

Model

Designation	SC21F	220-240V/50Hz 1~	Sales code:	104G8100
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	22cST	Displacement	20,95cm ³ / 1,28cu.in
Oil quantity	550cm ³ / 18,6fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1460cm ³ / 49,4fl.oz		
Weight	13,7kg / 30,2lbs		
Motor protection	1# internal		
Winding resistance main	3,7Ω (at 25°C)		
Winding resistance aux	14Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC21F

	Conf. 1
Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz
Number of phases	1
Voltage range	198-254V
Approvals	VDE
Starting torque	HST
Note	- / -

Applications with SC21F

	Conf. 1
Refrigerant	R134a
Application	LBP+MBP
System cooling	fan 1,5m/s
Hot gas defrost	OK
Long interval pull down	OK

Electrical data - Configurations with SC21F

	Conf. 1
Starting device type	relay
Run capacitor	-/-
Start capacitor	80μF
LRA (locked rotor amps / 4s)	
RLA (rated load amps / 1s)	-/-A
Cut in current	

Model

Designation

SC21F

220-240V/50Hz 1~

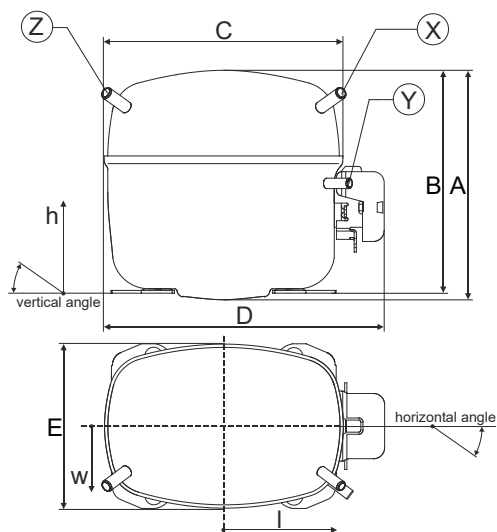
Sales code:

104G8100

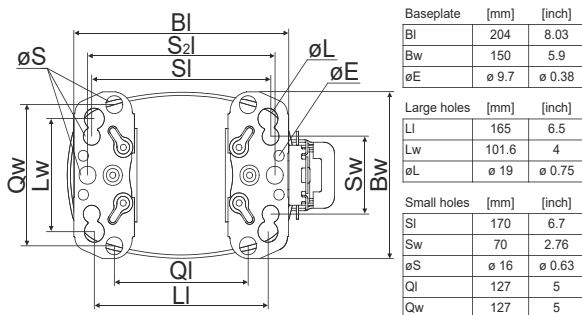
Compressor dimensions

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

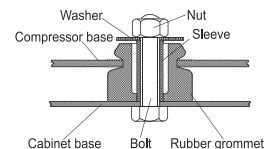
Connectors	Suction	Discharge	Process
	X	Y	Z
Diameter [mm]	øi 10,11-10,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,4-0,41	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/193/55	115/110/63	-107/193/55
[in]	4,2/7,6/2,2	4,5/4,3/2,5	-4,2/7,6/2,2
Straight tube l. [mm]	12	12	12
[in]	0,5	0,5	0,5



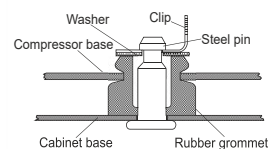
Compressor fixation



Bolt joint



Snap-on



Mounting accessories

	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

Application notes

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

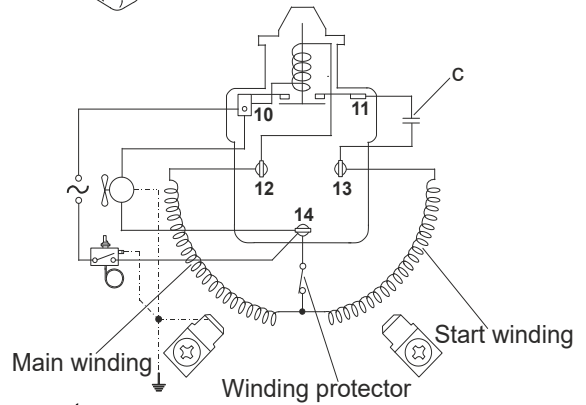
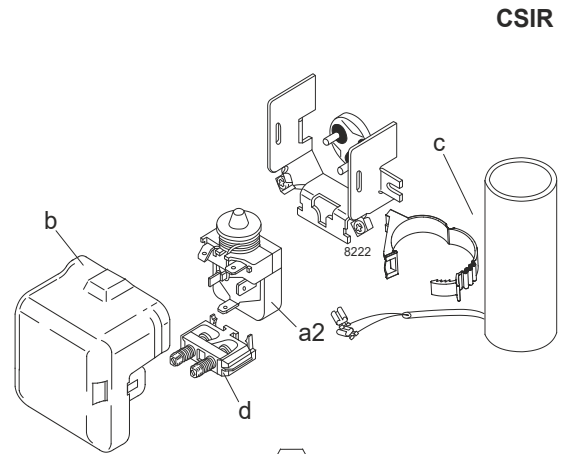
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Configuration

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Application	LBP+MBP
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Starting torque	HST
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Electrical accessories / wiring diagram



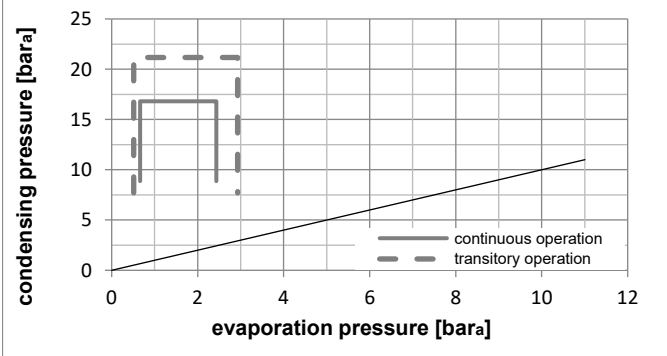
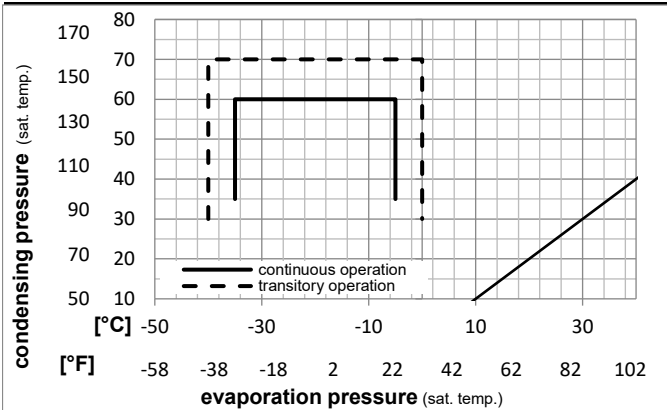
Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 1,5m/s

Operation Limits

Can be used as a HBP compressor with 240V 50Hz mains (216-254V).

Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80µF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2009

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Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 1,5m/s, VDE

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	Ref. mass flow	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
	-23	54	32	32	456,9	1560	393,2	1,14	3,88	0,98	402,5	2,80	8,87	ASHRAE LBP		
	-10	130	90	90												
	-25	55	32	55	335,0	1144	288,3	0,88	2,99	0,75	382,1	2,77	8,01	cecomaf LBP		
	-13	131	90	131												
	-35	40	20	40	244,5	835	210,4	0,82	2,79	0,70	298,9	2,57	5,36	EN12900 LBP		
	-31	104	68	104												
	-23	49	4,4	49	367,2	1254	316,0	0,93	3,16	0,80	396,7	2,76	9,70	ARI540 LBP		
	-10	120	40	120												
	-23	41	32	32	506,1	1728	435,5	1,29	4,42	1,11	391,4	2,74	9,83	AHAM LBP		
	-10	105	90	90												
	-35	45	32	45	219,1	748	188,5	0,76	2,60	0,65	288,1	2,52	4,73	opt		
	-31	113	90	113												

Performance tables

R134a, 220V/50Hz, CSIR, fan 1,5m/s, VDE

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	219,1	748	188,5	0,76	2,60	0,65	288,1	2,52	4,73
cond. pressure	-30	-22	290,3	991	249,8	0,88	3,02	0,76	328,5	2,63	6,27
pc= 45/113	-25	-13	391,0	1335	336,5	1,04	3,55	0,90	375,9	2,71	8,47
return gas temp.	-23	-10	431,9	1475	371,7	1,10	3,75	0,94	393,6	2,75	9,37
RGT= 32/90	-20	-4	521,1	1780	448,5	1,21	4,14	1,04	430,3	2,83	11,32
liquid temp	-15	5	680,9	2325	585,9	1,38	4,73	1,19	492,0	3,03	14,84
Tliq= 45/113	-5	23	1089,0	3719	937,2	1,71	5,83	1,47	637,7	3,89	23,95
[°C / °F]	-35	-31	186,0	635	160,0	0,68	2,33	0,59	272,9	2,50	4,43
cond. pressure	-30	-22	245,8	839	211,5	0,76	2,59	0,65	324,0	2,64	5,86
pc= 55/131	-25	-13	335,0	1144	288,3	0,88	2,99	0,75	382,1	2,77	8,01
return gas temp	-23	-10	372,1	1271	320,2	0,92	3,15	0,79	403,5	2,81	8,91
RGT= 32/90	-20	-4	453,8	1550	390,5	1,01	3,46	0,87	447,4	2,92	10,88
liquid temp	-15	5	602,1	2056	518,2	1,16	3,95	1,00	519,9	3,16	14,49
Tliq= 55/131	-5	23	987,4	3372	849,8	1,44	4,90	1,24	687,7	4,09	24,00