3150	3175	3913	4536	4570	5371	5722	2597	2713	3167

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Energymiser		GHA B260A EC FC-34	GHA B270A EC FC-34	GHA B280A EC FC-34	GHA B290A EC FC-34	GHA B2110A EC FC-34	GHA B2125A EC FC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	221,2	240,4	335,4	375,8	431,8	461,4
Nominal power input	kW	87,8	102	115,6	132,6	158,8	179,2
E.E.R.	Coef.	2,52	2,36	2,9	2,83	2,72	2,57
Energy class		D	E	B	C	C	D
E.S.E.E.R.	Coef.	3,32	3,15	3,64	3,54	3,55	3,35
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	FC	FC	FC	FC	FC	FC
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	80,8	95	101,6	118,6	144,8	165,2
Total running current	A	153,6	176	191,6	223,2	274	310,2
Total max current	A	210,8	262,8	317,6	339,6	393,6	459,6
Total starting current	A	356,5	401,6	469,6	539,5	656,2	756,5
DIMENSIONS							
Length with cabinet	mm	2410	2410	4510	4510	4510	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	3140	3170	5390	5430	5520	5540
Operating weight	kg	3221	3255	5522	5568	5763	5783
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA B2140A EC FC-34	GHA B2160A EC FC-34	GHA B2180A EC FC-34	GHA B2210A EC FC-34	GHA B2240A EC FC-34	GHA B2280A EC FC-34	GHA B2300A EC FC-34	GHA B3160A EC FC-34	GHA B3180A EC FC-34	GHA B3210A EC FC-34	GHA B3240A EC FC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
565,6	628,6	715,8	831	900,8	832,6	902	926,1	1073,7	1186,8	1266,3
197,8	230,4	278,8	305,8	339	304,2	337,8	351,6	418,2	471,6	534,3
2,86	2,73	2,57	2,72	2,66	2,74	2,67	2,63	2,57	2,52	2,37
C	C	D	C	D	C	D	D	D	D	E
3,54	3,5	3,49	3,51	3,48	3,5	3,49	3,41	3,47	3,35	3,24
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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
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
176,8	209,4	257,8	277,8	311	276,2	309,8	320,1	386,7	440,1	502,8
345	389,6	459,4	521	572,4	530	578,4	593,4	689,1	794,7	891,9
472,4	604,4	664,4	699,2	779,2	959,2	959,2	906,6	996,6	1026,6	1146,6
827,8	780,2	899,4	1044,9	1154	1167,9	1240,5	1616,7	1881,6	2203,5	2484
6610	6610	6610	8710	8710	8710	8710	9760	9760	9760	9760
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
6980	8120	8160	10030	9840	9810	9880	12060	12090	12320	12460
7256	8517	8551	10623	10261	10231	10301	12669	12699	12921	13050

GHA FC with EC fans

R134a

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Energymiser		GHA B3300A EC FC-34	GHA B4160A EC FC-34	GHA B4180A EC FC-34	GHA B4210A EC FC-34	GHA B4240A EC FC-34	
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	
Total cooling capacity	kW	1342,5	1268,4	1431,6	1582,4	1688,4	
Nominal power input	kW	511,2	456,8	557,6	628,8	712,4	
E.E.R.	Coef.	2,63	2,78	2,57	2,52	2,37	
Energy class		D	C	D	D	E	
E.S.E.E.R.	Coef.	3,43	3,9	3,84	3,6	3,39	
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	FC	FC	FC	FC	FC	
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	469,2	414,8	515,6	586,8	670,4	
Total running current	A	873,9	773,2	918,8	1059,6	1189,2	
Total max current	A	1438,8	1208,8	1328,8	1368,8	1528,8	
Total starting current	A	2450,7	2764,3	3317,5	3875,8	4377,8	
DIMENSIONS							
Length with cabinet	mm	12910	12910	12910	12910	12910	
Width	mm	2250	2250	2250	2250	2250	
Height	mm	2790	2790	2790	2790	2790	
Shipping weight	kg	14640	15980	16030	16370	16560	
Operating weight	kg	15298	16763	16813	17137	17313	
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with AC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA B135A AC FC-34	GHA B140A AC FC-34	GHA B150A AC FC-34	GHA B160A AC FC-34	GHA B170A AC FC-34	GHA B180A AC FC-34	GHA B190A AC FC-34	GHA B1110A AC FC-34	GHA B1125A AC FC-34	GHA B1140A AC FC-34	GHA B1160A AC FC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
67,5	85,1	95,5	110,6	120,2	167,7	187,9	215,9	230,7	282,8	314,3
24,55	31,3	37,9	43,9	51	57,8	66,3	79,4	89,6	98,9	115,2
2,75	2,72	2,52	2,52	2,36	2,9	2,83	2,72	2,57	2,86	2,73
C	C	D	D	E	B	C	C	D	C	C
2,7	2,54	2,4	2,51	2,4	2,74	2,69	2,69	2,52	2,7	2,66
56	58	59	59	60	62	63	65	64	64	64
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	1	1	1
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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	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
24,55	27,8	34,4	40,4	47,5	50,8	59,3	72,4	82,6	88,4	104,7
45,2	55,8	66,5	76,8	88	95,8	111,6	137	155,1	172,5	194,8
61,7	73,4	86,4	105,4	131,4	158,8	169,8	196,8	229,8	236,2	302,2
156,7	189,4	213,4	274,4	297,4	408,8	453,8	534,8	626,8	687,2	458,2
1360	1360	1360	1360	1360	2410	2410	2410	2410	3460	3460
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
1420	1470	1700	1720	1740	2850	2860	2990	3020	3740	4310
1453	1506	1738	1760	1782	2916	2929	3150	3175	3913	4536

GHA FC with AC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Energymiser		GHA B1180A AC FC-34	GHA B1210A AC FC-34	GHA B1240A AC FC-34	GHA B235A AC FC-34	GHA B240A AC FC-34	GHA B250A AC FC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	357,9	415,5	450,4	135	170,2	191
Nominal power input	kW	139,4	152,9	169,5	49,1	62,6	75,8
E.E.R.	Coef.	2,57	2,72	2,66	2,75	2,72	2,52
Energy class		D	C	D	C	C	D
E.S.E.E.R.	Coef.	2,65	2,66	2,64	3,43	3,15	3,16
Noise Pressure Level	dB(A)	64	64	66	59	61	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	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	FC	FC	FC	FC	FC	FC
Evaporator type (*2)	Type	S&T	S&T	S&T	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	128,9	138,9	155,5	45,6	55,6	68,8
Total running current	A	229,7	260,5	286,2	90,4	111,6	133
Total max current	A	332,2	349,6	389,6	123,4	146,8	172,8
Total starting current	A	487,2	615,6	679,6	208,4	251	295,1
DIMENSIONS							
Length with cabinet	mm	3460	4510	4510	2410	2410	2410
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	4350	5140	5370	2530	2640	3090
Operating weight	kg	4570	5371	5722	2597	2713	3167
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with AC fans

R134a

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA B260A AC FC-34	GHA B270A AC FC-34	GHA B280A AC FC-34	GHA B290A AC FC-34	GHA B2110A AC FC-34	GHA B2125A AC FC-34	GHA B2140A AC FC-34	GHA B2160A AC FC-34	GHA B2180A AC FC-34	GHA B2210A AC FC-34	GHA B2240A AC FC-34
R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
221,2	240,4	335,4	375,8	431,8	461,4	565,6	628,6	715,8	831	900,8
87,8	102	115,6	132,6	158,8	179,2	197,8	230,4	278,8	305,8	339
2,52	2,36	2,9	2,83	2,72	2,57	2,86	2,73	2,57	2,72	2,66
D	E	B	C	C	D	C	C	D	C	D
3,32	3,15	3,64	3,54	3,55	3,35	3,54	3,5	3,49	3,51	3,48
62	63	65	66	68	67	67	67	67	67	69
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	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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
BPHE	BPHE	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
80,8	95	101,6	118,6	144,8	165,2	176,8	209,4	257,8	277,8	311
153,6	176	191,6	223,2	274	310,2	345	389,6	459,4	521	572,4
210,8	262,8	317,6	339,6	393,6	459,6	472,4	604,4	664,4	699,2	779,2
356,5	401,6	469,6	539,5	656,2	756,5	827,8	780,2	899,4	1044,9	1154
2410	2410	4510	4510	4510	4510	6610	6610	6610	8710	8710
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
3140	3170	5390	5430	5520	5540	6980	8120	8160	10030	9840
3221	3255	5522	5568	5763	5783	7256	8517	8551	10623	10261

GHA FC with AC fans

R134a

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Energymiser		GHA B2280A AC FC-34	GHA B2300A AC FC-34	GHA B3160A AC FC-34	GHA B3180A AC FC-34	GHA B3210A AC FC-34	GHA B3240A AC FC-34
CHILLER PERFORMANCE							
Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
Total cooling capacity	kW	832,6	902	926,1	1073,7	1186,8	1266,3
Nominal power input	kW	304,2	337,8	351,6	418,2	471,6	534,3
E.E.R.	Coef.	2,74	2,67	2,63	2,57	2,52	2,37
Energy class		C	D	D	D	D	E
E.S.E.E.R.	Coef.	3,5	3,49	3,41	3,47	3,35	3,24
Noise Pressure Level	dB(A)	68	73	69	69	69	71
Distance	m	10	10	10	10	10	10
WORKING CONDITIONS							
Compressors type	Type	Screw	Screw	Screw	Screw	Screw	Screw
Compressors number	n°	2	2	3	3	3	3
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	FC	FC	FC	FC	FC	FC
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	276,2	309,8	320,1	386,7	440,1	502,8
Total running current	A	530	578,4	593,4	689,1	794,7	891,9
Total max current	A	959,2	959,2	906,6	996,6	1026,6	1146,6
Total starting current	A	1167,9	1240,5	1616,7	1881,6	2203,5	2484
DIMENSIONS							
Length with cabinet	mm	8710	8710	9760	9760	9760	9760
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	9810	9880	12060	12090	12320	12460
Operating weight	kg	10231	10301	12669	12699	12921	13050
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with AC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA B3300A AC FC-34	GHA B4160A AC FC-34	GHA B4180A AC FC-34	GHA B4210A AC FC-34	GHA B4240A AC FC-34						
R134a	R134a	R134a	R134a	R134a						
1342,5	1268,4	1431,6	1582,4	1688,4						
511,2	456,8	557,6	628,8	712,4						
2,63	2,78	2,57	2,52	2,37						
D	C	D	D	E						
3,43	3,9	3,84	3,6	3,39						
75	70	70	70	72						
10	10	10	10	10						
Screw	Screw	Screw	Screw	Screw						
3	4	4	4	4						
12	12	12	12	12						
6	6	6	6	6						
35	35	35	35	35						
FC	FC	FC	FC	FC						
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						
230/1/50	230/1/50	230/1/50	230/1/50	230/1/50						
469,2	414,8	515,6	586,8	670,4						
873,9	773,2	918,8	1059,6	1189,2						
1438,8	1208,8	1328,8	1368,8	1528,8						
2450,7	2764,3	3317,5	3875,8	4377,8						
12910	12910	12910	12910	12910						
2250	2250	2250	2250	2250						
2790	2790	2790	2790	2790						
14640	15980	16030	16370	16560						
15298	16763	16813	17137	17313						

GHA FC with EC fans



HFO
1234ze

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Greenmiser		GHA F150A EC FC-ZE	GHA F160A EC FC-ZE	GHA F170A EC FC-ZE	GHA F180A EC FC-ZE	GHA F190A EC FC-ZE	GHA F110A EC FC-ZE
CHILLER PERFORMANCE							
Refrigerant		HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE	HFO1234ZE
Total cooling capacity	kW	82,1	96	111,3	131,6	145,4	177,1
Nominal power input	kW	28	31,8	34,8	42	46,8	55,9
E.E.R.	Coef.	2,93	3,02	3,2	3,13	3,11	3,17
Energy class		B	B	A	A	A	A
E.S.E.E.R.	Coef.	4,68	4,89	5,08	4,48	4,53	4,95
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	FC	FC	FC	FC	FC	FC
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	24,5	28,3	31,3	35	39,8	48,9
Total running current	A	45,3	51,5	56,4	68	75,8	90,5
Total max current	A	85,6	103,6	130,6	156,2	171,2	191,2
Total starting current	A	211,6	267,6	303,6	384,2	434,2	468,2
DIMENSIONS							
Length with cabinet	mm	1360	1360	2410	2410	2410	2410
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	1640	1660	2280	2400	2430	2850
Operating weight	kg	1669	1690	2334	2459	2491	2915
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA F1125A EC FC-ZE	GHA F1140A EC FC-ZE	GHA F1160A EC FC-ZE	GHA F1180A EC FC-ZE	GHA F1210A EC FC-ZE	GHA F1240A EC FC-ZE	GHA F250A EC FC-ZE	GHA F260A EC FC-ZE	GHA F270A EC FC-ZE	GHA F280A EC FC-ZE	GHA F290A EC FC-ZE
HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE
197,8	238,2	267,7	305,9	351,3	379,2	164,2	192	224,4	263,2	290,8
63,5	72,6	84,4	99,1	111,9	123	56	63,6	72,7	84	93,6
3,11	3,28	3,17	3,09	3,14	3,08	2,93	3,02	3,09	3,13	3,11
A	A	A	B	A	B	B	B	B	A	A
4,91	4,81	4,94	5,09	4,85	4,9	4,08	4,39	4,16	4,02	4,84
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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
BPHE	BPHE	BPHE	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
56,5	62,1	73,9	88,6	97,9	109	49	56,6	62,2	70	79,6
102,8	117,5	136,6	160,6	181,1	199,2	90,6	103	117,6	136	151,6
209,2	237,8	299,8	331,8	378,4	449,4	171,2	207,2	266,8	312,4	342,4
573,2	595,8	452,8	481,8	608,4	672,4	233,3	279,9	317	379,3	427,7
2410	3460	3460	3460	4510	4510	2410	2410	3460	4510	4510
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
2900	3620	4620	4650	5150	5160	2930	2990	3720	4450	4490
2966	3711	4821	4842	5346	5352	2986	3050	3808	4563	4606

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Greenmiser		GHA F2110A EC FC-ZE	GHA F2125A EC FC-ZE	GHA F2140A EC FC-ZE	GHA F2160A EC FC-ZE	GHA F2180A EC FC-ZE	GHA F2210A EC FC-ZE
CHILLER PERFORMANCE							
Refrigerant		HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE
Total cooling capacity	kW	354,2	395,6	476,4	535,4	611,8	702,6
Nominal power input	kW	111,8	127	145,2	168,8	198,2	223,8
E.E.R.	Coef.	3,17	3,11	3,28	3,17	3,09	3,14
Energy class		A	A	A	A	B	A
E.S.E.E.R.	Coef.	5,28	5,03	5,34	5,27	5,37	5,26
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	FC	FC	FC	FC	FC	FC
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	97,8	113	124,2	147,8	177,2	195,8
Total running current	A	181	205,6	235	273,2	321,2	362,2
Total max current	A	382,4	418,4	475,6	599,6	663,6	756,8
Total starting current	A	488,8	578,2	625,2	611	697,5	813,9
DIMENSIONS							
Length with cabinet	mm	4510	4510	6610	6610	6610	8710
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	5460	5570	7000	8400	8590	10010
Operating weight	kg	5656	5819	7288	8676	8987	10446
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans



Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA F2240A EC FC-ZE	GHA F3180A EC FC-ZE	GHA F3210A EC FC-ZE	GHA F3240A EC FC-ZE	GHA F4180A EC FC-ZE	GHA F4210A EC FC-ZE	GHA F4240A EC FC-ZE				
HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE	HF01234ZE				
758,4	917,7	1053,9	1137,6	1223,6	1364,4	1473,6				
246	297,3	335,7	369	396,4	448	494,8				
3,08	3,09	3,14	3,08	3,09	3,05	2,98				
B	B	A	B	B	B	B				
5,09	5,39	5,18	5,29	5,37	5,27	5,17				
73	70	72	75	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				
FC	FC	FC	FC	FC	FC	FC				
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				
218	265,8	293,7	327	354,4	406	452,8				
398,4	481,8	543,3	597,6	642,4	725,6	801,2				
898,8	995,4	1135,2	1348,2	1327,2	1491,2	1775,2				
900,2	1355,8	1532,1	1698,2	2340,4	2682,7	2982,2				
8710	9760	12910	12910	12910	12910	12910				
2250	2250	2250	2250	2250	2250	2250				
2790	2790	2790	2790	2790	2790	2790				
10050	12760	14870	14890	16880	16920	16990				
10478	13369	15547	15559	17675	17703	17757				

GHA FC with EC fans

R290

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Greenmiser		GHA F170A EC FC-290	GHA F180A EC FC-290	GHA F190A EC FC-290	GHA F1100A EC FC-290	GHA F1120A EC FC-290	GHA F1140A EC FC-290
CHILLER PERFORMANCE							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	144,8	167,7	192,9	219,7	253,1	329,9
Nominal power input	kW	52,2	59,7	68,9	77,5	87,5	113,8
E.E.R.	Coef.	2,77	2,81	2,8	2,83	2,89	2,9
Energy class		C	C	C	C	C	B
E.S.E.E.R.	Coef.	4,17	4,32	4,09	4,2	4,44	4,42
Noise Pressure Level	dB(A)	59	60	61	62	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	FC	FC	FC	FC	FC	FC
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	52,2	52,7	58,4	67	77	99,8
Total running current	A	84,5	96,7	111,5	125,5	141,7	184,3
Total max current	A	139,2	156,2	176,8	191,8	211,8	267,4
Total starting current	A	309,2	384,2	439,8	417,8	508,8	601,4
DIMENSIONS							
Length with cabinet	mm	2410	2410	3460	3460	3460	4510
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	2400	2420	3160	3200	3210	4320
Operating weight	kg	2463	2485	3248	3291	3304	4440
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA F1160A EC FC-290	GHA F270A EC FC-290	GHA F280A EC FC-290	GHA F290A EC FC-290	GHA F2100A EC FC-290	GHA F2120A EC FC-290	GHA F2140A EC FC-290	GHA F2160A EC FC-290	GHA F170A LN EC FC-290	GHA F180A LN EC FC-290	GHA F190A LN EC FC-290
R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
370,2	284,6	335,4	374,4	432,6	506,2	659,8	740,4	139,8	173	190,1
122,5	105,8	119,4	137,9	153,7	175	227,6	245	49,94	56,01	64,31
3,02	2,69	2,81	2,72	2,81	2,89	2,9	3,02	2,8	3,09	2,96
B	D	C	C	C	C	B	B	C	B	B
4,53	3,82	4,05	3,83	4,01	4,16	4,15	4,53	4,5	4,75	4,56
66	62	63	64	65	66	68	69	54	55	55
10	10	10	10	10	10	10	10	10	10	10
Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw	Screw
1	2	2	2	2	2	2	2	1	1	1
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
FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC
BPHE	BPHE	BPHE	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	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
108,5	91,8	105,4	120,4	136,2	154	199,6	217	46,6	51	59,3
198,4	171,2	193,4	223,2	248,8	283,4	368,6	396,8	81,1	91,1	104,5
304,4	278,4	312,4	348	378	423,6	534,8	608,8	133,6	153,4	168,4
751,4	394,6	465,4	532,3	559,7	654,3	820	937,3	303,6	381,4	431,4
4510	4510	4510	5560	5560	6610	8710	8710	2410	3460	3460
2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
2790	2790	2790	2790	2790	2790	2790	2790	2790	2790	2790
4350	4490	4540	5320	5400	6110	8330	8400	2400	3120	3160
4476	4616	4670	5474	5560	6299	8570	8652	2463	3207	3248

GHA FC with EC fans

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

Greenmiser		GHA F1100A LN EC FC-290	GHA F1120A LN EC FC-290	GHA F1140A LN EC FC-290	GHA F1160A LN EC FC-290	GHA F270A LN EC FC-290	GHA F280A LN EC FC-290
CHILLER PERFORMANCE							
Refrigerant		R290	R290	R290	R290	R290	R290
Total cooling capacity	kW	223,1	257	329,9	370,2	279,6	346
Nominal power input	kW	72,68	82,38	108,15	116,85	99,88	112,02
E.E.R.	Coef.	3,07	3,12	3,05	3,17	2,8	3,09
Energy class		B	A	B	A	C	B
E.S.E.E.R.	Coef.	4,63	4,87	4,81	4,9	4,26	4,49
Noise Pressure Level	dB(A)	56	58	59	59	57	58
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	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	FC	FC	FC	FC	FC	FC
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	66	75,7	99,8	108,5	93,2	102
Total running current	A	118,3	133,9	175,9	190	162,2	182,2
Total max current	A	186,2	206,2	259	296	267,2	306,8
Total starting current	A	412,2	503,2	593	743	386,7	451,4
DIMENSIONS							
Length with cabinet	mm	4510	4510	5560	5560	4510	6610
Width	mm	2250	2250	2250	2250	2250	2250
Height	mm	2790	2790	2790	2790	2790	2790
Shipping weight	kg	3900	3910	5020	5050	4490	5940
Operating weight	kg	4014	4027	5162	5198	4616	6115
(*1) FC: Finned Coils (*2) S&T or BPHE: Shell and Tube - Brazed Plate Heat Exchanger							

GHA FC with EC fans

R290

Air cooled chiller with screw compressors, axial fans and Free Cooling for outdoor installation

GHA F290A LN EC FC-290	GHA F2100A LN EC FC-290	GHA F2120A LN EC FC-290	GHA F2140A LN EC FC-290	GHA F2160A LN EC FC-290						
R290	R290	R290	R290	R290						
380,2	432,6	506,2	659,8	740,4						
128,62	146,22	167,36	216,3	233,7						
2,96	2,96	3,02	3,05	3,17						
B	B	B	B	A						
4,32	4,39	4,52	4,55	4,92						
58	59	61	62	62						
10	10	10	10	10						
Screw	Screw	Screw	Screw	Screw						
2	2	2	2	2						
12	12	12	12	12						
6	6	6	6	6						
35	35	35	35	35						
FC	FC	FC	FC	FC						
BPHE	BPHE	BPHE	BPHE	BPHE						
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						
118,6	136,2	154	199,6	217						
209	237,6	272,2	351,8	380						
336,8	366,8	412,4	518	592						
516,6	548,5	643,1	803,2	920,5						
6610	6610	8710	10810	10810						
2250	2250	2250	2250	2250						
2790	2790	2790	2790	2790						
6020	6100	7520	9730	9800						
6197	6283	7754	10015	10097						



Brand

