

Model

Designation	SC12G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8243
-------------	--------------	--	-------------	-----------------

Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	22cSt	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	500cm ³ / 16,9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1510cm ³ / 51,1fl.oz		
Weight	12,7kg / 28lbs		
Motor protection	1# internal		
Winding resistance main	6,9Ω (at 25°C)		
Winding resistance aux	11Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC12G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	RSIR	RSIR
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	198-254V
Approvals	VDE, CCC, KC	VDE, CCC, KC	VDE, CCC, KC	VDE, CCC, KC
Starting torque	HST	HST	LST	LST
Note	- / -			

Applications with SC12G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R134a	R134a
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 SC12G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	PTC	PTC
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	80μF	80μF	-/-	-/-
LRA (locked rotor amps / 4s/ U(N))	13A	13A	12,6A	
RLA (rated load amps / 1s/ U(N))	2,5A	2,5A	2,5A	-/-A
Cut in current (U(N))	17A	17A	12,6A	

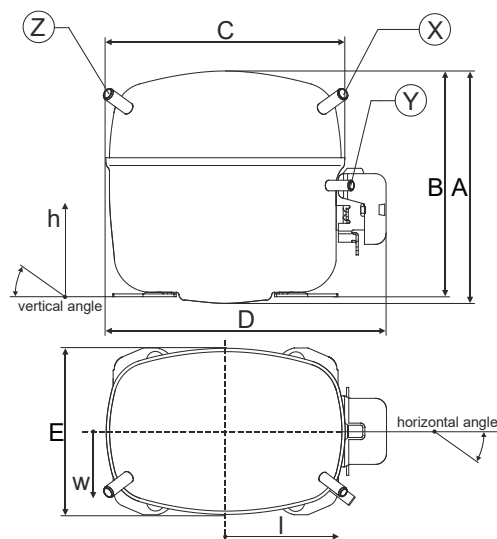
Model

Designation	SC12G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8243
-------------	--------------	--	-------------	-----------------

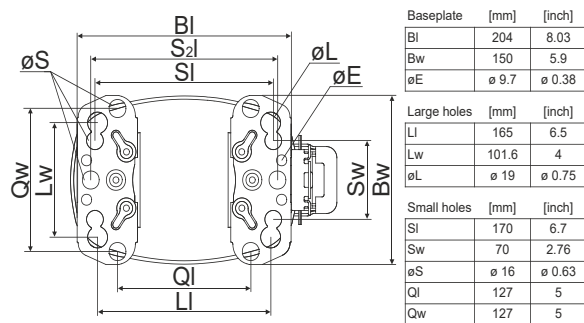
Compressor dimensions

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

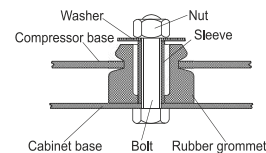
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10,11-10,29	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside) [in]	øi 0,4-0,41	øi 0,25-0,26	øi 0,25-0,26
Material	copper	copper	copper
Horizontal angle	±2° 37°	37°	143°
Vertical angle	±2° 30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55
	[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



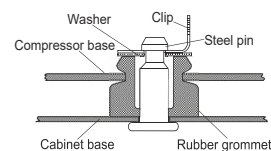
Compressor fixation



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

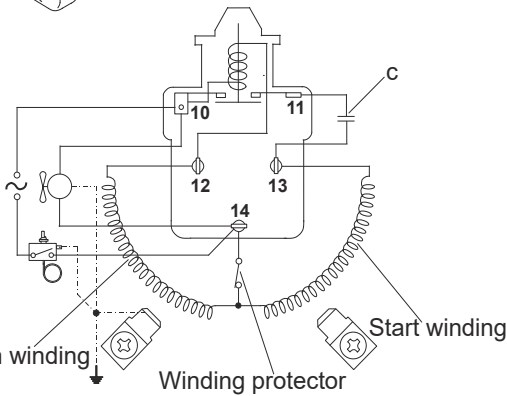
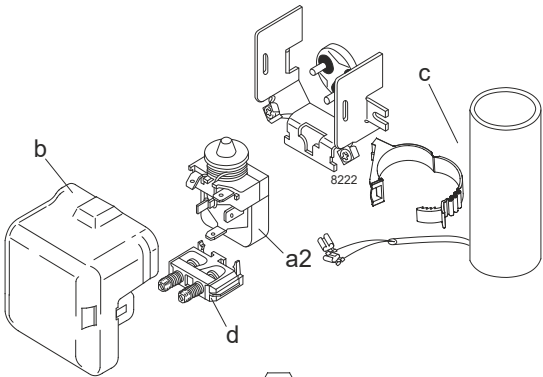
Designation	SC12G	220-240V/50Hz	Conf. 1	Sales code:	104G8243
-------------	-------	---------------	---------	-------------	----------

Configuration

Electrical accessories / wiring diagram

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

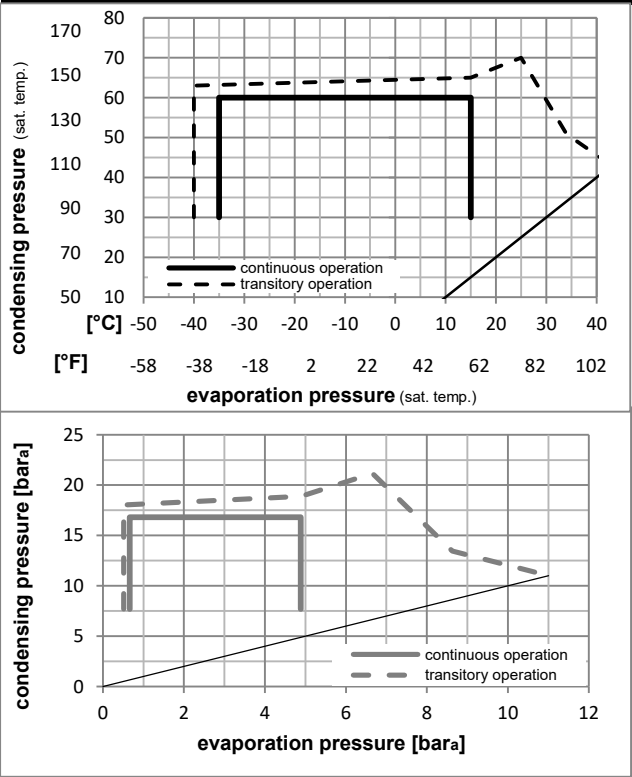
CSIR



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

a2	assy. relay	117U6003
c	start capacitor (80µF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation	SC12G	220-240V/50Hz	Conf. 1	Sales code:	104G8243
-------------	--------------	----------------------	----------------	-------------	-----------------

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, 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					247,5					845					213,0					1,03					3,52					0,89					240,3					1,87					4,81					ASHRAE LBP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
[°F]					-10					130					90					90																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Performance tables

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, 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]	-35	-31	102,6	350	88,3	0,65	2,21	0,56	158,5	1,69	2,21
cond. pressure	-25	-13	234,7	802	202,0	1,03	3,51	0,89	228,1	1,84	5,09
pc= 45/113	-15	5	435,5	1487	374,8	1,44	4,93	1,24	301,4	2,03	9,49
return gas temp.	-10	14	567,7	1939	488,5	1,67	5,71	1,44	339,2	2,15	12,42
RGT= 32/90	0	32	907,8	3100	781,2	2,18	7,44	1,88	416,6	2,42	20,07
liquid temp	5	41	1120,5	3827	964,3	2,46	8,39	2,11	456,0	2,58	24,95
Tliq= 45/113	15	59	1643,6	5613	1414,5	3,07	10,48	2,64	535,5	2,93	37,23
[°C / °F]	-35	-31	64,6	221	55,6	0,44	1,49	0,38	147,9	1,63	1,54
cond. pressure	-25	-13	175,0	598	150,6	0,77	2,63	0,66	226,8	1,83	4,18
pc= 55/131	-15	5	348,0	1188	299,5	1,12	3,82	0,96	311,1	2,09	8,38
return gas temp	-10	14	464,1	1585	399,4	1,31	4,46	1,12	355,1	2,24	11,22
RGT= 32/90	0	32	767,6	2621	660,6	1,72	5,88	1,48	446,1	2,57	18,77
liquid temp	5	41	959,8	3278	826,0	1,95	6,65	1,68	493,0	2,76	23,65
Tliq= 55/131	15	59	1437,3	4909	1237,0	2,44	8,34	2,10	588,7	3,17	36,10

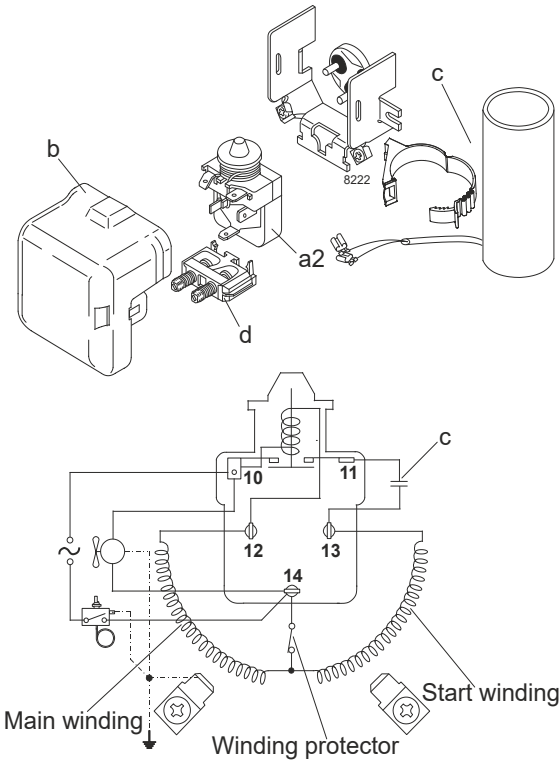
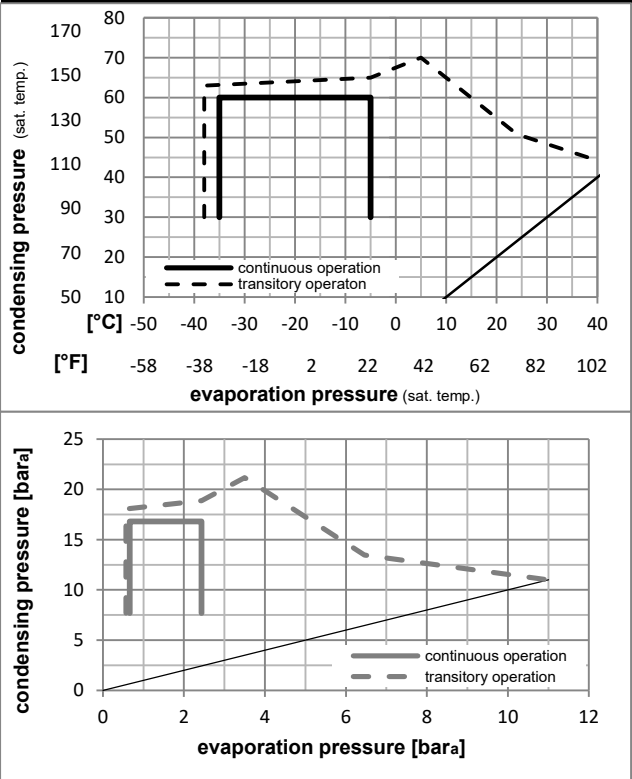
Model				
Designation	SC12G	220-240V/60Hz	Conf. 2	Sales code: 104G8243

Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R134a			
Application	LBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	CCC			
	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		
a2	assy. relay	117U6003
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2008

Model

Designation **SC12G** **220-240V/60Hz** Conf. 2 Sales code: **104G8243**

Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CCC, 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]	P1	I	m		
[°C]										[W]	[A]	[kg/h]		
[°F]														
-23	54	32	32	288,0	983	247,8	1,03	3,51	0,88	280,6	2,06	5,59	ASHRAE LBP	
-10	130	90	90											
-7	54	35	46	718,1	2452	618,0	1,60	5,47	1,38	448,6	2,57	15,67	ASHRAE MBP	
20	130	95	115											
7,2	54	35	46	1367,9	4671	1177,2	2,29	7,81	1,97	598,1	3,12	30,35	ASHRAE HBP	
45	130	95	115											
-35	40	20	40	142,9	488	123,0	0,74	2,54	0,64	192,4	1,90	3,14	EN12900 LBP	
-31	104	68	104											
-10	45	20	45	638,9	2182	549,8	1,61	5,51	1,39	396,3	2,36	14,95	EN12900 MBP	
14	113	68	113											
5	50	20	50	1162,6	3970	1000,5	2,10	7,16	1,80	554,8	2,94	29,30	EN12900 HBP	
41	122	68	122											

Performance tables

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

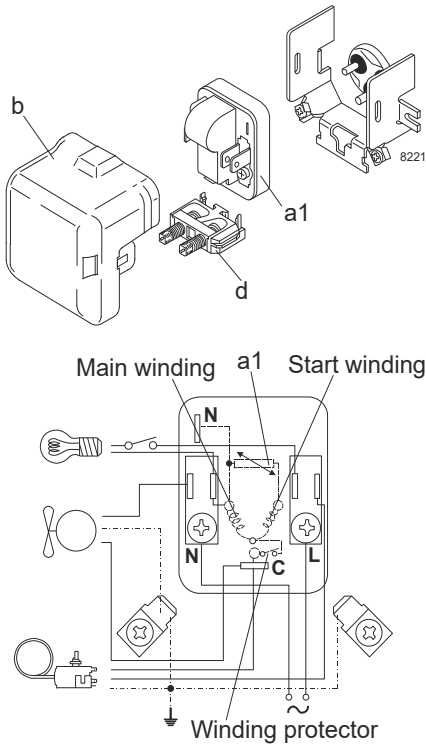
	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	118,7	405	102,2	0,64	2,19	0,55	184,8	1,86	2,56
cond. pressure	-30	-22	187,4	640	161,2	0,83	2,84	0,72	224,9	1,93	4,05
pc= 45/113	-25	-13	273,3	933	235,2	1,03	3,51	0,88	266,3	2,02	5,92
return gas temp.	-23	-10	306,9	1048	264,1	1,09	3,74	0,94	280,6	2,05	6,66
RGT= 32/90	-20	-4	379,3	1295	326,4	1,23	4,20	1,06	308,7	2,12	8,24
liquid temp	-15	5	508,2	1735	437,3	1,44	4,93	1,24	352,1	2,23	11,08
Tliq= 45/113	-5	23	846,1	2889	728,1	1,92	6,55	1,65	441,2	2,51	18,60
[°C / °F]	-35	-31	74,2	254	63,9	0,43	1,47	0,37	172,4	1,79	1,77
cond. pressure	-30	-22	131,0	448	112,8	0,60	2,06	0,52	217,7	1,89	3,13
pc= 55/131	-25	-13	203,3	694	175,0	0,77	2,62	0,66	264,7	2,01	4,86
return gas temp	-23	-10	232,0	792	199,6	0,83	2,82	0,71	281,0	2,06	5,55
RGT= 32/90	-20	-4	294,0	1004	253,0	0,94	3,20	0,81	313,3	2,15	7,05
liquid temp	-15	5	405,8	1386	349,2	1,12	3,81	0,96	363,4	2,30	9,77
Tliq= 55/131	-5	23	704,3	2405	606,1	1,51	5,14	1,30	467,5	2,64	17,12

Model					
Designation	SC12G	220-240V/50Hz	Conf. 3	Sales code:	104G8243

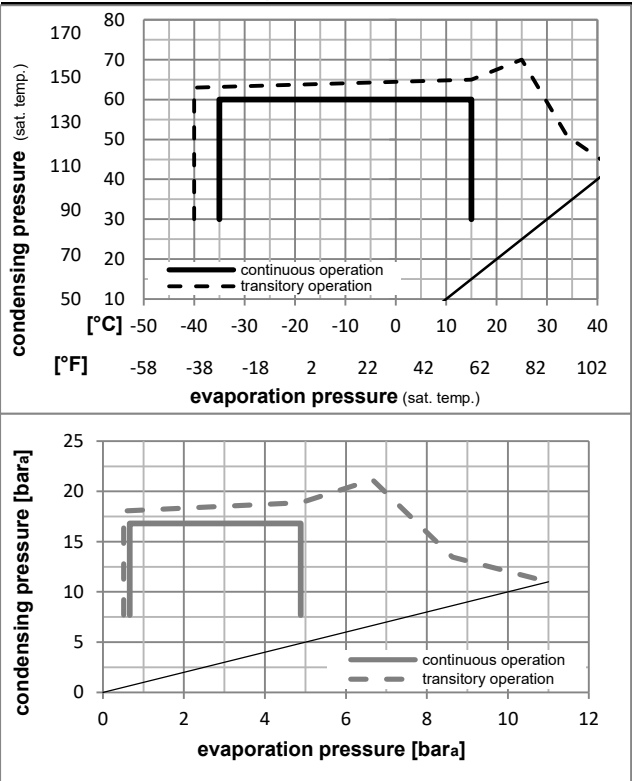
Configuration	Electrical accessories / wiring diagram				
Motor configuration	RSIR				RSIR
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R134a				
Application	LBP+MBP+HBP				
Voltage range	187-254V				
Starting torque	LST				
Approvals	VDE				
	CCC				
	KC				

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		
a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0011
d	cord relief	103N1004
b	plastic cover	103N2009

Model

Designation	SC12G	220-240V/50Hz	Conf. 3	Sales code:	104G8243
-------------	--------------	----------------------	----------------	-------------	-----------------

Optimization + standard conditions

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

[illegible]

Performance tables

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

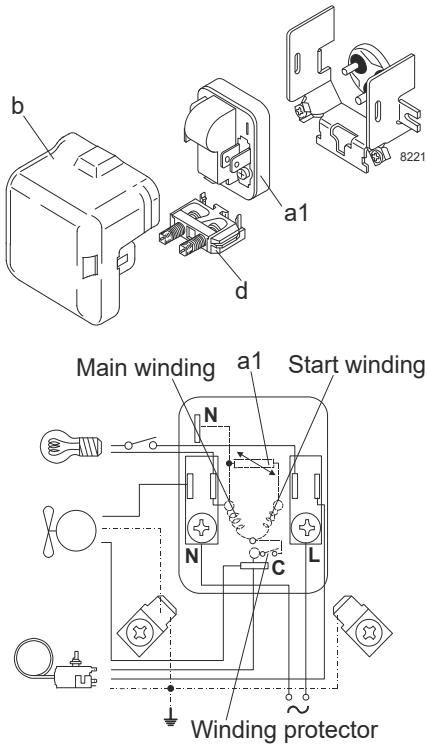
	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	102,6	350	88,3	0,65	2,21	0,56	158,5	1,69	2,21
cond. pressure	-25	-13	234,7	802	202,0	1,03	3,51	0,89	228,1	1,84	5,09
pc= 45/113	-15	5	435,5	1487	374,8	1,44	4,93	1,24	301,4	2,03	9,49
return gas temp.	-10	14	567,7	1939	488,5	1,67	5,71	1,44	339,2	2,15	12,42
RGT= 32/90	0	32	907,8	3100	781,2	2,18	7,44	1,88	416,6	2,42	20,07
liquid temp	5	41	1120,5	3827	964,3	2,46	8,39	2,11	456,0	2,58	24,95
Tliq= 45/113	15	59	1643,6	5613	1414,5	3,07	10,48	2,64	535,5	2,93	37,23
[°C / °F]	-35	-31	64,6	221	55,6	0,44	1,49	0,38	147,9	1,63	1,54
cond. pressure	-25	-13	175,0	598	150,6	0,77	2,63	0,66	226,8	1,83	4,18
pc= 55/131	-15	5	348,0	1188	299,5	1,12	3,82	0,96	311,1	2,09	8,38
return gas temp	-10	14	464,1	1585	399,4	1,31	4,46	1,12	355,1	2,24	11,22
RGT= 32/90	0	32	767,6	2621	660,6	1,72	5,88	1,48	446,1	2,57	18,77
liquid temp	5	41	959,8	3278	826,0	1,95	6,65	1,68	493,0	2,76	23,65
Tliq= 55/131	15	59	1437,3	4909	1237,0	2,44	8,34	2,10	588,7	3,17	36,10

Model				
Designation	SC12G	220-240V/60Hz	Conf. 4	Sales code: 104G8243

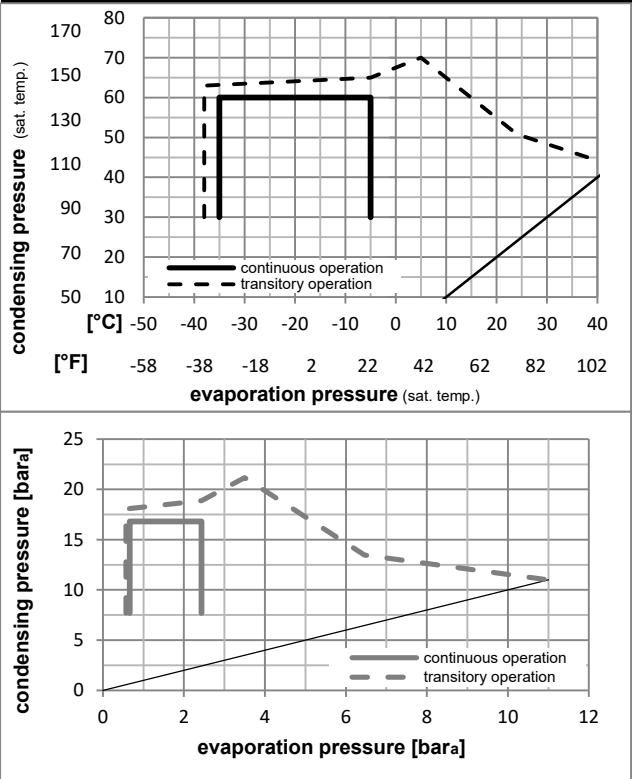
Configuration		Electrical accessories / wiring diagram		
Motor configuration	RSIR	RSIR		
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R134a			
Application	LBP			
Voltage range	198-254V			
Starting torque	LST			
Approvals	VDE			
	CCC			
	KC			

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		
a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0011
d	cord relief	103N1004
b	plastic cover	103N2009

Model

Designation **SC12G** **220-240V/60Hz** Conf. 4 Sales code: **104G8243**

Optimization + standard conditions

R134a, 230V/60Hz, RSIR, fan 3m/s, VDE, CCC, 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]	P1	I	m	
[°C]										[W]	[A]	[kg/h]	
[°F]													ASHRAE LBP
-23	54	32	32	288,0	983	247,8	1,03	3,51	0,88	280,6	2,06	5,59	
-10	130	90	90										
-7	54	35	46	718,1	2452	618,0	1,60	5,47	1,38	448,6	2,57	15,67	ASHRAE MBP
20	130	95	115										
7,2	54	35	46	1367,9	4671	1177,2	2,29	7,81	1,97	598,1	3,12	30,35	ASHRAE HBP
45	130	95	115										
-35	40	20	40	142,9	488	123,0	0,74	2,54	0,64	192,4	1,90	3,14	EN12900 LBP
-31	104	68	104										
-10	45	20	45	638,9	2182	549,8	1,61	5,51	1,39	396,3	2,36	14,95	EN12900 MBP
14	113	68	113										
5	50	20	50	1162,6	3970	1000,5	2,10	7,16	1,80	554,8	2,94	29,30	EN12900 HBP
41	122	68	122										

Performance tables

R134a, 230V/60Hz, RSIR, fan 3m/s, VDE, CCC, 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]	-35	-31	118,7	405	102,2	0,64	2,19	0,55	184,8	1,86	2,56	
cond. pressure	-30	-22	187,4	640	161,2	0,83	2,84	0,72	224,9	1,93	4,05	
pc= 45/113	-25	-13	273,3	933	235,2	1,03	3,51	0,88	266,3	2,02	5,92	
return gas temp.	-23	-10	306,9	1048	264,1	1,09	3,74	0,94	280,6	2,05	6,66	
RGT= 32/90	-20	-4	379,3	1295	326,4	1,23	4,20	1,06	308,7	2,12	8,24	
liquid temp	-15	5	508,2	1735	437,3	1,44	4,93	1,24	352,1	2,23	11,08	
Tliq= 45/113	-5	23	846,1	2889	728,1	1,92	6,55	1,65	441,2	2,51	18,60	
[°C / °F]	-35	-31	74,2	254	63,9	0,43	1,47	0,37	172,4	1,79	1,77	
cond. pressure	-30	-22	131,0	448	112,8	0,60	2,06	0,52	217,7	1,89	3,13	
pc= 55/131	-25	-13	203,3	694	175,0	0,77	2,62	0,66	264,7	2,01	4,86	
return gas temp	-23	-10	232,0	792	199,6	0,83	2,82	0,71	281,0	2,06	5,55	
RGT= 32/90	-20	-4	294,0	1004	253,0	0,94	3,20	0,81	313,3	2,15	7,05	
liquid temp	-15	5	405,8	1386	349,2	1,12	3,81	0,96	363,4	2,30	9,77	
Tliq= 55/131	-5	23	704,3	2405	606,1	1,51	5,14	1,30	467,5	2,64	17,12	