

Model
SC12G

Sales code:
104G8224

Compressor Data

Refrigerant(s)	R134a
Refr. charge - tech. limit	1300g / 45.86oz
Weight	12.70 kg / 28.00lbs
Displacement	12.87 cm³ / 0.79cu.in
Compressors on pallet	80



General - Configurations With SC12G

-	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	RSIR	RSIR
Power supply (nominal)	220-240 V/50 Hz	220-240 V/60 Hz	220-240 V/50 Hz	220-240 V/60 Hz
Number of phases	1	1	1	1
Voltage range	187-254 V	198-254 V	187-254 V	198-254 V
Approvals	CCC, VDE, KC	CCC, VDE, KC	CCC, VDE, KC	CCC, VDE, KC
Starting torque	HST	HST	LST	LST
Refrigerant	R134a	R134a	R134a	R134a
Application	LBP+MBP+HBP	LBP	LBP+MBP+HBP	LBP
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Application Notes

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

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Compressor Design

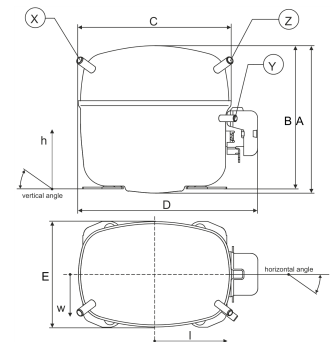
Oil type	POE	Winding resistance main	6.9 Ohm
Oil viscosity	22cSt	Winding resistance aux	11 Ohm
Oil quantity	500 / 16.91fl.oz	Max. winding temp.	125 °C
Free gas volume comp.	1,510 cm ³ / 51.06fl.oz	Max. discharge temp.	135°C / 275°F
Motor protection	internal		

Compressor Dimensions

Housing

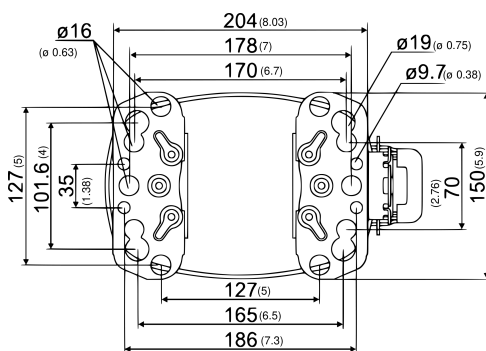
A Height	209mm / 8.23in
B Height	203mm / 7.99in
C Length shell	218mm / 8.58in
D Length w. cover	255mm / 10.04in
E Width	151mm / 5.94in

[Find 3D Model here](#)

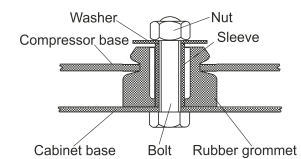


Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10.11–10.29 / 0.40–0.41in	øi 6.41–6.59 / 0.25–0.26in	øi 6.41–6.59 / 0.25–0.26in
Material	CU	CU	CU
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/183/55 / 4.21/7.20/2.17in	115/100/63 / 4.53/3.94/2.48in	-107/183/55 / -4.21/7.20/2.17in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

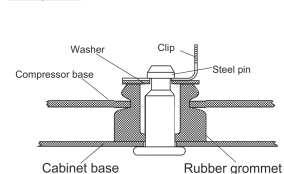
Mounting Accessories



Bolt joint



Snap-on



Dimensions in mm [in]

	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

Model

SC12G

Configuration 1

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Configuration

Motor configuration	CSIR
Power supply (nominal)	220-240 V/50 Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254 V
Starting torque	HST
Approvals	CCC, VDE, KC
Starting device type	relay
Run capacitor	-/-
Start capacitor	80 µF
LRA (locked rotor amps / 4s/ U(N))	13 A
RLA (rated load amps / 1s/ U(N))	2.5 A
Cut in current (U(N))	17 A

Ambient/ machine room temperatures minimum /maximum

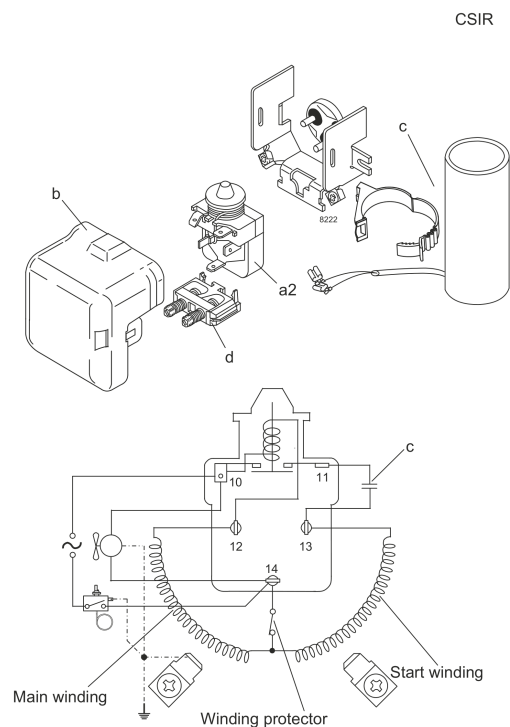
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling

fan 3m/s

Electrical Accessories / Wiring Diagram



[View full size](#)

Components

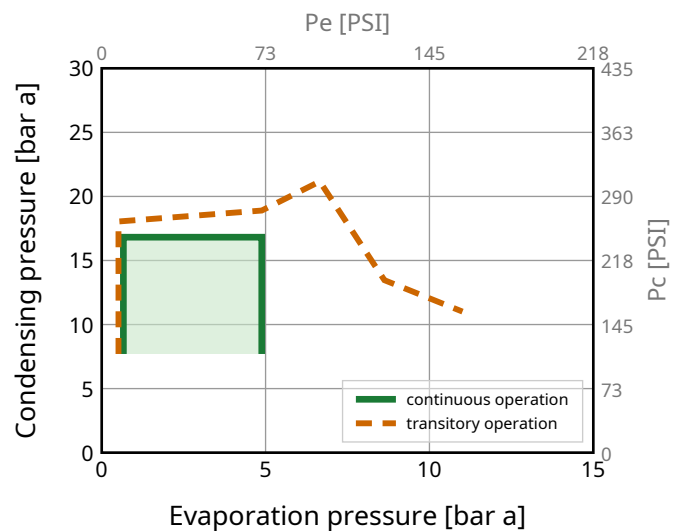
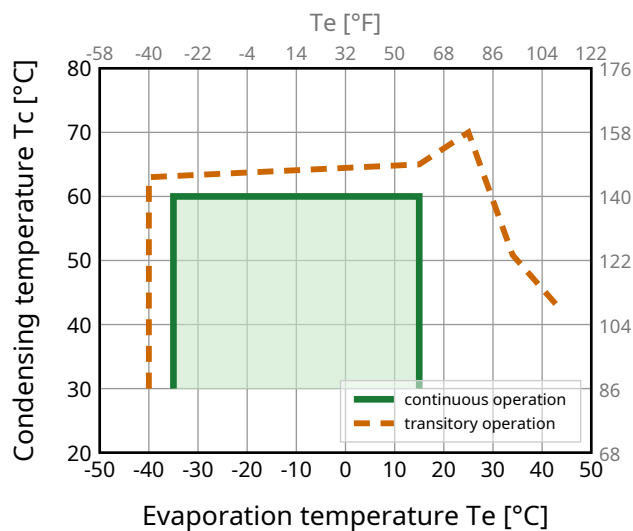
a2 assy. relay 117U6003

c start capacitor (80µF) 117U5017

d cord relief 103N1004

b plastic cover 103N2009

Operation Pressure Range



Model
SC12G

Configuration 1

Sales code:
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Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	m	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	248	846	213	1.03	3.51	241	1.87	4.81	ASHRAE LBP
-6.7 20	54.4 129.9	35 95	46.1 115	613	2093	528	1.60	5.46	384	2.33	13.36	ASHRAE MBP
7.2 45	54.4 129.9	35 95	46.1 115	1168	3987	1005	2.29	7.80	511	2.83	25.86	ASHRAE HBP
-35 -31	40 104	20 68	40 104	123	421	106	0.75	2.55	165	1.73	2.70	EN12900 LBP
-10 14	45 113	20 68	45 113	548	1870	471	1.62	5.51	339	2.15	12.78	EN12900 MBP
5 41	50 122	20 68	50 122	996	3400	857	2.10	7.16	475	2.67	25.00	EN12900 HBP

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	m
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	103	350	88	0.65	2.21	158	1.69	2.21
-30	-22	161	550	139	0.84	2.86	193	1.76	3.48
-20	-4	325	1110	280	1.23	4.20	264	1.93	7.05
-10	14	568	1937	488	1.67	5.71	339	2.15	12.40
0	32	908	3097	781	2.18	7.43	417	2.42	20.03
10	50	1365	4657	1174	2.75	9.40	496	2.75	30.55
15	59	1644	5608	1413	3.07	10.47	536	2.94	37.13

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	65	220	56	0.44	1.49	148	1.63	1.53
-30	-22	113	386	97	0.61	2.07	187	1.72	2.69
-20	-4	252	861	217	0.94	3.21	268	1.95	6.04
-10	14	464	1584	399	1.31	4.46	355	2.24	11.19
0	32	768	2619	660	1.72	5.87	446	2.57	18.72
10	50	1182	4034	1017	2.19	7.46	540	2.96	29.29
15	59	1437	4904	1236	2.44	8.33	589	3.17	35.98

Model

SC12G

Configuration 2

Sales code:

104G8224

Configuration

Motor configuration	CSIR
Power supply (nominal)	220-240 V/60 Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254 V
Starting torque	HST
Approvals	CCC, VDE, KC
Starting device type	relay
Run capacitor	-/-
Start capacitor	80 µF
LRA (locked rotor amps / 4s/ U(N))	13 A
RLA (rated load amps / 1s/ U(N))	2.5 A
Cut in current (U(N))	17 A

Ambient/ machine room temperatures minimum /maximum

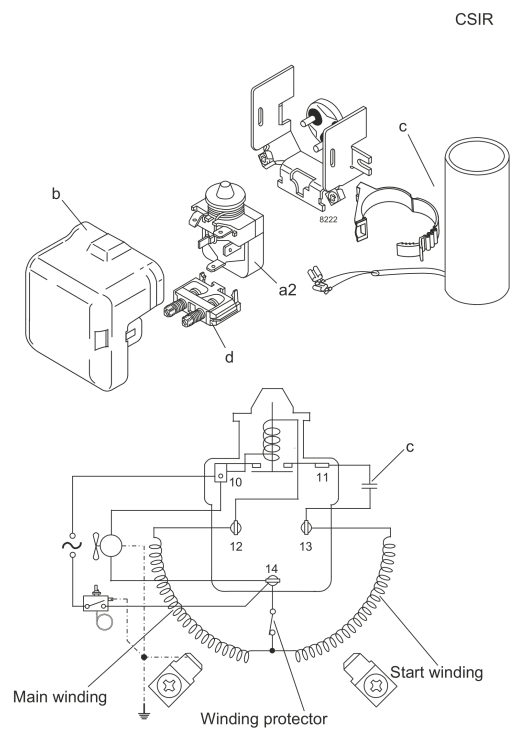
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling

fan 3m/s

Electrical Accessories / Wiring Diagram



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Components

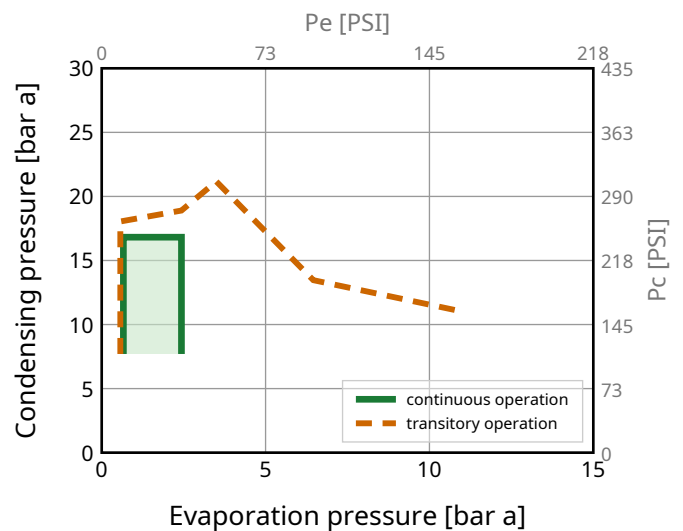
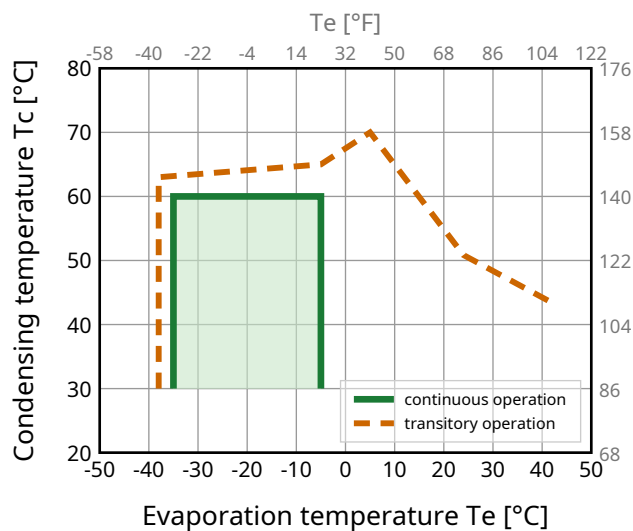
a2 assy. relay 117U6003

c start capacitor (80µF) 117U5017

d cord relief 103N1004

b plastic cover 103N2009

Operation Pressure Range



Model
SC12G

Configuration 2

Sales code:
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Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	m	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	288	984	248	1.03	3.50	281	2.06	5.59	ASHRAE LBP
-6.7 20	54.4 129.9	35 95	46.1 115	716	2444	616	1.60	5.45	448	2.57	15.59	ASHRAE MBP
7.2 45	54.4 129.9	35 95	46.1 115	1366	4659	1174	2.29	7.80	598	3.12	30.23	ASHRAE HBP
-35 -31	40 104	20 68	40 104	143	488	123	0.74	2.54	192	1.90	3.13	EN12900 LBP
-10 14	45 113	20 68	45 113	640	2183	550	1.61	5.51	396	2.36	14.92	EN12900 MBP
5 41	50 122	20 68	50 122	1165	3974	1002	2.10	7.16	555	2.94	29.21	EN12900 HBP

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	m
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	119	405	102	0.64	2.19	185	1.86	2.56
-30	-22	187	639	161	0.83	2.84	225	1.93	4.04
-25	-13	273	932	235	1.03	3.50	266	2.02	5.91
-20	-4	379	1294	326	1.23	4.19	309	2.12	8.22
-15	5	508	1734	437	1.44	4.92	352	2.23	11.05
-10	14	663	2261	570	1.67	5.71	396	2.36	14.47
-5	23	846	2887	728	1.92	6.54	441	2.51	18.56

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	74	253	64	0.43	1.47	172	1.79	1.76
-30	-22	131	447	113	0.60	2.05	218	1.89	3.12
-25	-13	203	694	175	0.77	2.62	265	2.01	4.85
-20	-4	294	1003	253	0.94	3.20	313	2.15	7.03
-15	5	406	1385	349	1.12	3.81	363	2.30	9.74
-10	14	542	1848	466	1.31	4.46	415	2.46	13.06
-5	23	704	2403	606	1.51	5.14	468	2.64	17.07

Model

SC12G

Configuration 3

Sales code:

104G8224

Configuration

Motor configuration	RSIR
Power supply (nominal)	220-240 V/50 Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254 V
Starting torque	LST
Approvals	CCC, VDE, KC
Starting device type	PTC
Run capacitor	-/-
Start capacitor	-/-
LRA (locked rotor amps / 4s/ U(N))	13 A
RLA (rated load amps / 1s/ U(N))	2.5 A
Cut in current (U(N))	17 A

Ambient/ machine room temperatures minimum /maximum

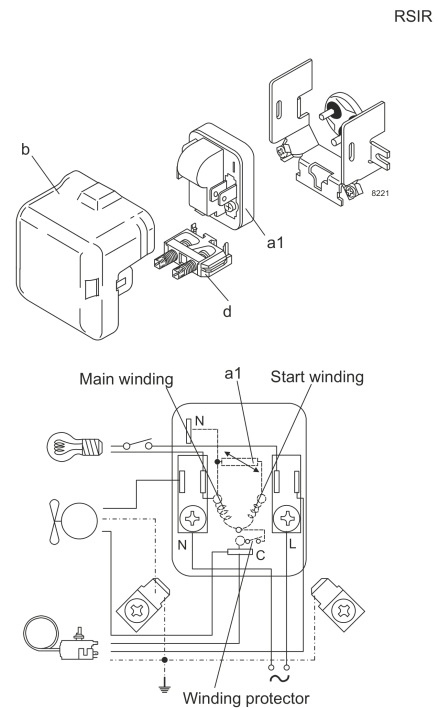
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling

fan 3m/s

Electrical Accessories / Wiring Diagram



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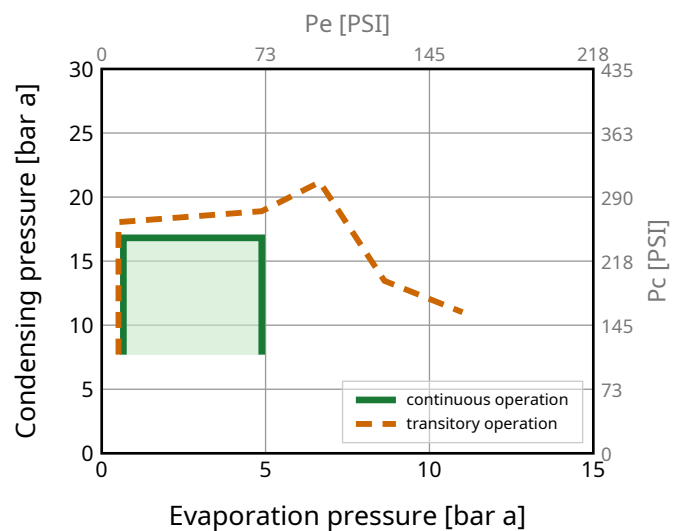
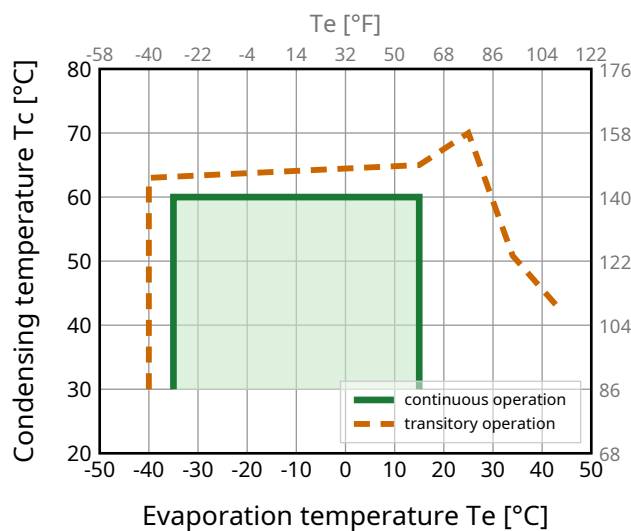
Components

a1 PTC starter (220V, 250ohm, 6.3mm) 103N0011

d cord relief 103N1004

b plastic cover 103N2009

Operation Pressure Range



Model
SC12G

Configuration 3

Sales code:
104G8224

Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	m	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	248	846	213	1.03	3.51	241	1.87	4.81	ASHRAE LBP
-6.7 20	54.4 129.9	35 95	46.1 115	613	2093	528	1.60	5.46	384	2.33	13.36	ASHRAE MBP
7.2 45	54.4 129.9	35 95	46.1 115	1168	3987	1005	2.29	7.80	511	2.83	25.86	ASHRAE HBP
-35 -31	40 104	20 68	40 104	123	421	106	0.75	2.55	165	1.73	2.70	EN12900 LBP
-10 14	45 113	20 68	45 113	548	1870	471	1.62	5.51	339	2.15	12.78	EN12900 MBP
5 41	50 122	20 68	50 122	996	3400	857	2.10	7.16	475	2.67	25.00	EN12900 HBP

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	m
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	103	350	88	0.65	2.21	158	1.69	2.21
-30	-22	161	550	139	0.84	2.86	193	1.76	3.48
-20	-4	325	1110	280	1.23	4.20	264	1.93	7.05
-10	14	568	1937	488	1.67	5.71	339	2.15	12.40
0	32	908	3097	781	2.18	7.43	417	2.42	20.03
10	50	1365	4657	1174	2.75	9.40	496	2.75	30.55
15	59	1644	5608	1413	3.07	10.47	536	2.94	37.13

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	65	220	56	0.44	1.49	148	1.63	1.53
-30	-22	113	386	97	0.61	2.07	187	1.72	2.69
-20	-4	252	861	217	0.94	3.21	268	1.95	6.04
-10	14	464	1584	399	1.31	4.46	355	2.24	11.19
0	32	768	2619	660	1.72	5.87	446	2.57	18.72
10	50	1182	4034	1017	2.19	7.46	540	2.96	29.29
15	59	1437	4904	1236	2.44	8.33	589	3.17	35.98

Model

SC12G

Configuration 4

Sales code:

104G8224

Configuration

Motor configuration	RSIR
Power supply (nominal)	220-240 V/60 Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254 V
Starting torque	LST
Approvals	CCC, VDE, KC
Starting device type	PTC
Run capacitor	-/-
Start capacitor	-/-
RLA (rated load amps / 1s/ U(N))	-/-A

Ambient/ machine room temperatures minimum /maximum

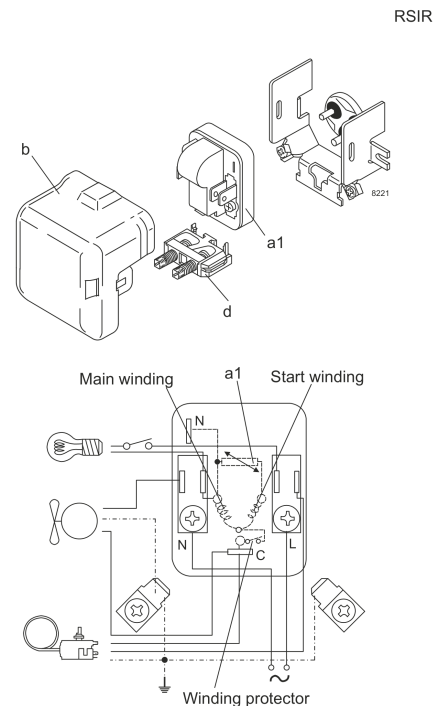
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling

fan 3m/s

Electrical Accessories / Wiring Diagram



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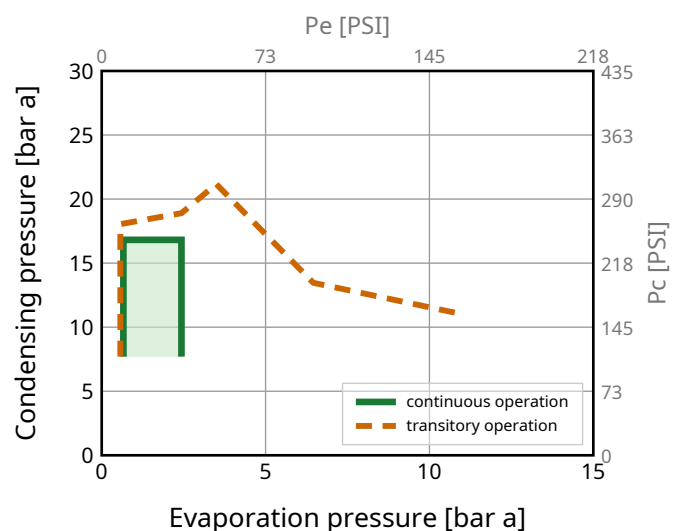
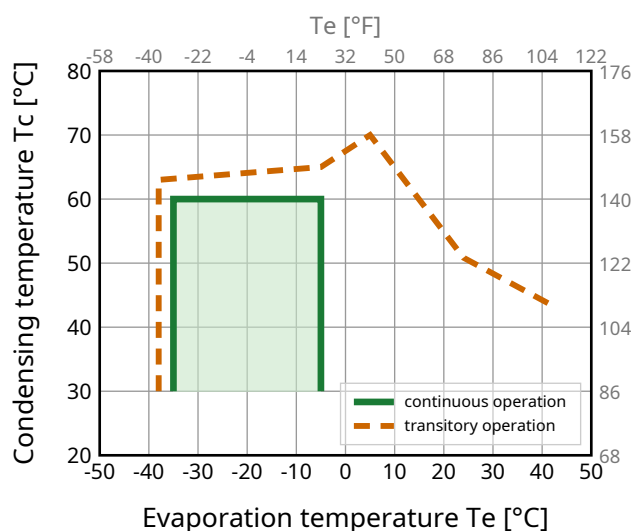
Components

a1 PTC starter (220V, 250ohm, 6.3mm) 103N0011

d cord relief 103N1004

b plastic cover 103N2009

Operation Pressure Range



Model
SC12G

Configuration 4

Sales code:
104G8224

Standard Conditions

R134a, 230 V/60 Hz, RSIR, fan 3m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	m	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	288	984	248	1.03	3.50	281	2.06	5.59	ASHRAE LBP
-6.7 20	54.4 129.9	35 95	46.1 115	716	2444	616	1.60	5.45	448	2.57	15.59	ASHRAE MBP
7.2 45	54.4 129.9	35 95	46.1 115	1366	4659	1174	2.29	7.80	598	3.12	30.23	ASHRAE HBP
-35 -31	40 104	20 68	40 104	143	488	123	0.74	2.54	192	1.90	3.13	EN12900 LBP
-10 14	45 113	20 68	45 113	640	2183	550	1.61	5.51	396	2.36	14.92	EN12900 MBP
5 41	50 122	20 68	50 122	1165	3974	1002	2.10	7.16	555	2.94	29.21	EN12900 HBP

Performance Tables

R134a, 230 V/60 Hz, RSIR, fan 3m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	m
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	119	405	102	0.64	2.19	185	1.86	2.56
-30	-22	187	639	161	0.83	2.84	225	1.93	4.04
-25	-13	273	932	235	1.03	3.50	266	2.02	5.91
-20	-4	379	1294	326	1.23	4.19	309	2.12	8.22
-15	5	508	1734	437	1.44	4.92	352	2.23	11.05
-10	14	663	2261	570	1.67	5.71	396	2.36	14.47
-5	23	846	2887	728	1.92	6.54	441	2.51	18.56

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	74	253	64	0.43	1.47	172	1.79	1.76
-30	-22	131	447	113	0.60	2.05	218	1.89	3.12
-25	-13	203	694	175	0.77	2.62	265	2.01	4.85
-20	-4	294	1003	253	0.94	3.20	313	2.15	7.03
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-10	14	542	1848	466	1.31	4.46	415	2.46	13.06
-5	23	704	2403	606	1.51	5.14	468	2.64	17.07