

Single Pack SC12GH 220-240V 50-60Hz CSIR

Single pack code number: **195B4222**

Position	Title	Code	Amount
1	Compressor SC12GH	104G8261	1
2	Starting relay	117U6011	1
3	Starting capacitor (80µF 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2008	1
6	Bolt joint for one compressor M6 ø16mm	118-1917	1

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Model

Designation	SC12GH	220-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	104G8261
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	22cST	Displacement	12,87cm³ / 0,79cu.in
Oil quantity	504cm³ / 17fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1510cm³ / 51,1fl.oz		
Weight	12,5kg / 27,6lbs		
Motor protection	1# internal		
Winding resistance main	4,4Ω (at 25°C)		
Winding resistance aux	14Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with SC12GH

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	198-254V	198-254V	198-254V	198-254V
Approvals	VDE, UL, KC	VDE, UL	VDE, UL, KC	VDE, UL
Starting torque	HST	HST	HST	HST
Note	- / -			

Applications with SC12GH

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R513A	R134a	R513A
Application	HBP	HBP	HBP	HBP
System cooling	fan 3m/s	fan 3m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with SC12GH

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	80µF	80µF	80µF	80µF
LRA (locked rotor amps / 4s)	19A	19A	18,3A	18,3A
RLA (rated load amps / 1s)	3,9A	3,9A	3,52A	3,52A
Cut in current	19A	19A	18,3A	18,3A

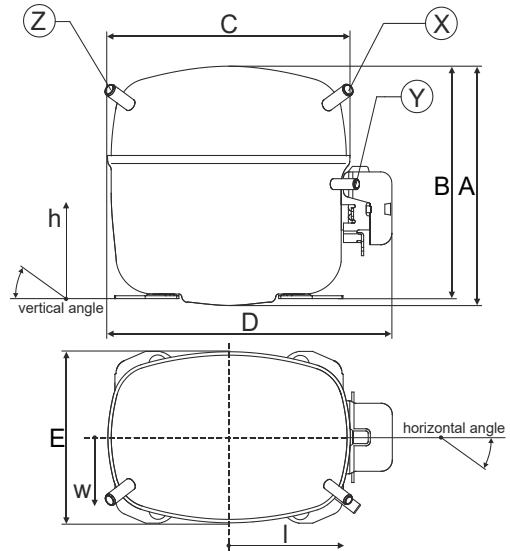
Model

Designation	SC12GH	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	104G8261
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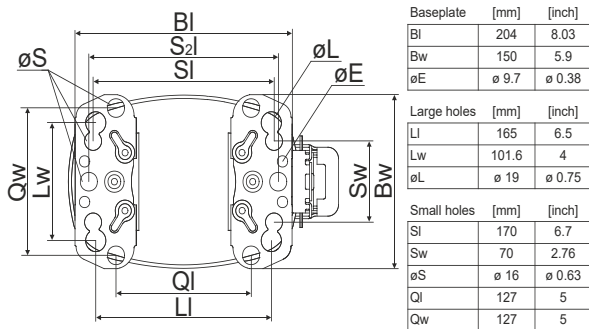
Compressor dimensions

Housing	A Height	209mm / 8,23in
	B Height	203mm / 7,99in
	C Length shell	218mm / 8,58in
	D Length w. cover	255mm / 10,04in
	E Width	151mm / 5,94in

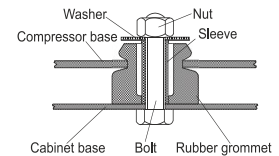
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10,11-10,29	øi 8,11-8,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,4-0,41	øi 0,32-0,33	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55
[in]	4,2/7,2/2,2	4,5/3,9/2,5	-4,2/7,2/2,2
Straight tube l. [mm]	12	12	12
[in]	0,5	0,5	0,5



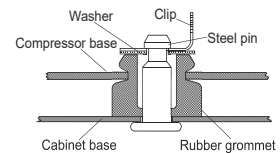
Compressor fixation



Bolt joint



Snap-on



Mounting accessories	one comp.	multi pack
Bolt joint M6 ø16mm	118-1917	118-1918
Bolt joint ø1/4" ø16mm	118-1946	
Bolt joint ø1/4" ø19mm	118-1949	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Application notes

Provision for PE Grounding is located at the PE Stamp on the compressor

Model				
Designation	SC12GH	220-240V/50Hz	Conf. 1	Sales code: 104G8261

Configuration		Electrical accessories / wiring diagram	
Motorconfiguration	CSIR	CSIR	
Power supply (nominal)	220-240V/50Hz 1~		
Refrigerant	R134a		
Application	HBP		
Voltage range	198-254V		
Starting torque	HST		
Approvals	VDE		
	UL		
	KC		

Ambient/ machine room temperatures minimum /maximum

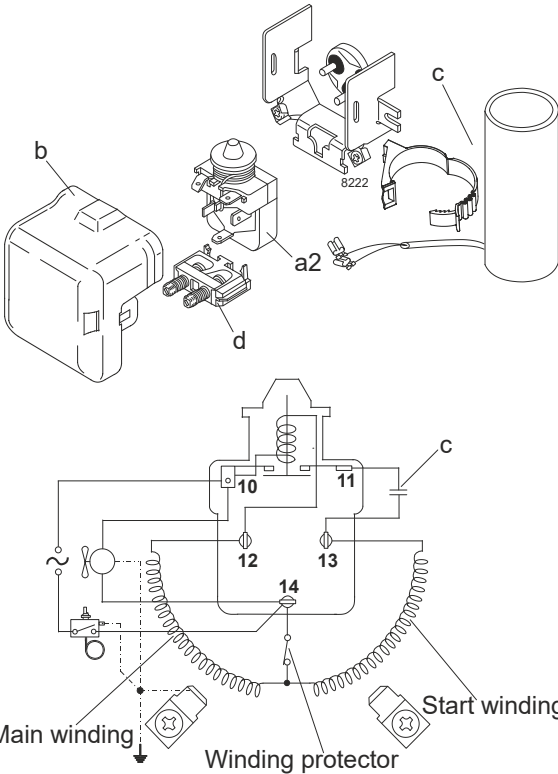
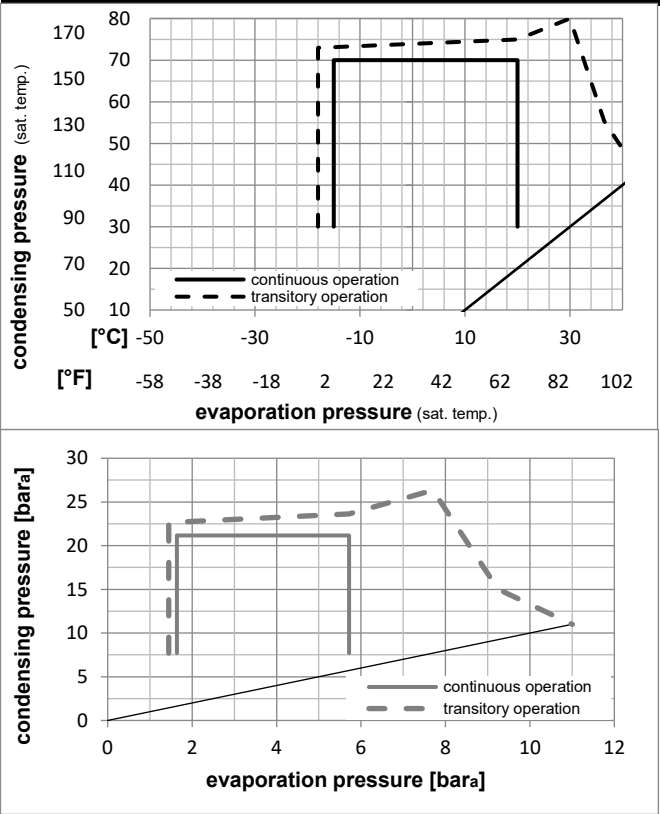
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s

Operation Limits

Operation pressure range



Components

a2	relay	117U6011
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation	SC12GH	220-240V/50Hz	Conf. 1	Sales code:	104G8261
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Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, KC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
											Current consumption			
Return gas temp.											Ref. mass flow			
Liquid temp.														
Cooling capacity					COP						EER			
											P1			
											I			
											ṁ			
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	7,2	54	35	46	1175,9	4016	1012,0	2,34	8,00	2,02	501,9	3,52	26,09	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	5	55	32	55	957,3	3269	823,9	1,97	6,71	1,69	487,1	3,47	23,59	cecomaf HBP
[°F]	41	131	90	131										
[°C]	5	50	20	50	998,2	3409	859,0	2,15	7,34	1,85	464,7	3,39	25,15	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-7	54	35	46	583,7	1994	502,4	1,52	5,18	1,30	385,2	3,16	12,74	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	428,7	1464	368,9	1,20	4,11	1,04	356,3	3,08	10,37	cecomaf MBP
[°F]	14	131	90	131										
[°C]	-10	45	20	45	517,8	1768	445,7	1,49	5,08	1,28	348,4	3,06	12,12	EN12900 MBP
[°F]	14	113	68	113										

Model				
Designation	SC12GH	220-240V/50Hz	Conf. 2	Sales code: 104G8261

Configuration		Electrical accessories / wiring diagram		
Motorconfiguration	CSIR	CSIR		
Power supply (nominal)	220-240V/50Hz 1~			
Refrigerant	R513A			
Application	HBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	UL			

Ambient/ machine room temperatures minimum /maximum

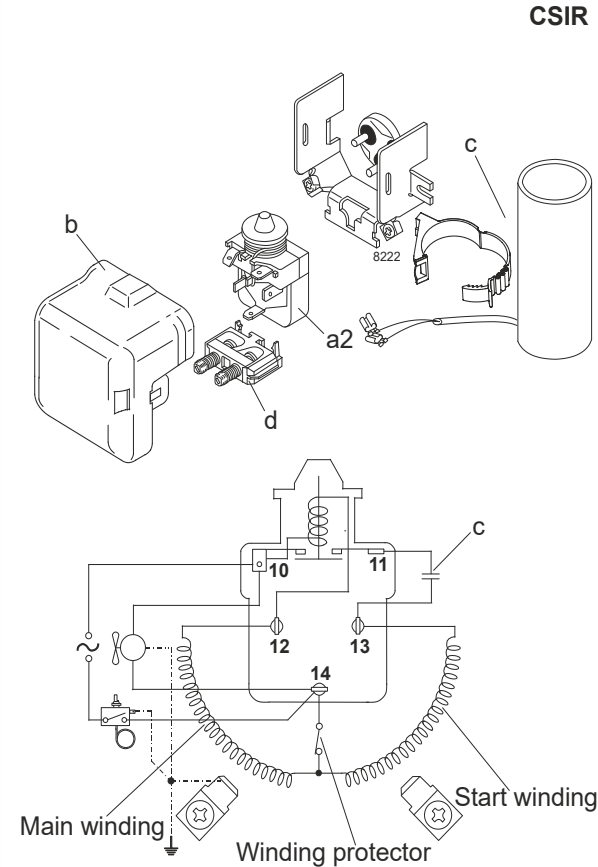
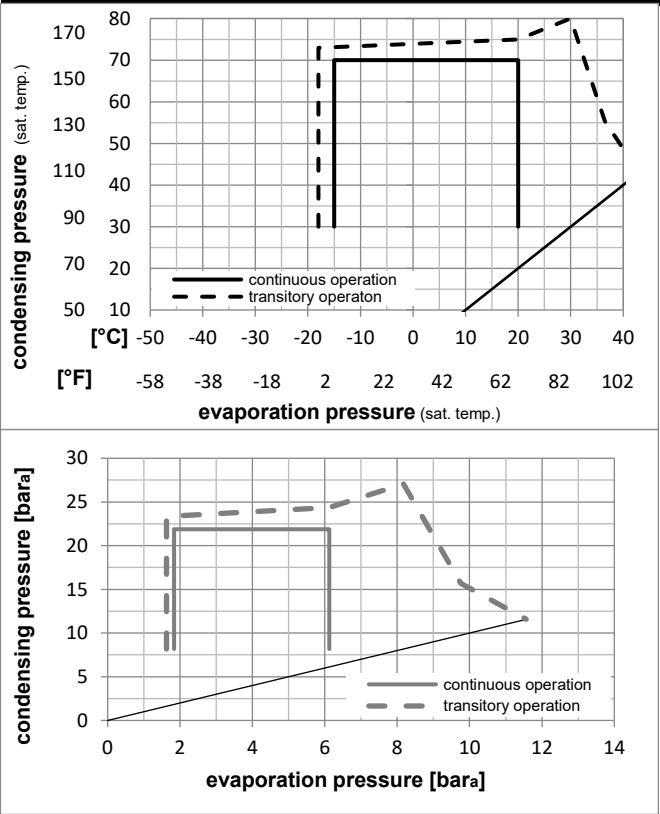
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s

Operation Limits

Operation pressure range



Components		
a2	relay	117U6011
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation	SC12GH	220-240V/50Hz	Conf. 2	Sales code:	104G8261
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Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																			
Return gas temp.					Current consumption						Ref. mass flow																			
Liquid temp.					Cooling capacity						COP				EER				P1				I				ṁ			
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]																		
[°C]	7,2	54	35	46	1210,2	4133	1041,5	2,31	7,90	1,99	522,9	3,59	30,06																	
[°F]	45	130	95	115																										
[°C]	5	55	32	55	970,8	3316	835,5	1,91	6,52	1,64	508,5	3,54	27,28																	
[°F]	41	131	90	131																										
[°C]	5	50	20	50	1013,9	3463	872,6	2,09	7,14	1,80	484,8	3,47	29,07																	
[°F]	41	122	68	122																										
[°C]	-7	54	35	46	613,9	2097	528,4	1,51	5,16	1,30	406,7	3,23	15,04																	
[°F]	20	130	95	115																										
[°C]	-10	55	32	55	445,8	1523	383,7	1,18	4,03	1,02	377,6	3,14	12,33																	
[°F]	14	131	90	131																										
[°C]	-10	45	20	45	542,1	1852	466,6	1,47	5,03	1,27	368,3	3,11	14,37																	
[°F]	14	113	68	113																										

Performance tables

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL

	pe		Cooling capacity			COP		EER			P1		I		m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]		[W]		[A]		[kg/h]	
[°C / °F]	-15	5	421,5	1440	362,8	1,27		4,34	1,09		331,5		2,99		10,33	
cond. pressure	-10	14	566,9	1936	487,9	1,54		5,26	1,32		368,3		3,11		13,94	
pc= 45/113	-5	23	737,1	2517	634,3	1,83		6,24	1,57		403,3		3,22		18,19	
return gas temp.	0	32	935,4	3195	805,0	2,15		7,34	1,85		435,4		3,31		23,20	
RGT= 32/90	5	41	1165,5	3980	1003,0	2,52		8,59	2,16		463,3		3,40		29,07	
liquid temp	15	59	1734,6	5924	1492,8	3,45		11,80	2,97		502,2		3,52		43,89	
Tliq= 45/113	20	68	2080,5	7105	1790,5	4,07		13,91	3,50		510,9		3,55		53,12	
[°C / °F]	-15	5	318,2	1087	273,8	0,96		3,27	0,82		332,4		3,00		8,76	
cond. pressure	-10	14	445,8	1523	383,7	1,18		4,03	1,02		377,6		3,14		12,33	
pc= 55/131	-5	23	594,8	2031	511,9	1,41		4,81	1,21		422,7		3,28		16,52	
return gas temp	0	32	768,7	2625	661,5	1,65		5,62	1,42		466,8		3,41		21,47	
RGT= 32/90	5	41	970,8	3316	835,5	1,91		6,52	1,64		508,5		3,54		27,28	
liquid temp	15	59	1473,9	5034	1268,5	2,54		8,67	2,19		580,5		3,76		42,09	
Tliq= 55/131	20	68	1781,8	6085	1533,4	2,93		10,00	2,52		608,5		3,85		51,41	

Model				
Designation	SC12GH	208-230V/60Hz	Conf. 3	Sales code: 104G8261

Configuration	Electrical accessories / wiring diagram			
Motorconfiguration	CSIR	CSIR		
Power supply (nominal)	208-230V/60Hz 1~			
Refrigerant	R134a			
Application	HBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	UL			
	KC			

Ambient/ machine room temperatures minimum /maximum

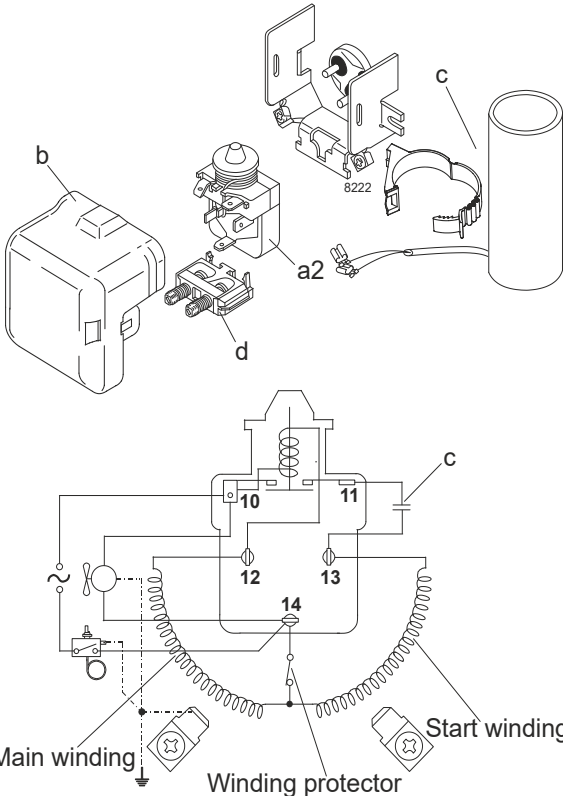
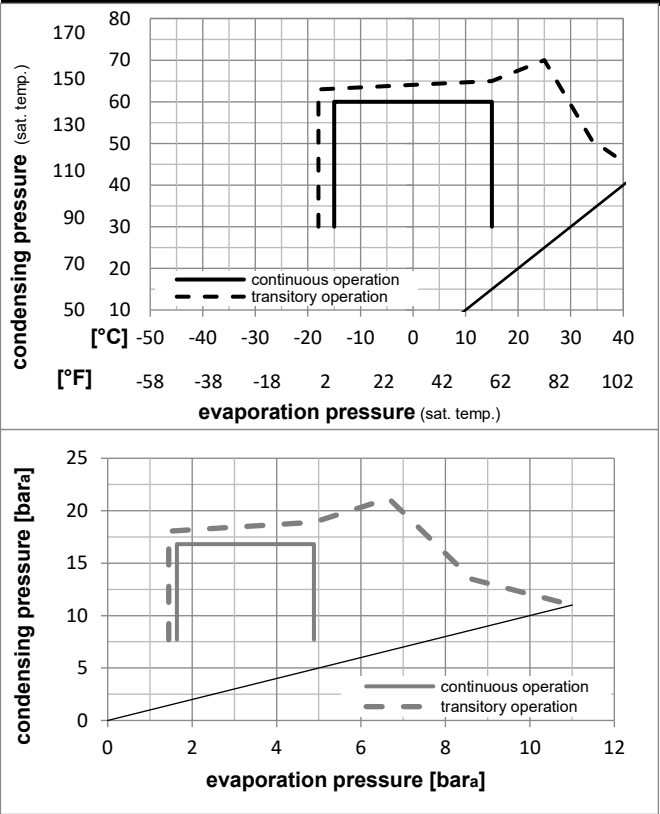
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s

Operation Limits

Operation pressure range



Components		
a2	relay	117U6011
c	start capacitor (80µF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation	SC12GH	208-230V/60Hz	Conf. 3	Sales code:	104G8261
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Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, KC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Return gas temp.					Liquid temp.					Cooling capacity					COP		EER		Power consumption					Current consumption		Ref. mass flow	
pe	pc	RGT	Tliq		[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]	[W]		[A]		[kg/h]																					
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[°C]	[°F]				
7,2	45	54	130	35	95	46	115	1370,3	4680	1179,3	2,38	8,13	2,05	575,7	3,36	30,40	ASHRAE HBP																				
5	41	55	131	32	90	55	131	1116,4	3813	960,8	2,01	6,86	1,73	555,8	3,28	27,51	cecomaf HBP																				
5	41	50	122	20	68	50	122	1163,6	3974	1001,4	2,20	7,53	1,90	528,0	3,16	29,32	EN12900 HBP																				
-7	20	54	130	35	95	46	115	688,4	2351	592,4	1,62	5,53	1,39	425,5	2,76	15,02	ASHRAE MBP																				
-10	14	55	131	32	90	55	131	511,2	1746	440,0	1,31	4,49	1,13	388,9	2,61	12,36	cecomaf MBP																				
-10	14	45	113	20	68	45	113	608,8	2079	523,9	1,61	5,49	1,38	378,9	2,57	14,25	EN12900 MBP																				

Performance tables

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, KC

	pe		Cooling capacity			COP		EER			P1		I		m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]		[W]		[A]		[kg/h]	
[°C / °F]	-15	5	469,7	1604	404,2	1,41		4,80	1,21		334,0		2,39		10,24	
cond. pressure	-10	14	631,6	2157	543,5	1,67		5,69	1,43		378,9		2,57		13,82	
pc= 45/113	-5	23	824,5	2816	709,6	1,95		6,67	1,68		422,3		2,74		18,13	
return gas temp.	0	32	1052,5	3594	905,8	2,27		7,75	1,95		463,8		2,90		23,28	
RGT= 32/90	5	41	1319,7	4507	1135,7	2,62		8,96	2,26		502,8		3,05		29,38	
liquid temp	10	50	1630,1	5567	1402,9	3,03		10,34	2,60		538,6		3,19		36,58	
Tliq= 45/113	15	59	1987,8	6789	1710,7	3,48		11,90	3,00		570,6		3,33		45,03	
[°C / °F]	-15	5	371,0	1267	319,3	1,12		3,81	0,96		332,3		2,37		8,93	
cond. pressure	-10	14	511,2	1746	440,0	1,31		4,49	1,13		388,9		2,61		12,36	
pc= 55/131	-5	23	679,5	2321	584,8	1,53		5,21	1,31		445,5		2,84		16,52	
return gas temp	0	32	879,9	3005	757,2	1,76		5,99	1,51		501,3		3,06		21,52	
RGT= 32/90	5	41	1116,4	3813	960,8	2,01		6,86	1,73		555,8		3,28		27,51	
liquid temp	10	50	1393,1	4758	1199,0	2,29		7,82	1,97		608,3		3,49		34,63	
Tliq= 55/131	15	59	1714,2	5854	1475,3	2,60		8,89	2,24		658,4		3,68		43,06	

Model				
Designation	SC12GH	208-230V/60Hz	Conf. 4	Sales code: 104G8261

Configuration		Electrical accessories / wiring diagram		
Motorconfiguration	CSIR	CSIR		
Power supply (nominal)	208-230V/60Hz 1~			
Refrigerant	R513A			
Application	HBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	UL			

Ambient/ machine room temperatures minimum /maximum

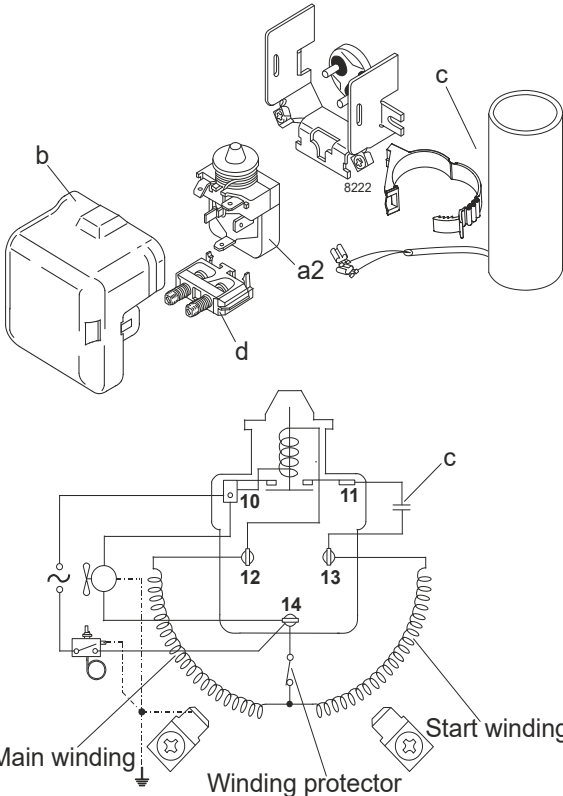
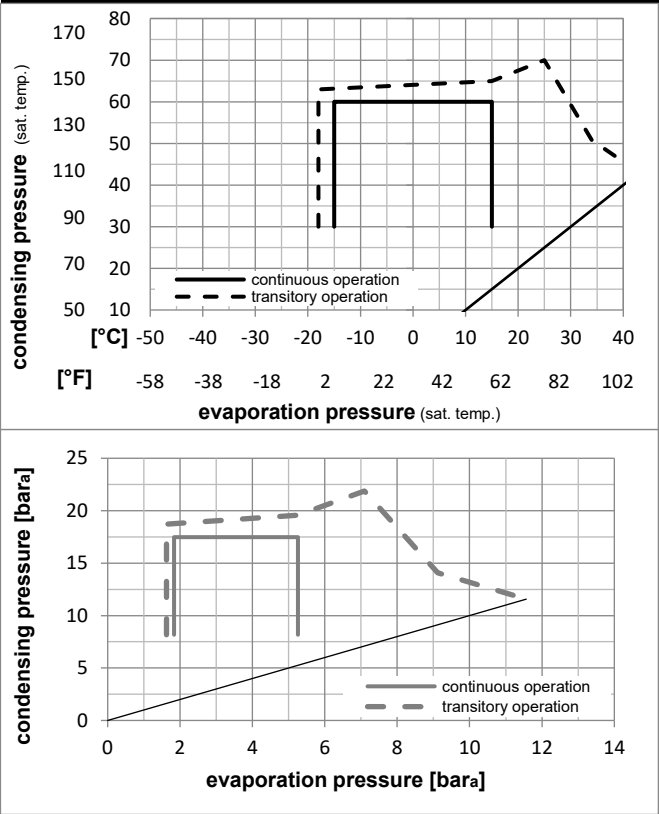
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s

Operation Limits

Operation pressure range



Components		
a2	relay	117U6011
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation	SC12GH	208-230V/60Hz	Conf. 4	Sales code:	104G8261
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Optimization + standard conditions

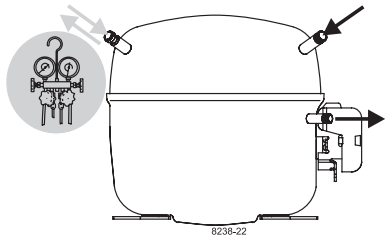
R513A, 230V/60Hz, CSIR, fan 3m/s, VDE, UL

Evaporating pressure (saturation temperature)																	
Condensing pressure (saturation temperature)																	
Return gas temp.																	
Liquid temp.																	
Cooling capacity																	
COP																	
EER																	
Power consumption																	
Current consumption																	
Ref. mass flow																	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m					
[°C]	[°F]									[W]	[A]	[kg/h]					
7,2	45	54	35	46	1410,5	4817	1213,9	2,35	8,03	2,02	600,1	3,45	35,04	ASHRAE HBP			
5	41	55	32	55	1132,3	3867	974,4	1,95	6,66	1,68	580,5	3,37	31,82	cecomaf HBP			
5	41	50	20	50	1182,1	4037	1017,4	2,14	7,32	1,85	551,3	3,25	33,90	EN12900 HBP			
-7	20	54	35	46	724,1	2473	623,2	1,61	5,50	1,39	449,8	2,85	17,74	ASHRAE MBP			
-10	14	55	32	55	531,8	1816	457,7	1,29	4,40	1,11	412,8	2,70	14,70	cecomaf MBP			
-10	14	45	20	45	637,4	2177	548,6	1,59	5,43	1,37	401,1	2,65	16,89	EN12900 MBP			

Performance tables

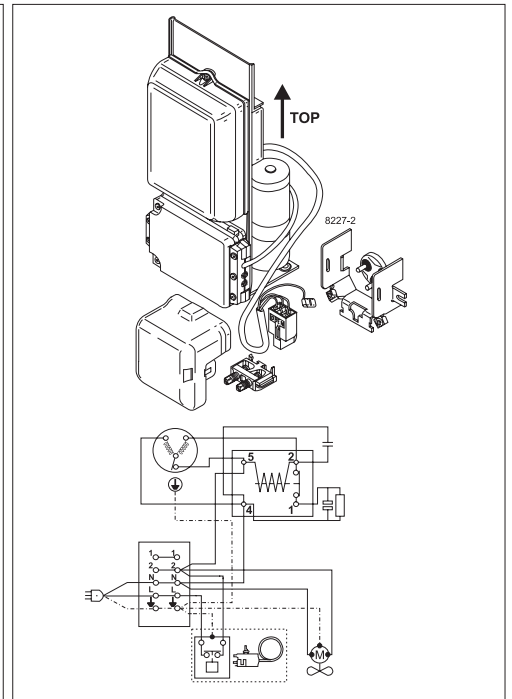
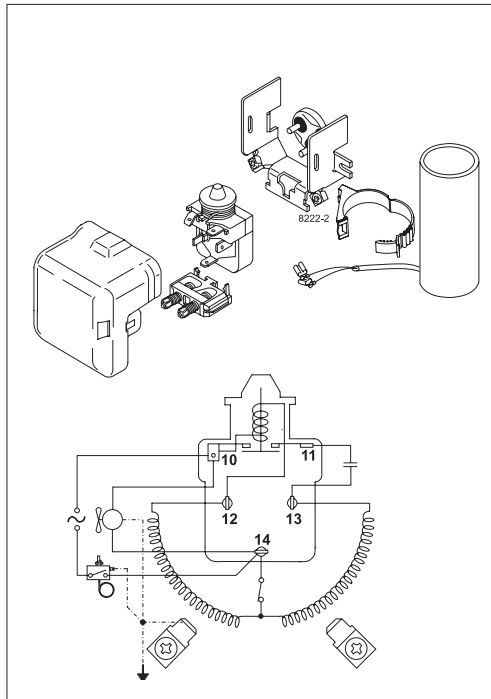
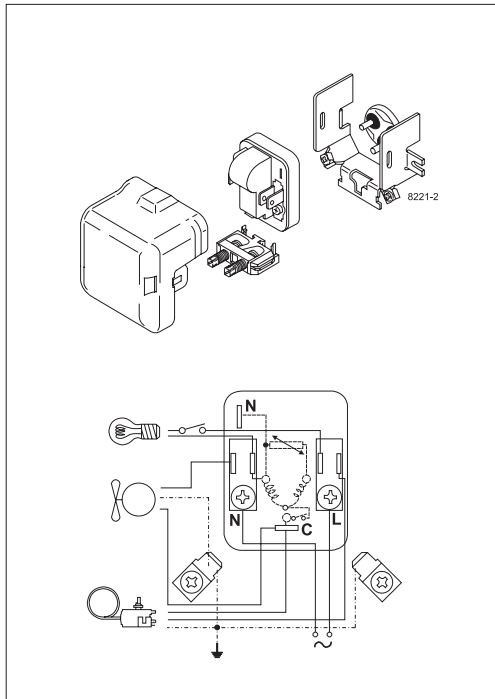
R513A, 230V/60Hz, CSIR, fan 3m/s, VDE, UL

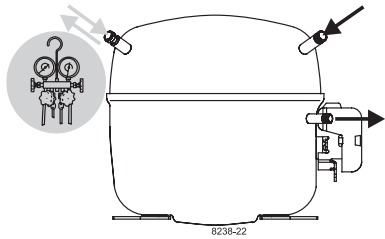
	pe		Cooling capacity			COP		EER			P1		I		m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]		[W]		[A]		[kg/h]	
[°C / °F]	-15	5	500,7	1710	430,9	1,41		4,81	1,21		355,4		2,47		12,27	
cond. pressure	-10	14	666,6	2276	573,6	1,66		5,68	1,43		401,1		2,65		16,39	
pc= 45/113	-5	23	862,7	2946	742,4	1,94		6,62	1,67		444,9		2,83		21,30	
return gas temp.	0	32	1092,8	3732	940,5	2,25		7,68	1,93		486,3		2,99		27,11	
RGT= 32/90	5	41	1361,0	4648	1171,3	2,59		8,86	2,23		524,7		3,15		33,95	
liquid temp	10	50	1670,9	5706	1438,0	2,98		10,19	2,57		559,8		3,29		41,95	
Tliq= 45/113	15	59	2026,4	6921	1744,0	3,43		11,71	2,95		591,0		3,41		51,27	
[°C / °F]	-15	5	390,4	1333	335,9	1,10		3,76	0,95		354,8		2,47		10,75	
cond. pressure	-10	14	531,8	1816	457,7	1,29		4,40	1,11		412,8		2,70		14,70	
pc= 55/131	-5	23	700,0	2391	602,5	1,49		5,09	1,28		470,1		2,93		19,44	
return gas temp	0	32	898,9	3070	773,6	1,71		5,83	1,47		526,2		3,15		25,10	
RGT= 32/90	5	41	1132,3	3867	974,4	1,95		6,66	1,68		580,5		3,37		31,82	
liquid temp	10	50	1404,0	4795	1208,3	2,22		7,58	1,91		632,6		3,58		39,75	
Tliq= 55/131	15	59	1717,8	5867	1478,4	2,52		8,60	2,17		682,0		3,78		49,06	



SC Compressors

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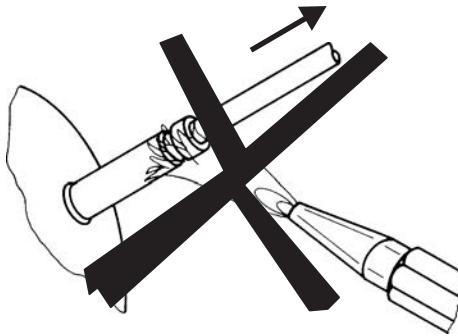




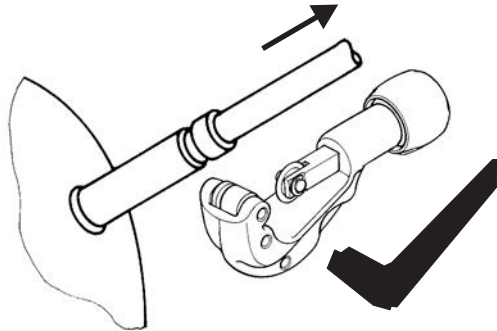
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Service/Repair – R290

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