

Model

Designation	SC21G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8140
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a , R513A
Oil viscosity	22cSt	Displacement	20,95cm ³ / 1,28cu.in
Oil quantity	550cm ³ / 18,6fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1460cm ³ / 49,4fl.oz		
Weight	13,6kg / 30lbs		
Motor protection	1# internal		
Winding resistance main	3,5Ω (at 25°C)		
Winding resistance aux	13Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with SC21G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSCR	CSCR	CSCR	CSCR
Power supply (nominal)	220-240V/50Hz	220-240V/60Hz	220-240V/50Hz	220-240V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	198-254V	187-254V	198-253V
Approvals	VDE, CCC	CCC, UL, KC	VDE, CCC	CCC, UL, KC
Starting torque	HST	HST	HST	HST
Note	- / -			

Applications with SC21G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R513A	R513A
Application	LBP+MBP+HBP	LBP	LBP+MBP+HBP	LBP
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 SC21G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	10μF	10μF	10μF	10μF
Start capacitor	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	22A	22A	22A	22A
RLA (rated load amps / 1s/ U(N))	3,9A	3,9A	3,9A	3,9A
Cut in current (U(N))	22A	22A	22A	22A

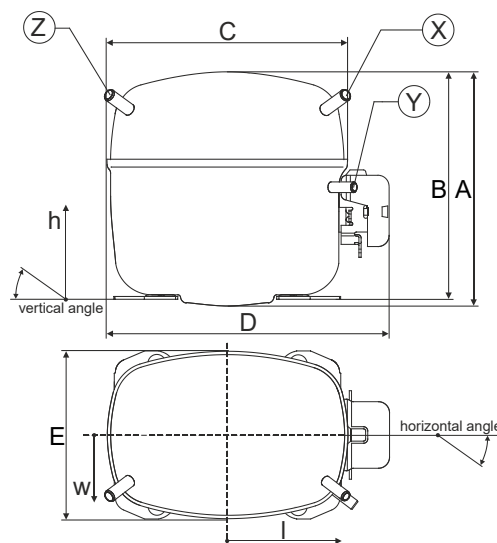
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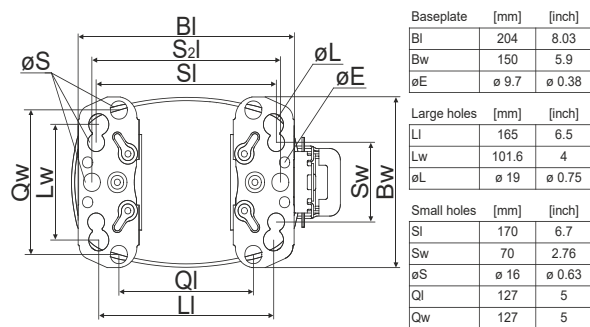
Compressor dimensions

Housing	A Height	219mm / 8,62in
	B Height	213mm / 8,39in
	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 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,4-0,41	øi 0,24-0,25	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]	107/193/55	115/110/63	-107/193/55
	[in] 4,2/7,6/2,2	4,5/4,3/2,5	-4,2/7,6/2,2
Straight tube l.	[mm] 12	12	12
	[in] 0,5	0,5	0,5

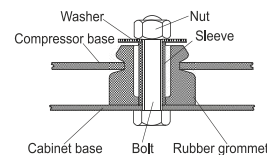


Compressor fixation

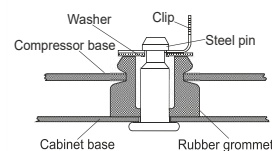


Baseplate	[mm]	[inch]
BI	204	8.03
Bw	150	5.9
øE	ø 9.7	ø 0.38
Large holes	[mm]	[inch]
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75
Small holes	[mm]	[inch]
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63
QI	127	5
Qw	127	5

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

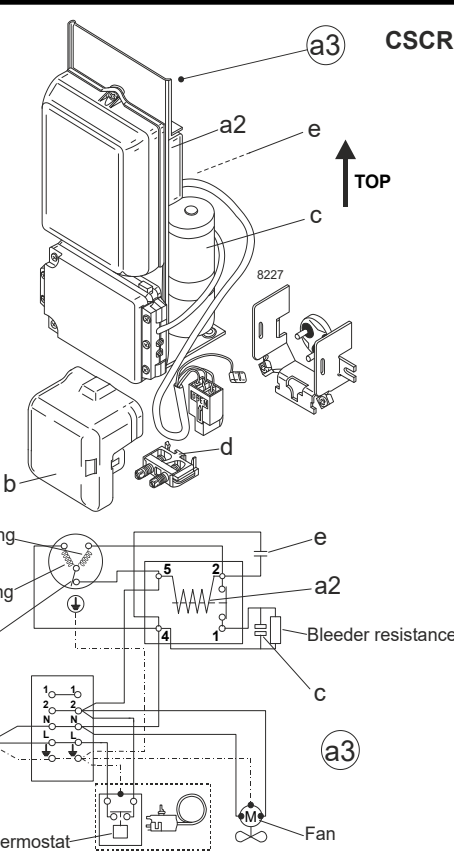
Model

Designation	SC21G	220-240V/50Hz	Conf. 1	Sales code:	104G8140
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Configuration

Motor configuration	CSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE
	CCC

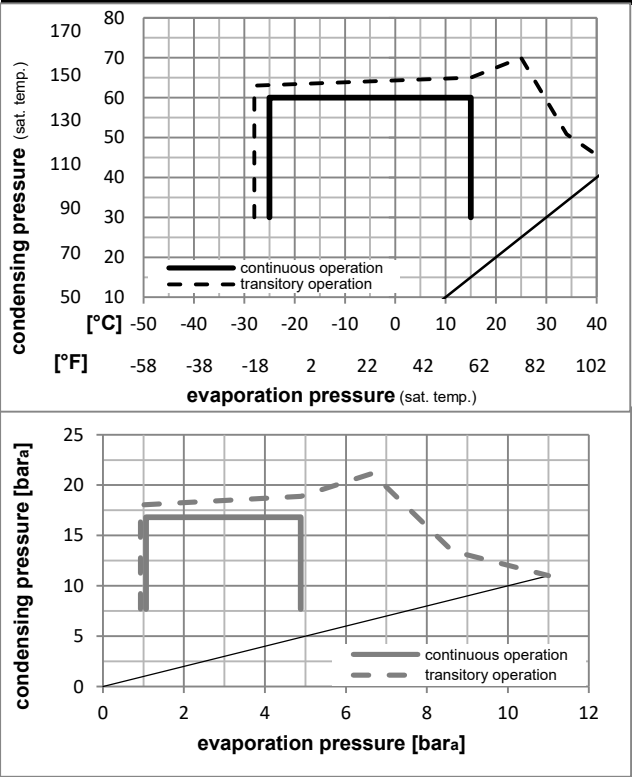
Electrical accessories / wiring diagram



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 pressure range



Components

a3	SC starter kit (550mm)	117-7029
b	plastic cover	103N2009
d	cord relief	103N1004

Alternative components

a3	SC starter kit (650mm)	117-7032
a3	SC starter kit (1000mm)	117-7041
a2	potential relay (RVA 4H3R341)	117-7427
c	start capacitor (80µF)	117U5373
e	run capacitor (10µF, 6.3mm)	117-7112

Model

Designation **SC21G** **220-240V/50Hz** Conf. 1 Sales code: **104G8140**

Optimization + standard conditions

R134a, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Performance tables

R134a, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

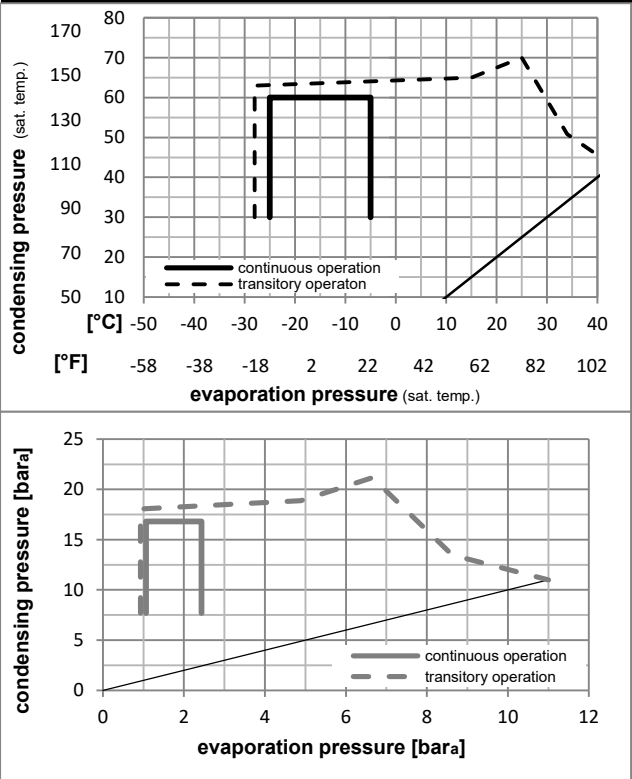
	pe		Cooling capacity			COP			EER			P1			I			m		
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]
[°C / °F]	-25	-13	420,9	1438	362,3	1,11	3,80	0,96	378,0	2,26	9,12									
cond. pressure	-20	-4	570,4	1948	490,9	1,29	4,40	1,11	442,9	2,44	12,39									
pc= 45/113	-10	14	966,8	3302	832,0	1,70	5,79	1,46	570,2	2,87	21,16									
return gas temp.	-5	23	1215,3	4150	1045,9	1,93	6,60	1,66	629,0	3,12	26,72									
RGT= 32/90	0	32	1498,4	5117	1289,5	2,20	7,50	1,89	682,2	3,39	33,14									
liquid temp	5	41	1816,9	6205	1563,6	2,50	8,52	2,15	727,9	3,68	40,45									
Tliq= 45/113	15	59	2563,1	8754	2205,8	3,25	11,08	2,79	789,8	4,34	58,06									
[°C / °F]	-25	-13	332,7	1136	286,4	0,96	3,26	0,82	348,2	2,28	7,96									
cond. pressure	-20	-4	453,1	1547	389,9	1,07	3,67	0,92	421,7	2,48	10,87									
pc= 55/131	-10	14	792,6	2707	682,1	1,39	4,75	1,20	569,4	2,96	19,16									
return gas temp	-5	23	1013,3	3461	872,0	1,58	5,41	1,36	640,0	3,24	24,63									
RGT= 32/90	0	32	1269,0	4334	1092,1	1,80	6,14	1,55	705,9	3,54	31,04									
liquid temp	5	41	1560,5	5329	1343,0	2,04	6,96	1,75	765,4	3,87	38,45									
Tliq= 55/131	15	59	2254,0	7698	1939,8	2,63	8,97	2,26	858,1	4,60	56,61									

Model				
Designation	SC21G	220-240V/60Hz	Conf. 2	Sales code: 104G8140
Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSCR			
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R134a			
Application	LBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	CCC			
	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 pressure range



Components

a3	SC starter kit (550mm)	117-7029
b	plastic cover	103N2009
d	cord relief	103N1004

Alternative components

a3	SC starter kit (650mm)	117-7032
a3	SC starter kit (1000mm)	117-7041
a2	potential relay (RVA 4H3R341)	117-7427
c	start capacitor (80µF)	117U5373
e	run capacitor (10µF, 6.3mm)	117-7112

Model

Designation **SC21G** **220-240V/60Hz** Conf. 2 Sales code: **104G8140**

Optimization + standard conditions

R134a, 230V/60Hz, CSCR, fan 3m/s, CCC, UL, KC

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				m																																															
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]														
[°C]					-23					54					32					32					443,9					1516					382,0					1,07					3,67					0,92					413,2					1,90					8,62					ASHRAE LBP				
[°F]					-10					130					90					90																																																						
[°C]					-7					54					35					46					1165,8					3981					1003,3					1,67					5,69					1,43					700,0					3,09					25,43					ASHRAE MBP				
[°F]					20					130					95					115																																																						
[°C]					7,2					54					35					46					2196,3					7501					1890,2					2,36					8,07					2,03					930,0					4,00					48,73					ASHRAE HBP				
[°F]					45					130					95					115																																																						
[°C]					-35					40					20					40					231,4					790					199,1					0,82					2,79					0,70					283,4					1,29					5,08					EN12900 LBP				
[°F]					-31					104					68					104																																																						
[°C]					-10					45					20					45					1000,0					3415					860,6					1,61					5,49					1,38					622,6					2,73					23,41					EN12900 MBP				
[°F]					14					113					68					113																																																						
[°C]					5					50					20					50					1828,2					6244					1573,3					2,09					7,15					1,80					872,9					3,71					46,07					EN12900 HBP				
[°F]					41					122					68					122																																																						

Performance tables

R134a, 230V/60Hz, CSCR, fan 3m/s, CCC, UL, KC

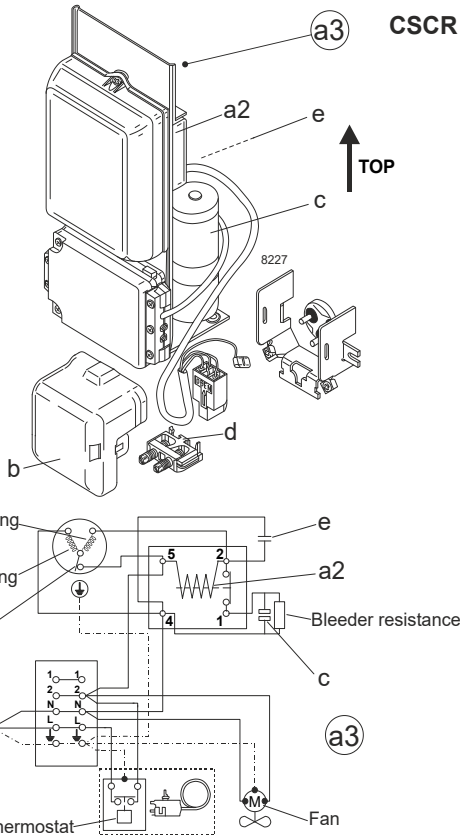
	pe		Cooling capacity			COP		EER			P1		I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]		[W]		[A]	[kg/h]
[°C / °F]	-25	-13	439,8	1502	378,5	1,07		3,64	0,92		412,9		1,84	9,53
cond. pressure	-23	-10	493,1	1684	424,3	1,13		3,85	0,97		437,2		1,94	10,69
pc= 45/113	-20	-4	606,1	2070	521,6	1,25		4,28	1,08		483,6		2,15	13,17
return gas temp.	-18	0	688,9	2353	592,9	1,34		4,58	1,15		514,2		2,28	14,99
RGT= 32/90	-15	5	803,8	2745	691,7	1,45		4,96	1,25		553,0		2,44	17,52
liquid temp	-10	14	1037,5	3543	892,9	1,67		5,69	1,43		622,6		2,73	22,71
Tliq= 45/113	-5	23	1311,7	4480	1128,9	1,89		6,46	1,63		693,8		3,01	28,84
[°C / °F]	-25	-13	303,4	1036	261,1	0,80		2,74	0,69		378,6		1,77	7,25
cond. pressure	-23	-10	354,9	1212	305,4	0,86		2,95	0,74		410,9		1,90	8,49
pc= 55/131	-20	-4	464,0	1585	399,3	0,98		3,36	0,85		471,7		2,14	11,13
return gas temp	-18	0	543,9	1858	468,1	1,06		3,63	0,92		511,1		2,30	13,07
RGT= 32/90	-15	5	654,7	2236	563,4	1,17		3,99	1,01		560,1		2,51	15,76
liquid temp	-10	14	880,1	3006	757,4	1,36		4,66	1,17		645,1		2,86	21,28
Tliq= 55/131	-5	23	1144,6	3909	985,1	1,57		5,37	1,35		728,2		3,21	27,82

Model					
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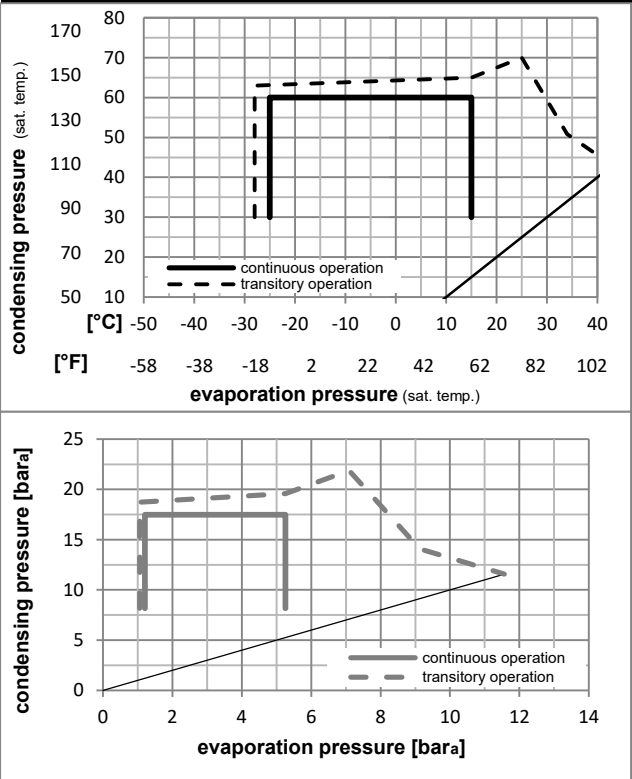
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Motor configuration	CSCR				
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Starting torque	HST				
Approvals	VDE				
	CCC				

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Compressor cooling:	fan 3m/s



Operation pressure range



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Optimization + standard conditions

R513A, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC

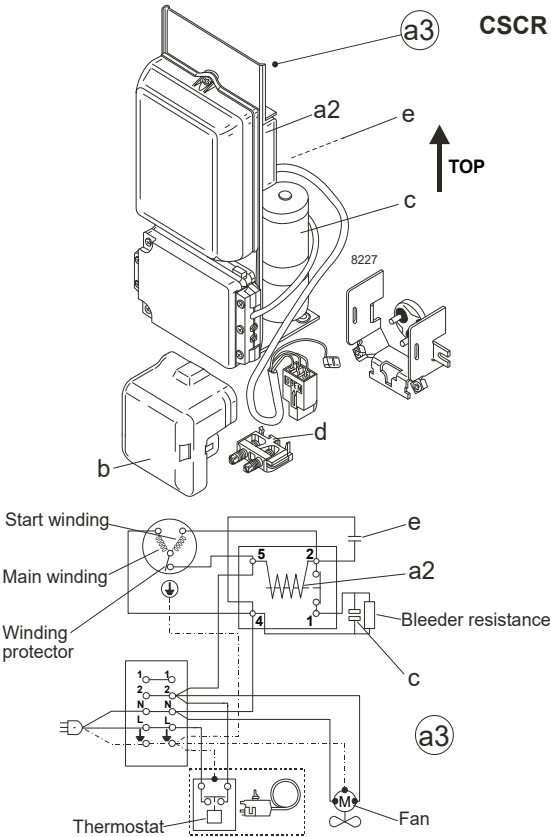
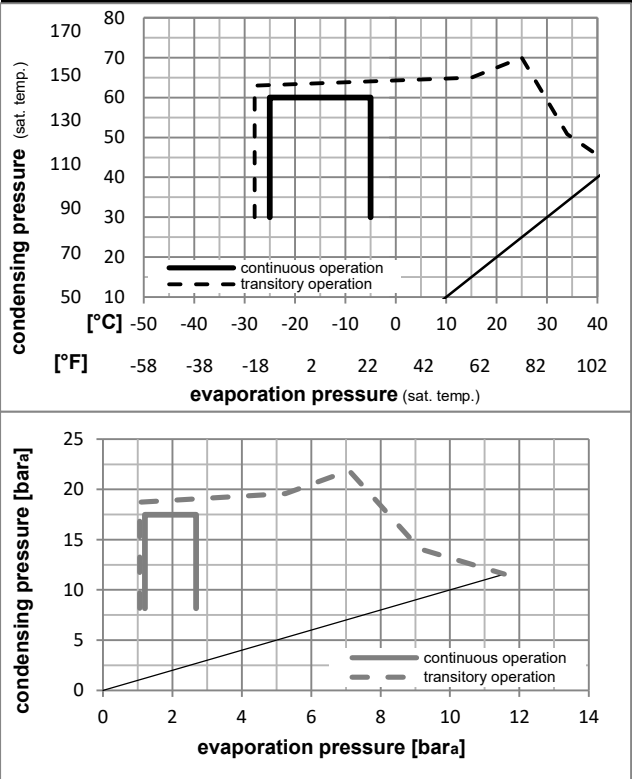
Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
					Return gas temp.						Current consumption			
					Liquid temp.						Ref. mass flow			
					Cooling capacity						COP			
					EER						P1			
					[W]						I			
					[Btu/h]						[A]			
					[kcal/h]						ṁ			
					[W/W]						[kg/h]			
					[Btu/Wh]									
					[kcal/Wh]									
					[W]									
					[A]									
					[kg/h]									

Model				
Designation	SC21G	220-240V/60Hz	Conf. 4	Sales code: 104G8140
Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSCR			
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R513A			
Application	LBP			
Voltage range	198-253V			
Starting torque	HST			
Approvals	CCC			
	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 pressure range



Components

a3	SC starter kit (550mm)	117-7029
b	plastic cover	103N2009
d	cord relief	103N1004

Alternative components

a3	SC starter kit (650mm)	117-7032
a3	SC starter kit (1000mm)	117-7041
a2	potential relay (RVA 4H3R341)	117-7427
c	start capacitor (80µF)	117U5373
e	run capacitor (10µF, 6.3mm)	117-7112

Model

Designation **SC21G** **220-240V/60Hz** Conf. 4 Sales code: **104G8140**

Optimization + standard conditions

R513A, 230V/60Hz, CSCR, fan 3m/s, CCC, 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]	P1	I	m	[W]	[A]	[kg/h]	P1	I	m	[W]	[A]	[kg/h]	P1	I	m	[W]	[A]	[kg/h]
[°C]	-23	54	32	32	494,1	1687	425,2	1,10	3,75	0,95	449,4	2,09	10,63	ASHRAE LBP																
[°F]	-10	130	90	90																										
[°C]	-7	54	35	46	1225,5	4185	1054,7	1,65	5,63	1,42	743,2	3,17	30,02	ASHRAE MBP																
[°F]	20	130	95	115																										
[°C]	7,2	54	35	46	2258,8	7714	1943,9	2,32	7,93	2,00	972,7	4,02	56,11	ASHRAE HBP																
[°F]	45	130	95	115																										
[°C]	-35	40	20	40	262,1	895	225,5	0,84	2,88	0,72	311,3	1,58	6,48	EN12900 LBP																
[°F]	-31	104	68	104																										
[°C]	-10	45	20	45	1046,7	3575	900,8	1,58	5,40	1,36	662,6	2,87	27,74	EN12900 MBP																
[°F]	14	113	68	113																										
[°C]	5	50	20	50	1855,5	6337	1596,8	2,03	6,93	1,75	914,5	3,81	53,20	EN12900 HBP																
[°F]	41	122	68	122																										

Performance tables

R513A, 230V/60Hz, CSCR, fan 3m/s, CCC, 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]	[W]	[A]	[kg/h]	[kg/h]
[°C / °F]	-25	-13	480,8	1642	413,8	1,07	3,66	0,92	448,6	2,08	11,72				
cond. pressure	-23	-10	536,3	1832	461,6	1,13	3,87	0,97	473,7	2,18	13,08				
pc= 45/113	-20	-4	653,4	2232	562,3	1,25	4,28	1,08	521,5	2,35	15,96				
return gas temp.	-18	0	738,8	2523	635,8	1,34	4,56	1,15	552,8	2,47	18,07				
RGT= 32/90	-15	5	856,6	2925	737,2	1,45	4,94	1,24	592,3	2,61	20,99				
liquid temp	-10	14	1094,5	3738	942,0	1,65	5,64	1,42	662,6	2,87	26,91				
Tliq= 45/113	-5	23	1371,6	4684	1180,4	1,87	6,38	1,61	734,0	3,14	33,86				
[°C / °F]	-25	-13	329,3	1125	283,4	0,80	2,72	0,69	413,1	1,95	9,02				
cond. pressure	-23	-10	382,6	1306	329,2	0,86	2,92	0,74	446,9	2,08	10,48				
pc= 55/131	-20	-4	494,6	1689	425,6	0,97	3,31	0,83	510,2	2,31	13,58				
return gas temp	-18	0	576,1	1967	495,8	1,05	3,57	0,90	550,9	2,46	15,84				
RGT= 32/90	-15	5	688,3	2351	592,4	1,14	3,91	0,99	601,3	2,65	18,96				
liquid temp	-10	14	914,8	3124	787,3	1,33	4,54	1,14	687,9	2,97	25,30				
Tliq= 55/131	-5	23	1178,4	4025	1014,2	1,53	5,21	1,31	771,8	3,28	32,73				