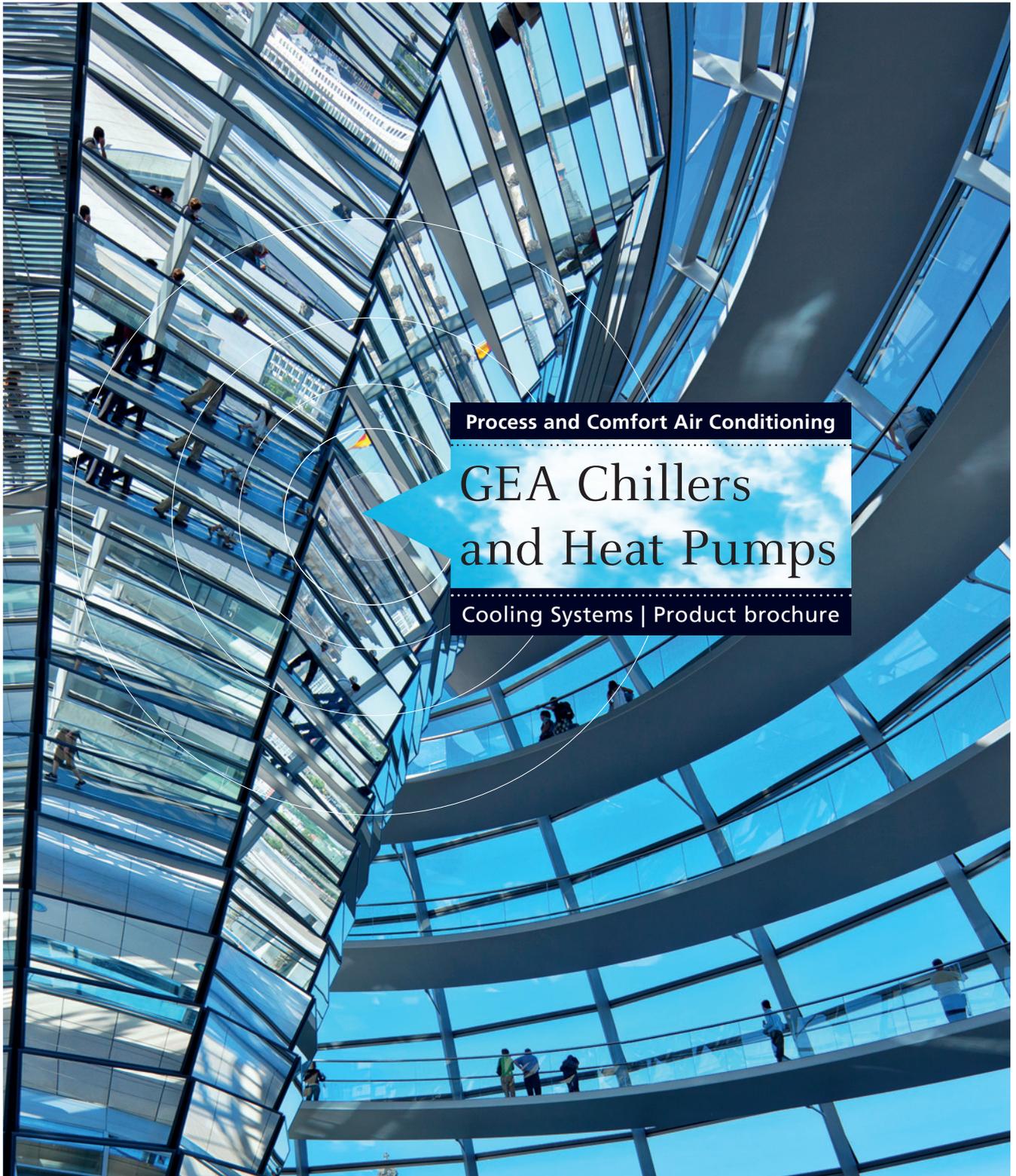


Air Eco₂nomy[®]



Process and Comfort Air Conditioning

GEA Chillers and Heat Pumps

Cooling Systems | Product brochure

Outdoor Installation

Chillers

**Compressor/
Condensing
Units**

Air Cooled

Packaged

Split

GSAC



GLCU



GAC



GMAC



GLAC



GLFC



Heat Pumps

Split

GSAH



GCH



GAH



GLAH



Indoor Installation

Chillers

Air Cooled

Packaged for Duct Connection

Split without Condenser

GSDC



GRC



GDC



GLRC



GLDC



Water Cooled

Packaged without Heat Rejection

GWC



GLWC



Heat Pumps

GSDH



Heat Pumps

GLWH

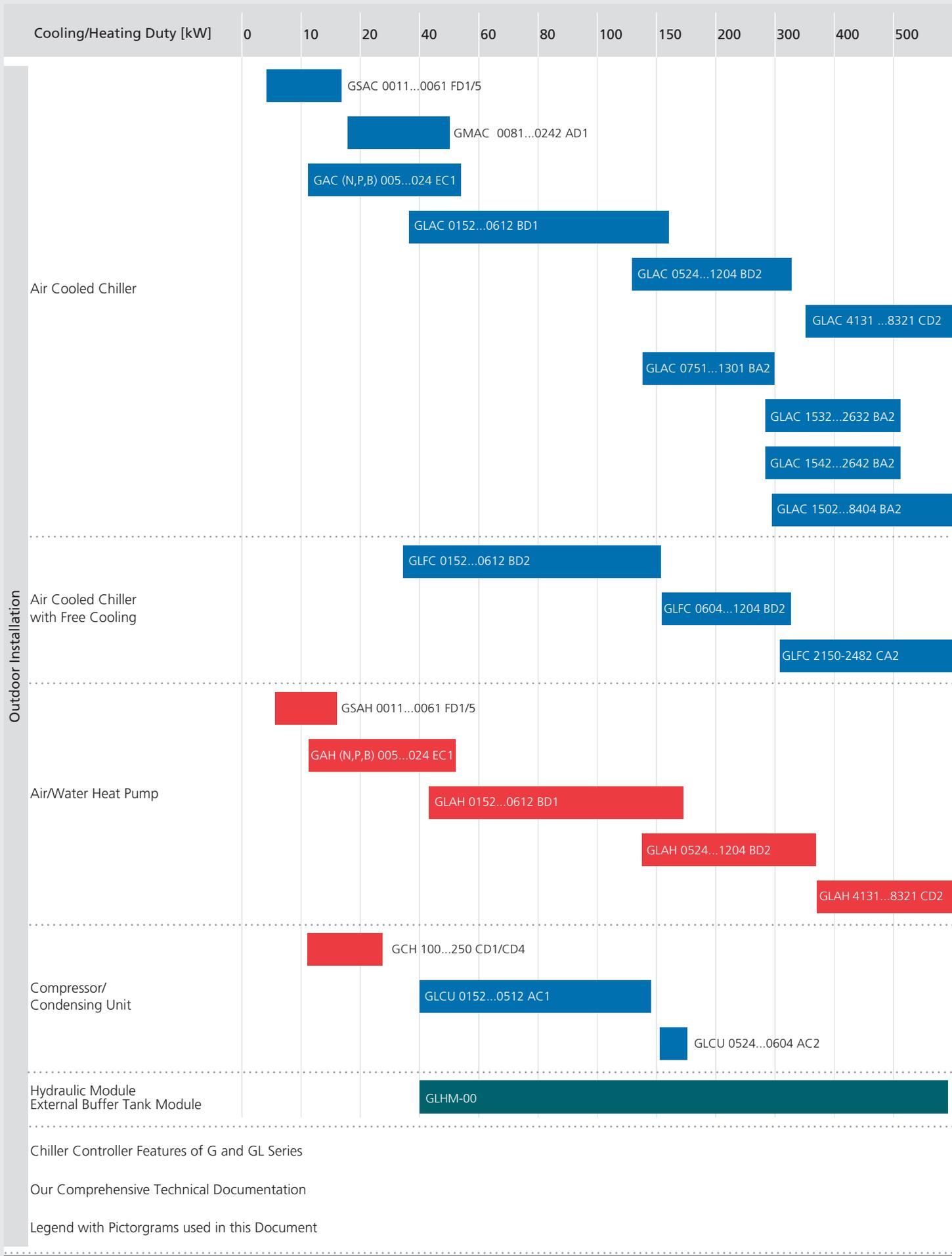


Indoor and Outdoor Installation

Hydraulic Module

GLHM-00



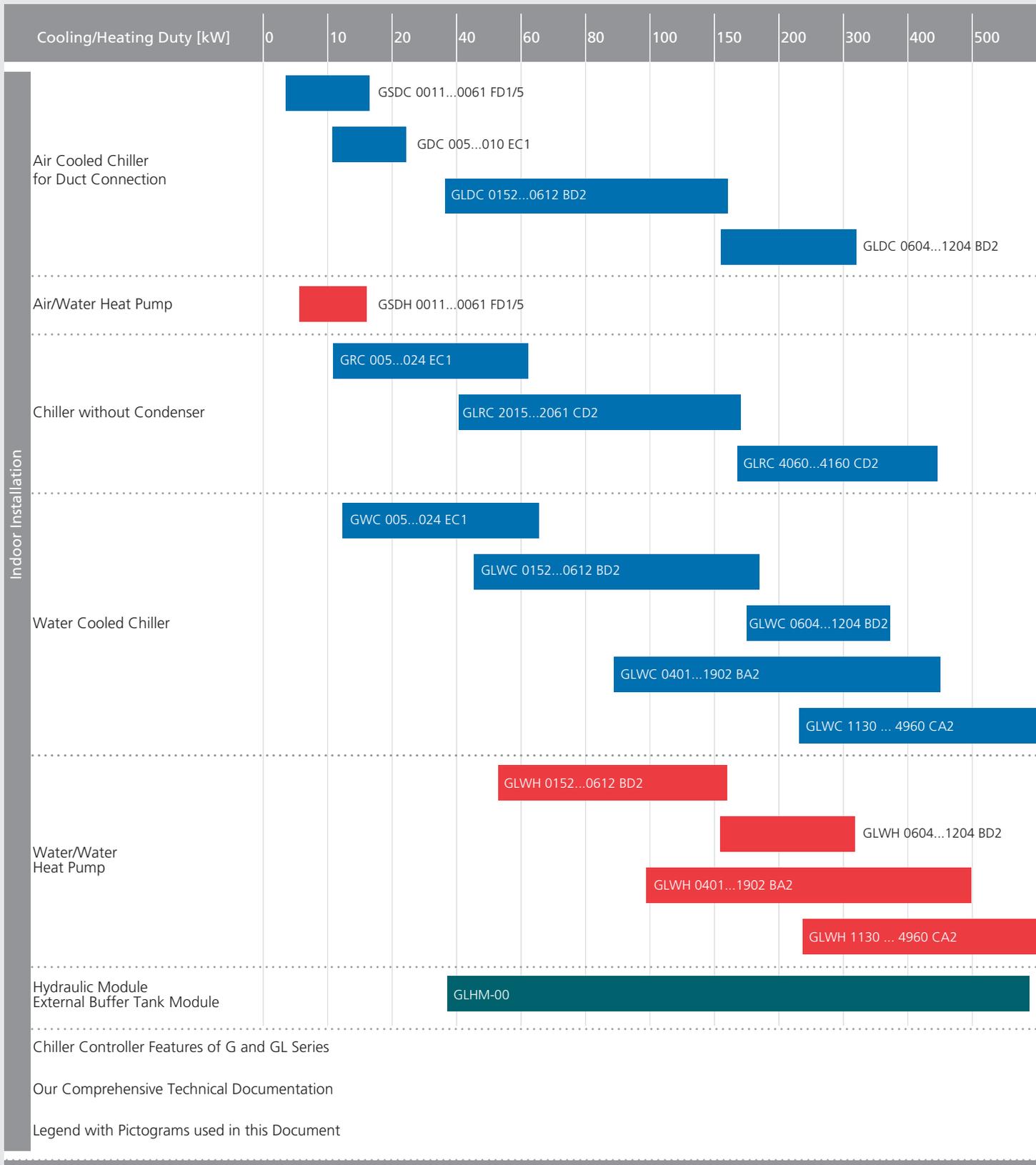


Chiller Controller Features of G and GL Series

Our Comprehensive Technical Documentation

Legend with Pictograms used in this Document

750	1000	2000	R 410A	R 407C	R 134a	Screw Compressor	Scroll Compressor	Hydraulic Module Standard	Hydraulic Module Option	Pump Module Option	Page
			●				●		●		8
			●				●		●		9
				●			●		●	●	10
			●				●		●		11
			●				●		●		12
			●				●		●		13
					●	●			●		14
					●	●		●			16
					●	●					15
					●	●					17
			●				●				20
			●				●				22
					●	●					24
			●				●		●		37
				●			●		●	●	38
			●				●		●		39
			●				●		●		40
			●				●		●		41
			●				●				42
				●			●				26
				●			●				26
											48
											49
											50
											55



750	1000	2000	R 410A	R 407C	R 134a	Screw Compressor	Scroll Compressor	Hydraulic module standard	Hydraulic module option	Pump module option	Page
			●				●		●		27
				●			●		●		28
			●				●			●	29
			●				●			●	29
			●				●		●		43
				●			●		●		30
			●				●			●	31
			●				●			●	31
				●			●		●		32
			●				●			●	33
			●				●			●	33
					●	●					34
					●	●					35
			●				●			●	44
			●				●			●	44
					●	●					45
					●	●					46
											48
											49
											50
											55



- Optimized compact model with 1 scroll compressor
- Standard pump module comprises safety valve, expansion tank, pressure gauge, air vent and fill connection
- Following pump heads for field-provided pipework by others
- Second pump for increasing pump head is optional for model sizes 0041 - 0061
- Buffer tank to be mounted below the unit is optional
- Cooling operation up to -10 °C air inlet temperature
- Condensing pressure is used to regulate fan speed
- Autoadaptive microprocessor control
- Supplied as two different models:
GSAC 0011 ... 0041 FD5 with 230 V supply voltage
GSAC 0021 ... 0061 FD1 with 400 V supply voltage



Supply voltage		1 ~ 230 volt (FD5 series)					3 ~ 400 volt (FD1 series)					
R 410a refrigerant	GSAC	0011	0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Rated cooling duty	kW	4.9	5.6	6.9	8.6	11.0	5.6	7.0	8.7	11.4	13.2	15.4
Power consumption	kW	1.9	2.1	2.5	3.4	4.1	2	2.4	3.1	4.2	4.7	5.2
Max. current consumption	A	17.6	17.6	20.6	24.6	28.6	7.1	7.6	9.6	11.6	13.4	16.9
ESEER	-	3.11	3.35	3.33	3.28	3.17	3.37	3.37	3.34	3.30	3.25	3.51
Scroll compressor	Quantity	1	1	1	1	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	1	1	1	1	1	1	1	1	1	1	1
Pump												
Pump head remain. pipework	kPa	59	57	54	54	43	57	54	54	40	33	30
Rated volume flow	m³/h	0.8	1	1.2	1.5	1.9	1	1.2	1.5	2	2.3	2.7
Sound power level	dB(A)	65	66	66	66	69	66	66	66	69	69	69
Sound pressure level 10 m	dB(A)	33	34	34	34	37	34	34	34	37	37	37
Length	mm	900	900	900	900	900	900	900	900	900	900	900
Width	mm	370	370	370	370	370	370	370	370	370	370	420
Height	mm	640	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	kg	80	85	100	105	125	85	100	105	125	145	155

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 1 to 2 scroll compressors
- Frame construction rounded off in GEA AHU design
- Service panel with quick-release locks
- Buffer tank and pump are optional (hydraulic module GMHM) additionally fitted with a regulating valve, safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -15 °C ambient temperature
- Water filter and flow switch are fitted
- Condensing pressure is used to regulate fan speed
- Microprocessor control
- Controller type μ-Chiller 2SE
- Unit main switch
- Connection to BMS via optional interface
- Supplied as two different models:
GMAC 0081 ... 0242 AD1 as standard unit
GMAC 0081 ... 0242 AD1.SL as especially low noise model

Refrigerant R 410A	GMAC	0081	0101	0121	0162	0202	0242
Rated cooling duty	kW	18	24	29	38	47	52
Power consumption	kW	6.8	9.1	10.7	14.3	19.8	20.5
Max. current consumption	A	19	25	28	37	49	55
ESEER	-	2.73	3.04	3.08	3.58	3.70	3.50
Scroll compressor	Quantity	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	1	1
Speeds	Quantity	1	1	1	2	2	2
Sound power level	dB(A)	76	77	77	79	80	80
Sound pressure level 10 m	dB(A)	44	45	45	47	48	48
Length	mm	1420	1420	1420	2580	2580	2580
Width	mm	790	790	790	790	790	790
Height	mm	1571	1571	1571	1571	1571	1571
Operating weight	kg	300	300	310	540	560	560

As above, but with noise-optimized SL model. Weight can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GMAC.SL	0081	0101	0121	0162	0202	0242
Rated cooling duty	kW	18	24	29	38	47	52
ESEER	-	2.73	3.04	3.08	3.58	3.70	3.50
Sound power level	dB(A)	73	74	74	76	77	77
Sound pressure level 10 m	dB(A)	41	42	42	44	45	45

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level Requirement specified by DIN EN ISO9614-2
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Space-saving configuration with 1 to 2 scroll compressors
- Cooling operation up to -15 °C ambient temperature
- Microprocessor control
- Controller type: µ-Chiller 2SE
- Unit main switch
- Water filter and two enclosed shut off cocks
- Fitted flow switch
- Supplied in three different configurations:
GACN - without hydraulic unit
GACP - with pump module, regulating valve, safety valve, expansion tank
GACB - buffer tank, pump module, regulating valve, safety valve, expansion tank



GACN	without pump – without buffer tank
GACP	with pump
GACB	with pump – with buffer tank

R 407C refrigerant	GAC (N/P/D)	005	008	010	012	016	020	024
Rated cooling duty	kW	11.3	17.9	22.5	26.5	37.0	46.6	55.3
Power consumption	kW	4.5	7.4	8.8	11.5	15.2	18.1	24.0
Max. current consumption	A	11	17	20	27	34	40	54
ESEER	-	2.93	2.87	3.07	2.74	3.07	3.30	2.94
Scroll compressor	Quantity	1	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	2	2	2
Speeds	Quantity	1	1	1	1	2	2	2
Sound power level	dB(A)	67	76	78	78	79	81	81
Sound pressure level 10 m	dB(A)	35	44	46	46	47	49	49
Length	mm	1290	1290	1290	1290	2580	2580	2580
Width	mm	734	734	734	734	734	734	734
Height	mm	1230	1230	1450	1450	1321	1541	1541
GACN without pump – without buffer tank								
Operating weight	kg	152	218	248	251	436	496	503
GACP with pump								
Operating weight	kg	171	232	262	265	457	518	524
GACB with pump – with buffer tank								
Operating weight	kg	239	300	330	355	525	586	592

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At evaporation temperature 7 °C and air inlet temperature 35 °C
 Sound power level Requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 scroll compressors
- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a flow switch, regulating valve, safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -15 °C ambient temperature
- With fitted water filter
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step-I
- Unit main switch
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in three different configurations:
GLAC 0152 ... 0612 BD1 as standard unit
GLAC 0152 ... 0612 BD1.SL as especially low noise model
GLAC 0152 ... 0512 BD1.HE as high performance model



Refrigerant R 410A	GLAC	0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Rated cooling duty	kW	36.1	42.8	50.7	57.6	74.2	84.4	96.4	108.8	122.0	144.0	158.6
Power consumption	kW	15.1	16.5	18.9	21.2	28.6	33.7	37.1	41.4	45.9	50.2	58.6
Max. current consumption	A	33	36	45	49	61	73	81	91	103	116	129
ESEER	-	4.03	4.20	4.25	4.22	4.11	3.99	4.02	4.15	4.06	4.40	4.20
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	79	79	80	80	81	83	83	83	84	87	87
Sound pressure level 10 m	dB(A)	47	47	48	48	49	51	51	51	52	55	55
Length	mm	1695	1695	2195	2195	2745	2745	2745	2745	3245	3245	3245
Width	mm	1120	1120	1120	1120	1120	1120	1120	1120	1120	1120	1120
Height	mm	1420	1420	1420	1420	1420	1420	1420	1420	1420	1620	1620
Operating weight	kg	430	460	520	550	730	790	860	900	1010	1020	1030

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GLAC.SL	0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Rated cooling duty	kW	34	42	48	56	70	85	97	106	118	139	151
ESEER	-	3.77	3.93	4.01	3.89	3.86	3.87	3.91	3.91	3.90	4.19	3.96
Sound power level	dB(A)	76	77	77	78	78	81	81	81	82	84	84
Sound pressure level 10 m	dB(A)	44	45	45	46	46	49	49	49	50	52	52

As above, but as .HE model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GLAC.HE	0152	0182	0202	0252	0302	0352	0412	0452	0512
Rated cooling duty	kW	40	47	55	62	81	91	104	116	130
ESEER	-	4.28	4.18	4.41	4.09	3.86	4.18	4.28	4.31	4.39
Sound power level	dB(A)	84	85	85	86	86	87	87	87	87
Sound pressure level 10 m	dB(A)	52	53	53	54	54	55	55	55	55

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 4 scroll compressors
- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a regulating valve, safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -15 °C ambient temperature
- With fitted water filter
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step II
- Unit main switch
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in two different configurations:
GLAC 0524 ... 1204 BD1 as standard unit
GLAC 0524 ... 1024 BD1.SL as especially low noise model



Refrigerant R 410A	GLAC	0524	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	136	154	177	200	223	255	293	325
Power consumption	kW	53.8	59.8	67.7	74.9	84.4	94.2	106.3	121.2
Max. current consumption	A	116	127	143	160	179	206	232	258
ESEER	-	3.60	3.79	3.91	4.08	4.15	3.96	4.10	4.16
Scroll compressor	Quantity	4	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4	4
Sound power level	dB(A)	92	92	92	92	93	94	95	95
Sound pressure level 10 m	dB(A)	60	60	60	60	61	62	63	63
Length	mm	3110	3110	3110	3110	4110	4110	4110	4110
Width	mm	2220	2220	2220	2220	2220	2220	2220	2220
Height	mm	1700	1700	2150	2150	2150	2150	2150	2150
Operating weight	kg	1450	1620	1780	1890	2070	2220	2380	2530

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GLAC.SL	0524	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	130	147	161	193	211	235	278	313
ESEER	-	4.14	4.14	4.13	4.08	4.08	4.10	4.39	4.19
Sound power level	dB(A)	82	82	82	83	83	83	85	86
Sound pressure level 10 m	dB(A)	50	50	50	51	51	51	53	53

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- High performance configuration with 4 or 8 scroll compressors
- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -15 °C ambient temperature
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step II
- Unit main switch
- Configuration with an electronic expansion valve EEV
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in three different configurations:
GLAC 4131 ... 8321 CD2 as standard unit
GLAC 4131 ... 8321 CD2.SL as especially low noise model
GLAC 4131 ... 8321 CD2.HE as high performance model



Refrigerant R 410A	GLAC	4131	4141	4161	5171	6181	5201	6211	6231	6241	8241	8261	8281	8301	8321
Rated cooling duty	kW	354	379	413	458	501	526	569	604	635	665	708	759	794	827
Power consumption	kW	124.4	130.2	147.8	160.4	171.9	183.9	195.4	214.1	218.6	233.7	248.8	260.5	279.1	295.6
Max. current consumption	A	273	288	317	351	384	398	432	461	480	517	546	576	605	634
ESEER	-	4.16	4.24	4.04	4.19	4.21	4.07	4.18	4.11	4.08	4.12	4.18	4.27	4.20	4.07
Scroll compressor	Quantity	4	4	4	5	6	5	6	6	6	8	8	8	8	8
Circuits	Quantity	2	2	2	2	2	2	2	2	2	4	4	4	4	4
Speeds	Quantity	4	4	4	5	6	5	6	6	6	8	8	8	8	8
Sound power level	dB(A)	96	96	96	96	97	97	97	97	98	98	98	99	99	99
Sound pressure level 10 m	dB(A)	64	64	64	64	65	65	65	65	66	66	66	67	67	67
Length	mm	3905	3905	3905	5080	5080	5080	6255	6255	6255	7430	7430	7430	7430	7430
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Operating weight	kg	2730	2770	2800	3400	3650	3690	4200	4220	4350	5260	5300	5370	5400	5430

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GLAC.SL	4131	4141	4161	5171	6181	5201	6211	6231	6241	8241	8261	8281	8301	8321
Rated cooling duty	kW	334	358	397	432	465	498	532	579	596	616	666	718	758	795
ESEER	-	4.29	4.31	4.21	4.33	4.36	4.26	4.37	4.38	4.29	4.32	4.39	4.36	4.39	4.27
Sound power level	dB(A)	86	86	86	87	87	87	87	88	88	88	89	90	90	90
Sound pressure level 10 m	dB(A)	54	54	54	55	55	55	55	58	58	58	59	60	60	60

As above, but as noise optimized .HE model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

Refrigerant R 410A	GLAC.HE	4131	4141	4161	5171	6181	5201	6211	6231	6241	8241	8261	8281	8301	8321
Rated cooling duty	kW	370	391	438	481	518	549	591	633	657	702	740	785	831	885
ESEER	-	4.45	4.48	4.39	4.54	4.50	4.42	4.48	4.48	4.37	4.44	4.46	4.50	4.49	4.45
Sound power level	dB(A)	97	97	97	97	98	98	98	98	99	99	99	100	100	100
Sound pressure level 10 m	dB(A)	65	65	65	65	66	66	66	66	67	67	67	68	68	68

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard model with 1 screw compressor
- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a regulating valve, safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -15 °C ambient temperature
- With enclosed water filter
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step-III
- Unit main switch
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in two different configurations:
GLAC 0751 ... 1301 BA2 as standard unit
GLAC 0751 ... 1301 BA2.SL as especially low noise model



R 134a refrigerant	GLAC	0751	0851	0951	0961	1021	1301
Rated cooling duty	kW	145	163	182	201	234	266
Power consumption	kW	52	61	69	75	85	93
Max. current consumption	A	117	127	144	144	154	201
ESEER	-	3.50	3.42	3.52	3.63	3.49	3.54
Screw compressor	Quantity	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1
Speeds	Quantity	3	3	3	3	3	3
Sound power level	dB(A)	94	94	94	94	96	96
Sound pressure level 10 m	dB(A)	62	62	62	62	64	64
Length	mm	3110	3110	3110	3110	4610	4610
Width	mm	2222	2222	2222	2222	2222	2222
Height	mm	2150	2150	2150	2150	2150	2150
Operating weight	kg	1680	1710	1780	1860	2590	2720

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	0751	0851	0951	0961	1021	1301
Rated cooling duty	kW	134	151	166	197	223	238
ESEER	-	3.54	3.41	3.40	3.69	3.58	3.32
Sound power level	dB(A)	84	84	84	84	86	86
Sound pressure level 10 m	dB(A)	52	52	52	52	54	54

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 screw compressors
- Cooling operation up to -15 °C ambient temperature
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step III
- Unit main switch
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in two different configurations:
GLAC 1542 ... 2642 BA2 as standard unit
GLAC 1542 ... 2642 BA2.SL as especially low noise model



R 134a refrigerant	GLAC	1542	1742	1942	1962	2442	2642
Rated cooling duty	kW	277	329	366	398	466	516
Power consumption	kW	104	121	139	154	179	193
Max. current consumption	A	227	253	287	287	360	398
ESEER	-	3.64	3.57	3.56	3.58	3.61	3.49
Screw compressor	Quantity	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6
Sound power level	dB(A)	97	97	97	97	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	67	67
Length	mm	4610	4610	4610	4610	5610	5610
Width	mm	2222	2222	2222	2222	2222	2222
Height	mm	2150	2420	2420	2420	2430	2430
Operating weight	kg	3490	3680	3810	4100	5140	5340

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	1542	1742	1942	1962	2442	2642
Rated cooling duty	kW	252	296	334	377	443	484
ESEER	-	3.50	3.47	3.46	3.62	3.69	3.52
Sound power level	dB(A)	86	87	87	87	89	89
Sound pressure level 10 m	dB(A)	54	55	55	55	57	57

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 screw compressors
- Standard GLHM hydraulic module with buffer tank and pump are integrated
Pumps with heavy duty pump head are available
- Following pump heads for field-provided remaining pipework by others
- Cooling operation up to -15 °C ambient temperature
- With enclosed water filter
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step III
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in two different configurations:
GLAC 1532 ... 2632 BA2 as standard unit
GLAC 1532 ... 2632 BA2.SL as especially low noise model



R 134a refrigerant	GLAC	1532	1732	1932	1952	2432	2632
Rated cooling duty	kW	277	329	366	398	466	516
Power consumption	kW	107	124	143	158	185	201
Max. current consumption	A	233	259	295	295	371	413
ESEER	-	3.64	3.57	3.56	3.56	3.61	3.49
Screw compressor	Quantity	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6
1 standard pump	Type	M	M	N	N	O	P
Pump head remain. pipework	kPa	124	96	126	111	96	132
Rated volume flow	m³/h	48	57	63	69	80	89
Sound power level	dB(A)	97	97	97	97	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	67	67
Length	mm	4610	4610	4610	4610	5610	5610
Width	mm	2222	2222	2222	2222	2222	2222
Height	mm	2150	2420	2420	2420	2430	2430
Operating weight	kg	4197	4387	4507	4527	6184	6404
including buffer tank with	l	1000	1000	1000	1000	1500	1500

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	1532	1732	1932	1952	2432	2632
Rated cooling duty	kW	252	296	334	377	443	484
ESEER	-	3.50	3.47	3.46	3.62	3.69	3.52
Sound power level	dB(A)	86	87	87	87	89	89
Sound pressure level 10 m	dB(A)	54	55	55	55	57	57

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- High performance configuration with 2 screw compressors
- Cooling operation up to -15 °C ambient temperature
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step III
- Unit main switch
- Master/slave operation
with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in three different configurations:
GLAC 1502 ... 2702 BA2 as standard unit
GLAC 1502 ... 2702 BA2.SL as especially low noise model
GLAC 1502 ... 2702 BA2.HE as high performance model



R 134a refrigerant	GLAC	1502	1702	1902	1922	1972	2022	2602	2652	2702
Rated cooling duty	kW	294	328	364	414	439	480	529	562	598
Power consumption	kW	101	120	134	147	157	160	185	195	208
Max. current consumption	A	227	253	292	292	292	303	396	421	445
ESEER	-	3.86	3.75	3.74	3.85	3.84	3.88	3.76	3.88	3.98
Screw compressor	Quantity	2	2	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6	6	6
Sound power level	dB(A)	98	98	99	99	99	99	99	99	99
Sound pressure level 10 m	dB(A)	66	66	67	67	67	67	67	67	67
Length	mm	4000	4000	4000	4900	4900	4900	4900	4900	4900
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2430	2430	2430	2430	2430	2430	2430	2430	2430
Operating weight	kg	3730	3760	3850	4740	5300	5810	5810	5910	6030

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	1502	1702	1902	1922	1972	2022	2602	2652	2702
Rated cooling duty	kW	275	300	337	389	413	454	486	520	554
ESEER	-	3.85	3.58	3.70	3.83	3.78	3.87	3.60	3.75	3.82
Sound power level	dB(A)	85	85	86	86	86	87	87	87	87
Sound pressure level 10 m	dB(A)	53	53	54	54	54	55	55	55	55

As above, but as .HE model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.HE	1502	1702	1902	1922	1972	2022	2602	2652	2702
Rated cooling duty	kW	304	351	397	433	460	484	545	579	625
ESEER	-	4.35	4.28	4.19	4.24	4.24	4.19	4.15	4.20	4.32
Sound power level	dB(A)	91	91	92	92	92	92	92	93	93
Sound pressure level 10 m	dB(A)	59	59	60	60	60	60	60	61	61

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- High performance configuration with 2 screw compressors
- Cooling operation up to -15 °C ambient temperature
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step III
- Unit main switch
- Master/slave operation with
GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in three different configurations:
GLAC 2712 ... 4822 BA2 as standard unit
GLAC 2712 ... 4822 BA2.SL as especially low noise model
GLAC 2712 ... 4822 BA2.HE as high performance model



R 134a refrigerant	GLAC	2712	2722	3152	3602	3902	4202	4212	4222	4822
Rated cooling duty	kW	625	681	730	785	831	900	968	1033	1157
Power consumption	kW	217	222	260	289	302	321	352	382	384
Max. current consumption	A	451	451	515	579	623	661	678	678	760
ESEER	-	3.89	4.07	3.94	3.94	3.78	3.79	3.78	3.90	4.14
Screw compressor	Quantity	2	2	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6	6	6
Sound power level	dB(A)	101	101	101	101	102	102	103	103	104
Sound pressure level 10 m	dB(A)	69	69	69	69	70	70	71	71	72
Length	mm	5800	5800	5800	5800	7000	7000	9400	9400	9400
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2430	2430	2430	2430	2430	2430	2430	2430	2430
Operating weight	kg	6190	6520	7190	7810	8220	8750	9680	9950	10360

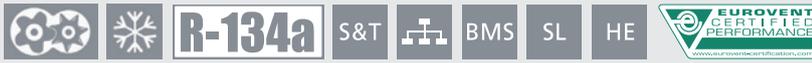
As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	2712	2722	3152	3602	3902	4202	4212	4222	4822
Rated cooling duty	kW	586	638	669	726	768	822	903	963	1088
ESEER	-	3.84	3.96	3.70	3.73	3.61	3.56	3.73	3.81	4.08
Sound power level	dB(A)	88	88	88	88	89	89	90	90	91
Sound pressure level 10 m	dB(A)	56	56	56	56	57	57	58	58	59

As above, but as .HE model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.HE	2712	2722	3152	3602	3902	4202	4212	4802	4822
Rated cooling duty	kW	651	676	764	825	904	941	1019	1062	1167
ESEER	-	4.32	4.32	4.36	4.33	4.24	4.12	4.24	4.41	4.42
Sound power level	dB(A)	93	93	94	94	96	96	96	96	96
Sound pressure level 10 m	dB(A)	61	61	62	62	64	64	64	64	64

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- High performance configuration with 3 or 4 screw compressors
- Cooling operation up to -15 °C ambient temperature
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step III
- Unit main switch
- Master/slave operation with
 GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Supplied in three different configurations:
 GLAC 5403 ... 8404 BA2 as standard unit
 GLAC 5403 ... 8404 BA2.SL as especially low noise model
 GLAC 5403 ... 8404 BA2.HE as high performance model



R 134a refrigerant	GLAC	5403	5423	5703	6903	7203	7223*	8404*
Rated cooling duty	kW	1198	1317	1238	1433	1486	1609	1744
Power consumption	kW	431	486	450	520	536	593	643
Max. current consumption	A	874	874	912	1103	1144	1144	1331
ESEER	-	3.98	3.84	4.09	3.68	3.82	3.79	3.66
Screw compressor	Quantity	3	3	3	3	3	3	4
Circuits	Quantity	3	3	3	3	3	3	4
Speeds	Quantity	6	6	6	6	6	6	8
Sound power level	dB(A)	105	105	105	105	105	105	105
Sound pressure level 10 m	dB(A)	73	73	73	73	73	73	73
Length	mm	10300	10300	10300	11200	11200	11200	11200
Width	mm	2260	2260	2260	2260	2260	2260	2260
Height	mm	2430	2430	2430	2430	2430	2430	2430
Operating weight	kg	12080	12260	12190	12680	12820	12950	16740

As above, but as noise optimized .SL model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.SL	5403	5423	5703	6903	7203	7223	8404*
Rated cooling duty	kW	1092	1230	1142	1308	1359	1512	1590
ESEER	-	3.72	3.66	3.92	3.61	3.60	3.90	3.51
Sound power level	dB(A)	92	92	92	92	92	94	92
Sound pressure level 10 m	dB(A)	62	62	62	62	62	61	62

As above, but as .HE model – unit dimensions and weight data can marginally deviate from the standard version (see above)!

R 134a refrigerant	GLAC.HE	5403	5414	5424
Rated cooling duty	kW	1240	1302	1353
ESEER	-	4.41	4.32	4.31
Sound power level	dB(A)	97	97	97
Sound pressure level 10 m	dB(A)	65	65	65

* These units are not certified by Eurovent

- ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
- Performance data At chilled water 12/7°C and air intake temperature 35°C
- Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
- Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- With 2 scroll compressors
- Autoadaptive microprocessor control
- Controller type: HVAC-Systems-Step II
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



Refrigerant R 410A	GLFC	0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Rated cooling duty	kW	37.4	44.3	53.4	58.7	76.7	90.3	99.2	113.4	129.2	143.9	161.6
Power consumption	kW	15.2	16.4	20.7	23.9	30.1	32.7	37.7	43.3	46.2	54.2	62.9
Max. current consumption	A	37	40	48	53	63	75	84	93	107	120	133
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	87	87	90	90	91	91	92	92	93	93	94
Sound pressure level 10 m	dB(A)	55	55	58	58	59	59	60	60	61	61	62
Length	mm	2200	2200	2602	2602	2602	3602	3602	3602	4602	4602	4602
Width	mm	920	920	1104	1104	1104	1104	1104	1104	1104	1104	1104
Height	mm	1720	1720	2165	2165	2165	2175	2175	2175	2192	2192	2192
Operating weight	kg	670	710	870	880	1060	1310	1340	1410	1650	1680	1740

Performance data with free cooling

Free cooling operation*		0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Performance data without free-cooling mode at 35 °C outdoor temperature												
Cooling duty	kW	41	48	58	64	83	98	108	123	140	156	175
Power consumption	kW	16	17	21	24	31	34	39	45	47	56	65
Performance data with free-cooling mode at 5 °C outdoor temperature												
Cooling duty	kW	31	36	42	44	55	70	72	84	99	102	114
Share of free-cooling duty	%	77	74	73	69	66	71	67	68	70	65	65
Capacity data at 100 % free-cooling mode												
Cooling duty	kW	41	48	58	64	83	98	108	123	140	156	175
Power consumption	kW	1.5	1.5	4.2	4.2	4.2	4.2	4.2	6.3	6.3	6.3	8.4
Air inlet temperature:	°C	2.0	1.6	1.3	0.5	-0.1	0.9	0.0	0.2	0.8	-0.3	-0.3
EER	-	27.0	32.0	13.8	15.0	19.8	23.4	25.7	19.5	22.3	24.8	20.9

Performance data in normal mode with chilled water 12/7°C and air inlet temperature 35°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- With 2 scroll compressors
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step II
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



As above, but as noise-optimized SL model

Refrigerant R 410A	GLFC.SL	0152	0182	0202	0252	0302	352	0412	0452	0512	0552	0612
Rated cooling duty	kW	35.4	43.1	48.5	54.7	72.3	84.2	96.1	105.2	118.4	134.0	154.3
Power consumption	kW	15.3	17.1	20.4	23.3	29.9	34.2	37.7	43.6	48.3	56.1	62.4
Max. current consumption	A	34	40	48	53	63	75	84	93	107	120	133
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	77	78	78	79	80	81	81	82	83	84	85
Sound pressure level 10 m	dB(A)	45	46	46	47	48	49	49	50	51	52	53
Length	mm	2200	2602	2602	2602	3602	3602	4602	4602	4602	4602	4602
Width	mm	920	1104	1104	1104	1104	1104	1104	1104	1104	1277	1277
Height	mm	1720	2165	2165	2165	2175	2175	2192	2192	2192	2497	2497
Operating weight	kg	680	860	920	940	1240	1350	1590	1610	1690	1920	2000

Performance data with free cooling

Free cooling operation*		0152	0182	0202	0252	0302	352	0412	0452	0512	0552	0612
Performance data without free-cooling mode at 35 °C outdoor temperature												
Cooling duty	kW	38	47	53	59	79	92	105	114	128	145	167
Power consumption	kW	16	18	21	24	31	34	39	45	50	58	64
Performance data with free-cooling mode at 5 °C outdoor temperature												
Cooling duty	kW	25	30	34	38	50	59	69	72	80	90	98
Share of free-cooling duty	%	64	63	65	64	63	64	66	63	63	62	59
Capacity data at 100 % free-cooling mode												
Cooling duty	kW	38	47	53	59	79	92	105	114	128	145	167
Power consumption	kW	0.6	1.5	1.5	1.7	1.7	2.6	2.6	2.6	3.4	3.4	4.4
Air inlet temperature:	°C	-0.5	-0.9	-0.5	-0.6	-0.8	-0.6	-0.2	-0.9	-0.9	-1.1	-2.1
EER	-	63.7	31.3	35.0	34.6	46.2	35.2	40.8	43.8	37.6	42.5	37.9

Performance data Performance data in normal mode with chilled water 12/7°C and air inlet temperature 35°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free-cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- With 4 scroll compressors in two refrigerating circuits
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step II
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 410a refrigerant	GLFC	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	153.7	179.0	202.5	231.9	253.9	291.0	326.3
Power consumption	kW	60.0	66.2	77.6	84.2	94.4	107.0	124.3
Max. current consumption	A	127	151	167	187	206	232	266
Scroll compressor	Quantity	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4
Sound power level	dB(A)	93	93	94	94	94	95	96
Sound pressure level 10 m	dB(A)	61	61	62	62	62	63	64
Length	mm	4110	4110	4110	5110	5110	5110	5110
Width	mm	2220	2220	2220	2220	2220	2220	2220
Height	mm	2150	2150	2150	2180	2180	2430	2430
Operating weight	kg	2200	2330	2510	2880	2940	3260	3400

Performance data with free cooling

Free cooling*		0604	0704	0804	0904	1004	1104	1204
Performance data without free-cooling mode at 35 °C outdoor temperature								
Cooling duty	kW	167	195	221	252	275	316	354
Power consumption	kW	62	68	80	86	97	110	128
Performance data with free-cooling mode at 5 °C outdoor temperature								
Cooling duty	kW	129	135	156	193	199	227	254
Share of free-cooling duty	%	77	69	71	77	72	72	72
Capacity data at 100 % free-cooling mode								
Cooling duty	kW	167	195	221	252	275	316	354
Power consumption	kW	8.4	8.4	12.6	12.6	12.6	12.6	12.6
Air inlet temperature:	°C	2.0	0.5	0.9	1.9	1.2	1.1	1.0
EER	-	19.9	23.2	17.5	20.0	21.8	25.0	21.1

Performance data Performance data in normal mode with chilled water 12/7°C and air inlet temperature 35°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free-cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- With 4 scroll compressors in two refrigerating circuits
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step II
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



As above, but as noise-optimized SL model

Refrigerant R 410A	GLFC.SL	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	142.5	165.4	184.8	208.8	236.1	269.7	302.5
Power consumption	kW	61.0	70.0	79.2	88.0	95.4	109.7	125.9
Max. current consumption	A	127	151	167	187	206	232	266
Scroll compressor	Quantity	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4
Sound power level	dB(A)	82	83	83	84	84	85	86
Sound pressure level 10 m	dB(A)	50	51	51	52	52	53	54
Length	mm	4110	4110	4110	5110	5110	5110	5110
Width	mm	2220	2220	2220	2220	2220	2220	2220
Height	mm	2150	2150	2150	2180	2180	2430	2430
Operating weight	kg	2280	2410	2580	2880	3040	3380	3520

Performance data with free cooling

Free cooling*		0604	0704	0804	0904	1004	1104	1204
Performance data without free-cooling mode at 35 °C outdoor temperature								
Cooling duty	kW	155	180	201	226	255	291	326
Power consumption	kW	63	73	82	91	98	113	130
Performance data with free-cooling mode at 5 °C outdoor temperature								
Cooling duty	kW	97	112	115	140	148	166	188
Share of free-cooling duty	%	63	62	57	62	58	57	58
Capacity data at 100 % free-cooling mode								
Cooling duty	kW	155	180	201	226	255	291	326
Power consumption	kW	3.4	5.2	5.2	5.2	5.2	5.2	6.9
Air inlet temperature:	°C	-1.0	-1.0	-2.5	-1.1	-2.2	-2.5	-2.4
EER		45.5	34.6	38.7	43.5	49.0	56.0	47.3

Performance data Performance data in normal mode with chilled water 12/7°C and air inlet temperature 35°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free-cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step III
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLFC	2150	2170	2190	2192	2202	2260	2270	2272	2360	2420	2421	2422	2482
Rated cooling duty	kW	300.8	337.9	381.2	417.5	462.6	530.5	584.6	655.6	788.2	910.0	986.4	1034.9	1133.1
Power consumption	kW	99.7	116.6	130.5	142.0	162.4	183.0	210.7	212.9	286.1	318.1	323.5	341.5	380.3
Max. current consumption	A	240	260	301	301	312	413	462	469	605	696	711	711	793
Screw compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6	6	6	6	6	6	6
Sound power level	dB(A)	99	99	99	99	99	101	101	102	102	103	105	105	105
Sound pressure level 10 m	dB(A)	67	67	67	67	67	69	69	69	69	70	72	72	72
Length	mm	4000	4000	4900	4900	4900	5800	5800	7000	7900	10000	11800	11800	11800
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	kg	4810	4810	5310	5630	6590	7170	7190	7940	9670	11500	12530	12600	12660

Performance data with free cooling

Free cooling*		2150	2170	2190	2192	2202	2260	2270	2272	2360	2420	2421	2422	2482
Performance data without free-cooling mode at 30 °C outdoor temperature														
Cooling duty	kW	329	369	416	453	502	579	636	711	858	994	1076	1126	1229
Power consumption	kW	104	121	136	147	169	191	221	221	298	333	337	355	395
Performance data with free-cooling mode at 5 °C outdoor temperature														
Cooling duty	kW	248	258	315	327	336	403	411	492	571	668	784	796	817
Share of free-cooling duty	%	75	70	76	72	67	70	65	69	67	67	73	71	67
Capacity data at 100 % free-cooling mode														
Cooling duty	kW	329	369	416	453	502	579	636	711	858	994	1076	1126	1229
Power consumption	kW	16.8	16.8	21.0	21.0	21.0	25.2	25.2	29.4	33.6	42.0	50.4	50.4	50.4
Air inlet temperature:	°C	1.7	0.7	1.8	1.1	0.1	0.6	-0.5	0.6	0.0	0.1	1.3	0.9	0.0
EER	-	19.6	22.0	19.8	21.6	23.9	23.0	25.2	24.2	25.5	23.7	21.4	22.3	24.4

Performance data Performance data in normal mode with chilled water 12/7°C and air inlet temperature 30°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free-cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Unit with a free-cooling function with high energy-saving potential
- Starting from 1 °C temperature difference between outdoor air and water - free cooling mode is activated
- 3-way valve for optimization of water ways and efficiency
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step III
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



As above, but as noise-optimized SL model

R 134a refrigerant	GLFC	2150	2170	2190	2192	2202	2260	2270	2272	2360	2420	2421	2422	2482
Rated cooling duty	kW	288	320	365	402	463	503	551	632	745	860	947	995	1085
Power consumption	kW	97.8	116.6	128.6	143.7	155.4	184.1	217.4	219.2	294.3	321.6	323.1	346.5	394.5
Max. current consumption	A	240	260	301	301	320	413	462	469	605	696	711	711	793
Screw compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6	6	6	6	6	6	6
Sound power level	dB(A)	92	92	92	92	94	94	94	95	95	95	97	97	97
Sound pressure level 10 m	dB(A)	60	60	60	60	62	62	62	62	62	62	64	64	64
Length	mm	4000	4000	4900	4900	4900	5800	5800	7000	7900	10000	11800	11800	11800
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	kg	4900	4900	5390	5710	7240	7260	7280	8050	9790	11660	12710	12780	12840

Performance data with free cooling

Free cooling*		2150	2170	2190	2192	2202	2260	2270	2272	2360	2420	2421	2422	2482
Performance data without free-cooling mode at 30 °C outdoor temperature														
Cooling duty	kW	315	348	398	435	503	548	597	683	808	936	1030	1080	1171
Power consumption	kW	102	122	135	150	162	194	230	229	309	339	338	362	413
Performance data with free-cooling mode at 5 °C outdoor temperature														
Cooling duty	kW	215	224	274	285	339	349	359	431	499	582	682	695	713
Share of free-cooling duty	%	68	64	69	65	67	64	60	63	62	62	66	64	61
Capacity data at 100 % free-cooling mode														
Cooling duty	kW	315	348	398	435	503	548	597	683	808	936	1030	1080	1171
Power consumption	kW	9.6	9.6	12.0	12.0	14.4	14.4	14.4	16.8	19.2	24.0	28.8	28.8	28.8
Air inlet temperature:	°C	0.4	-0.5	0.5	-0.3	0.2	-0.7	-1.6	-0.8	-1.2	-1.1	-0.1	-0.5	-1.4
EER	-	32.8	36.2	33.2	36.3	34.9	38.0	41.4	40.7	42.1	39.0	35.8	37.5	40.7

Performance data Performance data in normal mode with chilled water 12/7°C and air inlet temperature 30°C with 30 % ethylene glycol
 * Free-cooling operation Performance data in optimized conditions with chilled water free-cooling 15/10 with 30 % ethylene glycol
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 or 4 scroll compressors
2-circuit system
- Cooling operation up to -15 °C ambient temperature
- Controls by others
- Unit main switch
- Recommended accessories:
refrigeration-related accessory items GLZCU... R06
(expansion valve, solenoid valve, filter drier
and sight glass, to be mounted for each circuit by others on site)



R 407C refrigerant	GLCU	0152	0182	0202	0252	0302	0412	0512	0524	0604
Rated cooling duty	kW	40.3	50.4	58.5	71.1	85.2	120.2	148.0	150.8	171.1
Power consumption	kW	14.8	18.2	20.7	25.9	30.2	40.4	48.9	56	66
Max. current consumption	A	31	41	47	60	65	88	105	115	129
ESEER	-	-	-	-	-	-	-	-	-	-
Screw compressor	Quantity	2	2	2	2	2	2	2	4	4
Circuits	Quantity	2	2	2	2	2	2	2	2	2
Speeds	Quantity	2	2	2	2	2	2	2	4	4
Sound power level	dB(A)	78	79	79	81	81	85	85	94	94
Sound pressure level 10 m	dB(A)	46	47	47	49	49	53	53	62	62
Length	mm	1695	2195	2195	2745	2745	3245	3245	3110	3110
Width	mm	1120	1120	1120	1120	1120	1120	1120	2220	2220
Height	mm	1420	1420	1420	1420	1420	1620	1620	1700	1700
Operating weight	kg	540	590	620	680	730	990	1050	1620	1700

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At evaporation temperature 7 °C and air inlet temperature 35 °C
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!

PR-2011-0102-GB - Subject to modifications - K3-01/2012



- Optimized compact model with 1 scroll compressor
- Standard pump module comprises safety valve, expansion tank, pressure gauge, air vent and fill connection
- Following pump heads for field-provided pipework by others
- Second pump for increasing pump head is optional for model sizes 0041 - 0061
- Buffer tank to be mounted below the unit is optional
- Cooling operation up to -10 °C air inlet temperature
- Condensing pressure regulated fan with speed control
- Centrifugal fan for pressure side duct connection
- Autoadaptive microprocessor control
- Supplied as two different models:
GSDC 0011 ... 0041 FD5 with 230 V supply voltage
GSDC 0021 0061 FD1 with 400 V supply voltage



Supply voltage	1 ~ 230 volt (FD5 series)						3 ~ 400 volt (FD1 series)					
Refrigerant R 410A	GSDC	0011	0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Rated cooling duty	kW	4.9	5.6	6.9	8.6	11.0	5.6	7.0	8.7	11.4	13.2	15.4
Max. external pressure	Pa	200	100	200	80	80	100	200	80	80	80	70
Power consumption	kW	2.5	2.6	3.1	4	5.2	2.6	3	3.7	5.3	5.8	6.4
Max. current consumption	A	20.3	20.3	23.3	27.3	31.3	9.8	10.3	12.3	14.3	16.1	19.3
ESEER	-	2.24	2.48	2.68	2.60	2.39	2.54	2.76	2.70	2.48	2.53	2.78
Scroll compressor	Quantity	1	1	1	1	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	1	1	1	1	1	1	1	1	1	1	1
Pump												
Pump head remain. pipework	kPa	59	57	54	54	43	57	54	54	40	33	30
Rated volume flow	m³/h	0.8	1.0	1.2	1.5	1.9	1.0	1.2	1.5	2.0	2.3	2.7
Sound power level	dB(A)	68	68	68	68	71	68	68	68	71	71	71
Sound pressure level 10 m	dB(A)	36	36	36	36	39	36	36	36	39	39	39
Length	mm	900	900	900	900	900	900	900	900	900	900	900
Width	mm	580	580	580	580	580	580	580	580	580	580	630
Height	mm	640	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	kg	110	115	130	135	180	115	130	135	180	200	210

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level Requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Optimized for space-saving configuration with 1 scroll compressor
- External buffer tank and pump are optional (hydraulic module GHM) additionally fitted with a safety valve, expansion tank, air vent and fill connection
- Cooling operation up to -10 °C air inlet temperature
- Microprocessor control
- Controller type: μ-Chiller 2SE
- Configuration with a centrifugal fan
- Pressure and suction side duct connection



R 407C refrigerant	GDC	005	008	010
Rated cooling duty	kW	11.6	18.4	23.8
Max. external pressure	Pa	100	150	150
Power consumption	kW	5.3	7.8	9.9
Max. current consumption	A	17	21	26
ESEER	-	2.74	2.81	2.52
Scroll compressor	Quantity	1	1	1
Circuits	Quantity	1	1	1
Speeds	Quantity	1	1	1
Sound power level	dB(A)	63	66	67
Sound pressure level 10 m	dB(A)	31	34	35
Length	mm	856	1180	1330
Width	mm	630	630	630
Height	mm	1345	1290	1395
Operating weight	kg	166	228	266

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At evaporation temperature 7°C and air inlet temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 or 4 scroll compressors
- Pump module is optional (hydraulic module GLPE) additionally fitted with a safety valve, air vent and fill connection
- Cooling operation up to -10 °C air inlet temperature
- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step I (0152-0612)
HVAC Systems-Step II (0604-1204)
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface
- Configuration with a centrifugal fan
- Pressure and suction side duct connection



Refrigerant R 410A	GLDC	0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Rated cooling duty	kW	37.1	43.0	50.5	57.0	74.8	86.4	97.9	108.8	120.9	137.7	158.7
Max. external pressure	Pa	480	380	370	370	230	420	410	310	300	340	310
Power consumption	kW	15.7	18.3	20.6	23.2	30.4	36.8	40.7	46.8	51.5	58.3	67.2
Max. current consumption	A	38	40	48	52	66	81	89	99	108	122	143
ESEER	-	4.61	4.30	4.46	4.35	4.18	3.86	3.88	3.73	3.74	4.17	3.94
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	85	88	88	88	90	95	95	96	96	96	98
Sound pressure level 10 m	dB(A)	53	56	56	56	58	63	63	64	64	64	66
Length	mm	2200	2200	2200	2200	2200	2602	2602	2602	2602	3602	3602
Width	mm	920	920	920	920	920	1104	1104	1104	1104	1104	1104
Height	mm	1642	1642	1642	1642	1642	1927	1927	1927	1927	1927	1927
Operating weight	kg	680	680	710	730	890	1130	1180	1220	1270	1460	1460

As above, but standard configuration with 4 scroll compressors

Refrigerant R 410A	GLDC	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	151.6	171.8	194.8	221.7	243.9	281.3	312.2
Max. external pressure		390	280	320	400	310	270	300
Power consumption	kW	62.5	73.1	83.5	89.6	101.6	115	133.2
Max. current consumption	A	139	156	181	201	220	246	282
ESEER	-	3.86	3.72	3.61	3.97	3.77	3.88	3.74
Scroll compressor	Quantity	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4
Sound power level	dB(A)	97	98	99	98	99	99	100
Sound pressure level 10 m	dB(A)	65	66	67	66	67	67	68
Length	mm	3602	3602	4602	4602	4602	4602	5602
Width	mm	1277	1277	1277	1277	1277	1277	1277
Height	mm	1900	1900	2235	2235	2235	2235	2235
Operating weight	kg	1855	1950	2320	2455	2525	2705	2895

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and air intake temperature 35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Space-saving configuration with 1 or 2 scroll compressors
- Condenser by others, air or water cooled
- External buffer tank and pump are optional (hydraulic module GHM) additionally fitted with a safety valve, expansion tank, air vent and fill connection
- Water filter with two shut off cocks, flow switches and one enclosed air vent are included in the delivery
- Microprocessor control
- Unit main switch
- Controller type: μ -Chiller 2SE



R 407C refrigerant	GRC	005	008	010	012	016	020	024
Rated cooling duty	kW	12.1	20.0	26.8	31.2	40.0	53.7	62.4
Power consumption	kW	4.2	6.7	8.7	10.2	13.5	18.0	20.5
Max. current consumption	A	8	14	18	20	28	36	40
ESEER	-	-	-	-	-	-	-	-
Scroll compressor	Quantity	1	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	2	2	2
Speeds	Quantity	1	1	1	1	2	2	2
Sound power level	dB(A)	64	64	64	71	67	67	74
Sound pressure level 10 m	dB(A)	32	32	32	39	35	35	42
Length	mm	600	600	600	600	1200	1200	1200
Width	mm	600	600	600	600	600	600	600
Height	mm	600	600	600	600	600	600	600
Operating weight	kg	104	138	144	149	252	265	274

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and condensing temperature 45°C, subcooling 5 K
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 or 4 scroll compressors
- Condenser by others, air or water cooled
- Pump module is optional (hydraulic module GLPE)
additionally fitted with a safety valve, air vent and fill connection
Unit dimensions change if a pump module is used
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step I (2015-2061)
HVAC Systems-Step II (4060-4160)
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



Refrigerant R 410A	GLRC	2015	2018	2020	2025	2026	2030	2035	2041	2045	2051	2055	2061
Rated cooling duty	kW	41	47	55	62	69	82	95	107	120	135	154	174
Power consumption	kW	11.5	12.9	15.0	17.3	19.1	22.5	25.8	29.1	32.6	36.1	41.5	47.0
Max. current consumption	A	31	33	41	45	51	61	67	72	82	92	105	118
ESEER	-	-	-	-	-	-	-	-	-	-	-	-	-
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	73	74	74	74	75	76	77	77	78	78	79	79
Sound pressure level 10 m	dB(A)	41	42	42	42	43	44	45	45	46	46	47	47
Length	mm	1130	1130	1130	1130	1130	1310	1310	1310	1310	1310	1310	1310
Width	mm	669	669	669	669	669	893	893	893	893	893	893	893
Height	mm	1255	1255	1255	1255	1255	1496	1496	1496	1496	1496	1496	1496
Operating weight	kg	270	280	290	295	300	410	500	585	615	645	680	700

As above, but standard configuration with 4 scroll compressors

Refrigerant R 410A	GLRC	4060	4070	4080	4090	4100	4110	4120	4140	4160
Rated cooling duty	kW	165	190	213	241	270	308	348	396	442
Power consumption	kW	45.0	51.6	58.1	65.2	72.2	83.0	93.9	106.6	119.2
Max. current consumption	A	122	133	144	164	183	209	236	265	294
ESEER	-	-	-	-	-	-	-	-	-	-
Scroll compressor	Quantity	4	4	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4	4	4
Sound power level	dB(A)	86	87	88	89	90	91	91	91	91
Sound pressure level 10 m	dB(A)	54	55	56	57	58	59	59	59	59
Length	mm	2227	2227	2227	2227	2227	2227	2227	2227	2227
Width	mm	1020	1020	1020	1020	1020	1020	1020	1020	1020
Height	mm	1780	1780	1780	1780	1780	1780	1780	1780	1780
Operating weight	kg	755	950	1125	1185	1250	1330	1370	1430	1480

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and condensing temperature 45°C
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Space-saving configuration with 1 or 2 scroll compressors
- External buffer tank and pump are optional (hydraulic module GHM) additionally fitted with a safety valve, expansion tank, air vent and fill connection
- Water filter with two shut off cocks, flow switches and one enclosed air vent are included in the delivery
- Microprocessor control
- Unit main switch
- Controller type: μ -Chiller 25E



R 407C refrigerant	GWC	005	008	010	012	016	020	024
Rated cooling duty	kW	13.0	21.5	28.0	32.5	43.0	56.0	65.0
Power consumption	kW	3.7	6.0	7.8	9.1	12.1	16.0	18.3
Max. current consumption	A	8	14	18	20	28	36	40
ESEER	-	-	-	-	-	-	-	-
Scroll compressor	Quantity	1	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	2	2	2
Speeds	Quantity	1	1	1	1	2	2	2
Sound power level	dB(A)	64	64	64	71	67	67	74
Sound pressure level 10 m	dB(A)	32	32	32	39	35	35	42
Length	mm	600	600	600	600	1200	1200	1200
Width	mm	600	600	600	600	600	600	600
Height	mm	600	600	600	600	600	600	600
Operating weight	kg	113	150	160	167	300	320	334

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water 30/35°C
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 or 4 scroll compressors
- Pump module is optional (hydraulic module GLPE/GLPC) additionally fitted with a safety valve, expansion tank, pressure gauge, air vent and fill connection
Unit dimensions change if a pump module is used
- Autoadaptive microprocessor control
- Unit main switch
Control type: HVAC Systems Step I (0152-0612)
HVAC Systems-Step II (0604-1204)
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



Refrigerant R 410A	GLWC	0152	0182	0202	0252	0262	0302	0352	0412	0452	0512	0552	0612
Rated cooling duty	kW	43.4	50.1	58.9	66.4	72.6	86.7	101.2	114.7	128.6	143.5	164.9	186.3
Power consumption	kW	10	11.3	13	15.2	16.6	19.5	22.7	25.9	28.9	32.2	36.9	41.6
Max. current consumption	A	31	33	41	45	51	56	64	72	82	92	105	118
ESEER	-	5.81	5.98	6.01	5.69	5.59	5.66	5.80	5.71	5.80	5.78	5.93	5.79
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	73	74	74	74	75	76	77	77	78	78	79	79
Sound pressure level 10 m	dB(A)	41	42	42	42	43	44	45	45	46	46	47	47
Length	mm	1055	1055	1055	1055	1055	1222	1222	1222	1222	1222	1222	1222
Width	mm	649	649	649	649	649	873	873	873	873	873	873	873
Height	mm	1255	1255	1255	1255	1255	1496	1496	1496	1496	1496	1496	1496
Operating weight	kg	280	295	300	310	315	565	605	635	675	715	765	795

As above, but standard configuration with 4 scroll compressors

Refrigerant R 410A	GLWC	0604	0704	0804	0904	1004	1104	1204
Rated cooling duty	kW	174	203	228	258	288	329	371
Power consumption	kW	39	45	52	58	64	74	84
Max. current consumption	A	112	128	144	164	183	209	236
ESEER	-	5.79	5.92	5.82	5.93	5.93	5.99	5.89
Scroll compressor	Quantity	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4
Sound power level	dB(A)	86	87	88	89	90	91	91
Sound pressure level 10 m	dB(A)	54	55	56	57	58	59	59
Length	mm	2227	2227	2227	2227	2227	2227	2227
Width	mm	877	877	877	877	877	877	877
Height	mm	1780	1780	1780	1780	1780	1780	1780
Operating weight	kg	1055	1130	1190	1270	1355	1450	1510

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water 30/35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 1 or 2 screw compressors
- Control cabinet on the long side
- Pump control as an option
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWC	0401	0501	0551	0651	0751	0851	0951
Rated cooling duty	kW	87	107	130	147	165	198	221
Power consumption	kW	20	25	28	33	37	43	50
Max. current consumption	A	55	67	80	92	105	115	132
ESEER	-	5.15	5.32	5.25	5.29	5.40	5.54	5.42
Screw compressor	Quantity	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1
Speeds	Quantity	3	3	3	3	3	3	3
Sound power level	dB(A)	91	92	94	94	94	94	94
Sound pressure level 10 m	dB(A)	59	60	62	62	62	62	62
Length	mm	2300	2500	2500	2500	2500	3200	3200
Width	mm	1000	1000	1000	1000	1000	1000	1000
Height	mm	1500	1500	1500	1500	1500	1500	1500
Operating weight	kg	800	840	1160	1180	1190	1270	1350

As above, but standard configuration with 2 screw compressors

R 134a refrigerant	GLWC	0802	1002	1102	1302	1502	1702	1902
Rated cooling duty	kW	178	217	251	298	340	393	447
Power consumption	kW	39	49	56	66	75	85	100
Max. current consumption	A	111	134	161	183	210	230	264
ESEER	-	5.39	5.52	5.24	5.49	5.67	5.70	5.61
Screw compressor	Quantity	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6
Sound power level	dB(A)	94	95	97	97	97	97	97
Sound pressure level 10 m	dB(A)	62	63	65	65	65	65	65
Length	mm	3200	3200	3200	3500	3500	3500	3500
Width	mm	1200	1200	1200	1200	1200	1200	1200
Height	mm	1500	1500	1500	1800	1800	1800	1800
Operating weight	kg	1470	1490	1930	2220	2260	2320	2720

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water 30/35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 1 or 4 screw compressors
- Control cabinet on the front side
- Pump control as an option
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWC	1130	1140	1160	1180	1210	1240	1270	2280	1300	2320	2360	2420
Rated cooling duty	kW	306	348	422	477	538	607	675	694	746	844	957	1071
Power consumption	kW	60.5	68.7	83.4	94.4	106.0	120.0	133.0	137.0	148.0	167.0	189.0	212.0
Max. current consumption	A	147	168	197	223	247	286	318	336	351	394	446	494
ESEER	-	5.94	5.95	5.73	5.84	5.94	5.92	5.79	5.94	5.91	5.87	6.14	6.08
Screw compressor	Quantity	1	1	1	1	1	1	1	2	1	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	2	1	2	2	2
Speeds	Quantity	25 %-stageless											
Sound power level	dB(A)	97	97	97	97	97	97	99	99	99	99	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	65	65	67	67	67	67	67	67
Length	mm	3830	3830	3860	3860	3860	3860	3930	4200	3930	4750	4750	4750
Width	mm	900	900	900	900	900	900	900	1150	900	1150	1150	1150
Height	mm	1700	1700	1840	1840	1840	1840	1990	2050	1990	2050	2050	2050
Operating weight	kg	2050	2110	2590	2810	2910	2970	3510	4120	3600	5110	5400	6070

As above, but standard configuration with 4 screw compressors

R 134a refrigerant	GLWC	2450	2480	2540	2600	3630*	3660*	3720*	3780*	3810*	3900*	4900*	4960*	
Rated cooling duty	kW	1145	1213	1348	1490	1604	1677	1815	1967	2024	2236	2278	2416	
Power consumption	kW	226	240	267	295	317	331	359	389	400	442	451	478	
Max. current consumption	A	533	572	636	702	741	780	858	922	954	1053	1066	1144	
ESEER	-	6.23	6.17	6.00	6.09	6.14	6.24	6.18	6.11	6.09	6.14	6.23	6.17	
Screw compressor	Quantity	2	2	2	2	3	3	3	3	3	3	4	4	
Circuits	Quantity	2	2	2	2	3	3	3	3	3	3	4	4	
Speeds	Quantity	25 %-stageless					17 %-stageless					12.5 %-stageless		
Sound power level	dB(A)	99	99	101	101	102	102	102	102	102	102	102	102	
Sound pressure level 10 m	dB(A)	67	67	69	69	70	70	70	70	70	70	70	70	
Length	mm	4750	4750	4850	4850	4950	4950	4950	4950	4950	4950	4650	4650	
Width	mm	1150	1150	1150	1150	1700	1700	1700	1700	1700	1700	2250	2250	
Height	mm	2200	2200	2200	2200	2150	2150	2150	2150	2150	2150	2230	2230	
Operating weight	kg	6120	6180	6950	7090	8980	9050	9120	9950	10170	10350	14330	14390	

* These units are not certified by Eurovent

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water 30/35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- HE configuration with 1 or 2 screw compressors
- Control cabinet on the front side
- Pump control is option
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWC.HE	1130	1140	1160	1180	1210	1240	2280	2320	2360	2420	2480
Rated cooling duty	kW	321	365	442	506	574	649	729	884	1012	1147	1299
Power consumption	kW	57.3	65.1	79.1	90.3	102.6	116.1	130.3	158.1	180.4	205.1	232.3
Max. current consumption	A	147	168	197	223	247	286	336	394	446	494	572
ESEER	-	6.49	6.50	6.30	6.40	6.37	6.40	6.66	6.57	6.73	6.64	6.66
Screw compressor	Quantity	1	1	1	1	1	1	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	2	2	2	2	2
Speeds	Quantity	25 %-stageless										
Sound power level	dB(A)	97	97	97	97	97	97	99	99	99	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	65	65	67	67	67	67	67
Length	mm	4300	4300	4000	4000	4000	4300	4600	4950	5220	4920	4920
Width	mm	900	900	900	900	900	900	1150	1150	1150	1150	1150
Height	mm	1950	1950	2000	2000	2000	2100	2195	2195	2195	2350	2430
Operating weight	kg	2460	2750	3560	3720	3760	4180	5360	6410	6870	7850	8470

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water 30/35°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Optimized compact model with 1 scroll compressor
- Heat pump switch with a 4-way valve
- Standard pump module comprises safety valve, expansion tank, pressure gauge, air vent and fill connection
- Following pump heads for field-provided pipework by others
- Second pump for increasing pump head is optional for model sizes 0041 - 0061
- Buffer tank to be mounted below the unit is optional
- Cooling operation up to -10 °C air inlet temperature
Heating operation up to -7°C air inlet temperature
- Condensing pressure is used to regulate fan speed
- Autoadaptive microprocessor control
- Supplied as two different models:
GSAH 0011 ... 0041 FD5 with 230 V supply voltage
GSAH 0011 ... 0061 FD1 with 400 V supply voltage



Supply voltage		1 ~ 230 volt (FD5 series)					3 ~ 400 volt (FD1 series)					
Refrigerant R 410A	GSAH	0011	0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Rated heating duty	kW	5.7	6.4	8.1	10.0	12.4	6.4	8.0	9.7	12.8	14.4	16.8
Rated cooling duty	kW	4.6	5.4	6.6	8.2	10.4	5.3	6.7	8.2	10.8	12.6	14.6
Power consumption*	kW	2.3	2.4	2.9	3.6	4.5	2.4	2.7	3.2	4.7	5.0	5.4
Max. current consumption	A	17.6	17.6	20.6	24.6	28.6	7.1	7.6	9.6	11.6	13.4	16.6
ESEER	-	2.96	3.19	3.16	3.01	3.01	3.21	3.41	3.17	3.13	3.08	3.33
Scroll compressor	Quantity	1	1	1	1	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	1	1	1	1	1	1	1	1	1	1	1
Pump												
Pump head remain. pipework	kPa	59	57	54	54	43	57	54	54	40	33	30
Rated volume flow	m³/h	0.8	1.0	1.2	1.5	1.9	1.0	1.2	1.5	2.0	2.3	2.7
Sound power level	dB(A)	65	66	66	66	69	66	66	66	69	69	69
Sound pressure level 10 m	dB(A)	33	34	34	34	37	34	34	34	37	37	37
Length	mm	900	900	900	900	900	900	900	900	900	900	900
Width	mm	370	370	370	370	370	370	370	370	370	370	420
Height	mm	640	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	kg	90	95	110	115	140	95	110	115	140	160	170

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 40/45°C and air intake temperature 7°C
 At chilled water 12/7°C and air intake temperature 35°C * in heating mode
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Optimized for space-saving configuration with 1 ... 2 scroll compressors
- Heat pump switch with a 4-way valve
- Cooling operation up to -15 °C air inlet temperature
Heating operation up to -10°C air inlet temperature
- Microprocessor control
- Controller type: μ-Chiller 2SE
- Unit main switch
- Water filter and two enclosed shut off cocks
- Fitted flow switch
- Supplied in three different configurations:
GAHN - without hydraulic unit
GAHP - with pump module, regulating valve, safety valve, expansion tank
GAHB - buffer tank, pump module, regulating valve, safety valve, expansion tank



GAHN	without pump – without buffer tank
GAHP	with pump
GAHB	with pump – with buffer tank

R 407C refrigerant	GAH_	005	008	010	012	016	020	024
Rated heating duty	kW	11.9	18.5	24.0	27.0	37.0	46.0	54.0
Rated cooling duty	kW	9.1	17.1	21.0	25.0	34.2	40.0	50.0
Power consumption*	kW	4.6	7.1	9.1	10.8	14.2	17.4	21.6
Max. current consumption	A	11	17	20	27	34	40	54
ESEER	-	-	-	-	-	-	-	-
Scroll compressor	Quantity	1	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	2	2	2
Speeds	Quantity	1	1	1	1	2	2	2
Sound power level	dB(A)	67	76	78	78	79	81	81
Sound pressure level 10 m	dB(A)	35	44	46	46	47	49	49
Length	mm	1290	1290	1290	1290	2580	2580	2580
Width	mm	734	734	734	734	734	734	734
Height	mm	1230	1230	1450	1450	1321	1541	1541
GAHN without pump – without buffer tank								
Operating weight	kg	165	230	261	261	461	522	522
GAHP with pump								
Operating weight	kg	184	244	275	275	482	544	544
GAHB with pump – with buffer tank								
Operating weight	kg	252	312	343	343	550	612	612

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 40/45°C and air intake temperature 7°C
 At chilled water 12/7°C and air intake temperature 35°C * in heating mode
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 scroll compressors
- Heat pump switch with a 4-way valve

- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a flow switch, regulating valve, safety valve, expansion tank, air vent and fill connection
- Cooling operation to -15 °C ambient temperature
Heating operation to -5 °C ambient temperature
Heating operation to -10 °C ambient temperature with LT model
- With fitted water filter
- Autoadaptive microprocessor control
- Controller type: HVAC Systems Step I
Controller type: HVAC Systems Step II for LT unit

- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface

- Supplied in two different configurations:
GLAH 0152 ... 0612 BD1 as standard unit
GLAH 0152 ... 0512 BD1.LT as especially low noise model and with extended operating limits in heat pump mode



Refrigerant R 410A	GLAH	0152	0182	0202	0252	0302	0352	0412	0452	0512	0552	0612
Rated heating duty	kW	43	48	54	65	81	93	105	121	136	157	173
Rated cooling duty	kW	38	43	48	58	73	83	94	107	120	138	151
Power consumption*	kW	14	16	18	21	26	30	34	38	42	48	54
Max. current consumption	A	35	37	45	52	62	71	81	91	103	116	129
ESEER	-	4.04	4.08	4.03	4.00	3.95	4.06	3.92	4.09	4.04	4.18	3.99
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	84	84	84	84	85	86	86	86	87	87	87
Sound pressure level 10 m	dB(A)	52	52	52	52	53	54	54	54	55	55	55
Length	mm	1695	1695	1695	2195	2195	2195	2745	2745	3245	3245	3245
Width	mm	1120	1120	1120	1120	1120	1120	1120	1120	1120	1120	1120
Height	mm	1420	1420	1420	1420	1420	1420	1420	1420	1620	1620	1620
Operating weight	kg	450	460	470	560	690	750	840	910	1030	1090	1100

As above, but as temperature and noise optimized model
– unit dimensions and weight data can marginally deviate from the standard version (see above)!
with cooling operation to -15 °C, heating operation to -10 °C outdoor temperature, .LT configuration

Refrigerant R 410A	GLAH.LT	0152	0182	0202	0252	0302	0352	0412	0452	0512
Rated heating duty	kW	42	48	54	64	84	96	109	121	137
Rated cooling duty	kW	36	42	48	55	73	84	94	103	119
ESEER	-	4.09	4.16	4.03	4.02	4.08	3.96	3.94	3.93	3.99
Sound power level	dB(A)	79	79	80	80	81	83	83	83	84
Sound pressure level 10 m	dB(A)	47	47	48	48	49	51	51	51	52

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
Performance data At chilled water 40/45°C and air intake temperature 7°C
At chilled water 12/7°C and air intake temperature 35°C * in heating mode
Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 4 scroll compressors
- Heat pump switch with a 4-way valve

- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a regulating valve, safety valve, expansion tank, air vent and fill connection

- Cooling operation to -15 °C ambient temperature
Heating operation to -5 °C ambient temperature
Heating operation to -10 °C ambient temperature with LT model

- With fitted water filter
- Autoadaptive microprocessor control
- Controller type: HVAC Systems Step II
- Unit main switch
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface

- Supplied in two different configurations:
GLAH 0524 ... 1204 BD2 as standard unit
GLAH 0524 ... 1204 BD2.LT as especially low noise model and with extended operating limits in heat pump mode



Refrigerant R 410A	GLAH	0524	0604	0704	0804	0904	1004	1104	1204
Rated heating duty	kW	145	167	185	209	234	266	306	344
Rated cooling duty	kW	129	147	166	189	211	240	277	311
Power consumption*	kW	53	58	65	72	80	92	104	116
Max. current consumption	A	116	127	143	160	179	206	232	258
ESEER	-	3.39	3.57	3.64	3.80	3.88	3.68	3.84	3.93
Scroll compressor	Quantity	4	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4	4
Sound power level	dB(A)	92	92	92	92	93	94	95	95
Sound pressure level 10 m	dB(A)	60	60	60	60	61	62	63	63
Length	mm	3110	3110	3110	3110	4110	4110	4110	4110
Width	mm	2220	2220	2220	2220	2220	2220	2220	2220
Height	mm	1700	1700	2150	2150	2150	2150	2150	2150
Operating weight	kg	1570	1750	1900	2080	2270	2410	2540	2700

As above, but as a temperature optimized model
– unit dimensions and weight data can marginally deviate from the standard version (see above)!
with cooling operation up to -15 °C, heating operation up to -10 °C outdoor temperature, .LT configuration

Refrigerant R 410A	GLAH.LT	0524	0604	0704	0804	0904	1004	1104	1204
Rated heating duty	kW	150	166	191	220	244	274	315	356
Rated cooling duty	kW	134	149	172	198	219	248	287	322
ESEER	-	3.53	3.64	3.77	3.57	3.60	3.82	3.98	3.80
Sound power level	dB(A)	92	92	92	94	94	94	96	97
Sound pressure level 10 m	dB(A)	60	60	60	62	62	62	64	65

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
Performance data At chilled water 40/45°C and air intake temperature 7°C
At chilled water 12/7°C and air intake temperature 35°C; * in heating mode
Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
For project-related sound data calculations - use the obligatory sound power level!



- High performance configuration with 4 or 8 scroll compressors
- Heat pump switch with a 4-way valve

- Buffer tank and pump are optional (hydraulic module GLHM) additionally fitted with a safety valve, expansion tank, air vent and fill connection

- Cooling operation up to -15 °C ambient temperature
Heating operation up to -5 °C ambient temperature
Heating operation up to -12 °C ambient temperature with LT model

- Autoadaptive microprocessor control
- Controller type: HVAC Systems-Step II
- Unit main switch
- Configuration with an electronic expansion valve EEV
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface

- Supplied in two different configurations:
GLAH 4131 ... 8321 CD2 as standard unit
GLAH 4131 ... 8321 CD2.LT as especially low noise model and with extended operating limits in heat pump mode



Refrigerant R 410A	GLAH	4131	4141	4161	6171	6181	6201	6211	6241	8241	8261	8281	8301	8321
Rated heating duty	kW	371	398	436	473	515	572	597	654	686	742	796	834	871
Rated cooling duty	kW	339	363	396	435	478	526	546	594	638	678	728	761	792
Power consumption*	kW	122.4	129.7	142.7	157.2	170.6	187.2	194.1	214.3	227.2	245.2	258.7	272.2	285.6
Max. current consumption	A	273	288	317	354	388	417	432	476	517	546	576	605	634
ESEER	-	3.80	3.88	3.97	3.88	3.78	3.89	3.91	3.77	3.78	3.83	3.92	3.88	3.78
Scroll compressor	Quantity	4	4	4	5	6	5	6	6	8	8	8	8	8
Circuits	Quantity	2	2	2	2	2	2	2	2	4	4	4	4	4
Speeds	Quantity	4	4	4	5	6	5	6	6	8	8	8	8	8
Sound power level	dB(A)	96	96	96	96	97	97	97	98	98	98	99	99	99
Sound pressure level 10 m	dB(A)	64	64	64	64	65	65	65	66	65	65	66	66	66
Length	mm	3905	3905	3905	4515	5690	5690	5690	5690	7430	7430	7430	7430	7430
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Operating weight	kg	3170	3250	3280	4220	4610	4740	4810	4860	5950	6080	6230	6260	6300

As above, but as a temperature optimized model
– unit dimensions and weight data can marginally deviate from the standard version (see above)!
with cooling operation to -15 °C, heating operation to -12 °C outdoor temperature, .LT configuration

Refrigerant R 410A	GLAH.LT	4131	4141	4161	6171	6181	6201	6211	6241	8241	8261	8281	8301	8321
Rated heating duty	kW	383	409	449	497	533	587	614	674	709	766	819	860	898
Rated cooling duty	kW	352	372	417	453	504	538	559	625	667	710	745	789	833
ESEER	-	4.12	4.20	4.07	4.19	4.08	4.18	4.17	4.09	4.09	4.14	4.18	4.17	4.09
Sound power level	dB(A)	97	97	97	97	98	98	98	99	99	99	100	100	100
Sound pressure level 10 m	dB(A)	65	65	65	64	66	66	66	67	67	67	68	68	68

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
Performance data At chilled water 40/45°C and air intake temperature 7°C
At chilled water 12/7°C and air intake temperature 35°C; * in heating mode
Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
For project-related sound data calculations - use the obligatory sound power level!



- Space-saving configuration with 1 or 2 scroll compressors
- Heat pump switch with a 4-way valve
- Inverter technology is used for compressor control
- Cooling operation from 43 °C to -5 °C outdoor temperature (dry bulb)
Heating operation from 15.5 °C to -20 °C outdoor temperature (wet bulb)
- Controls by others
- Necessary accessory items:
Expansion valve kit GZCH...CD.R12
Communication box GZCH-CBOX.E13



Supply voltage		1 ~ 230 Volt			3 ~ 400 Volt		
Refrigerant R 410A	GCH	100-CD4	125-CD4	140-CD4	125-CD1	200-CD1	250-CD1
Rated cooling duty	kW	11.2	14.0	15.5	14.0	22.4	28.0
Rated heating duty	kW	12.5	16.0	18.0	16.0	25.0	31.5
Power input cooling	kW	2.8	3.5	4.5	3.5	5.2	7.4
Power input heating	kW	2.7	3.9	4.6	4.0	5.6	7.7
Max. current consumption	A	27	27	27	16	17	32
ESEER	-	-	-	-	-	-	-
Scroll compressor	Quantity	1	1	1	1	1	2
Circuits	Quantity	1	1	1	1	1	1
Speeds	Quantity	24...100 %	24...100 %	24...100 %	50...100 %	50...100 %	50...100 %
Sound power level	dB(A)	66	67	69	72	78	78
Sound pressure level 10 m	dB(A)	34	35	37	40	46	46
Length	mm	900	900	900	635	930	930
Width	mm	320	320	320	765	765	765
Height	mm	1345	1345	1345	1680	1680	1680
Operating weight	kg	120	120	120	159	187	240

Accessories: overview of expansion valves

GZCH##CD.R12		063	080	100	125	140	200	250
Cooling duty								
Min.	kW	6.3	7.9	10.0	12.4	15.5	17.7	24.7
Max.	kW	7.8	9.9	12.3	15.4	17.6	24.6	30.8
Evaporation volume								
Min.	dm ³	0.96	1.22	1.53	1.91	2.14	3.06	3.82
Max.	dm ³	1.22	1.53	1.91	2.14	2.97	3.8	4.78
Can be combined with:								
from capacity stage		100	100	100	100	125	200	200
up to capacity stage		125	140	200	250	250	250	250
Length	mm	401	401	401	401	401	401	401
Width	mm	215	215	215	215	215	215	215
Height	mm	78	78	78	78	78	78	78
Operating weight	kg	2.9	2.9	2.9	2.9	2.9	2.9	2.9

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data Cooling - at evaporation temperature 7°C and outdoor air temperature 35°C
 Heating - at evaporation temperature 45°C and outdoor air temperature 7°C
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Optimized compact model with 1 scroll compressor
- Heat pump switch with a 4-way valve
- Standard pump module comprises safety valve, expansion tank, pressure gauge, air vent and fill connection
- Following pump heads for field-provided pipework by others
- Second pump for increasing pump head is optional for model sizes 0041 - 0061
- Buffer tank to be mounted below the unit is optional
- Cooling operation up to -10 °C air inlet temperature
Heating operation up to -7°C air inlet temperature
- Condensing pressure is used to regulate fan speed
- Centrifugal fan for pressure side duct connection
- Autoadaptive microprocessor control
- Supplied as two different models:
GSDH 0011 ... 0041 FD5 with 230 V supply voltage
GSDH 0021 ... 0061 FD1 with 400 V supply voltage



Supply voltage		1 ~ 230 volt (FD5 series)					3 ~ 400 volt (FD1 series)					
Refrigerant R 410A	GSDH	0011	0021	0025	0031	0041	0021	0025	0031	0041	0051	0061
Rated heating duty	kW	5.7	6.4	8.1	10.0	12.4	6.4	8.0	9.7	12.8	14.4	16.8
Rated cooling duty	kW	4.6	5.4	6.6	8.2	10.4	5.3	6.7	8.2	10.8	12.6	14.6
Max. external pressure	Pa	200	100	200	80	80	100	200	80	80	80	70
Power consumption*	kW	2.8	2.9	3.5	4.2	5.7	2.9	3.3	3.8	5.9	6.1	6.5
Max. current consumption	A	20.3	20.3	23.3	27.3	31.3	9.8	10.3	12.3	14.3	16.1	19.3
ESEER	-	2.11	2.37	2.53	2.48	2.27	2.44	2.62	2.58	2.36	2.40	2.62
Scroll compressor	Quantity	1	1	1	1	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	1	1	1	1	1	1	1	1	1	1	1
Pump												
Pump head remain. pipework	kPa	59	57	54	54	43	57	54	54	40	33	30
Rated volume flow	m³/h	0.8	1.0	1.2	1.5	1.9	1.0	1.2	1.5	2.0	2.3	2.7
Sound power level	dB(A)	68	68	68	68	71	68	68	68	71	71	71
Sound pressure level 10 m	dB(A)	36	36	36	36	39	36	36	36	39	39	39
Length	mm	900	900	900	900	900	900	900	900	900	900	900
Width	mm	580	580	580	580	580	580	580	580	580	580	630
Height	mm	640	640	940	940	1240	640	940	940	1240	1240	1390
Operating weight	kg	110	115	130	135	180	115	135	135	180	200	210

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At warm water 40/45°C and air intake temperature 7°C;
 At chilled water 12/7°C and air inlet temperature 35°C; * in heating mode
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 2 or 4 scroll compressors
- Heat pump switch with a 4-way valve
- Pump module is optional (hydraulic module GLPE/GLPC) additionally fitted with a safety valve, expansion tank, pressure gauge, air vent and fill connection
Unit dimensions change if a pump module is used
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step I (0152-0612)
HVAC Systems-Step II (0604-1204)
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



Refrigerant R 410A	GLWH	0152	0182	0202	0252	0262	0302	0352	0412	0452	0512	0552	0612
Rated heating duty	kW	50.5	58.2	68.0	77.0	85.0	100.9	116.9	132.1	148.3	165.4	190.0	214.7
Rated cooling duty	kW	38.4	44.7	52.3	59.0	65.2	77.7	90.2	101.8	114.5	127.9	146.9	166.0
Power consumption	kW	12.9	14.3	16.7	19.2	21.1	24.7	28.4	32.2	36.0	40.0	45.9	51.5
Max. current consumption	A	31	33	41	45	51	56	64	72	82	92	105	118
ESEER	-	5.67	5.86	5.88	5.59	5.52	5.54	5.72	5.61	5.69	5.66	5.80	5.70
Scroll compressor	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	1	1	1	1	1
Speeds	Quantity	2	2	2	2	2	2	2	2	2	2	2	2
Sound power level	dB(A)	73	74	74	74	75	76	77	77	78	78	79	79
Sound pressure level 10 m	dB(A)	41	42	42	42	43	44	45	45	46	46	47	47
Length	mm	1055	1055	1055	1055	1055	1222	1222	1222	1222	1222	1222	1222
Width	mm	649	649	649	649	649	873	873	873	873	873	873	873
Height	mm	1255	1255	1255	1255	1255	1496	1496	1496	1496	1496	1496	1496
Operating weight	kg	290	305	315	325	330	585	620	660	685	740	790	830

As above, but standard configuration with 4 scroll compressors

Refrigerant R 410A	GLWH	0604	0704	0804	0904	1004	1104	1204
Rated heating duty	kW	202	234	263	297	332	379	428
Rated cooling duty	kW	156	181	203	229	257	293	331
Power consumption	kW	49	57	64	72	80	92	104
Max. current consumption	A	112	128	144	164	183	209	236
ESEER	-	5.69	5.81	5.72	5.82	5.81	5.98	5.78
Scroll compressor	Quantity	4	4	4	4	4	4	4
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	4	4	4	4	4	4	4
Sound power level	dB(A)	86	87	88	89	90	91	91
Sound pressure level 10 m	dB(A)	54	55	56	57	58	59	59
Length	mm	2227	2227	2227	2227	2227	2227	2227
Width	mm	877	877	877	877	877	877	877
Height	mm	1780	1780	1780	1780	1780	1780	1780
Operating weight	kg	1090	1165	1245	1290	1395	1500	1585

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7 °C and warm water temperature 40/45 °C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- Standard configuration with 1 or 2 screw compressors
- Control cabinet on the long side
- Pump control as an option
- Selectable regulation of condenser water temperature (warm water) evaporator water temperature (chilled water)
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWH	0401	0501	0551	0651	0751	0851	0951
Rated heating duty	kW	100	123	148	168	189	223	252
Rated cooling duty	kW	77	95	116	131	147	175	197
Power consumption	kW	23	29	34	39	44	51	59
Max. current consumption	A	55	67	80	92	105	115	132
ESEER	-	5.15	5.32	5.25	5.29	5.40	5.54	5.42
Screw compressor	Quantity	1	1	1	1	1	1	1
Circuits	Quantity	1	1	1	1	1	1	1
Speeds	Quantity	3	3	3	3	3	3	3
Sound power level	dB(A)	91	92	94	94	94	94	94
Sound pressure level 10 m	dB(A)	59	60	62	62	62	62	62
Length	mm	2300	2500	2500	2500	2500	3200	3200
Width	mm	1000	1000	1000	1000	1000	1000	1000
Height	mm	1500	1500	1500	1500	1500	1500	1500
Operating weight	kg	800	840	1160	1180	1190	1270	1350

As above, but standard configuration with 2 screw compressors

R 134a refrigerant	GLWH	0802	1002	1102	1302	1502	1702	1902
Rated heating duty	kW	202	249	287	339	387	445	509
Rated cooling duty	kW	158	194	223	265	304	348	397
Power consumption	kW	47	58	67	78	88	102	117
Max. current consumption	A	111	134	161	183	210	230	264
ESEER	-	5.39	5.52	5.24	5.49	5.67	5.70	5.61
Screw compressor	Quantity	2	2	2	2	2	2	2
Circuits	Quantity	2	2	2	2	2	2	2
Speeds	Quantity	6	6	6	6	6	6	6
Sound power level	dB(A)	94	95	97	97	97	97	97
Sound pressure level 10 m	dB(A)	62	63	65	65	65	65	65
Length	mm	3200	3200	3200	3500	3500	3500	3500
Width	mm	1200	1200	1200	1200	1200	1200	1200
Height	mm	1500	1500	1500	1800	1800	1800	1800
Operating weight	kg	1470	1490	1930	2220	2260	2320	2720

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water temperature 40/45°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



■ Standard configuration with 1 to 4 screw compressors

- Control cabinet on the front side
- Pump control as an option
- Selectable regulation of condenser water temperature (warm water) evaporator water temperature (chilled water)

- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWH	1130	1140	1160	1180	1210	1240	1270	2280	1300	2320	2360	2420
Rated heating duty	kW	348	396	474	537	608	687	759	790	839	948	1075	1214
Rated cooling duty	kW	276	314	376	425	484	546	603	625	667	752	853	964
Power consumption	kW	76.8	87.3	104.3	118.2	132.8	149.8	165.7	174.7	183.0	208.7	236.5	265.1
Max. current consumption	A	147	168	197	223	247	286	318	336	351	394	446	464
ESEER	-	5.94	5.95	5.73	5.84	5.94	5.92	5.79	5.94	5.91	5.87	6.14	6.08
Screw compressor	Quantity	1	1	1	1	1	1	1	2	1	2	2	2
Circuits	Quantity	1	1	1	1	1	1	1	2	1	2	2	2
Speeds	Quantity	25 %-stageless											
Sound power level	dB(A)	97	97	97	97	97	97	99	99	99	99	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	65	65	67	67	67	67	67	67
Length	mm	3830	3830	3860	3860	3860	3860	3930	4200	3930	4750	4750	4750
Width	mm	900	900	900	900	900	900	900	1150	900	1150	1150	1150
Height	mm	1700	1700	1840	1840	1840	1840	1990	2050	1990	2050	2050	2050
Operating weight	kg	2050	2110	2590	2810	2910	2970	3510	4120	3600	5110	5400	6070

As above, but standard configuration with 4 screw compressors

R 134a refrigerant	GLWH	2450	2480	2540	2600	3630*	3660*	3720*	3780*	3810*	3900*	4900*	4960*
Rated heating duty	kW	1295	1373	1516	1676	1817	1899	2057	2215	2276	2515	2582	2739
Rated cooling duty	kW	1030	1091	1205	1333	1444	1509	1634	1761	1809	2000	2052	2177
Power consumption	kW	282.7	300.1	331.3	365.8	397.6	414.6	449.4	483.7	497.1	548.3	563.9	598.6
Max. current consumption	A	533	572	636	702	741	780	858	922	954	1053	1066	1144
ESEER	-	6.23	6.17	6.00	6.09	6.14	6.24	6.18	6.11	6.09	6.14	6.23	6.17
Screw compressor	Quantity	2	2	2	2	3	3	3	3	3	3	4	4
Circuits	Quantity	2	2	2	2	3	3	3	3	3	3	4	4
Speeds	Quantity	25 %-stageless				17 %-stageless				12.5 %-stageless			
Sound power level	dB(A)	99	99	101	101	102	102	102	102	102	102	102	102
Sound pressure level 10 m	dB(A)	67	67	69	69	70	70	70	70	70	70	70	70
Length	mm	4750	4750	4850	4850	4950	4950	4950	4950	4950	4950	4650	4650
Width	mm	1150	1150	1150	1150	1700	1700	1700	1700	1700	1700	2250	2250
Height	mm	2200	2200	2200	2200	2150	2150	2150	2150	2150	2150	2230	2230
Operating weight	kg	6120	6180	6950	7090	8980	9050	9120	9950	10170	10350	14330	14390

* These units are not certified by Eurovent

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water temperature 40/45°C
 Sound power level EUROVENT certified figure, requirement specified by Eurovent 8/1 and ISO 9614
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



- HT configuration with 1 to 4 screw compressors
- Control cabinet on the front side
- Pump control as an option
- Selectable regulation of condenser water temperature (warm water) evaporator water temperature (chilled water)
- Autoadaptive microprocessor control
- Unit main switch
- Controller type: HVAC Systems-Step III
- Master/slave operation with GEA HVAC System unit series available as an accessory item
- Connection to BMS via optional interface



R 134a refrigerant	GLWH.HT	1130	1140	1160	1180	1210	1240	2280	2320	2360
Rated heating duty	kW	355	405	469	542	607	666	808	937	1087
Rated cooling duty	kW	282	322	373	430	480	528	641	747	863
Power consumption	kW	77.5	89.0	101.4	119.0	135.2	147.8	178.0	202.8	238.1
Max. current consumption	A	214	245	274	314	358	390	490	548	628
ESEER	-	-	-	-	-	-	-	-	-	-
Screw compressor	Quantity	1	1	1	1	1	1	2	2	2
Circuits	Quantity	1	1	1	1	1	1	2	2	2
Speeds	Quantity	25 %-stageless								
Sound power level	dB(A)	97	97	97	97	97	97	99	99	99
Sound pressure level 10 m	dB(A)	65	65	65	65	65	65	67	67	67
Length	mm	3830	3830	3860	3860	3860	3860	4200	4750	4750
Width	mm	900	900	900	900	900	900	1150	1150	1150
Height	mm	1700	1700	1840	1840	1840	1840	2050	2050	2050
Operating weight	kg	2050	2110	2590	2810	2910	2970	4120	5110	5400

As above, but standard configuration with 4 screw compressors

R 134a refrigerant	GLWH.HT	2420	2450	2480	3630	3660	3720	4900	4960
Rated heating duty	kW	1210	1273	1332	1812	1875	1994	2537	2656
Rated cooling duty	kW	957	1007	1053	1432	1482	1577	2007	2102
Power consumption	kW	269.6	283.6	296.5	404.4	417.7	443.5	564.4	590.2
Max. current consumption	A	719	748	780	1074	1160	1170	1496	1560
ESEER	-	-	-	-	-	-	-	-	-
Screw compressor	Quantity	2	2	2	3	3	3	4	4
Circuits	Quantity		2	2	3	3	3	4	4
Speeds	Quantity	25 %-stageless			17 %-stageless			12.5 %-stageless	
Sound power level	dB(A)	99	99	99	102	102	102	102	102
Sound pressure level 10 m	dB(A)	67	67	67	70	70	70	70	70
Length	mm	4750	4750	4750	4950	4950	4950	4650	4650
Width	mm	1150	1150	1150	1700	1700	1700	2250	2250
Height	mm	2200	2200	2200	2150	2150	2150	2230	2230
Operating weight	kg	6070	6120	6180	8980	9050	9120	14330	14390

ESEER European Seasonal Energy Efficiency according to the Eurovent standard 6-C003-2006
 Performance data At chilled water 12/7°C and cooling water temperature 40/45°C
 Sound power level Requirement specified by ISO 3744
 Sound pressure level Rectangular-shaped radiation – 10 m distance – reflection factor Q=2
 For project-related sound data calculations - use the obligatory sound power level!



External buffer tank module to be selected with chillers for safe operation and ensuring minimum run time.

- Self-carrying construction using galvanized plastic coated metal sheet
- Configuration with 1 to 2 pumps
- Single circuit tank with 300 to 2500 l volume
- Fitted with:
 - Expansion tank
 - Safety valve
 - Pressure gauge
 - Water side differential pressure switch
 - Full and drain valve
 - Air vent valve
- Thermal insulation using closed porous neoprene

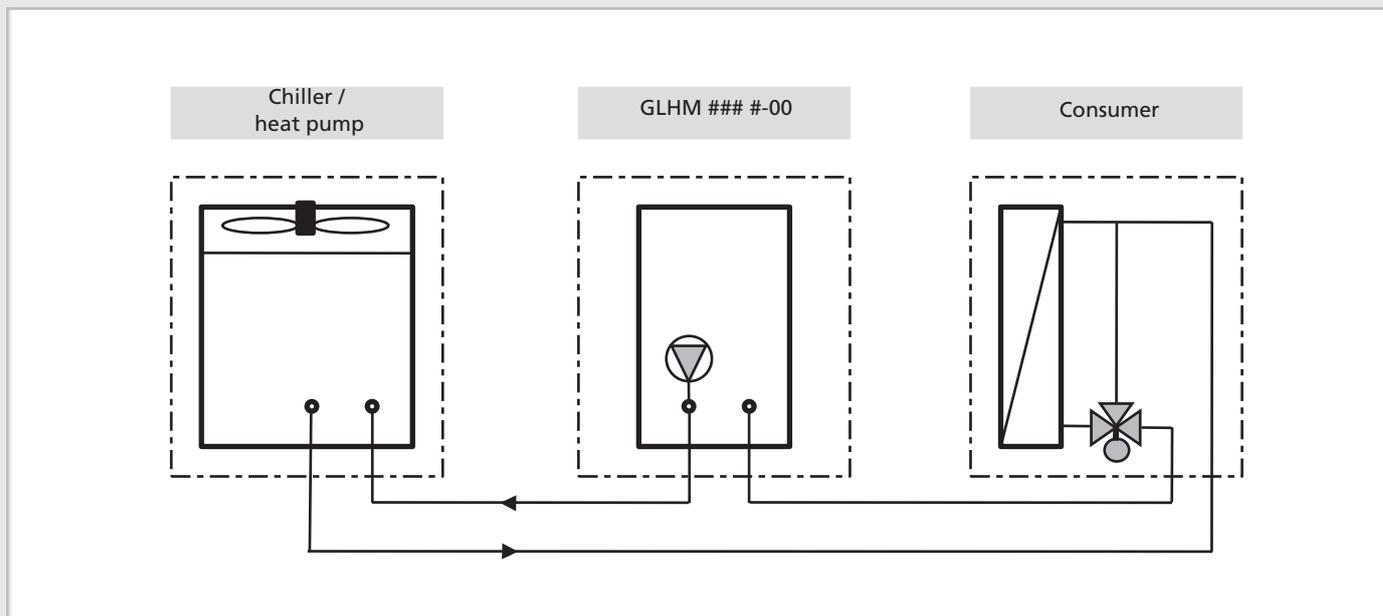


Depending on water volume and pressure drop, these modules can be combined with the following chiller series, for which integrated hydraulic units are not available:

- GLFC
- GLAC / GLAH
- GLWC / GLWH
- GLRC

Module	GLHM	103#	203#	105#	205#	107#	207#	110#	210#	115#	215#	125#	225#
Volume	l	300	300	500	500	700	700	1000	1000	1500	1500	2500	2500
Pumps	-	1	2	1	2	1	2	1	2	1	2	1	2
Length	mm	1504	1504	1504	1504	2044	2044	2044	2044	2260	2260	2260	2260
Width	mm	1120	1120	1120	1120	1200	1200	1200	1200	1900	1900	1900	1900
Height	mm	1265	1265	1265	1265	1510	1510	1510	1510	1145	1145	1145	1145
Operating weight	kg	500	530	720	760	1130	1250	1430	1580	2130	2320	3190	3380

Example of system integration



μ-chiller 2SE

Following controller functions are available as standard:

- Remote on/off contact, collective error messaging
- Remote switch between heating/cooling mode
- General status/operating messaging
- Status messaging of individual compressors
- Regulation of chilled water pump
- Temperature control using water inlet or water outlet (only GMAC)
- Alarm logging of recent 25 messages (only GMAC)



Additional controller functions are available as option:

- Compressor soft start
- Connection to a Building Management System (only GMAC)
- Connection of a remote control (only GMAC)
- 2nd setpoint (only GMAC)

HVAC Systems-Step I

Following controller functions are available as standard:

- Alphanumerical display
- Selection between 3 languages
- Remote on/off contact
- Collective error message
- Remote switch between heating/cooling mode
- Regulation of chilled water pump
- P-I temperature control at inlet and outlet
- Retrieving last 200 alarm messages with alarm history



Additional controller functions are available as option:

- Setpoint shift via 4-20 mA signal
- Load shedding contact
- Field provided fault shutdown
- Connection to a remote control
- Compressor soft start
- Operation message of compressor
- Connection to a BMS
- Master/slave operation with up to 5 units

HVAC Systems-Step II

Following controller functions are available as standard:

As with HVAC System Step I but with the following additional functions:

- Setpoint shift via 4-20 mA signal
- Selection between 7 languages
- Field provided fault shutdown



Besides, following additional controller functions are optional:

As with HVAC Systems Step I but with the following additional functions:

- 2nd setpoint

HVAC Systems-Step III

Following controller functions are available as standard:

As with HVAC System Step I but with the following additional functions:

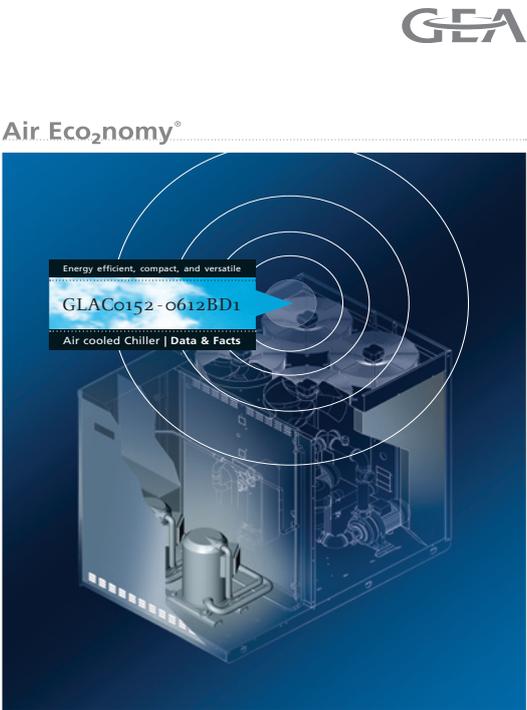
- Continuous capacity control of screw compressors
- Selection between 7 languages
- Without chilled water pump control

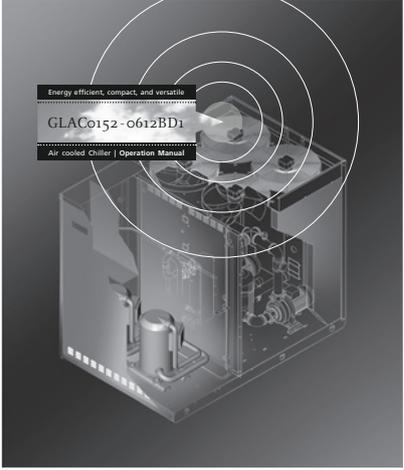


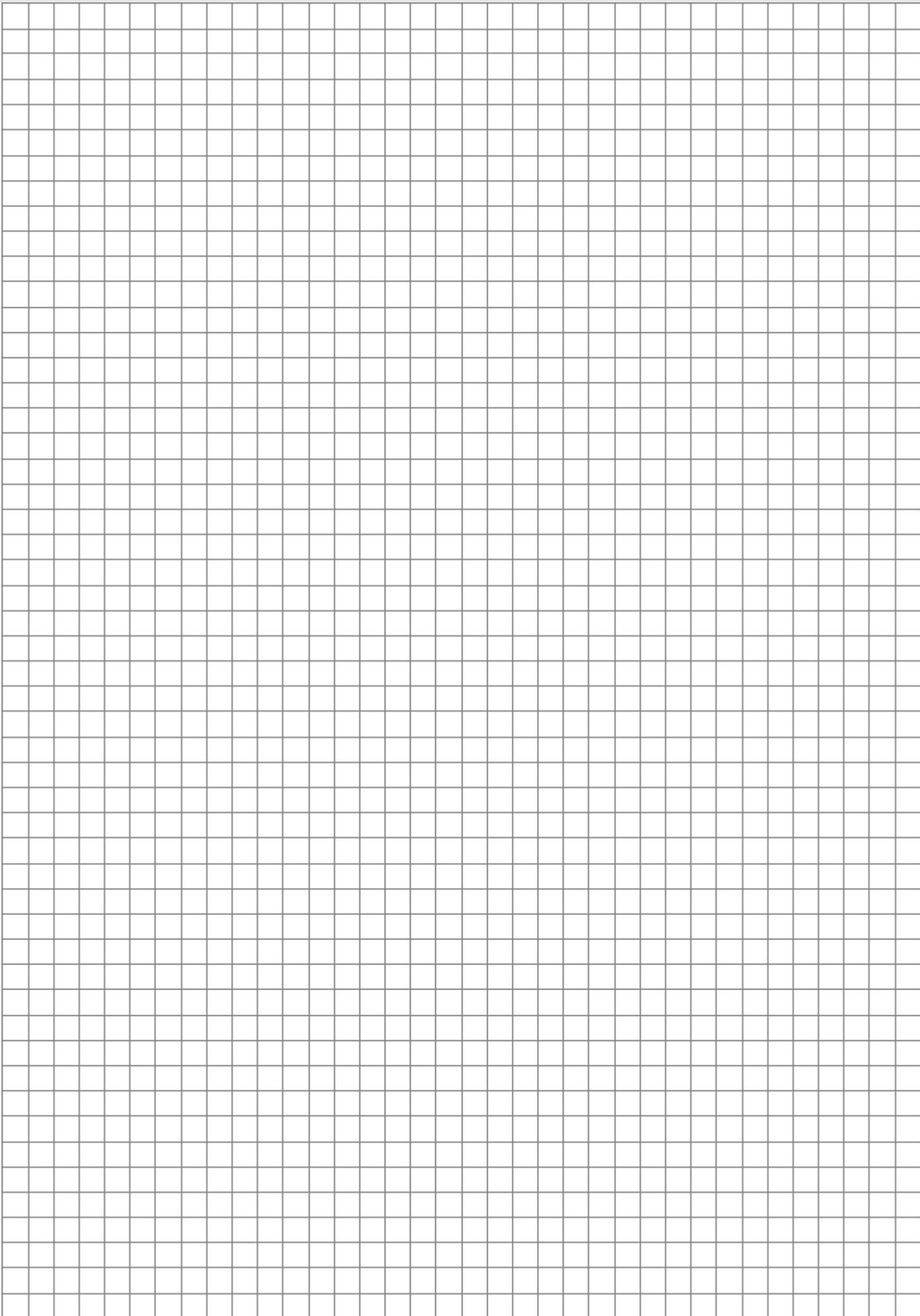
Besides, following additional controller functions are optional:

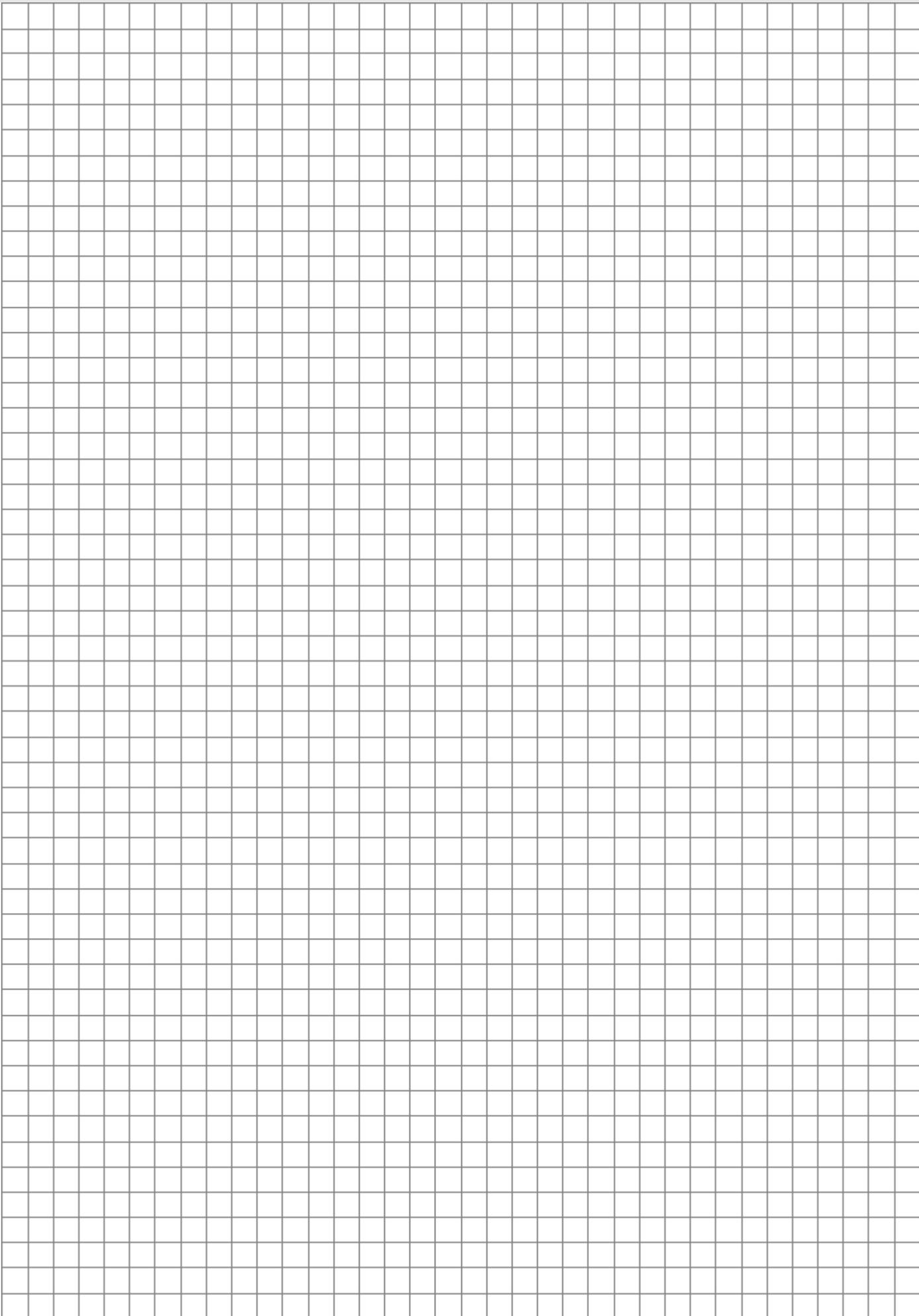
As with HVAC Systems Step I but with the following additional functions:

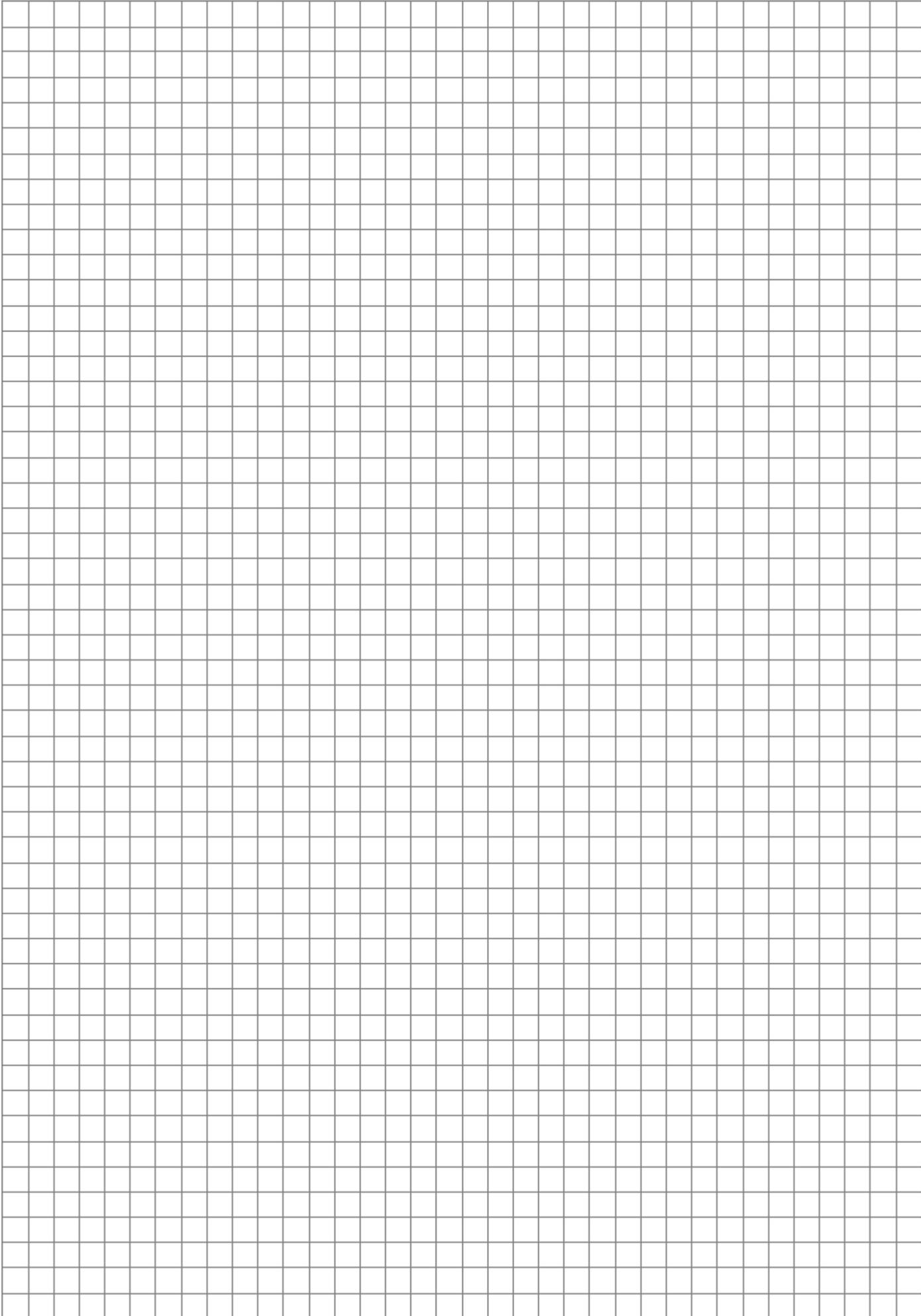
- 2nd setpoint
- Regulation of chilled water pump

Data & Facts	Unit Series	PR Number
 <p>GEA Heat Exchangers HVAC Systems</p>	GSAC0011-0061FD1/5	PR-2010-0111-GB
	GMAC0081-0242AD1	PR-2009-0094-GB
	GLAC0152-0612BD1	PR-2009-0097-GB
	GLAC0152-0612BD1	PR-2009-0097-GB
	GLAC0524-1204BD2	PR-2009-0120-GB
	GLAC4131-8321CD2	PR-2010-0109-GB
	GLAC0751-1301BA2	PR-2009-0105-GB
	GLAC1542-2642BA2	PR-2009-0105-GB
	GLAC1532-2632BA2	PR-2009-0105-GB
	GLAC1502-8404BA2	PR-2009-0105-GB
	GLFC0152-0612BD2	PR-2009-0007-GB
	GLFC0604-1204BD2	PR-2009-0007-GB
	GLCU0152-0512AC1	2145745GB
	GSDC0011-0061FD1/5	PR-2010-0111-GB
	GLDC0152-1204BD2	PR-2007-0450-GB
	GLRC2015-4160CA2	PR-2010-0105-GB
	GLWC0152-1204BD2	PR-2008-0005-GB
	GLWC0401-1902BA2	PR-2008-0326-GB
	GSAH0011-0061FD1/5	PR-2010-0111-GB
	GLAH0152-0612BD1	PR-2009-0030-GB
GLAH0524-1204BD2	PR-2009-0030-GB	
GLAH4131-8321CD2	PR-2010-0109-GB	
GCH100-250CD1	PR-2009-0118-GB	
GSDH0011-0061FD1/5	PR-2010-0111-GB	
GLWH0152-1204BD2	PR-2008-0007-GB	
GLWH0401-1902BA2	PR-2008-0326-GB	
GLHM.....00	PR-2009-0100-GB	

Operation Manuals	Unit Series	PR Number
 <p data-bbox="212 392 352 418">Air Eco₂nomy®</p>  <p data-bbox="212 902 363 916">GEA Heat Exchangers / HVAC Systems</p>	<p data-bbox="938 264 1141 291">GMAC0081-0242AD1</p> <p data-bbox="938 315 1157 342">GAC(N,P,B)005-024EC1</p> <p data-bbox="938 367 1129 394">GLAC0152-0612BD1</p> <p data-bbox="938 418 1133 445">GLAC0524-1204BD2</p> <p data-bbox="938 470 1133 497">GLAC0751-1301BA2</p> <p data-bbox="938 521 1133 548">GLAC1542-2642BA2</p> <p data-bbox="938 573 1133 600">GLAC1532-2632BA2</p> <p data-bbox="938 624 1133 651">GLAC1502-8404BA2</p> <p data-bbox="938 676 1129 703">GLFC0152-0612BD2</p> <p data-bbox="938 728 1129 754">GLFC0604-1204BD2</p> <p data-bbox="938 779 1133 806">GLCU0152-0512AC1</p> <p data-bbox="938 831 1098 857">GDC005-010EC1</p> <p data-bbox="938 882 1133 909">GLDC0152-1204BD2</p> <p data-bbox="938 934 1101 960">GWC005-024EC1</p>	<p data-bbox="1300 264 1476 291">PR-2009-0095-GB</p> <p data-bbox="1300 315 1428 342">4PW61654-1</p> <p data-bbox="1300 367 1476 394">PR-2009-0098-GB</p> <p data-bbox="1300 418 1476 445">PR-2007-0341-GB</p> <p data-bbox="1300 470 1476 497">PR-2009-0106-GB</p> <p data-bbox="1300 521 1476 548">PR-2009-0106-GB</p> <p data-bbox="1300 573 1476 600">PR-2009-0106-GB</p> <p data-bbox="1300 624 1476 651">PR-2009-0106-GB</p> <p data-bbox="1300 676 1476 703">PR-2009-0008-GB</p> <p data-bbox="1300 728 1476 754">PR-2009-0008-GB</p> <p data-bbox="1300 779 1412 806">2145746GB</p> <p data-bbox="1300 831 1428 857">4PW61658-1</p> <p data-bbox="1300 882 1476 909">PR-2007-0451-GB</p> <p data-bbox="1300 934 1428 960">4PW61668-1</p> <p data-bbox="1300 985 1428 1012">4PW61667-1</p>
 <p data-bbox="212 1077 352 1104">Air Eco₂nomy®</p>  <p data-bbox="212 1597 363 1610">GEA Heat Exchangers / HVAC Systems</p>	<p data-bbox="938 1025 1141 1052">GLWC0152-1204BD2</p> <p data-bbox="938 1077 1141 1104">GLWC0401-1902BA2</p> <p data-bbox="938 1128 1157 1155">GAH(N,P,B)005-024EC1</p> <p data-bbox="938 1180 1133 1207">GLAH0152-0612BD1</p> <p data-bbox="938 1232 1133 1258">GLAH0524-1204BD2</p> <p data-bbox="938 1283 1101 1310">GCH100-250CD1</p> <p data-bbox="938 1536 1141 1563">GLWH0152-1204BD2</p> <p data-bbox="938 1588 1141 1615">GLWH0401-1902BA2</p> <p data-bbox="938 1639 1053 1666">GLHM.....00</p>	<p data-bbox="1300 1025 1476 1052">PR-2008-0006-GB</p> <p data-bbox="1300 1077 1476 1104">PR-2008-0331-GB</p> <p data-bbox="1300 1128 1428 1155">4PW61656-1</p> <p data-bbox="1300 1180 1476 1207">PR-2009-0028-GB</p> <p data-bbox="1300 1232 1476 1258">PR-2009-0028-GB</p> <p data-bbox="1300 1283 1428 1310">4PW54101-1</p> <p data-bbox="1300 1335 1444 1361">4PW54102-1A</p> <p data-bbox="1300 1386 1428 1413">4PW54103-1</p> <p data-bbox="1300 1438 1428 1464">4PW54104-1</p> <p data-bbox="1300 1489 1444 1516">4PW54104-1A</p> <p data-bbox="1300 1536 1476 1563">PR-2008-0008-GB</p> <p data-bbox="1300 1588 1476 1615">PR-2008-0331-GB</p> <p data-bbox="1300 1639 1476 1666">PR-2009-0100-GB</p>







Legend with Description of Pictograms Used in this Document

Pictogram	Description
	Screw compressor
	Scroll compressor
R-134a	R 134a refrigerant
R-410A	Refrigerant R 410A
R-407C	R 407C refrigerant
PHX	Plate heat exchanger
S&T	Shell and tube heat exchanger
	Master/slave switch is possible
DX	Direct evaporator
BMS	BMS integration is possible
FC	Unit with free cooling
SL	Unit as low noise model
HE	Unit as high performance model
HT	Unit as high performance model
LT	Unit as low noise model with extended operating limits
	Heating
	Cooling
	Eurovent certified

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