Model
SC21G

Sales code:
104G8143

Compressor Data

Refrigerant(s)	**R134a / 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	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	198-253 V
Approvals	VDE, CCC	CCC, UL, KC	VDE, CCC	CCC, UL, KC
Starting torque	HST	HST	HST	HST
Refrigerant	R134a	R134a	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:
104G8143

Compressor Design

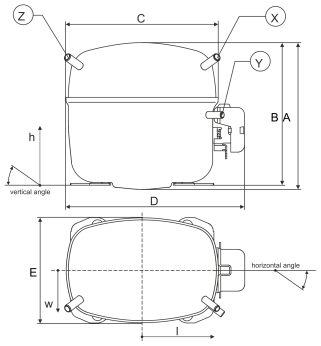
Oil type	**POE**	Winding resistance main	**3.5 Ohm**
Oil viscosity	**22cSt**	Winding resistance aux	**13 Ohm**
Oil quantity	**550 cm3 / 18.60fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,460 cm3 / 49.37fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

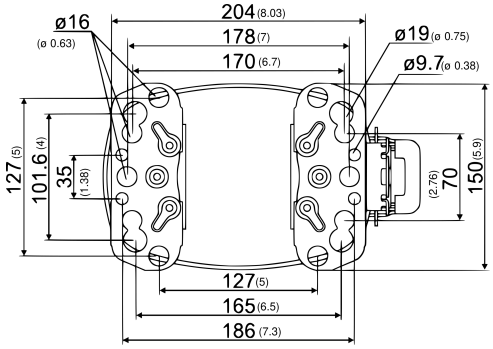
A Height	**219mm / 8.62in**
B Height	**213mm / 8.39in**
C Length shell	**218mm / 8.58in**
D Length w. cover	**255mm / 10.04in**
E Width	**151mm / 5.94in**

Find 3D Model here



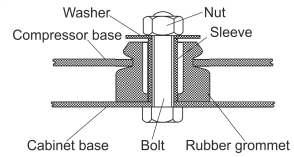
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10.11–10.29 / 0.40–0.41in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55 / 4.21/7.60/2.17in	115/110/63 / 4.53/4.33/2.48in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

Mounting Accessories

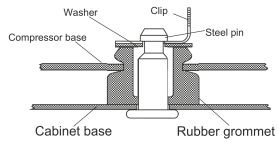


Dimensions in mm [in]

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:
104G8143

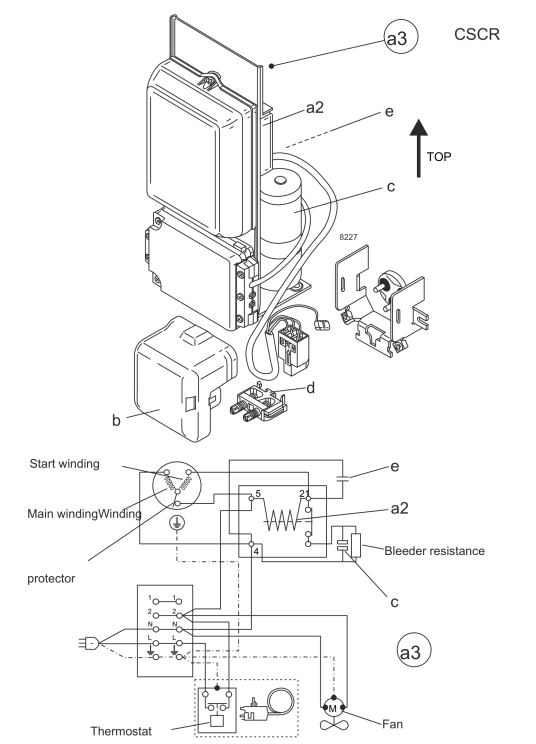
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**LBP+MBP+HBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CCC**
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

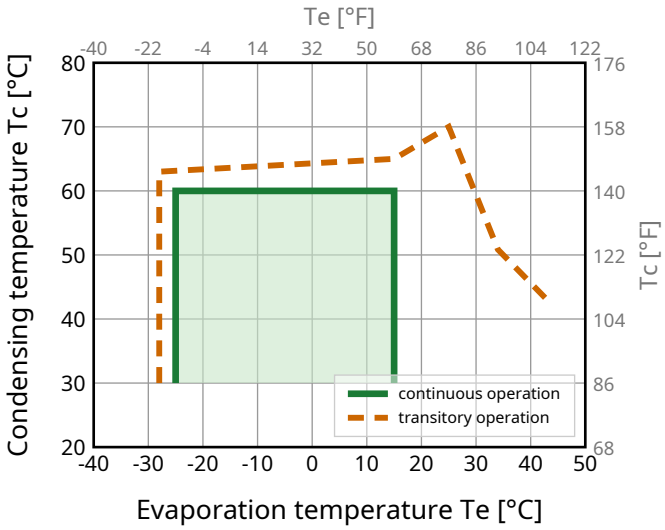


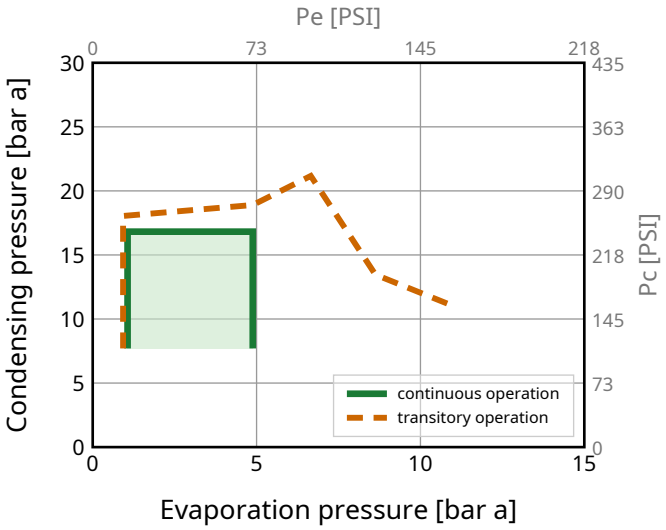
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Components
a3 SC starter kit (550mm) 117-7039
b plastic cover 103N2008
d cord relief 103N1004

Alternative components
a3 SC starter kit (1000mm) 117-7043

Operation Pressure Range





Model
SC21G Configuration 1

Sales code:
104G8143

Standard Conditions

R134a, 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	**470**	1605	405	**1.19**	4.07	394	2.91	9.13	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1040**	3547	894	**1.69**	5.78	614	2.84	22.64	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**1848**	6307	1590	**2.32**	7.91	797	5.26	40.91	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**219**	746	188	**0.81**	2.76	270	1.83	4.78	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**905**	3089	778	**1.70**	5.79	533	2.14	21.11	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1574**	5372	1354	**2.15**	7.35	731	4.72	39.49	**EN12900 HBP**

Performance Tables

R134a, 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	**423**	1443	364	**1.17**	3.98	362	2.55	9.14
-20	-4	**568**	1939	489	**1.36**	4.65	417	2.40	12.32
-10	14	**938**	3199	806	**1.76**	6.00	533	2.14	20.48
0	32	**1441**	4915	1239	**2.26**	7.70	638	3.46	31.78
10	50	**2113**	7210	1817	**2.99**	10.19	708	8.21	47.30
15	59	**2524**	8613	2171	**3.50**	11.93	722	12.44	57.03

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

-25	-13	**335**	1143	288	**0.89**	3.03	377	2.78	7.99
-20	-4	**471**	1607	405	**1.08**	3.70	434	3.02	11.27
-10	14	**806**	2751	693	**1.42**	4.83	569	2.87	19.44
0	32	**1255**	4282	1079	**1.77**	6.03	710	3.40	30.61
10	50	**1854**	6325	1594	**2.22**	7.58	834	6.45	45.93
15	59	**2220**	7576	1910	**2.52**	8.59	882	9.49	55.58

Model
SC21G Configuration 2

Sales code:
104G8143

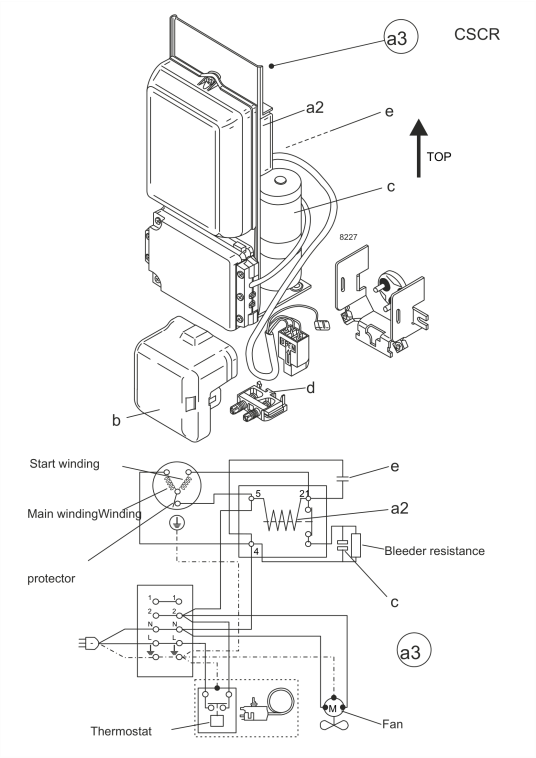
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**LBP**
Voltage range	**198-254 V**
Starting torque	**HST**
Approvals	**CCC, UL, KC**
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

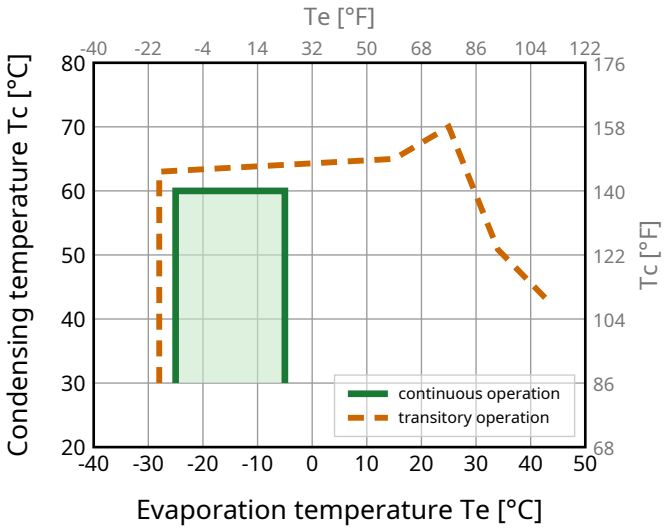


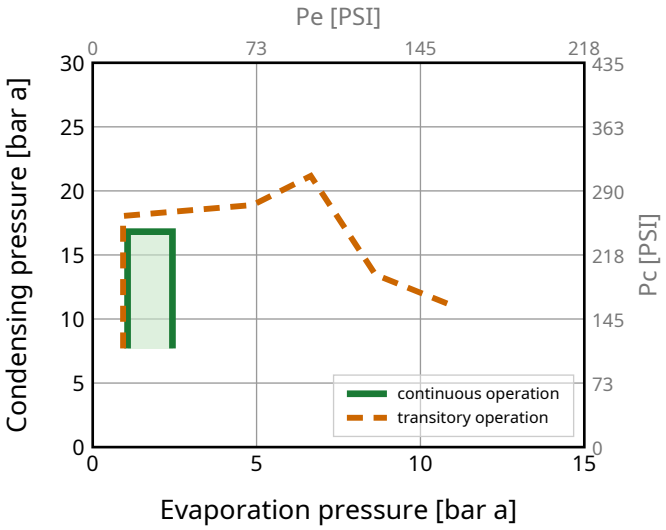
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Components
a3 SC starter kit (550mm) 117-7039
b plastic cover 103N2008
d cord relief 103N1004

Alternative components
a3 SC starter kit (1000mm) 117-7043

Operation Pressure Range





Model Sales code:

SC21G Configuration 2 **104G8143**

Standard Conditions

R134a, 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	**529**	1806	455	**1.15**	3.93	459	2.42	10.27	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1181**	4030	1016	**1.72**	5.86	688	3.29	25.72	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**2158**	7364	1856	**2.27**	7.76	950	4.44	47.77	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**247**	842	212	**0.83**	2.82	298	1.79	5.40	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**1030**	3515	886	**1.74**	5.93	593	2.91	24.03	**EN12900 MBP**
5 41	50 122	20 68	50 122	**1838**	6273	1581	**2.10**	7.17	874	4.11	46.11	**EN12900 HBP**

Performance Tables

R134a, 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**	1619	408	**1.12**	3.81	425	2.29	10.26
-20	-4	**639**	2180	549	**1.33**	4.54	480	2.50	13.85
-15	5	**834**	2846	717	**1.56**	5.33	534	2.69	18.14
-10	14	**1067**	3641	918	**1.80**	6.14	593	2.91	23.31
-5	23	**1345**	4588	1156	**2.03**	6.93	662	3.19	29.50

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

-25	-13	**378**	1289	325	**0.87**	2.97	433	2.33	9.01
-20	-4	**529**	1806	455	**1.04**	3.57	506	2.61	12.66
-15	5	**705**	2406	606	**1.23**	4.19	575	2.86	16.93
-10	14	**911**	3110	784	**1.42**	4.83	643	3.12	21.97
-5	23	**1155**	3941	993	**1.61**	5.50	717	3.41	27.99

Model
SC21G Configuration 3

Sales code:
104G8143

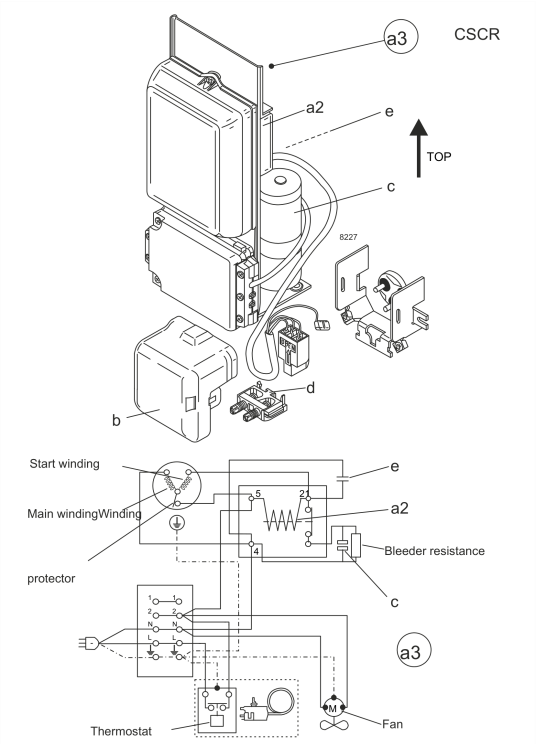
Configuration

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**
Approvals	**VDE, CCC**
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

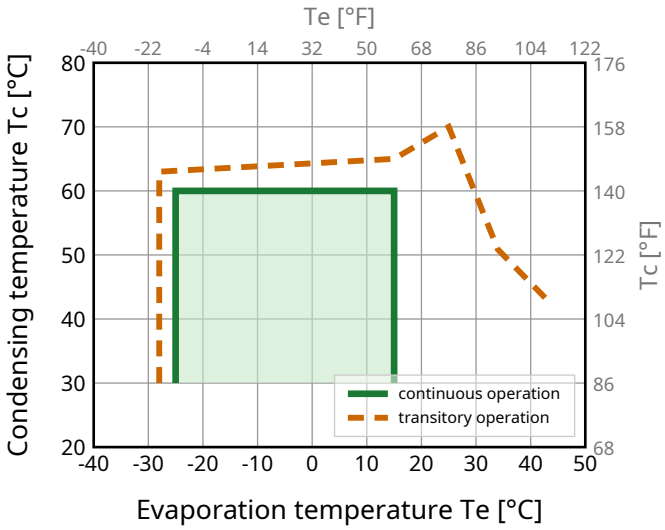


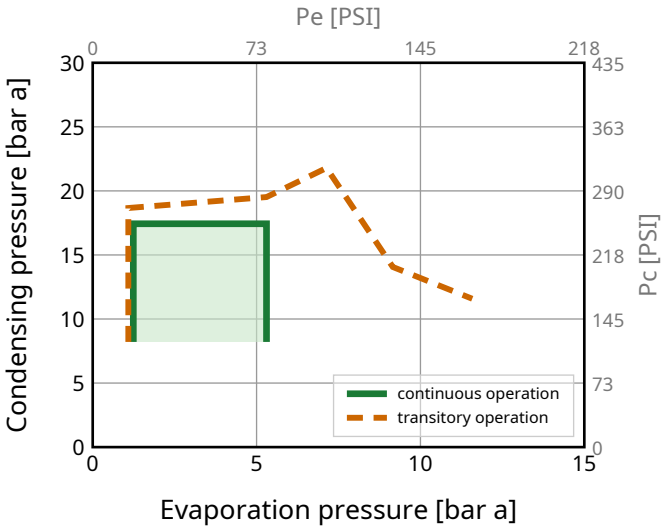
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Components
a3 SC starter kit (550mm) 117-7039
b plastic cover 103N2008
d cord relief 103N1004

Alternative components
a3 SC starter kit (1000mm) 117-7043

Operation Pressure Range





Model
SC21G Configuration 3

Sales code:
104G8143

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:
104G8143

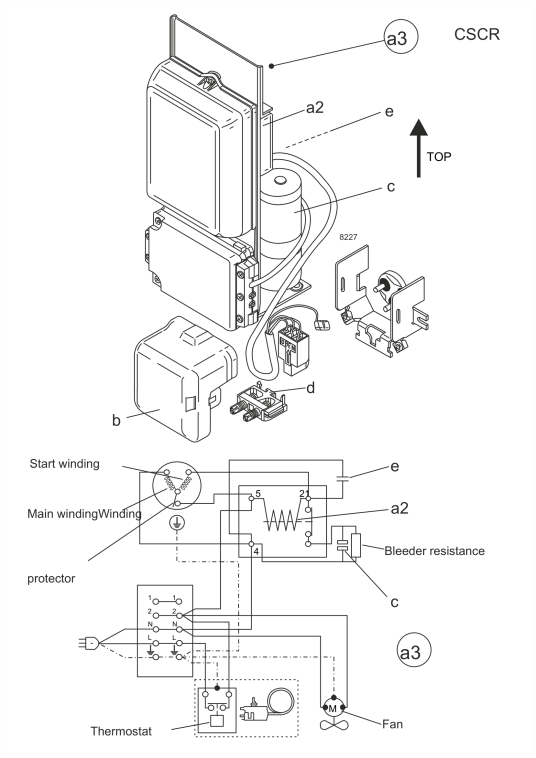
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/60 Hz 1~**
Refrigerant	**R513A**
Application	**LBP**
Voltage range	**198-253 V**
Starting torque	**HST**
Approvals	**CCC, UL, KC**
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

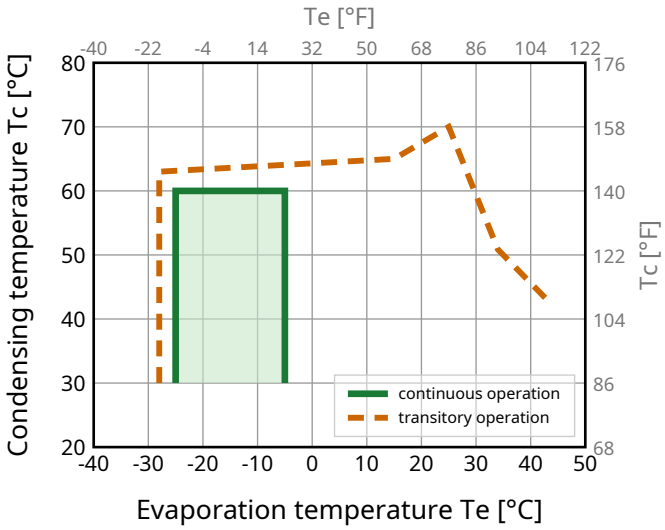


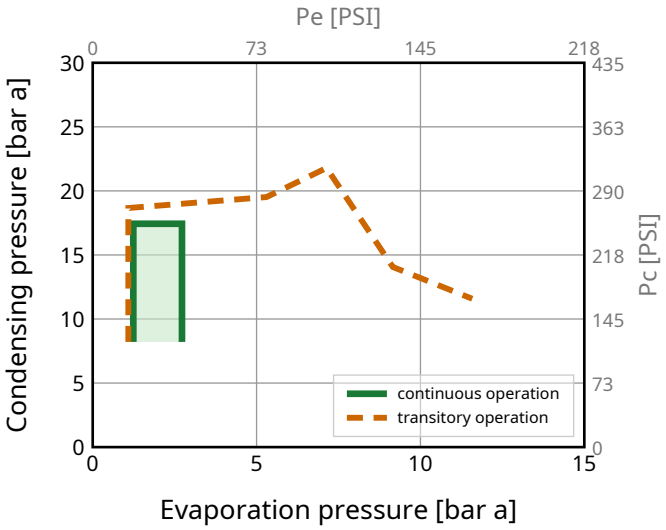
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Components
a3 SC starter kit (550mm) 117-7039
b plastic cover 103N2008
d cord relief 103N1004

Alternative components
a3 SC starter kit (1000mm) 117-7043

Operation Pressure Range





Model

SC21G Configuration 4

Sales code:

104G8143

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