

Single Pack SC12G 220-240V 50/60Hz CSIR

Single pack code number: **195B4457**

Position	Title	Code	Amount
1	Compressor SC12G	104G8250	1
2	Starting relay	117U6003	1
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2009	1
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	SC12G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8250
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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
Motorconfiguration	CSIR	CSIR	RSIR	RSIR
Power supply (nominal)	220-240V/50Hz	208-230V/60Hz	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	198-254V	187-254V	198-254V
Approvals	CCC, VDE, KC	CCC, VDE, KC	CCC, VDE, KC	CCC, VDE, 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	oil cooled	oil cooled	oil cooled	oil cooled
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)	13A	13A	12,6A	
RLA (rated load amps / 1s)	2,5A	2,5A	2,5A	- / -A
Cut in current	17A	17A	12,6A	

Model

Designation

SC12G

220-240V/50Hz 1~ 220-240V/60Hz 1~

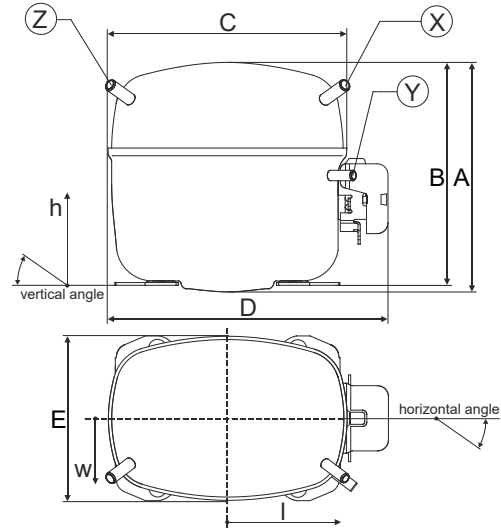
Sales code:

104G8250

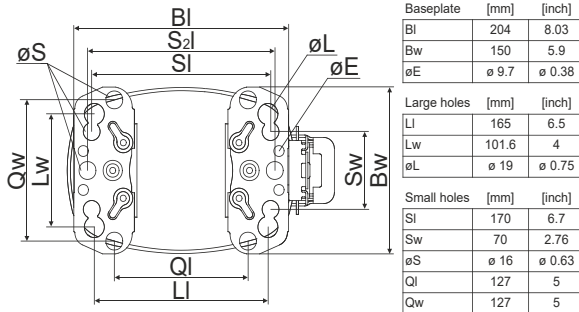
Compressor dimensions

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

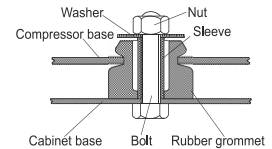
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	ø 8,11-8,29	ø 6,11-6,29	ø 6,11-6,29
(i:inside, o:outside) [in]	ø 0,32-0,33	ø 0,24-0,25	ø 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55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



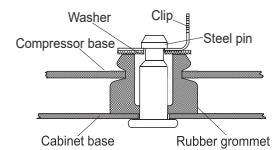
Compressor fixation



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

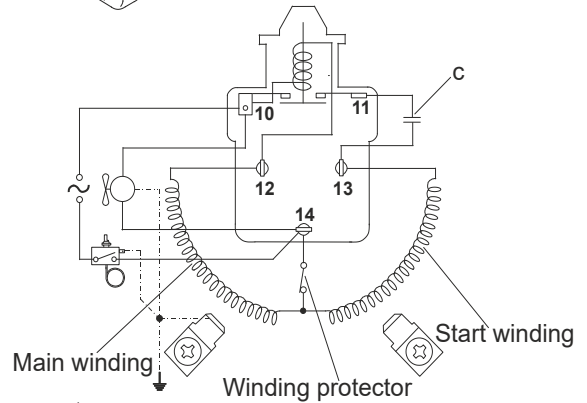
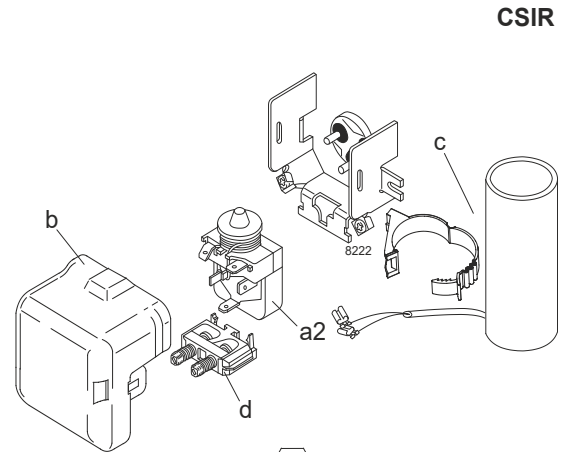
Model

Designation	SC12G	220-240V/50Hz	Conf. 1	Sales code:	104G8250
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Configuration

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

Electrical accessories / wiring diagram

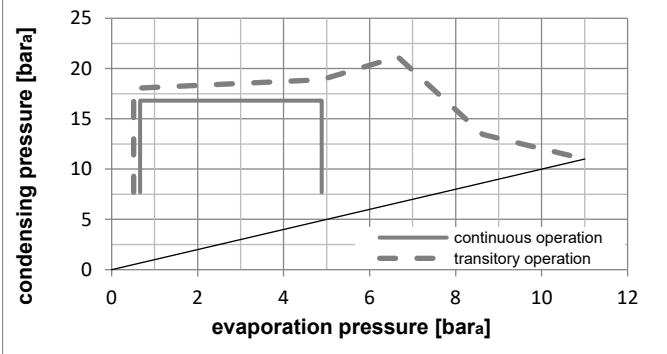
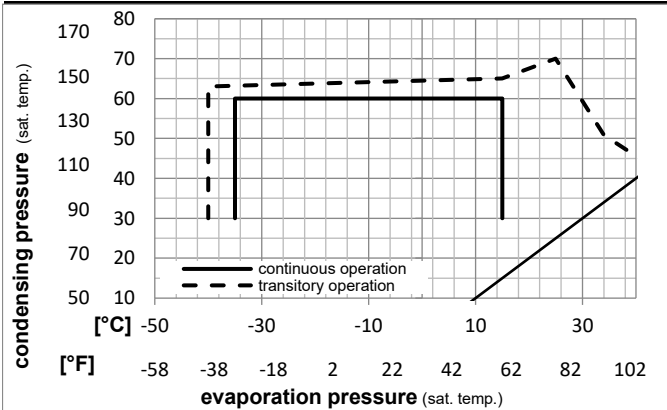


Ambient/ machine room temperatures minimum /maximum

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 Limits

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:	104G8250
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Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	Ref. mass flow	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
	-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, CSIR, fan 3m/s, CCC, VDE, 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

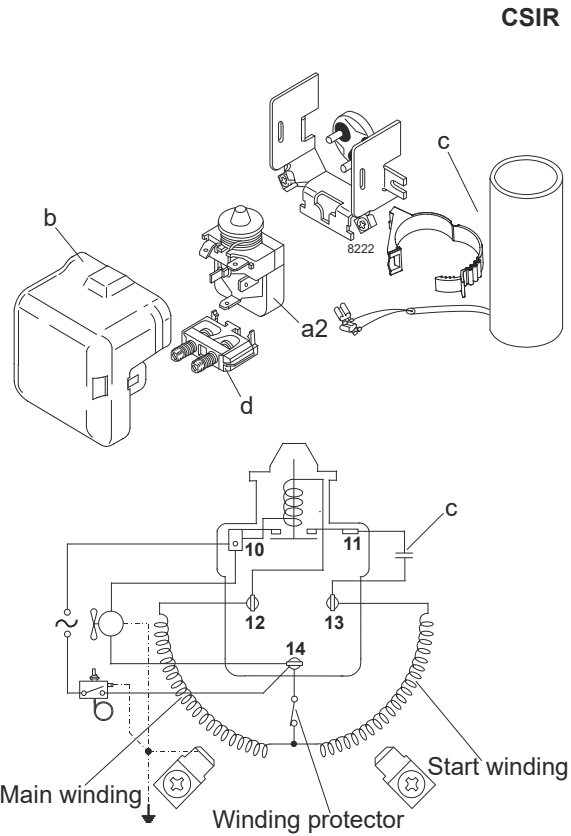
Model

Designation	SC12G	208-230V/60Hz	Conf. 2	Sales code:	104G8250
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC VDE KC

Electrical accessories / wiring diagram

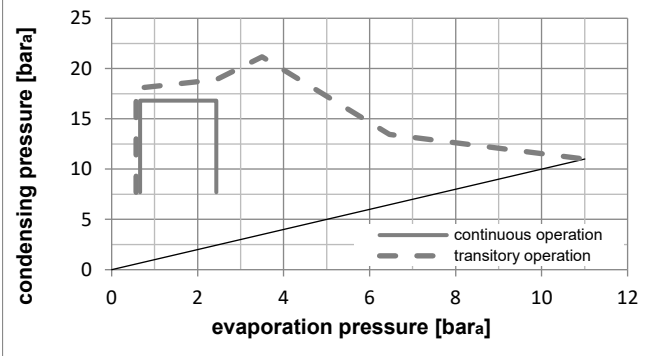
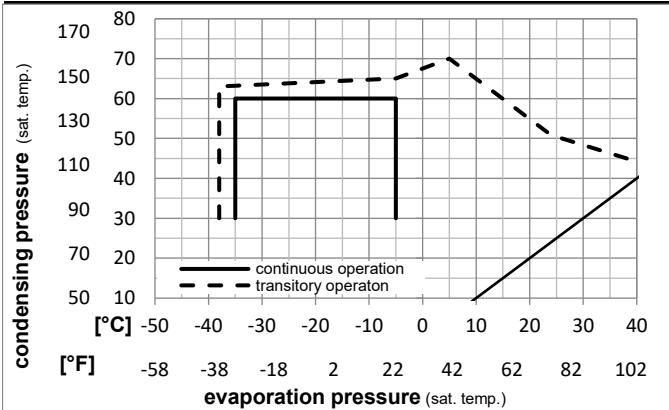


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 1,5m/s

Operation Limits

Operation pressure range



Components

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

Model

Designation **SC12G** **208-230V/60Hz** Conf. 2 Sales code: **104G8250**

Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 1,5m/s, CCC, VDE, KC

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.		Liquid temp.		Cooling capacity		COP	EER		P1	I	Ref. mass flow		
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-23	54	32	32	288,0	983	247,8	1,03	3,51	0,88	280,6	2,06	5,59	ASHRAE LBP	
[°F]	-10	130	90	90											
[°C]	-7	54	35	46	718,1	2452	618,0	1,60	5,47	1,38	448,6	2,57	15,67	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	7,2	54	35	46	1367,9	4671	1177,2	2,29	7,81	1,97	598,1	3,12	30,35	ASHRAE HBP	
[°F]	45	130	95	115											
[°C]	-35	40	20	40	142,9	488	123,0	0,74	2,54	0,64	192,4	1,90	3,14	EN12900 LBP	
[°F]	-31	104	68	104											
[°C]	-10	45	20	45	638,9	2182	549,8	1,61	5,51	1,39	396,3	2,36	14,95	EN12900 MBP	
[°F]	14	113	68	113											
[°C]	5	50	20	50	1162,6	3970	1000,5	2,10	7,16	1,80	554,8	2,94	29,30	EN12900 HBP	
[°F]	41	122	68	122											

Performance tables

R134a, 230V/60Hz, CSIR, fan 1,5m/s, CCC, VDE, 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

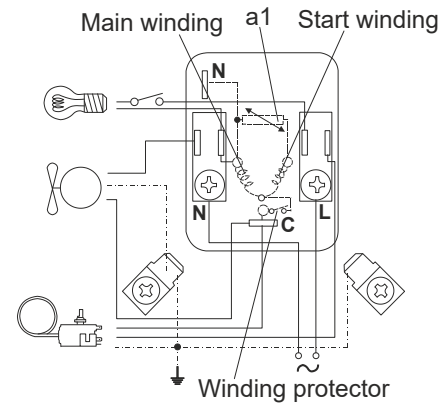
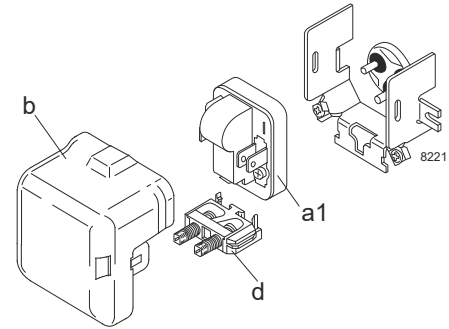
Designation	SC12G	220-240V/50Hz	Conf. 3	Sales code:	104G8250
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Configuration

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

Electrical accessories / wiring diagram

RSIR

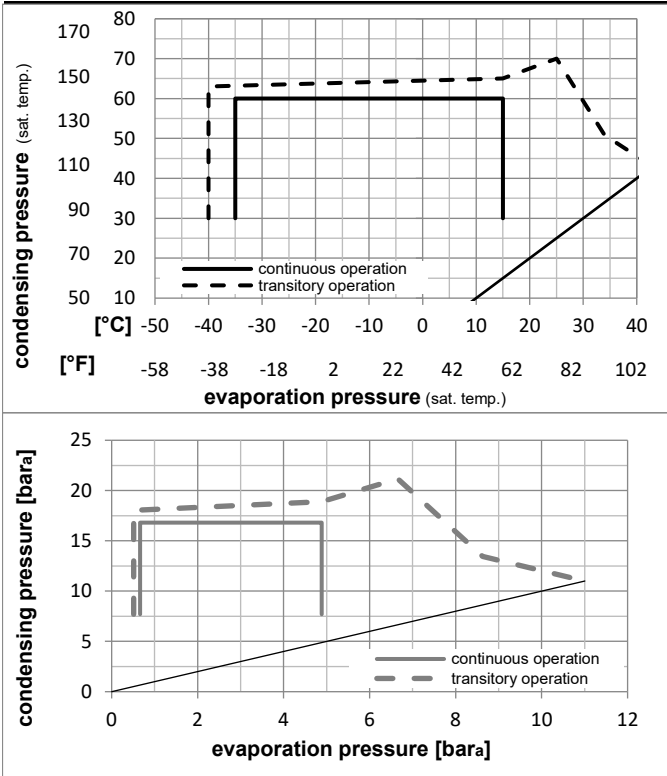


Ambient/ machine room temperatures minimum /maximum

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

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
d	cord relief	103N1004
b	plastic cover	103N2009

Model

Designation **SC12G** **220-240V/50Hz** Conf. 3 Sales code: **104G8250**

Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption			ASHRAE
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				l	m	[W]	
[°C]	-23	54	32	32	247,5	845	213,0	1,03	3,52	0,89	240,3	1,87	4,81	
[°F]	-10	130	90	90										ASHRAE LBP
[°C]	-7	54	35	46	615,0	2100	529,3	1,60	5,47	1,38	383,9	2,34	13,42	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	1170,4	3997	1007,3	2,29	7,81	1,97	511,8	2,84	25,97	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	123,3	421	106,1	0,75	2,55	0,64	165,0	1,73	2,70	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	547,2	1869	470,9	1,61	5,51	1,39	339,2	2,15	12,81	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	994,8	3397	856,1	2,10	7,16	1,80	474,7	2,67	25,07	EN12900 HBP
[°F]	41	122	68	122										

Performance tables

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

	pe		Cooling capacity			COP	EER	P1	l	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/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

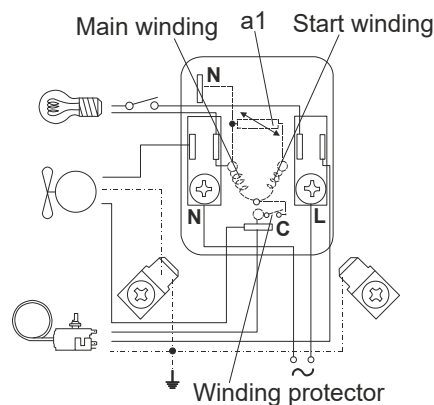
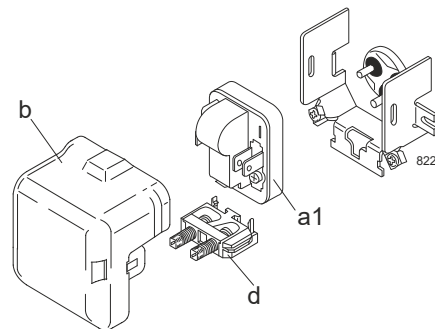
Designation	SC12G	208-230V/60Hz	Conf. 4	Sales code:	104G8250
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	LST
Approvals	CCC VDE KC

Electrical accessories / wiring diagram

RSIR

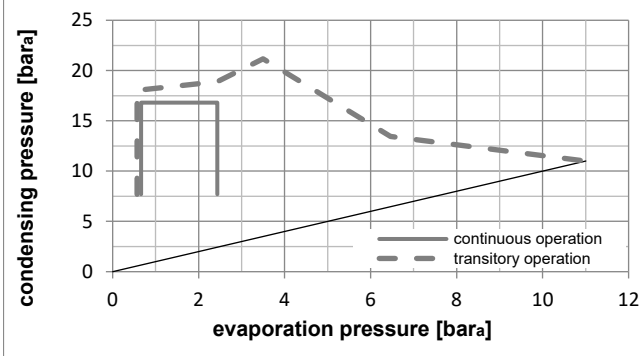
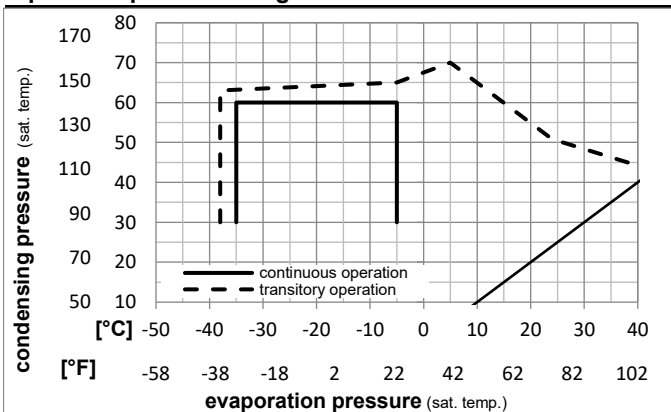


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 1,5m/s

Operation Limits

Operation pressure range



Components

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

Model

Designation **SC12G** **208-230V/60Hz** Conf. 4 Sales code: **104G8250**

Optimization + standard conditions

R134a, 230V/60Hz, RSIR, fan 1,5m/s, CCC, VDE, KC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER		Power consumption			ASHRAE
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				P1	I	m	
[°C]	-23	54	32	32	288,0	983	247,8	1,03	3,51	0,88	280,6	2,06	5,59	
[°F]	-10	130	90	90										ASHRAE LBP
[°C]	-7	54	35	46	718,1	2452	618,0	1,60	5,47	1,38	448,6	2,57	15,67	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	1367,9	4671	1177,2	2,29	7,81	1,97	598,1	3,12	30,35	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	142,9	488	123,0	0,74	2,54	0,64	192,4	1,90	3,14	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	638,9	2182	549,8	1,61	5,51	1,39	396,3	2,36	14,95	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	1162,6	3970	1000,5	2,10	7,16	1,80	554,8	2,94	29,30	EN12900 HBP
[°F]	41	122	68	122										

Performance tables

R134a, 230V/60Hz, RSIR, fan 1,5m/s, CCC, VDE, KC

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/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



SC Compressors





SC Compressors

Service/Repair – R290



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