Single
Packs

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 (80µF 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2009	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
SC12G

Sales code:
104G8250

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

- Compressor with oil cooler.
- Provision for PE Grounding is located at the PE Stamp on the compressor

Model
SC12G

Sales code:
104G8250

Compressor Design

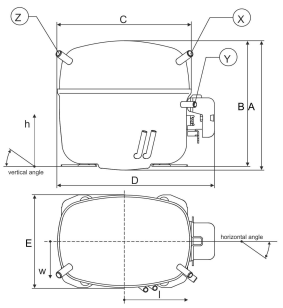
Oil type	**POE|OC**	Winding resistance main	**6.9 Ohm**
Oil viscosity	**22cSt**	Winding resistance aux	**11 Ohm**
Oil quantity	**500 / 16.91fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,510 cm3 / 51.06fl.oz**	Max. discharge temp.	**135°C / 275°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

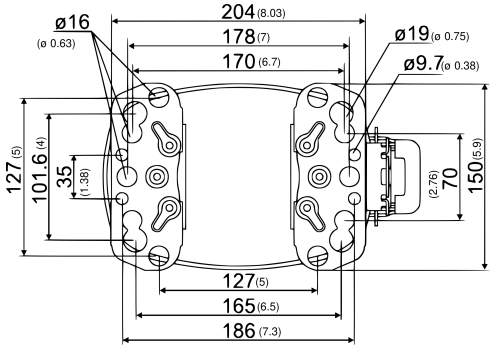
A Height	**209mm / 8.23in**
B Height	**203mm / 7.99in**
C Length shell	**218mm / 8.58in**
D Length w. cover	**255mm / 10.04in**
E Width	**151mm / 5.94in**

Find 3D Model here



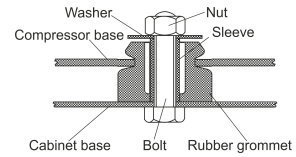
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/183/55 / 4.21/7.20/2.17in	115/100/63 / 4.53/3.94/2.48in	-107/183/55 / -4.21/7.20/2.17in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

Mounting Accessories

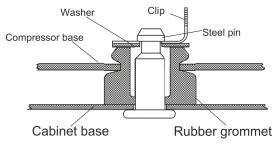


Dimensions in mm [in]

Bolt joint



Snap-on



	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

Sales code:

104G8250

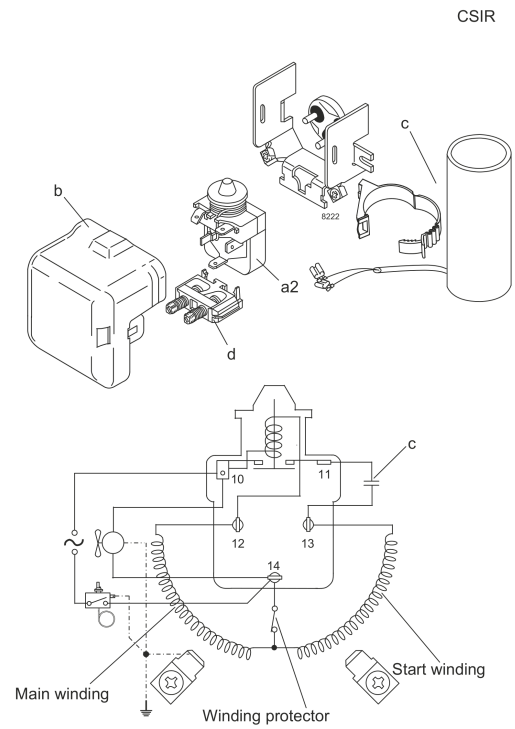
Configuration

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
oil cooled

Electrical Accessories / Wiring Diagram



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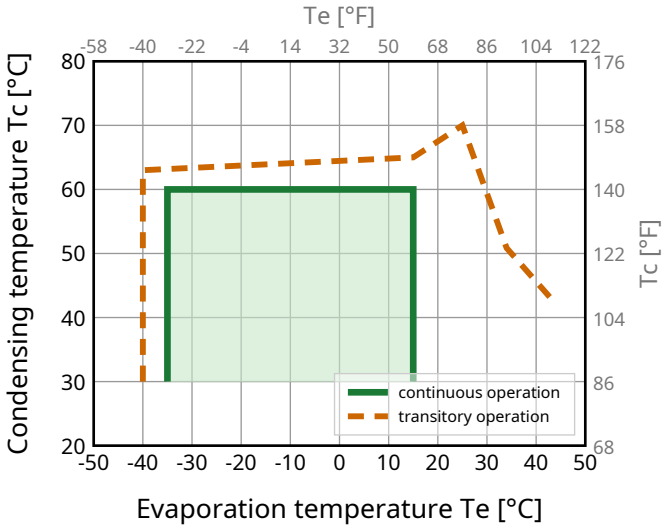
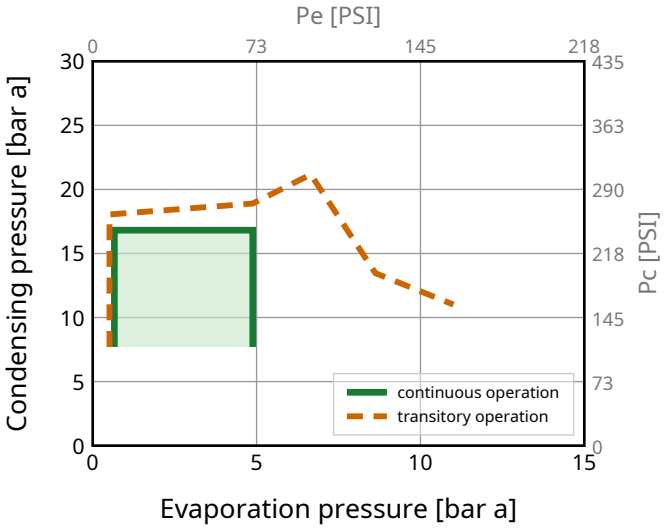
Components
a2 assy. relay 117U6003
c start capacitor (80µF) 117U5017
d cord relief 103N1004
b plastic cover 103N2008

Operation Pressure Range





Model
SC12G Configuration 1

Sales code:
104G8250

Standard Conditions

R134a, 220 V/50 Hz, CSIR, oil cooled

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°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, oil cooled

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

pe		Cooling capacity			COP	EER	P	I	ṁ
[°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:
104G8250

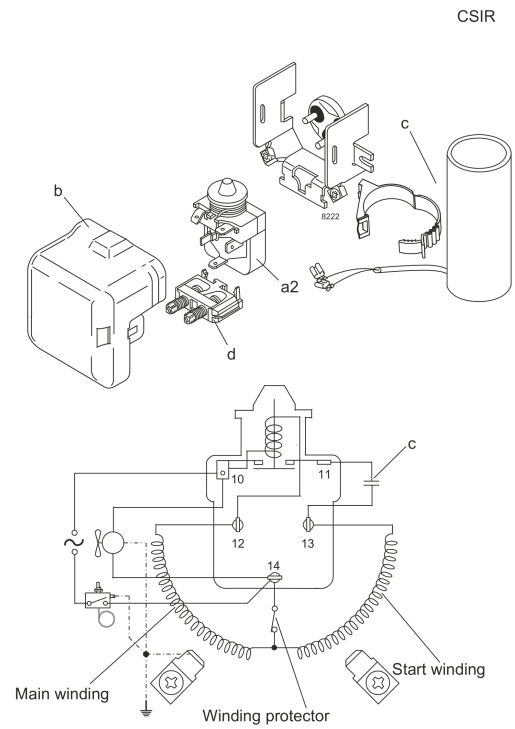
Configuration

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
oil cooled

Electrical Accessories / Wiring Diagram



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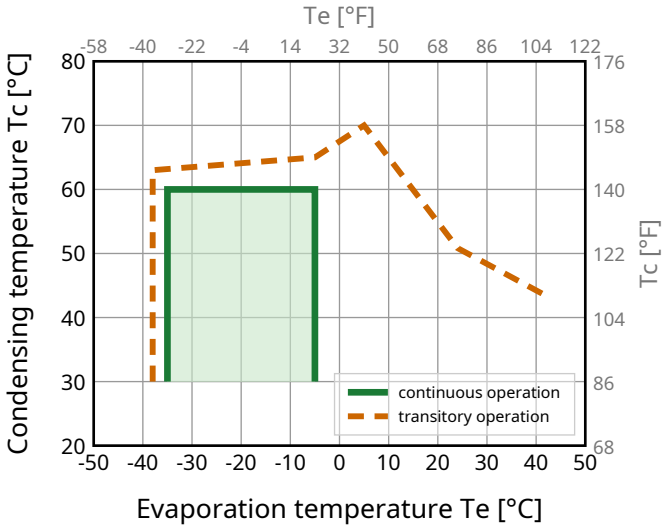
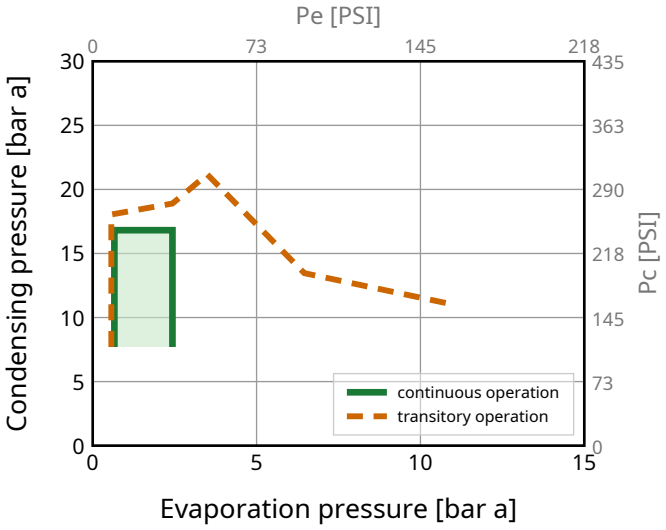
Components
a2 assy. relay 117U6003
c start capacitor (80µF) 117U5017
d cord relief 103N1004
b plastic cover 103N2008

Operation Pressure Range





Model
SC12G Configuration 2

Sales code:
104G8250

Standard Conditions

R134a, 230 V/60 Hz, CSIR, oil cooled

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°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, oil cooled

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

pe		Cooling capacity			COP	EER	P	I	ṁ
[°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:
104G8250

Configuration

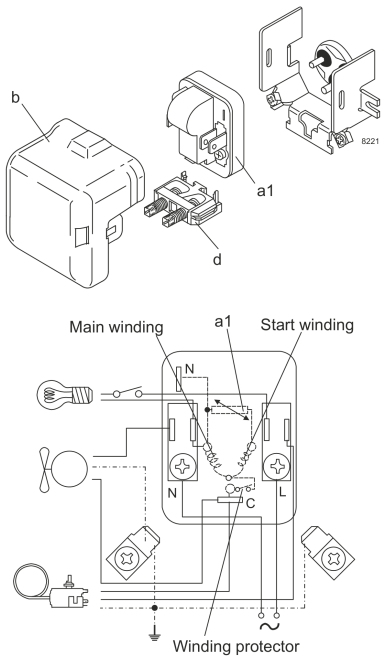
Motor configuration	**RSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**LBP+MBP+HBP**
Voltage range	**187-254 V**
Starting torque	**LST**
Approvals	**CCC, VDE, KC**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
LRA (locked rotor amps / 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
oil cooled

Electrical Accessories / Wiring Diagram

RSIR



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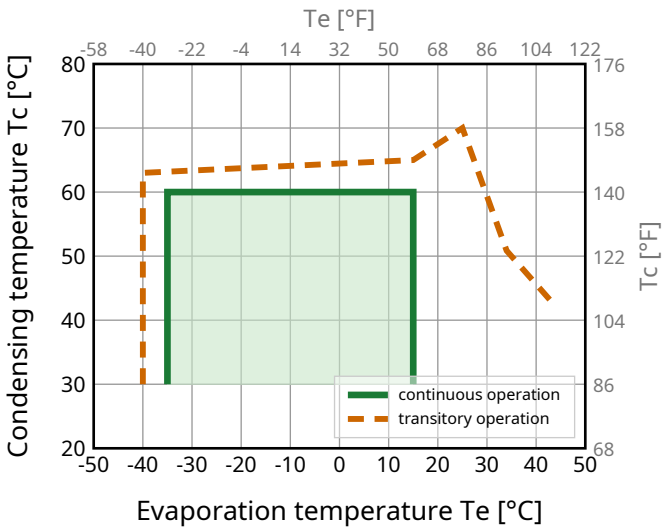
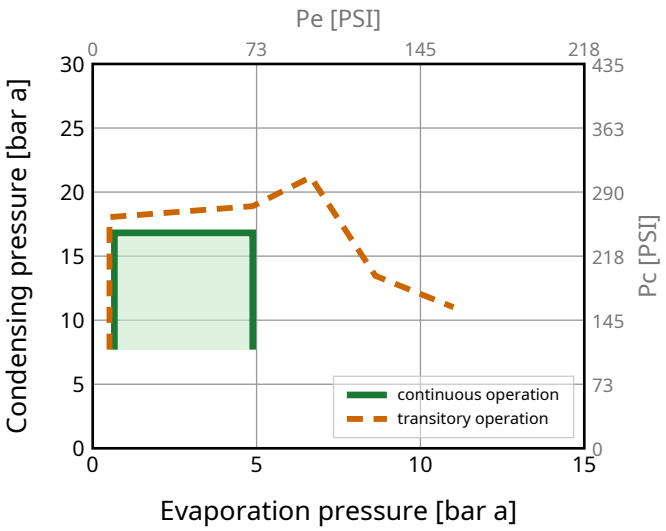
Components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0011
d cord relief 103N1004
b plastic cover 103N2009

Operation Pressure Range





Model
SC12G Configuration 3

Sales code:
104G8250

Standard Conditions

R134a, 220 V/50 Hz, RSIR, oil cooled

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°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, oil cooled

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

pe		Cooling capacity			COP	EER	P	I	ṁ
[°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:
104G8250

Configuration

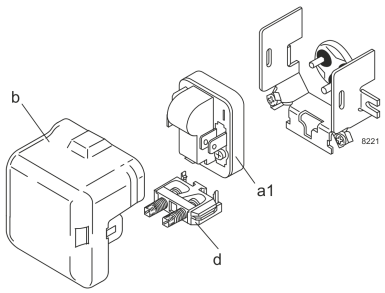
Motor configuration	**RSIR**
Power supply (nominal)	**220-240 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**LBP**
Voltage range	**198-254 V**
Starting torque	**LST**
Approvals	**CCC, VDE, KC**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
RLA (rated load amps / 1s/ U(N))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

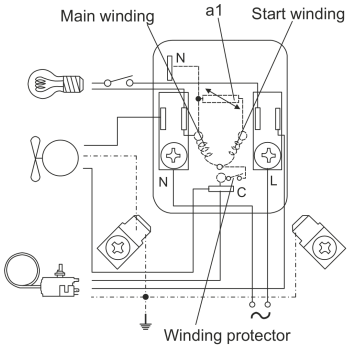
Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
oil cooled

Electrical Accessories / Wiring Diagram

RSIR





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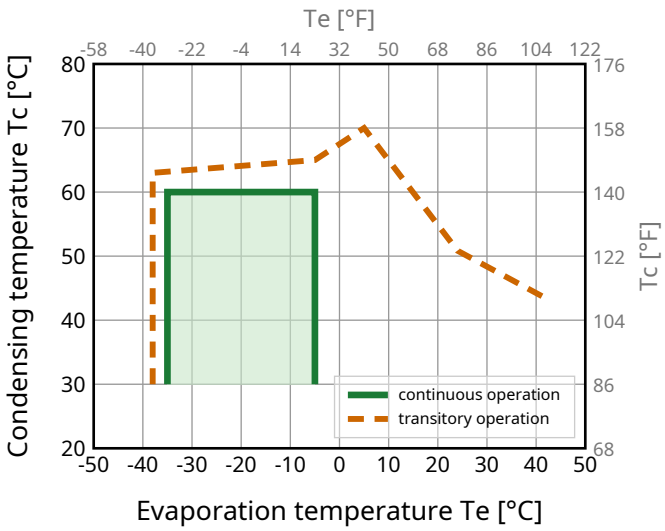
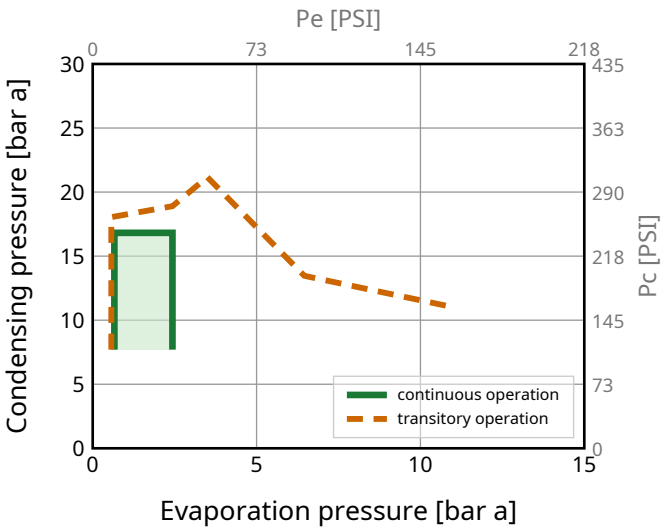
Components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0011
d cord relief 103N1004
b plastic cover 103N2009

Operation Pressure Range





Model

SC12G Configuration 4

Sales code:

104G8250

Standard Conditions

R134a, 230 V/60 Hz, RSIR, oil cooled

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°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

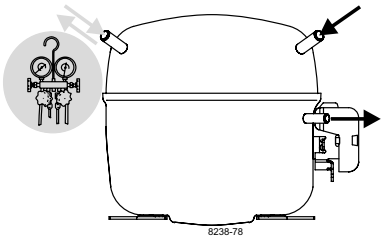
R134a, 230 V/60 Hz, RSIR, oil cooled

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

pe		Cooling capacity			COP	EER	P	I	ṁ
[°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



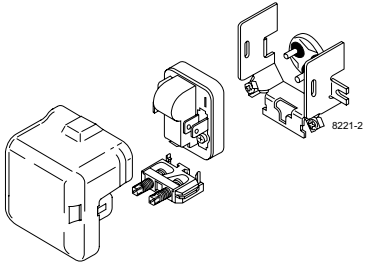
SC Compressors

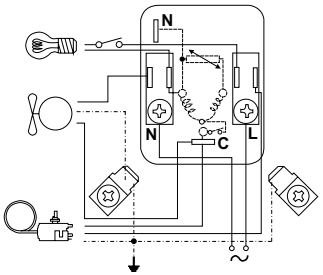
SECOP

Keep electrical equipment clear from oil, chemicals, and water

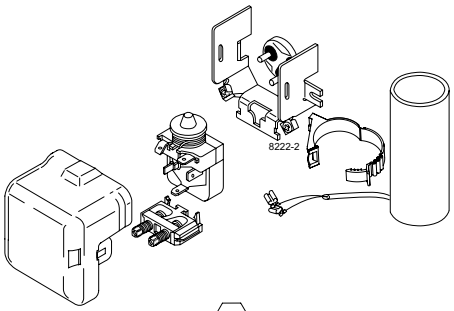
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

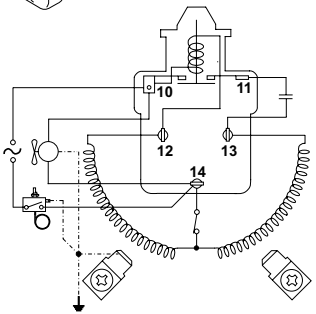
RSIR





CSIR





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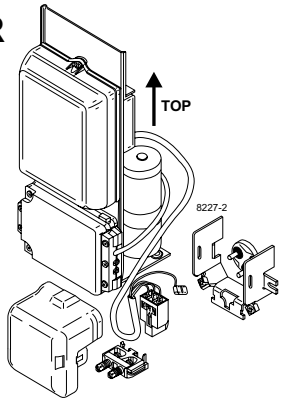

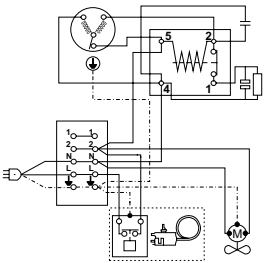

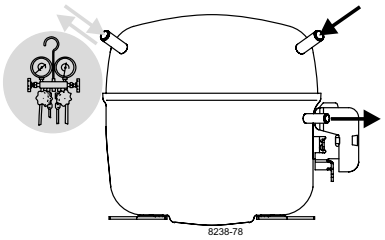

SC Compressors

SECOP

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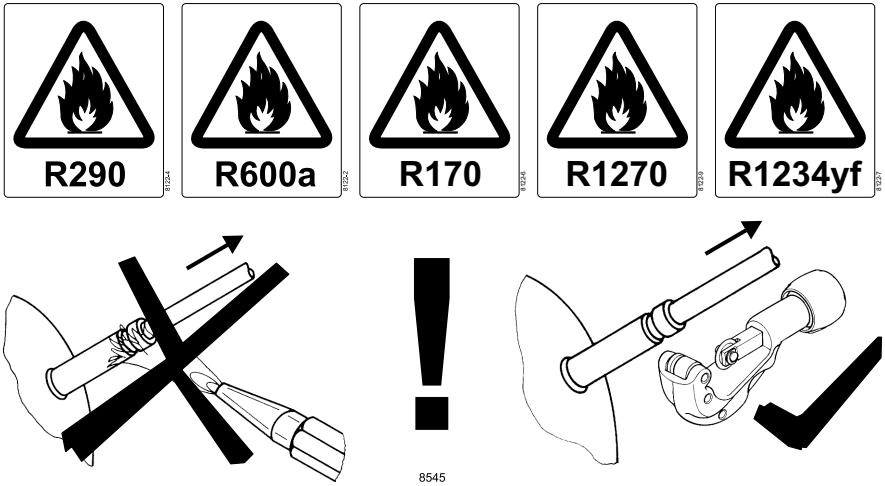
Service/Repair – R290, R600a, R170, R1270, R1234yf

(applies to all flammable refrigerants)



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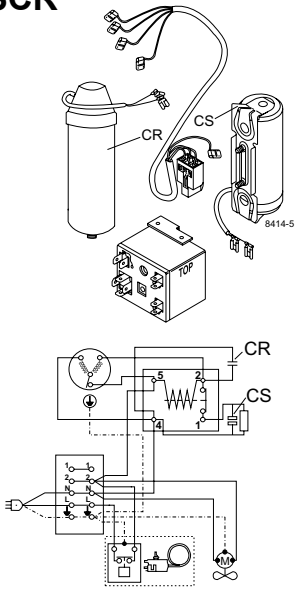

Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**