Model
SC21G

Sales code:
104G8149

Compressor Data

Refrigerant(s)	**R1234yf / R513A**
Refr. charge - tech. limit	**1300g / 45.86oz**
Weight	**13.60 kg / 29.98lbs**
Displacement	**20.95 cm3 / 1.28cu.in**
Compressors on pallet	**80**



General – Configurations With SC21G

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSCR	CSCR	CSCR	CSCR
Power supply (nominal)	220-240 V/50 Hz	208-230 V/60 Hz	220-240 V/50 Hz	220-240 V/60 Hz
Number of phases	1	1	1	1
Voltage range	198-254 V	198-253 V	187-254 V	198-253 V
Starting torque	HST	HST	HST	HST
Refrigerant	R1234yf	R1234yf	R513A	R513A
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

Model
SC21G

Sales code:
104G8149

Compressor Design

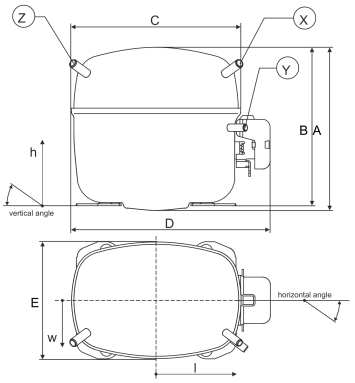
Oil type	**POE**	Winding resistance main	**3.500 Ohm**
Oil viscosity	**22cSt**	Winding resistance aux	**12.90 Ohm**
Oil quantity	**550 cm3 / 18.60fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,460 cm3 / 49.37fl.oz**	Max. discharge temp.	**140°C / 284°F**

Compressor Dimensions

Housing

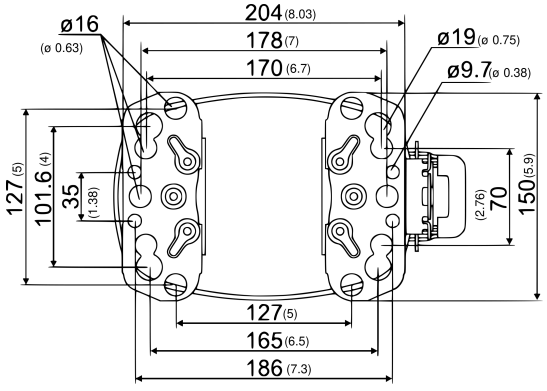
A Height	**219mm / 8.62in**
B Height	**213mm / 8.39in**
C Length shell	**218mm / 8.58in**
D Length w. cover	**255mm / 10.04in**
E Width	**151mm / 5.94in**

Find 3D Model here



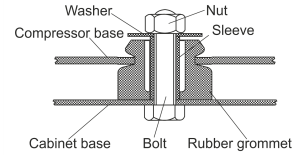
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10.11–10.29 / 0.40–0.41in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55 / 4.21/7.60/2.17in	115/110/63 / 4.53/4.33/2.48in	-107/193/55 / -4.21/7.60/2.17in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

Mounting Accessories

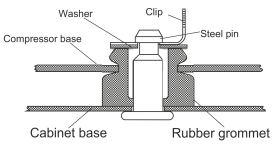


Dimensions in mm [in]

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
SC21G Configuration 1

Sales code:
104G8149

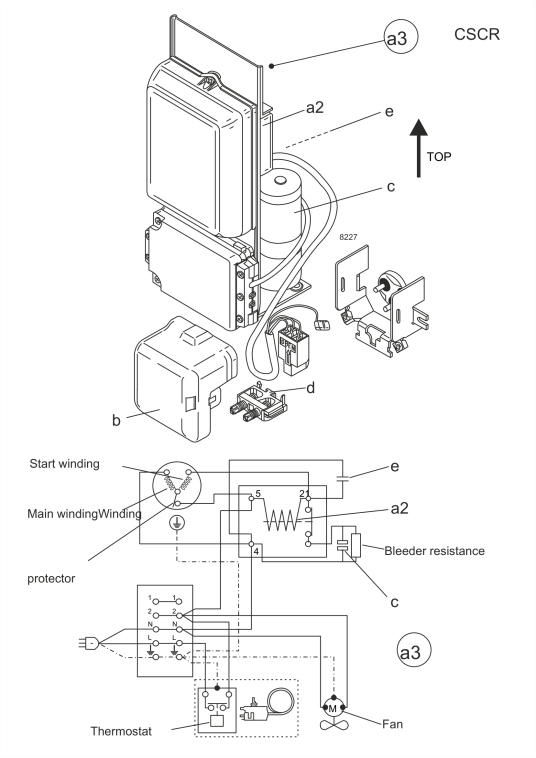
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R1234yf**
Application	**LBP+MBP+HBP**
Voltage range	**198-254 V**
Starting torque	**HST**
Starting device type	**relay**
Run capacitor	**10 µF**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**22 A**
RLA (rated load amps / 1s/ U(N))	**3.9 A**
Cut in current (U(N))	**22 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

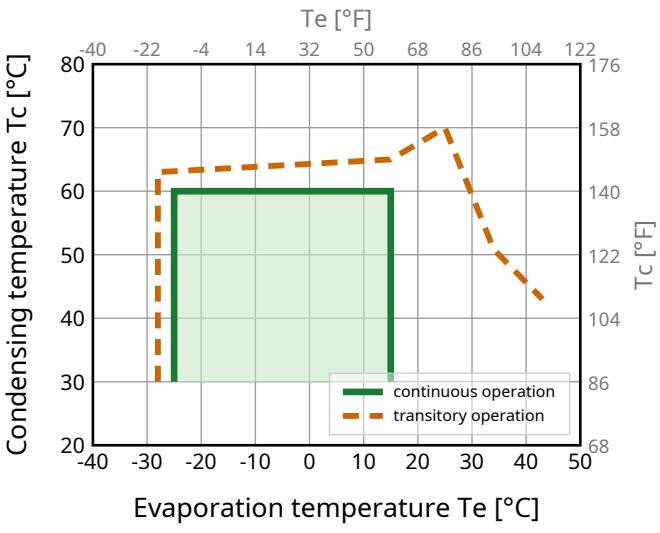


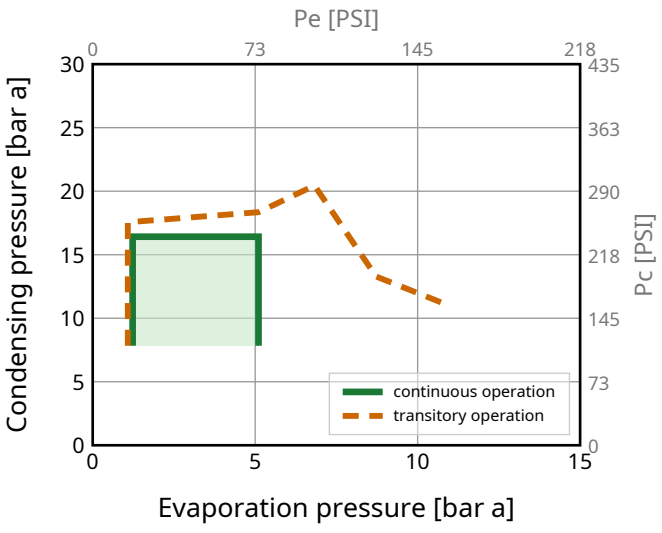
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Components
a3 SC starter kit (550mm) 117-7029
b plastic cover 103N2009
d cord relief 103N1004

Alternative components
a3 SC starter kit (650mm) 117-7032
a3 SC starter kit (1000mm) 117-7041
a2 potential relay (RVA 4H3R341) 117-7427
c start capacitor (80µF) 117U5373
e run capacitor (10µF, 6.3mm) 117-7112

Operation Pressure Range





Model
SC21G Configuration 1

Sales code:
104G8149

Standard Conditions

R1234yf, 220 V/50 Hz, CSCR, fan 3m/s

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	**508**	1735	437	**1.27**	4.35	399	2.35	11.97	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1048**	3576	901	**1.68**	5.73	625	3.19	28.31	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**1838**	6270	1580	**2.38**	8.12	772	3.82	50.60	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**250**	855	215	**0.91**	3.12	274	1.99	6.86	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**925**	3155	795	**1.59**	5.43	582	3.02	27.41	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1526**	5206	1312	**2.06**	7.03	741	3.69	49.52	**EN12900 HBP**

Performance Tables

R1234yf, 220 V/50 Hz, CSCR, fan 3m/s

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]
-25	-13	**453**	1545	389	**1.13**	3.85	401	2.35	12.15
-20	-4	**599**	2045	515	**1.29**	4.41	464	2.57	16.13
-10	14	**979**	3341	842	**1.68**	5.74	582	3.02	26.59
0	32	**1476**	5035	1269	**2.17**	7.40	680	3.42	40.56
10	50	**2089**	7129	1797	**2.80**	9.54	747	3.71	58.39
15	59	**2440**	8326	2099	**3.19**	10.88	765	3.79	68.94

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

-25	-13	**355**	1211	305	**0.95**	3.26	372	2.26	10.75
-20	-4	**470**	1604	404	**1.06**	3.62	443	2.50	14.29
-10	14	**788**	2689	678	**1.36**	4.63	581	3.02	24.19
0	32	**1224**	4176	1053	**1.74**	5.94	702	3.52	38.09
10	50	**1778**	6067	1529	**2.23**	7.63	795	3.92	56.39
15	59	**2100**	7164	1806	**2.54**	8.66	827	4.05	67.40

Model
SC21G Configuration 2

Sales code:
104G8149

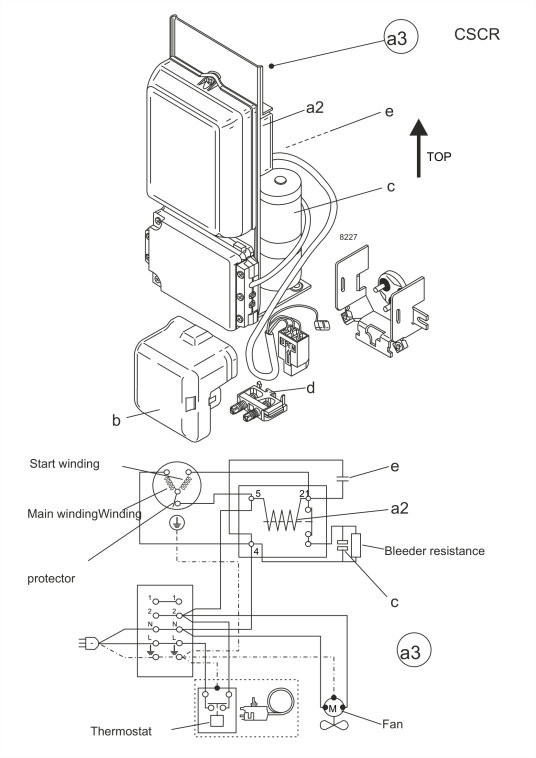
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R1234yf**
Application	**LBP**
Voltage range	**198-253 V**
Starting torque	**HST**
Starting device type	**relay**
Run capacitor	**10 µF**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**22 A**
RLA (rated load amps / 1s/ U(N))	**3.9 A**
Cut in current (U(N))	**22 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

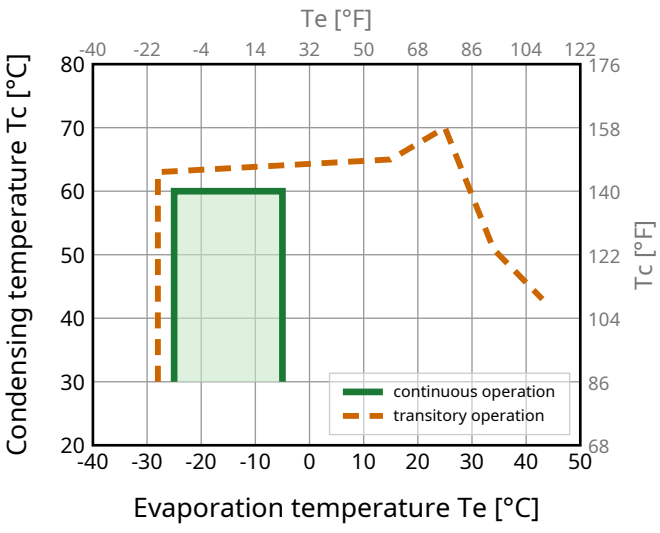


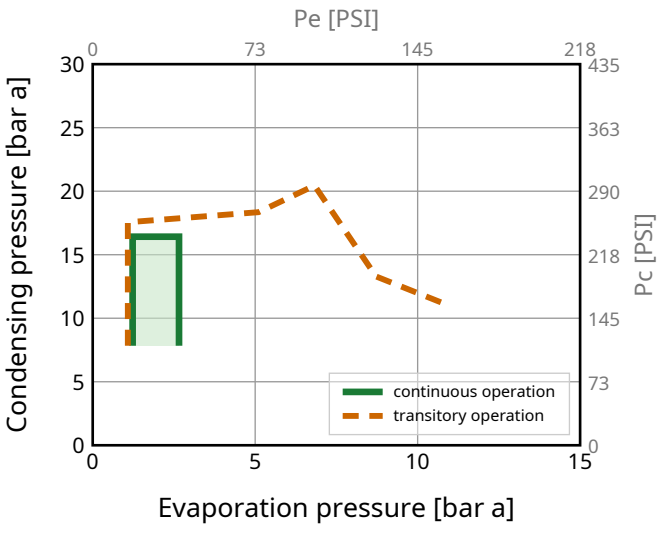
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Components
a3 SC starter kit (550mm) 117-7029
b plastic cover 103N2009
d cord relief 103N1004

Alternative components
a3 SC starter kit (650mm) 117-7032
a3 SC starter kit (1000mm) 117-7041
a2 potential relay (RVA 4H3R341) 117-7427
c start capacitor (80µF) 117U5373
e run capacitor (10µF, 6.3mm) 117-7112

Operation Pressure Range





Model Sales code:

SC21G Configuration 2 **104G8149**

Standard Conditions

R1234yf, 230 V/60 Hz, CSCR, fan 3m/s

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	**535**	1824	460	**1.11**	3.80	480	2.43	12.59	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1176**	4011	1011	**1.66**	5.67	708	3.35	31.75	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**2136**	7289	1837	**2.34**	7.99	912	4.23	58.82	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**265**	903	228	**0.84**	2.85	316	1.86	7.25	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**988**	3369	849	**1.57**	5.36	629	3.02	29.27	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1722**	5876	1481	**1.99**	6.80	864	4.01	55.89	**EN12900 HBP**

Performance Tables

R1234yf, 230 V/60 Hz, CSCR, fan 3m/s

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]
-25	-13	**474**	1616	407	**1.08**	3.68	439	2.28	12.70
-20	-4	**633**	2158	544	**1.26**	4.31	501	2.51	17.03
-15	5	**822**	2806	707	**1.46**	4.97	564	2.75	22.22
-10	14	**1046**	3568	899	**1.66**	5.67	629	3.02	28.39
-5	23	**1306**	4455	1123	**1.88**	6.40	696	3.30	35.65

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

-25	-13	**368**	1254	316	**0.81**	2.75	457	2.34	11.13
-20	-4	**507**	1729	436	**0.97**	3.30	525	2.60	15.40
-15	5	**677**	2309	582	**1.14**	3.89	593	2.87	20.66
-10	14	**880**	3003	757	**1.33**	4.53	663	3.15	27.01
-5	23	**1120**	3823	964	**1.53**	5.21	733	3.45	34.60

Model
SC21G Configuration 3

Sales code:
104G8149

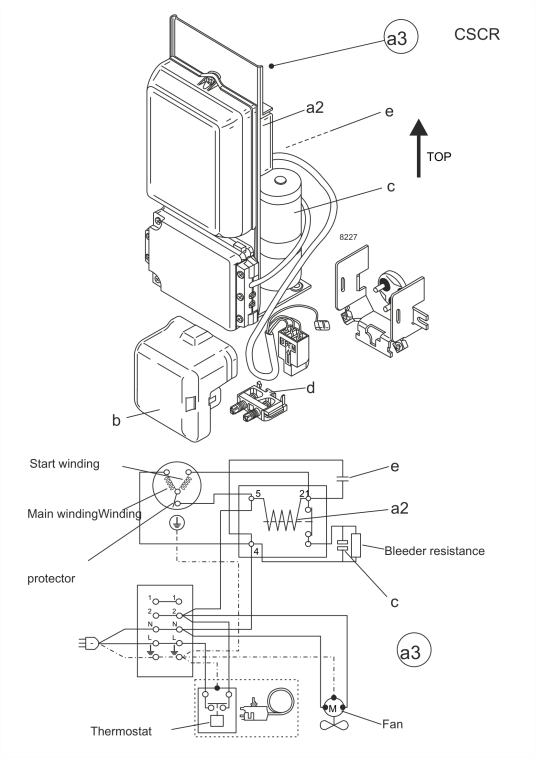
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R513A**
Application	**LBP+MBP+HBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Starting device type	**relay**
Run capacitor	**10 µF**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**22 A**
RLA (rated load amps / 1s/ U(N))	**3.9 A**
Cut in current (U(N))	**22 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

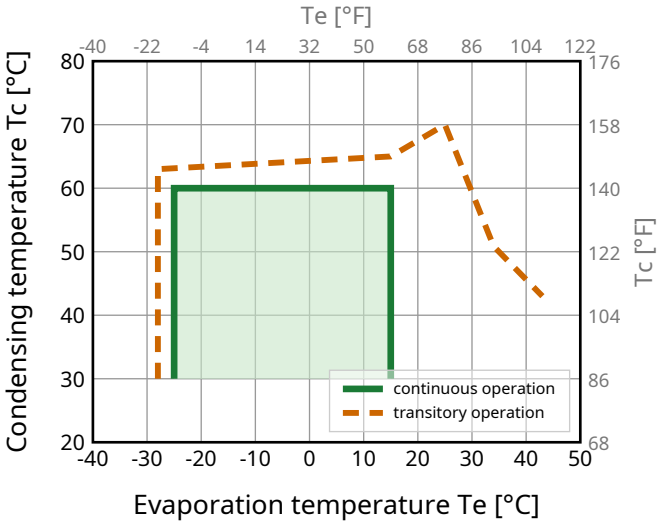


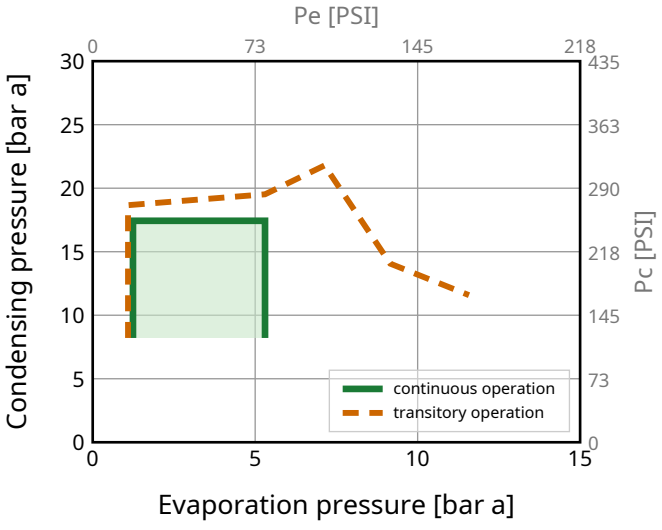
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Components
a3 SC starter kit (550mm) 117-7029
b plastic cover 103N2009
d cord relief 103N1004

Alternative components
a3 SC starter kit (650mm) 117-7032
a3 SC starter kit (1000mm) 117-7041
a2 potential relay (RVA 4H3R341) 117-7427
c start capacitor (80µF) 117U5373
e run capacitor (10µF, 6.3mm) 117-7112

Operation Pressure Range





Model Sales code:

SC21G Configuration 3 **104G8149**

Standard Conditions

R513A, 220 V/50 Hz, CSCR, fan 3m/s

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	**532**	1816	458	**1.21**	4.13	440	2.30	11.65	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1092**	3728	940	**1.68**	5.72	652	3.18	27.24	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**1910**	6519	1643	**2.23**	7.61	856	4.12	48.54	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**256**	872	220	**0.86**	2.94	297	1.78	6.43	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**943**	3217	811	**1.68**	5.74	560	2.79	25.53	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1593**	5435	1370	**2.03**	6.93	784	3.78	46.97	**EN12900 HBP**

Performance Tables

R513A, 220 V/50 Hz, CSCR, fan 3m/s

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]
-25	-13	**468**	1595	402	**1.17**	3.99	400	2.15	11.57
-20	-4	**615**	2099	529	**1.36**	4.65	451	2.35	15.27
-10	14	**989**	3375	851	**1.76**	6.02	560	2.79	24.76
0	32	**1499**	5115	1289	**2.21**	7.55	677	3.29	37.98
10	50	**2183**	7447	1877	**2.72**	9.29	801	3.88	56.22
15	59	**2601**	8875	2237	**3.00**	10.25	866	4.20	67.72

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

-25	-13	**374**	1274	321	**0.89**	3.03	421	2.23	10.34
-20	-4	**508**	1734	437	**1.06**	3.61	481	2.46	14.12
-10	14	**839**	2863	722	**1.38**	4.69	610	2.99	23.54
0	32	**1283**	4379	1104	**1.71**	5.82	752	3.63	36.49
10	50	**1879**	6410	1616	**2.07**	7.08	906	4.37	54.42
15	59	**2245**	7659	1930	**2.27**	7.76	987	4.78	65.81

Model
SC21G Configuration 4

Sales code:
104G8149

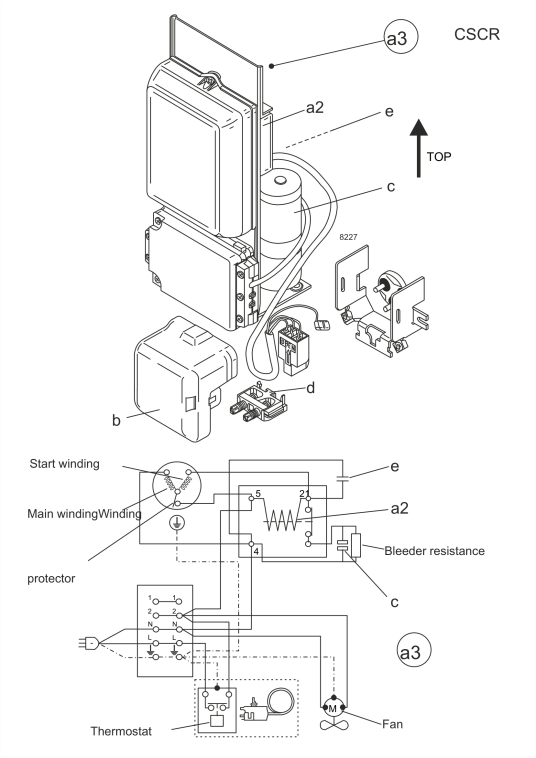
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/60 Hz 1~**
Refrigerant	**R513A**
Application	**LBP**
Voltage range	**198-253 V**
Starting torque	**HST**
Starting device type	**relay**
Run capacitor	**10 µF**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**22 A**
RLA (rated load amps / 1s/ U(N))	**3.9 A**
Cut in current (U(N))	**22 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

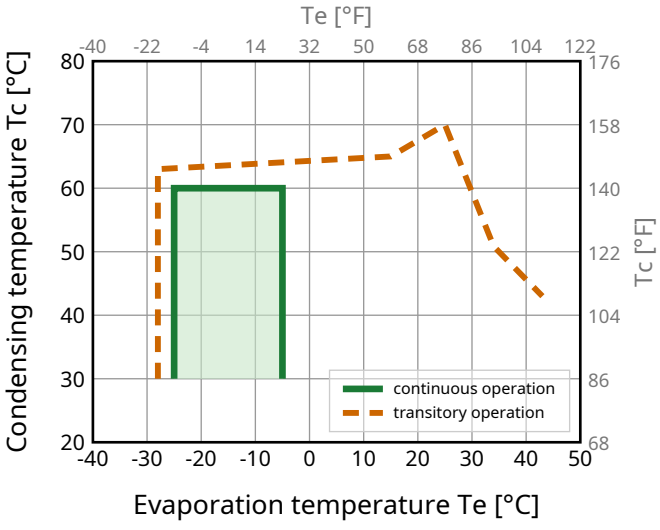


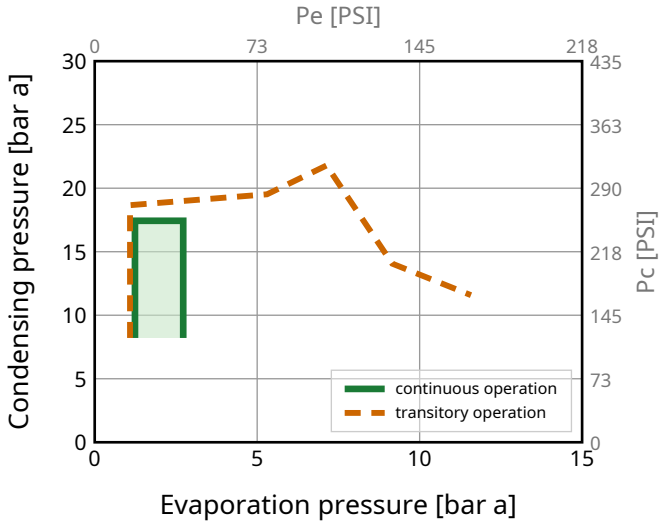
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Components
a3 SC starter kit (550mm) 117-7029
b plastic cover 103N2009
d cord relief 103N1004

Alternative components
a3 SC starter kit (650mm) 117-7032
a3 SC starter kit (1000mm) 117-7041
a2 potential relay (RVA 4H3R341) 117-7427
c start capacitor (80µF) 117U5373
e run capacitor (10µF, 6.3mm) 117-7112

Operation Pressure Range





Model

SC21G Configuration 4

Sales code:

104G8149

Standard Conditions

R513A, 230 V/60 Hz, CSCR, fan 3m/s

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	**598**	2041	514	**1.21**	4.11	496	2.56	13.09	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1245**	4249	1071	**1.70**	5.79	734	3.48	31.05	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**2236**	7630	1923	**2.26**	7.70	991	4.59	56.82	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**287**	981	247	**0.87**	2.98	330	1.91	7.23	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**1077**	3673	926	**1.70**	5.79	635	3.08	29.15	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1864**	6360	1603	**2.04**	6.97	912	4.25	54.96	**EN12900 HBP**

Performance Tables

R513A, 230 V/60 Hz, CSCR, fan 3m/s

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]
-25	-13	**525**	1791	451	**1.15**	3.92	457	2.41	12.98
-20	-4	**693**	2363	596	**1.35**	4.59	515	2.62	17.19
-15	5	**892**	3044	767	**1.56**	5.31	573	2.84	22.23
-10	14	**1130**	3854	971	**1.78**	6.07	635	3.08	28.27
-5	23	**1412**	4817	1214	**2.00**	6.84	704	3.36	35.53

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

-25	-13	**420**	1434	361	**0.89**	3.04	472	2.46	11.64
-20	-4	**571**	1949	491	**1.05**	3.58	545	2.74	15.88
-15	5	**746**	2545	642	**1.21**	4.14	616	3.01	20.82
-10	14	**951**	3246	818	**1.38**	4.72	688	3.30	26.69
-5	23	**1194**	4073	1027	**1.56**	5.33	765	3.61	33.70