Single
Packs

Single Pack SC21MFX 220-240V 50Hz CSIR

Single pack code number: **195B4201**

Position	Title	Code	Amount
1	Compressor SC21MFX	104G8120	1
2	Starting relay	117U6019	1
3	Starting capacitor (80µF 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2008	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
SC21MFX

Sales code:
104G8120

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**1300g / 45.86oz**
Weight	**13.70 kg / 30.20lbs**
Displacement	**20.95 cm3 / 1.28cu.in**
Compressors on pallet	**80**

General – Configurations With SC21MFX

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSCR	CSIR	CSIR
Power supply (nominal)	220-240 V/50 Hz	220-240 V/50 Hz	220-240 V/50 Hz	220-240 V/50 Hz
Number of phases	1	1	1	1
Voltage range	187-254 V	187-254 V	187-254 V	198-254 V
Approvals	VDE, CCC, EAC	VDE, CCC, EAC	VDE, CCC, EAC	–
Starting torque	HST	HST	HST	HST
Refrigerant	R134a	R134a	R513A	R1234yf
Application	MBP	MBP	MBP	MBP
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
SC21MFX

Sales code:
104G8120

Compressor Design

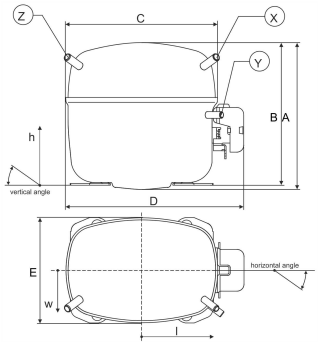
Oil type	**POE**	Winding resistance main	**3.4 Ohm**
Oil viscosity	**22cSt**	Winding resistance aux	**14.4 Ohm**
Oil quantity	**550 / 18.60fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,460 cm3 / 49.37fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

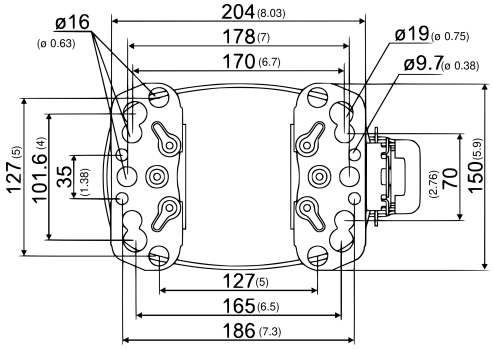
A Height	**219mm / 8.62in**
B Height	**213mm / 8.39in**
C Length shell	**218mm / 8.58in**
D Length w. cover	**255mm / 10.04in**
E Width	**151mm / 5.94in**

Find 3D Model here



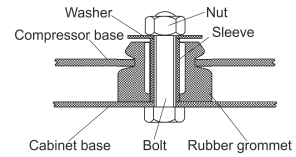
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10.11–10.29 / 0.40–0.41in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55 / 4.21/7.60/2.17in	115/110/63 / 4.53/4.33/2.48in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

Mounting Accessories

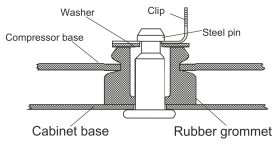


Dimensions in mm [in]

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
SC21MFX Configuration 1

Sales code:
104G8120

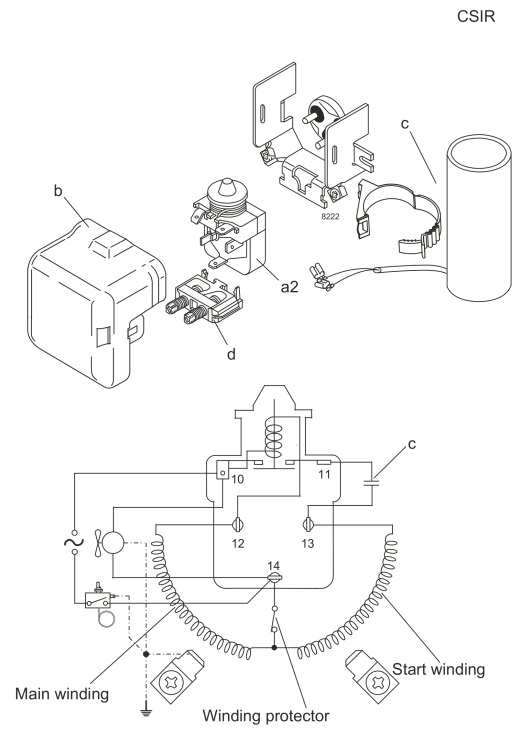
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CCC, EAC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**23.4 A**
RLA (rated load amps / 1s/ U(N))	**4.3 A**
Cut in current (U(N))	**23.4 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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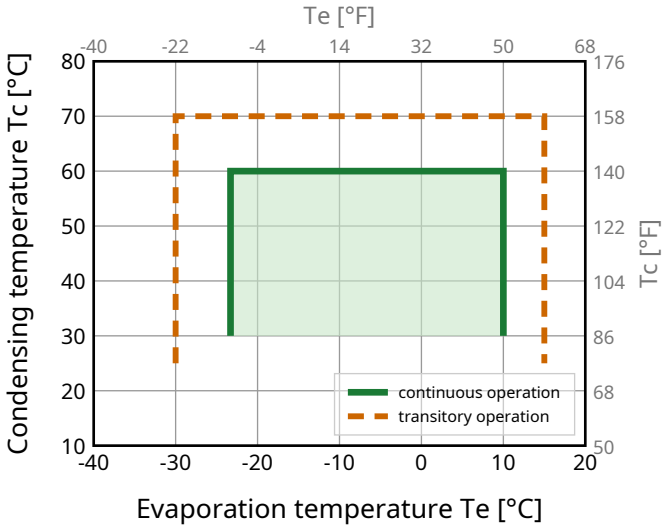
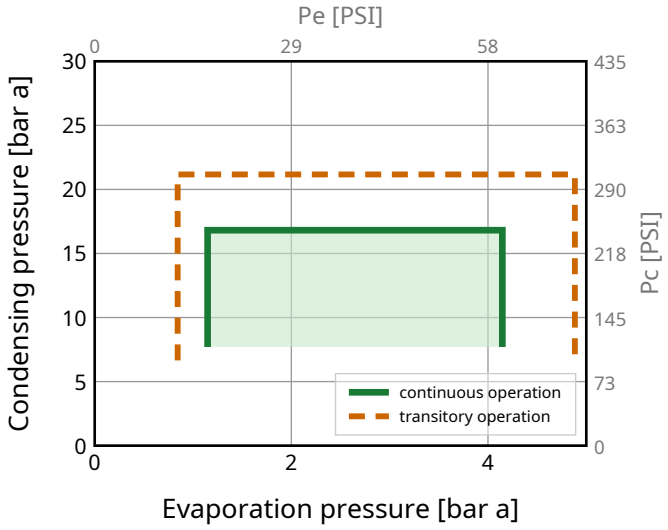
Components
a2 relay 117U6019
c start capacitor (80µF) 117U5017
d cord relief 103N1004
b plastic cover 103N2009

Operation Pressure Range





Model Sales code:

SC21MFX Configuration 1 **104G8120**

Standard Conditions

R134a, 220 V/50 Hz, CSIR, 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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**1080**	3683	928	**1.65**	5.62	656	4.48	23.51	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**840**	2866	722	**1.37**	4.66	615	4.35	20.25	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**942**	3215	810	**1.62**	5.53	582	4.18	21.97	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**1026**	3499	882	**1.62**	5.52	634	4.37	25.20	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**976**	3330	839	**1.68**	5.73	582	4.18	21.31	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**465**	1586	400	**1.14**	3.88	409	3.47	10.05	**opt MBP 2**

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	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-23.3	-10	**509**	1738	438	**1.19**	4.06	428	3.55	11.02
-20	-4	**604**	2063	520	**1.30**	4.43	466	3.72	13.11
-15	5	**773**	2639	665	**1.48**	5.04	524	3.95	16.82
-10	14	**976**	3330	839	**1.68**	5.73	582	4.18	21.31
-5	23	**1216**	4149	1046	**1.90**	6.48	641	4.39	26.68
0	32	**1499**	5113	1289	**2.14**	7.29	701	4.59	33.07
5	41	**1828**	6236	1572	**2.39**	8.16	764	4.78	40.59
10	50	**2208**	7533	1899	**2.67**	9.10	828	4.96	49.41

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

-23.3	-10	**430**	1466	370	**0.97**	3.32	441	3.69	10.26
-20	-4	**514**	1752	442	**1.06**	3.61	485	3.86	12.28
-15	5	**662**	2258	569	**1.20**	4.11	550	4.11	15.89
-10	14	**840**	2866	722	**1.37**	4.66	615	4.35	20.25
-5	23	**1052**	3590	905	**1.55**	5.28	680	4.58	25.50
0	32	**1303**	4445	1120	**1.75**	5.96	746	4.79	31.77
5	41	**1596**	5446	1373	**1.96**	6.70	813	4.99	39.20
10	50	**1936**	6607	1665	**2.20**	7.50	881	5.18	47.98

Model
SC21MFX Configuration 2

Sales code:
104G8120

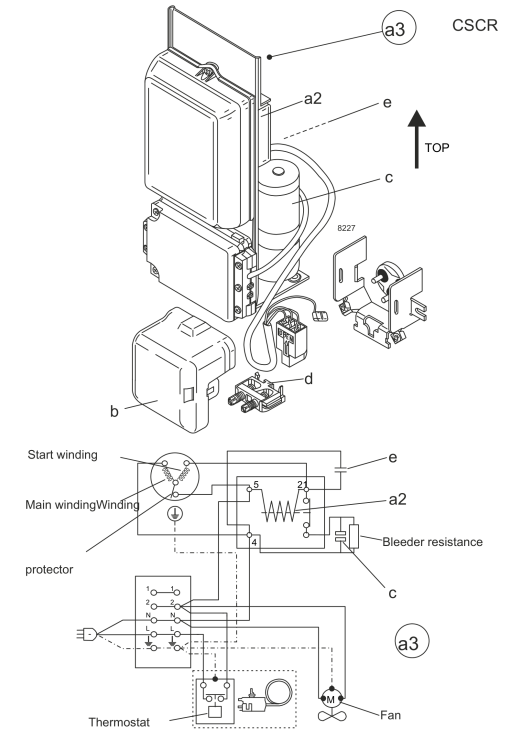
Configuration

Motor configuration	**CSCR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CCC, EAC**
Starting device type	**relay**
Run capacitor	**10 µF**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**23.4 A**
RLA (rated load amps / 1s/ U(N))	**4.3 A**
Cut in current (U(N))	**23.4 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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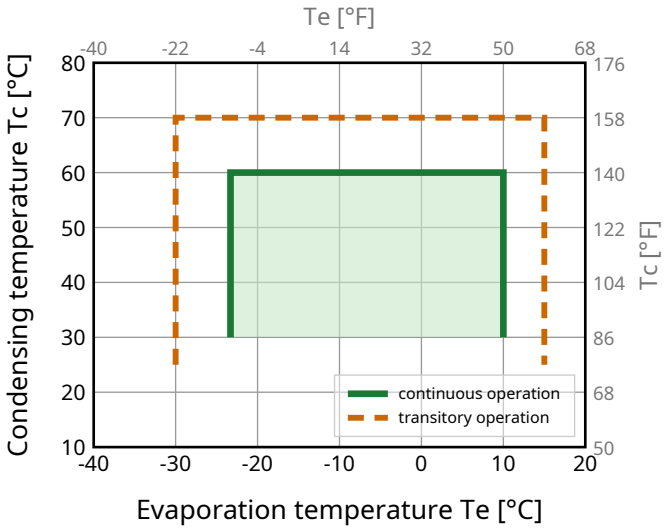
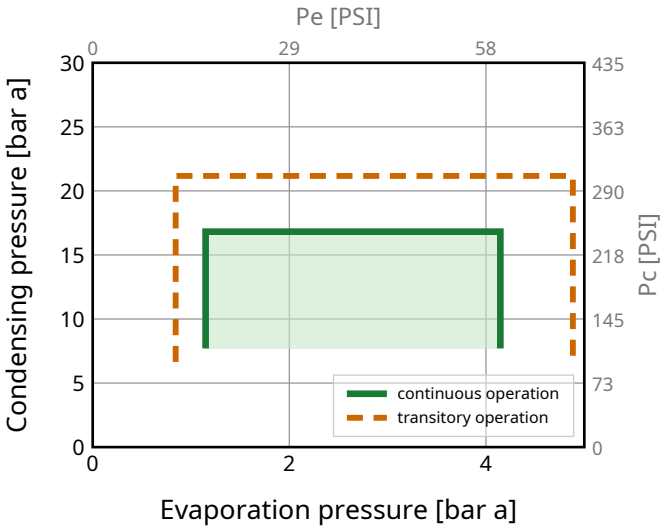
Components
a3 SC starter kit (550mm) 117-7039
b plastic cover 103N2009
d cord relief 103N1004

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

Operation Pressure Range





Model

SC21MFX Configuration 2

Sales code:

104G8120

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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**1113**	3797	957	**1.76**	6.00	633	3.69	24.23	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**866**	2955	745	**1.46**	4.97	594	3.52	20.88	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**971**	3314	835	**1.73**	5.90	562	3.28	22.65	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**1057**	3606	909	**1.73**	5.89	612	3.52	25.97	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**1006**	3432	865	**1.79**	6.11	562	3.28	21.97	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**479**	1635	412	**1.21**	4.13	396	2.38	10.36	**opt MBP 2**

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]
-23.3	-10	**525**	1792	452	**1.27**	4.32	415	2.49	11.37
-20	-4	**623**	2127	536	**1.38**	4.72	451	2.69	13.52
-15	5	**797**	2720	686	**1.57**	5.37	506	2.99	17.34
-10	14	**1006**	3432	865	**1.79**	6.11	562	3.28	21.97
-5	23	**1254**	4277	1078	**2.03**	6.91	619	3.54	27.50
0	32	**1544**	5270	1328	**2.28**	7.79	677	3.80	34.08
5	41	**1884**	6427	1620	**2.56**	8.72	737	4.04	41.83
10	50	**2275**	7762	1956	**2.85**	9.72	798	4.26	50.92

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

-23.3	-10	**443**	1512	381	**1.04**	3.54	427	2.65	10.58
-20	-4	**530**	1807	455	**1.13**	3.85	469	2.88	12.67
-15	5	**682**	2328	587	**1.28**	4.38	532	3.21	16.38
-10	14	**866**	2955	745	**1.46**	4.97	594	3.52	20.88
-5	23	**1084**	3700	933	**1.65**	5.64	657	3.81	26.28
0	32	**1343**	4581	1155	**1.87**	6.37	720	4.10	32.74
5	41	**1645**	5612	1415	**2.10**	7.16	784	4.36	40.40
10	50	**1996**	6809	1716	**2.35**	8.02	849	4.61	49.44

Model
SC21MFX Configuration 3

Sales code:
104G8120

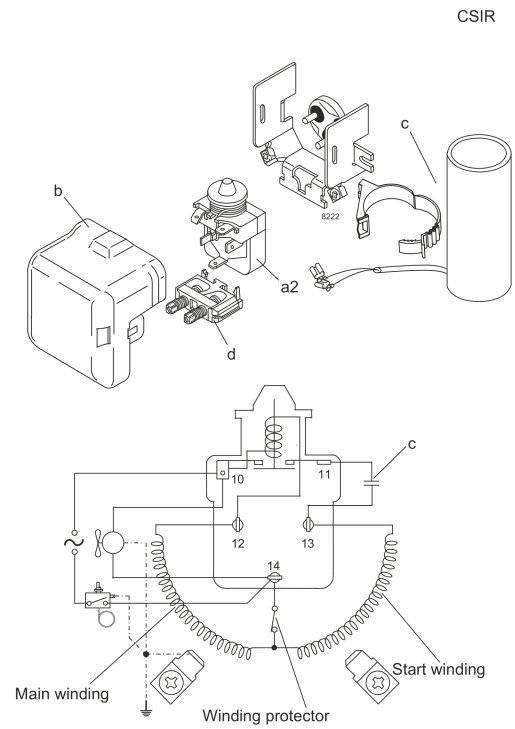
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R513A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CCC, EAC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**23.4 A**
RLA (rated load amps / 1s/ U(N))	**4.3 A**
Cut in current (U(N))	**23.4 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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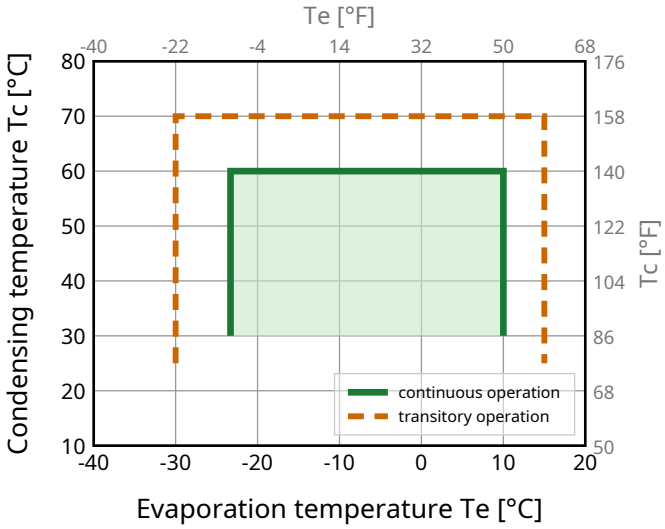
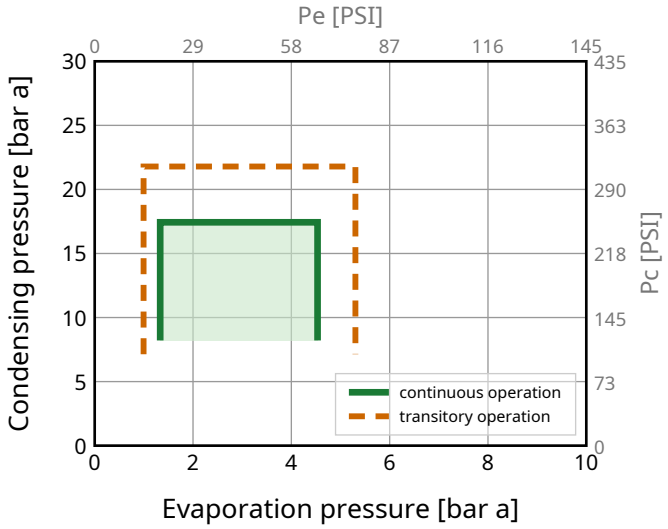
Components
a2 relay 117U6019
c start capacitor (80µF) 117U5017
d cord relief 103N1004
b plastic cover 103N2009

Operation Pressure Range





Model

SC21MFX Configuration 3

Sales code:

104G8120

Standard Conditions

R513A, 220 V/50 Hz, CSIR, 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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**1127**	3847	970	**1.62**	5.53	696	4.57	28.11	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**867**	2959	746	**1.32**	4.51	656	4.41	24.33	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**976**	3331	840	**1.57**	5.37	620	4.28	26.44	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**1048**	3575	901	**1.56**	5.32	672	4.48	30.17	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**1024**	3496	881	**1.65**	5.64	620	4.28	25.64	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**502**	1712	431	**1.12**	3.83	447	3.62	12.41	**opt MBP 2**

Performance Tables

R513A, 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	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-23.3	-10	**548**	1869	471	**1.17**	4.00	467	3.70	13.56
-20	-4	**646**	2203	555	**1.28**	4.36	506	3.84	16.03
-15	5	**819**	2794	704	**1.46**	4.96	563	4.06	20.40
-10	14	**1024**	3496	881	**1.65**	5.64	620	4.28	25.64
-5	23	**1267**	4322	1089	**1.87**	6.37	678	4.50	31.88
0	32	**1550**	5288	1333	**2.10**	7.16	739	4.73	39.26
5	41	**1877**	6405	1614	**2.34**	7.98	803	4.97	47.92
10	50	**2253**	7688	1938	**2.58**	8.82	872	5.24	58.03

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

-23.3	-10	**456**	1554	392	**0.95**	3.23	482	3.75	12.63
-20	-4	**540**	1844	465	**1.03**	3.51	526	3.92	15.02
-15	5	**690**	2353	593	**1.17**	3.98	591	4.17	19.25
-10	14	**867**	2959	746	**1.32**	4.51	656	4.41	24.33
-5	23	**1077**	3676	926	**1.50**	5.10	721	4.66	30.41
0	32	**1324**	4516	1138	**1.68**	5.74	788	4.91	37.64
5	41	**1610**	5494	1385	**1.88**	6.41	857	5.18	46.18
10	50	**1941**	6623	1669	**2.08**	7.11	931	5.46	56.24

Model
SC21MFX Configuration 4

Sales code:
104G8120

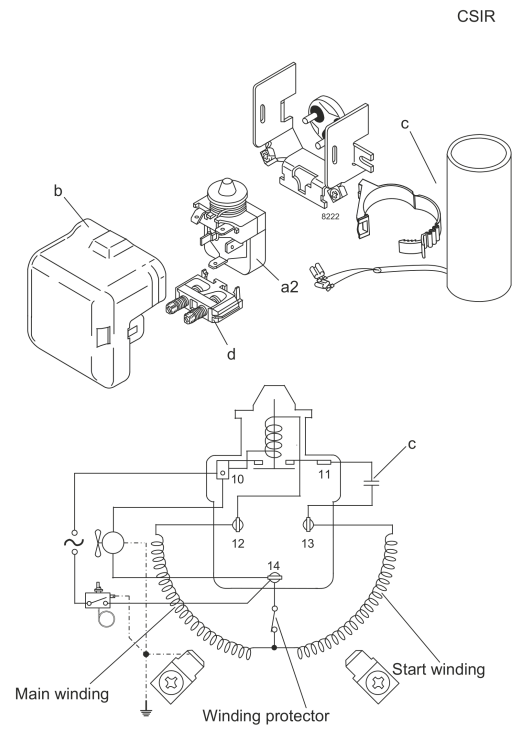
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R1234yf**
Application	**MBP**
Voltage range	**198-254 V**
Starting torque	**HST**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**23.4 A**
RLA (rated load amps / 1s/ U(N))	**4.3 A**
Cut in current (U(N))	**23.4 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

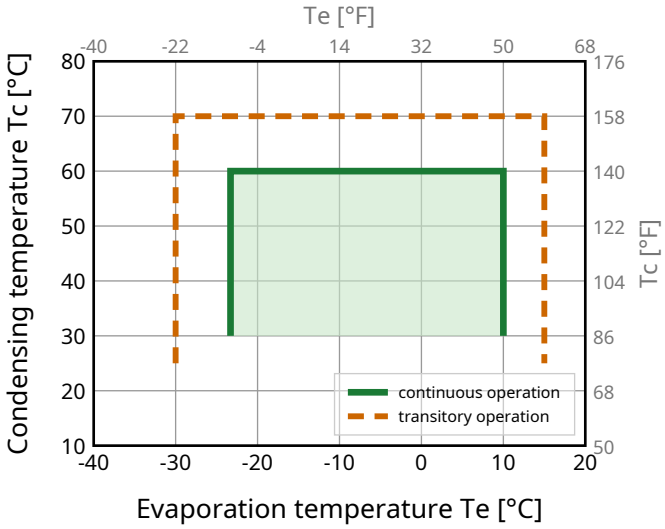
Electrical Accessories / Wiring Diagram

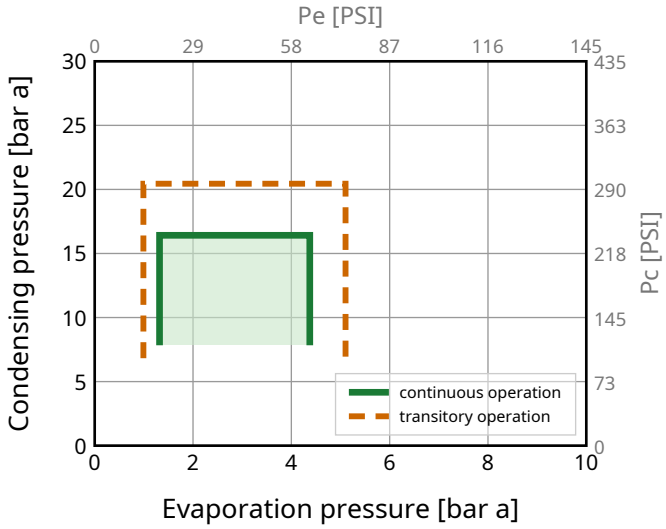


View full size

Components
a2 current relay 117U7019
c start capacitor (80µF) 117U5017
d cord relief 103N1004
b plastic cover 103N2009

Operation Pressure Range





Model
SC21MFX Configuration 4

Sales code:
104G8120

Standard Conditions

R1234yf, 220 V/50 Hz, CSIR, 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]	
-6.7 20	54.4 129.9	35 95	46.1 115	**1090**	3720	938	**1.64**	5.61	663	3.35	29.45	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**836**	2851	719	**1.33**	4.54	628	3.21	25.65	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**934**	3185	803	**1.57**	5.37	594	3.07	27.67	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**994**	3391	855	**1.55**	5.29	641	3.26	31.49	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**988**	3373	850	**1.67**	5.68	594	3.07	26.84	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**500**	1704	430	**1.15**	3.92	435	2.47	13.40	**opt MBP 2**

Performance Tables

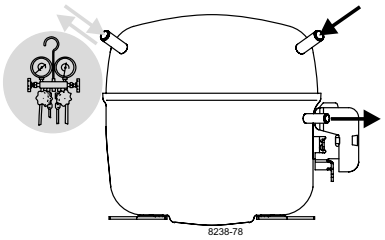
R1234yf, 220 V/50 Hz, CSIR, fan 3m/s

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

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-23.3	-10	**543**	1852	467	**1.20**	4.09	453	2.53	14.58
-20	-4	**635**	2167	546	**1.30**	4.44	488	2.66	17.09
-15	5	**797**	2719	685	**1.47**	5.03	541	2.86	21.54
-10	14	**988**	3373	850	**1.67**	5.68	594	3.07	26.84
-5	23	**1214**	4141	1044	**1.88**	6.41	646	3.28	33.14
0	32	**1476**	5035	1269	**2.11**	7.20	699	3.51	40.56
5	41	**1778**	6067	1529	**2.36**	8.05	754	3.74	49.25
10	50	**2125**	7249	1827	**2.62**	8.96	810	3.98	59.38

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

-23.3	-10	**453**	1545	389	**0.96**	3.29	470	2.60	13.72
-20	-4	**532**	1815	458	**1.04**	3.56	510	2.75	16.17
-15	5	**671**	2289	577	**1.18**	4.02	570	2.98	20.48
-10	14	**836**	2851	719	**1.33**	4.54	628	3.21	25.65
-5	23	**1030**	3513	886	**1.50**	5.12	685	3.45	31.80
0	32	**1257**	4288	1081	**1.69**	5.78	742	3.69	39.10
5	41	**1520**	5186	1307	**1.90**	6.49	800	3.94	47.71
10	50	**1823**	6220	1568	**2.13**	7.26	857	4.19	57.82



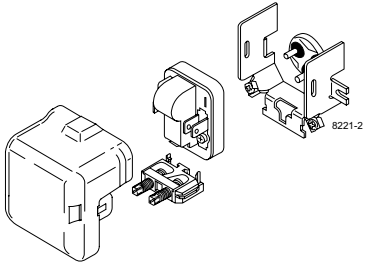
SC Compressors

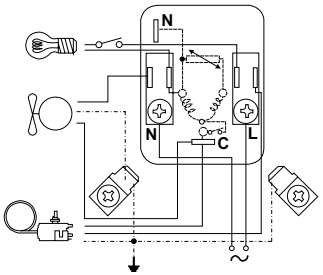
SECOP

Keep electrical equipment clear from oil, chemicals, and water

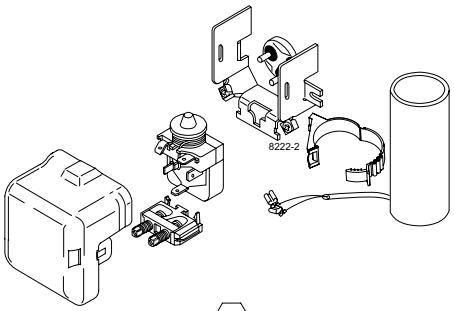
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

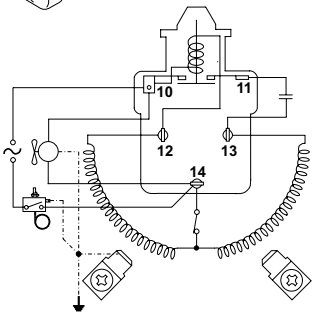
RSIR



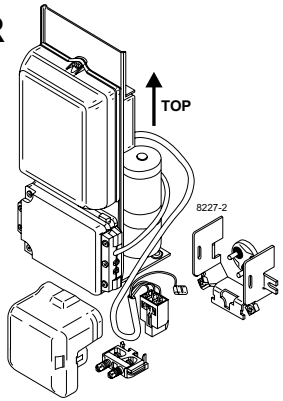


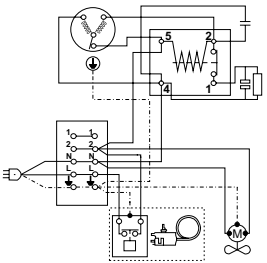
CSIR

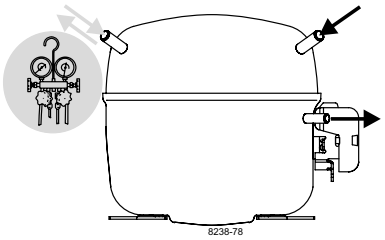




CSCR







SC Compressors

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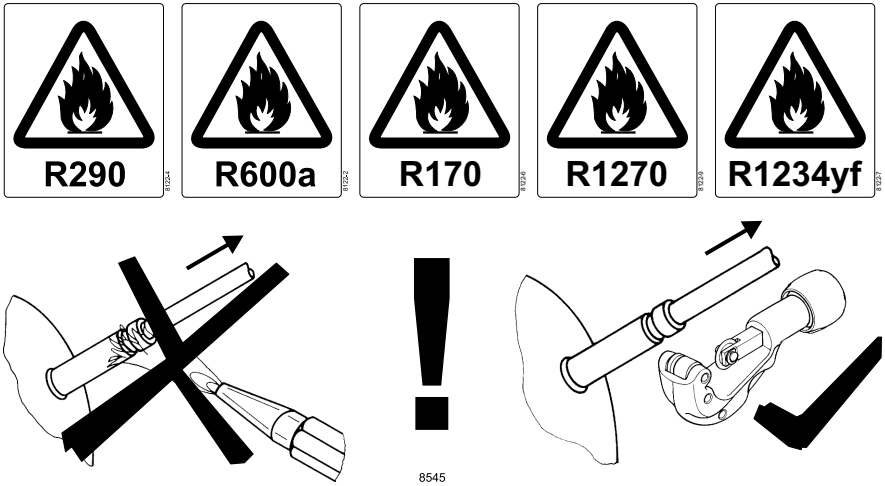
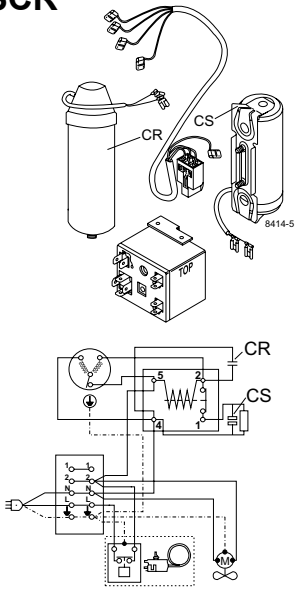
Service/Repair – R290, R600a, R170, R1270, R1234yf

(applies to all flammable refrigerants)



CSCR



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**