

Model

Designation	SC12G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8240
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	22cSt	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	550cm ³ / 18,6fl.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.	130°C / 266°F		



General - Configurations with SC12G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Motor configuration	CSIR	CSIR	CSIR	CSIR	RSIR
Power supply (nominal)	220-240V/50Hz	220-240V/60Hz	220-240V/50Hz	220-240V/60Hz	220-240V/50Hz
Number of phases	1	1	1	1	1
Voltage range	187-254V	198-254V	187-254V	187-253V	187-254V
Approvals	VDE, UL, CCC, EAC, KC	VDE, UL, CCC, EAC, KC	VDE, UL, CCC	VDE, UL, CCC	VDE, UL, CCC, EAC, KC
Starting torque	HST	HST	HST	HST	LST
Note	- / -				

Applications with SC12G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Refrigerant	R134a	R134a	R513A	R513A	R134a
Application	LBP+MBP+HBP	LBP	LBP+MBP+HBP	LBP	LBP+MBP+HBP
System cooling	fan 3m/s	fan 3m/s	fan 3m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK	OK

Electrical data - Configurations with SC12G

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

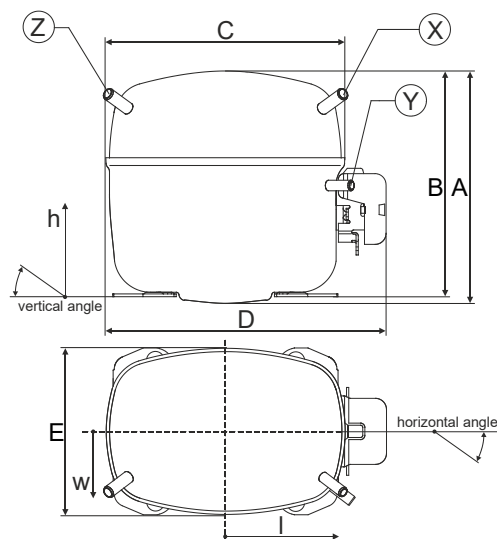
Model

Designation	SC12G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8240
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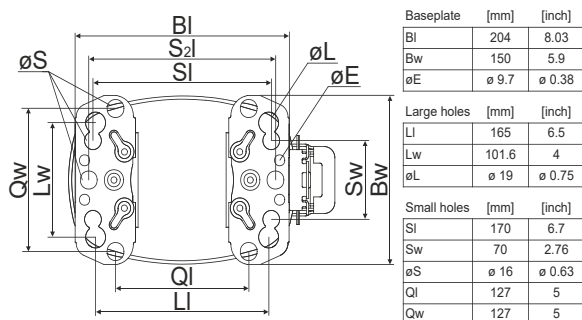
Compressor dimensions

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

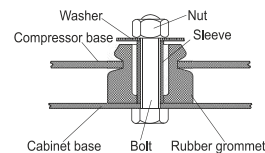
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle	±2° 37°	37°	143°
Vertical angle	±2° 30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55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



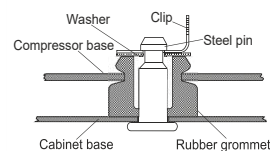
Compressor fixation



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

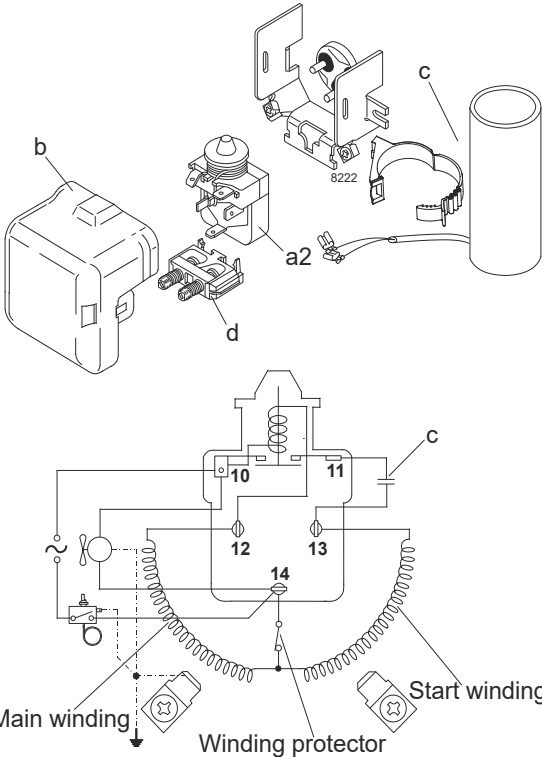
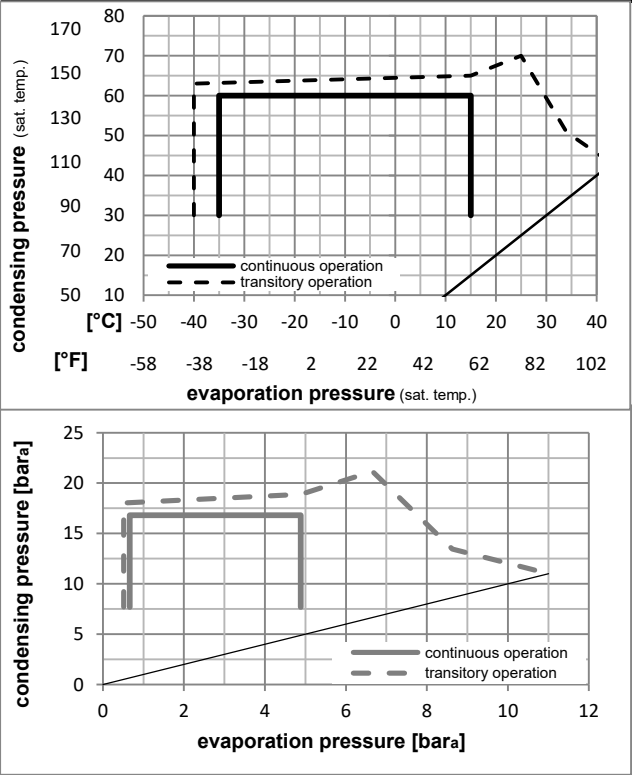
Model					
Designation	SC12G	220-240V/50Hz	Conf. 1	Sales code:	104G8240

Configuration	Electrical accessories / wiring diagram				
Motor configuration	CSIR	CSIR			
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R134a				
Application	LBP+MBP+HBP				
Voltage range	187-254V				
Starting torque	HST				
Approvals	VDE				
	UL				
	CCC				
	EAC				
	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	103N2009

Model

Designation **SC12G** **220-240V/50Hz** Conf. 1 Sales code: **104G8240**

Optimization + standard conditions

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

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			I		ṁ	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	-23	54	32	32											
[°F]	-10	130	90	90	247,5	845	213,0	1,03	3,52	0,89	240,3	1,87	4,81	ASHRAE LBP	
[°C]	-7	54	35	46											
[°F]	20	130	95	115	615,0	2100	529,3	1,60	5,47	1,38	383,9	2,34	13,42	ASHRAE MBP	
[°C]	7,2	54	35	46											
[°F]	45	130	95	115	1170,4	3997	1007,3	2,29	7,81	1,97	511,8	2,84	25,97	ASHRAE HBP	
[°C]	-35	40	20	40											
[°F]	-31	104	68	104	123,3	421	106,1	0,75	2,55	0,64	165,0	1,73	2,70	EN12900 LBP	
[°C]	-10	45	20	45											
[°F]	14	113	68	113	547,2	1869	470,9	1,61	5,51	1,39	339,2	2,15	12,81	EN12900 MBP	
[°C]	5	50	20	50											
[°F]	41	122	68	122	994,8	3397	856,1	2,10	7,16	1,80	474,7	2,67	25,07	EN12900 HBP	

Performance tables

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

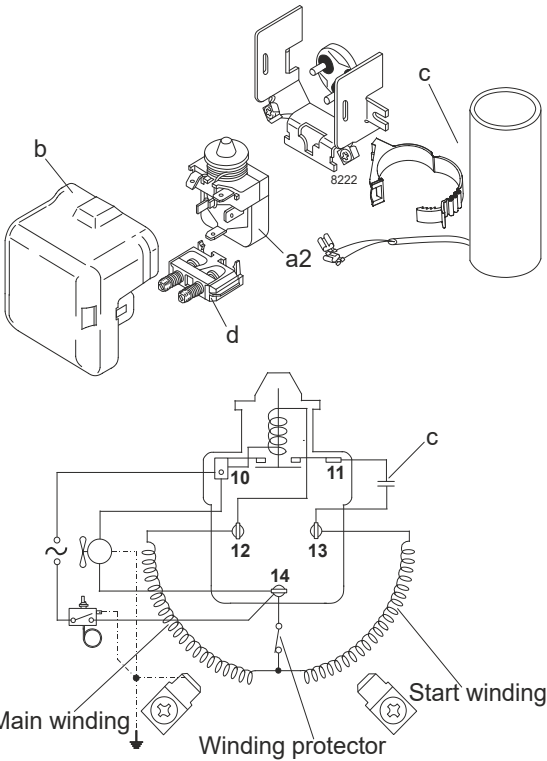
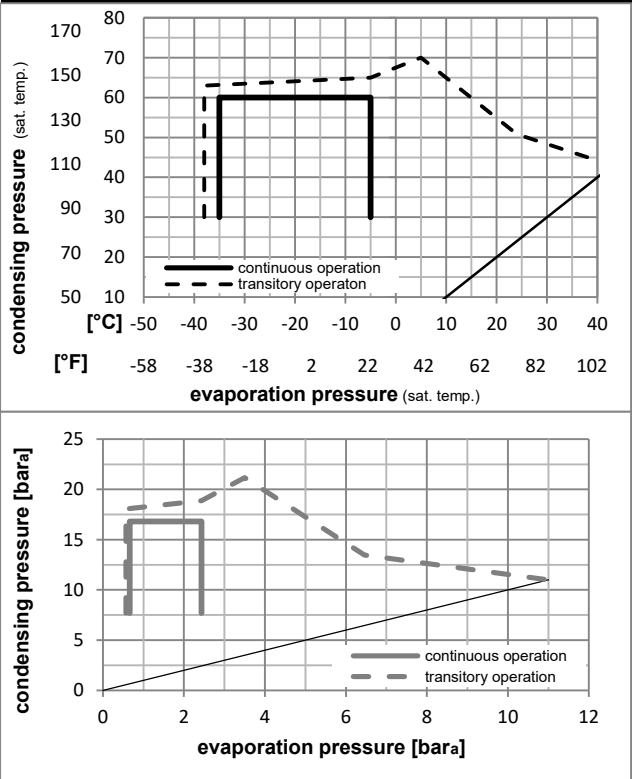
Model					
Designation	SC12G	220-240V/60Hz	Conf. 2	Sales code:	104G8240

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				
	UL				
	CCC				
	EAC				
	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	103N2009

Model

Designation **SC12G** **220-240V/60Hz** Conf. 2 Sales code: **104G8240**

Optimization + standard conditions

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

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
											Current consumption			
											Ref. mass flow			

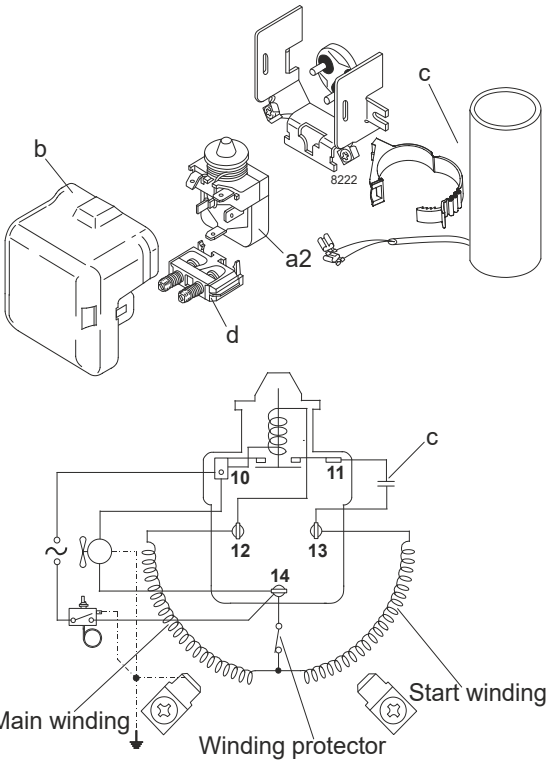
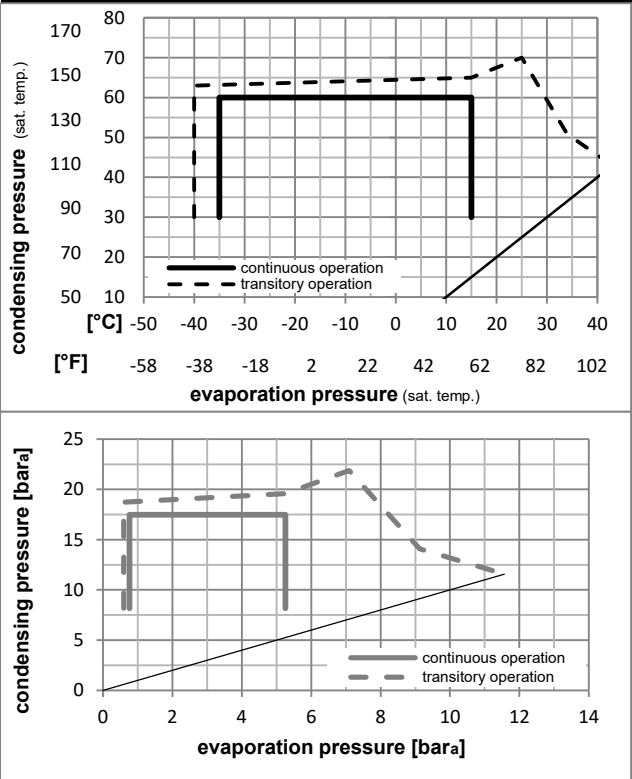
Model				
Designation	SC12G	220-240V/50Hz	Conf. 3	Sales code: 104G8240

Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	220-240V/50Hz 1~			
Refrigerant	R513A			
Application	LBP+MBP+HBP			
Voltage range	187-254V			
Starting torque	HST			
Approvals	VDE			
	UL			
	CCC			

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	103N2009

Model

Designation	SC12G	220-240V/50Hz	Conf. 3	Sales code:	104G8240
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Optimization + standard conditions

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

[illegible]

Performance tables

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

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/W/h]	[kcal/W/h]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	117,5	401	101,1	0,68	2,34	0,59	171,6	1,60	2,85
cond. pressure	-25	-13	256,8	877	221,0	1,05	3,59	0,90	244,4	1,85	6,26
pc= 45/113	-15	5	464,3	1586	399,6	1,45	4,96	1,25	319,9	2,12	11,38
return gas temp.	-10	14	599,1	2046	515,6	1,67	5,71	1,44	358,4	2,25	14,73
RGT= 32/90	0	32	942,4	3218	811,0	2,16	7,37	1,86	436,5	2,52	23,37
liquid temp	5	41	1155,3	3945	994,2	2,43	8,29	2,09	475,8	2,66	28,82
Tliq= 45/113	15	59	1674,8	5720	1441,4	3,02	10,31	2,60	554,6	2,94	42,37
[°C / °F]	-35	-31	74,9	256	64,5	0,46	1,58	0,40	161,8	1,56	2,04
cond. pressure	-25	-13	190,1	649	163,6	0,78	2,65	0,67	244,6	1,85	5,20
pc= 55/131	-15	5	366,2	1251	315,1	1,10	3,77	0,95	331,5	2,16	10,09
return gas temp	-10	14	482,7	1649	415,4	1,28	4,38	1,10	376,3	2,31	13,35
RGT= 32/90	0	32	784,0	2678	674,7	1,68	5,72	1,44	468,0	2,63	21,90
liquid temp	5	41	973,3	3324	837,6	1,89	6,46	1,63	514,7	2,80	27,35
Tliq= 55/131	15	59	1440,2	4919	1239,5	2,36	8,07	2,03	609,5	3,13	41,13

Model

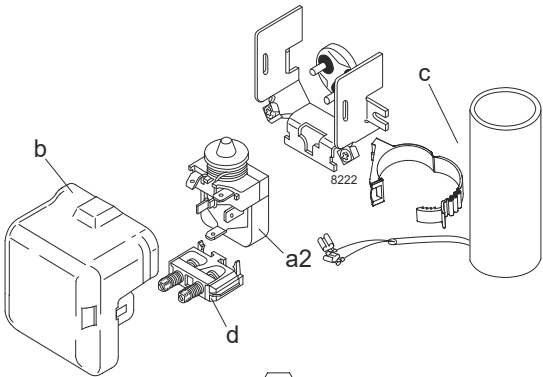
Designation	SC12G	220-240V/60Hz	Conf. 4	Sales code:	104G8240
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Configuration

Electrical accessories / wiring diagram

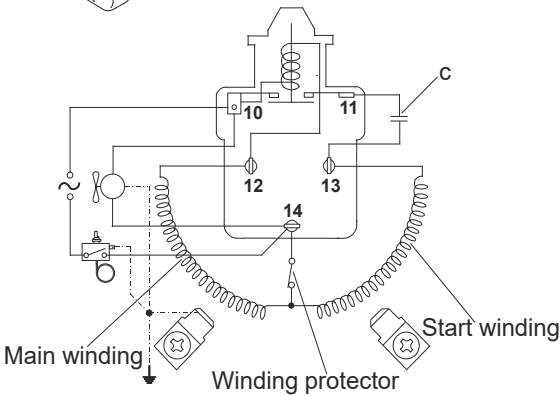
Motor configuration	CSIR
Power supply (nominal)	220-240V/60Hz 1~
Refrigerant	R513A
Application	LBP
Voltage range	187-253V
Starting torque	HST
Approvals	VDE
	UL
	CCC

CSIR

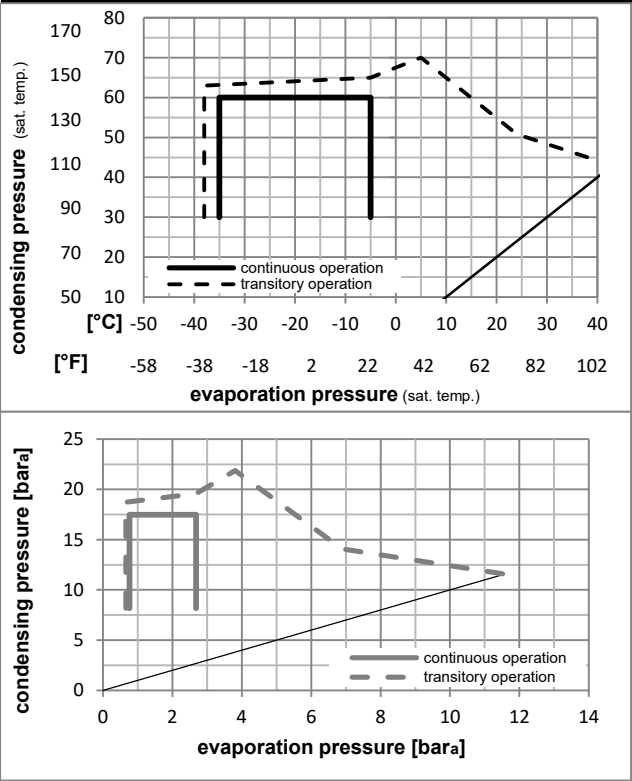


Ambient/ machine room temperatures minimum /maximum

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	103N2009

Model

Designation **SC12G** **220-240V/60Hz** Conf. 4 Sales code: **104G8240**

Optimization + standard conditions

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

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	320,8	1095	276,1	1,05	3,57	0,90	306,8	2,11	6,90	ASHRAE LBP	
-10	130	90	90											
-7	54	35	46	755,0	2578	649,8	1,58	5,41	1,36	477,0	2,67	18,49	ASHRAE MBP	
20	130	95	115											
7,2	54	35	46	1407,3	4806	1211,2	2,25	7,69	1,94	625,4	3,16	34,96	ASHRAE HBP	
45	130	95	115											
-35	40	20	40	162,0	553	139,4	0,77	2,62	0,66	211,5	1,80	4,01	EN12900 LBP	
-31	104	68	104											
-10	45	20	45	668,7	2284	575,5	1,58	5,41	1,36	422,4	2,49	17,72	EN12900 MBP	
14	113	68	113											
5	50	20	50	1180,5	4032	1015,9	2,03	6,94	1,75	581,3	3,02	33,85	EN12900 HBP	
41	122	68	122											

Performance tables

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

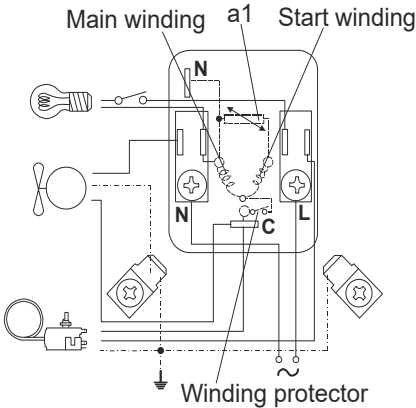
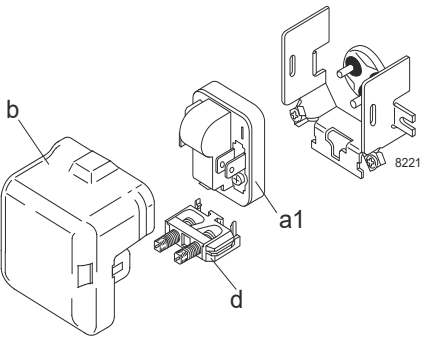
	pe		Cooling capacity			COP		EER		P1		I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C / °F]	-35	-31	136,0	465	117,1	0,67	2,27	0,57	204,5	1,77	3,30		
cond. pressure	-30	-22	208,8	713	179,7	0,85	2,89	0,73	246,9	1,91	5,08		
pc= 45/113	-25	-13	298,9	1021	257,3	1,03	3,52	0,89	289,9	2,05	7,29		
return gas temp.	-23	-10	334,0	1141	287,4	1,10	3,74	0,94	304,7	2,10	8,15		
RGT= 32/90	-20	-4	408,9	1397	351,9	1,23	4,19	1,06	333,6	2,20	9,99		
liquid temp	-15	5	541,5	1849	466,0	1,43	4,90	1,23	377,7	2,34	13,27		
Tliq= 45/113	-5	23	884,8	3022	761,5	1,89	6,47	1,63	467,4	2,64	21,84		
[°C / °F]	-35	-31	86,2	294	74,2	0,44	1,52	0,38	193,9	1,74	2,35		
cond. pressure	-30	-22	145,9	498	125,6	0,60	2,06	0,52	241,7	1,90	3,99		
pc= 55/131	-25	-13	220,8	754	190,0	0,76	2,60	0,65	290,6	2,06	6,05		
return gas temp	-23	-10	250,2	855	215,3	0,81	2,78	0,70	307,5	2,11	6,86		
RGT= 32/90	-20	-4	313,6	1071	269,9	0,92	3,14	0,79	340,6	2,22	8,61		
liquid temp	-15	5	426,8	1458	367,3	1,09	3,72	0,94	391,5	2,39	11,76		
Tliq= 55/131	-5	23	725,2	2477	624,1	1,46	4,99	1,26	496,1	2,74	20,14		

Model				
Designation	SC12G	220-240V/50Hz	Conf. 5	Sales code: 104G8240

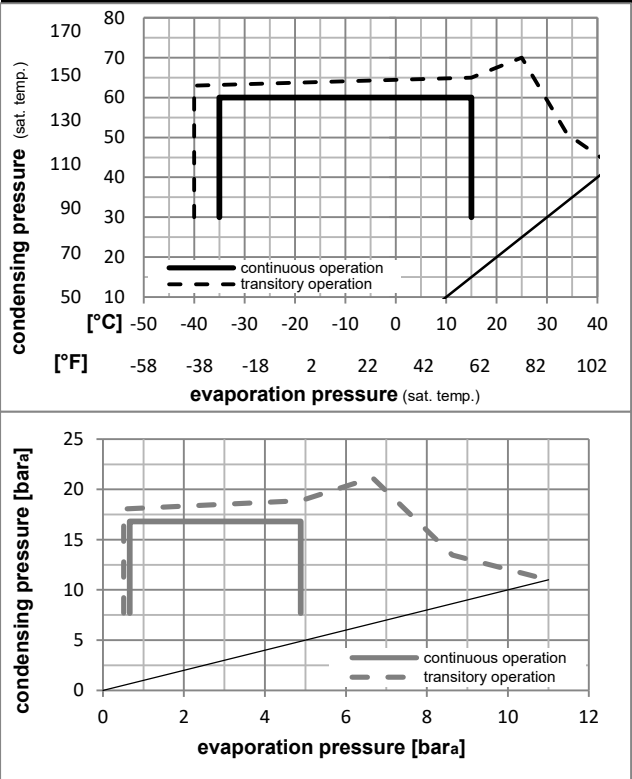
Configuration		Electrical accessories / wiring diagram		
Motor configuration	RSIR	RSIR		
Power supply (nominal)	220-240V/50Hz 1~			
Refrigerant	R134a			
Application	LBP+MBP+HBP			
Voltage range	187-254V			
Starting torque	LST			
Approvals	VDE			
	UL			
	CCC			
	EAC			
	KC			

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. 5 Sales code: **104G8240**

Optimization + standard conditions

R134a, 220V/50Hz, RSIR, fan 3m/s, VDE, UL, CCC, EAC, 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	247,5	845	213,0	1,03	3,52	0,89	240,3	1,87	4,81	ASHRAE LBP	
-10	130	90	90											
-7	54	35	46	615,0	2100	529,3	1,60	5,47	1,38	383,9	2,34	13,42	ASHRAE MBP	
20	130	95	115											
7,2	54	35	46	1170,4	3997	1007,3	2,29	7,81	1,97	511,8	2,84	25,97	ASHRAE HBP	
45	130	95	115											
-35	40	20	40	123,3	421	106,1	0,75	2,55	0,64	165,0	1,73	2,70	EN12900 LBP	
-31	104	68	104											
-10	45	20	45	547,2	1869	470,9	1,61	5,51	1,39	339,2	2,15	12,81	EN12900 MBP	
14	113	68	113											
5	50	20	50	994,8	3397	856,1	2,10	7,16	1,80	474,7	2,67	25,07	EN12900 HBP	
41	122	68	122											

Performance tables

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