

Single Pack SC12FT 220-240V 50/60Hz CSIR

Single pack code number: **195B4057**

Position	Title	Code	Amount
1	Compressor SC12FT	104G8205	1
2	Starting relay	117U6003	1
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5017	1
4	Cord relief	103N1004	1
5	Cover	103N2009	1
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	SC12FT	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8205
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	22cST	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	550cm ³ / 18,6fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1410cm ³ / 47,7fl.oz		
Weight	12,7kg / 28lbs		
Motor protection	1# internal		
Winding resistance main	6,9Ω (at 25°C)		
Winding resistance aux	11Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC12FT

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	CSIR	RSIR	RSIR
Power supply (nominal)	220-240V/50Hz	208-230V/60Hz	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	198-254V	187-254V	198-254V
Approvals	CCC, VDE	CCC, VDE	CCC, VDE	CCC, VDE
Starting torque	HST	HST	LST	LST
Note	- / -			

Applications with SC12FT

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R134a	R134a
Application	LBP	LBP	LBP	LBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with SC12FT

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	PTC	PTC
Run capacitor	-/ -	-/ -	-/ -	-/ -
Start capacitor	80μF	80μF	-/ -	-/ -
LRA (locked rotor amps / 4s)	23,4A	23,4A		
RLA (rated load amps / 1s)	4,3A	4,3A	-/ -A	-/ -A
Cut in current	23,4A	23,4A		

Model

Designation

SC12FT

220-240V/50Hz 1~ 220-240V/60Hz 1~

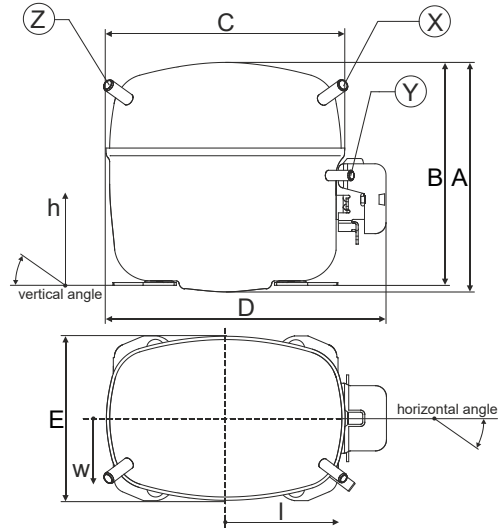
Sales code:

104G8205

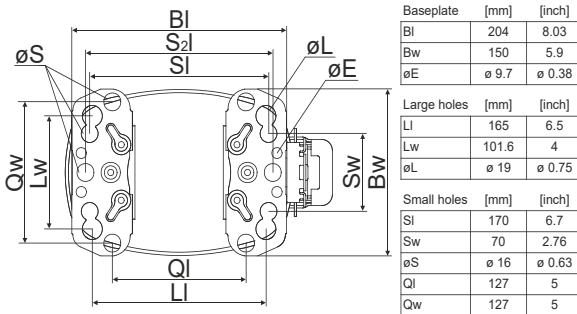
Compressor dimensions

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

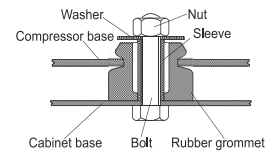
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	37°	37°	143°
Vertical angle ±2°	30°	0°	150°
Position l/h/w [mm]	107/183/55	115/100/63	-107/183/55
[in]	4,2/7,2/2,2	4,5/3,9/2,5	-4,2/7,2/2,2
Straight tube l. [mm]	12	12	12
[in]	0,5	0,5	0,5



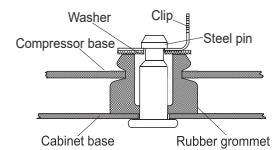
Compressor fixation



Bolt joint



Snap-on



Mounting accessories

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

Model

Designation	SC12FT	220-240V/50Hz	Conf. 1	Sales code:	104G8205
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	187-254V
Starting torque	HST
Approvals	CCC VDE

Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

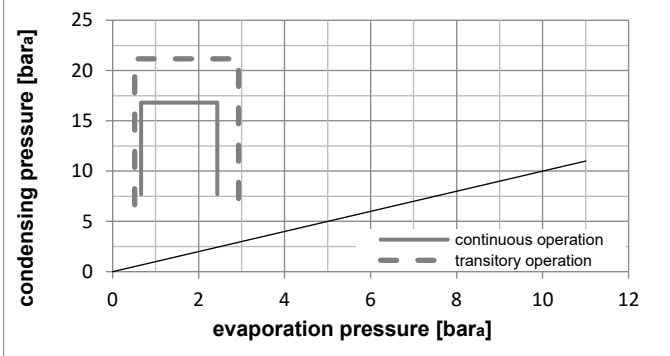
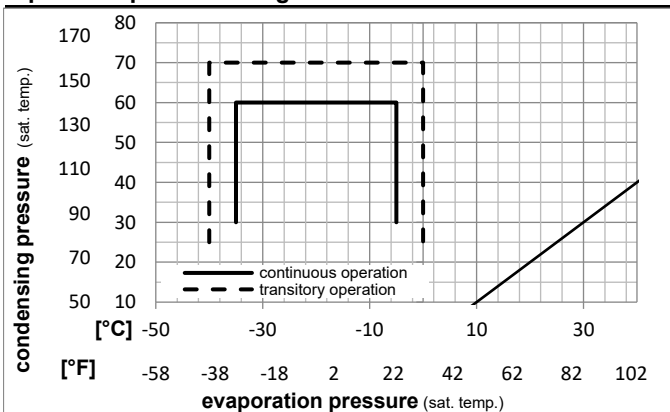
Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

Operation Limits

F1 at 43°C ambient temperature possible at 220V nominal (187-242V)

Operation pressure range



Components

a2	assy. relay	117U6003
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2009

Model

Designation **SC12FT** **220-240V/50Hz** Conf. 1 Sales code: **104G8205**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 1,5m/s, CCC, 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]	-23	54	32	32	320,4	1094	275,8	1,15	3,94	0,99	277,9	2,08	6,22	ASHRAE LBP		
[°F]	-10	130	90	90												
[°C]	-25	55	32	55	233,0	796	200,5	0,88	3,00	0,76	265,0	2,04	5,57	cecomaf LBP		
[°F]	-13	131	90	131												
[°C]	-35	40	20	40	155,2	530	133,6	0,79	2,68	0,68	197,6	1,87	3,41	EN12900 LBP		
[°F]	-31	104	68	104												
[°C]	-23	49	4,4	49	266,9	911	229,7	0,96	3,29	0,83	277,2	2,08	7,05	ARI540 LBP		
[°F]	-10	120	40	120												
[°C]	-23	41	32	32	362,5	1238	312,0	1,35	4,60	1,16	268,9	2,07	7,04	AHAM LBP		
[°F]	-10	105	90	90												
[°C]	-35	45	32	45	142,4	486	122,6	0,73	2,48	0,62	196,4	1,86	3,07	opt		
[°F]	-31	113	90	113												

Performance tables

R134a, 220V/50Hz, CSIR, fan 1,5m/s, CCC, 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	142,4	486	122,6	0,73	2,48	0,62	196,4	1,86	3,07
cond. pressure	-30	-22	205,6	702	176,9	0,89	3,05	0,77	230,5	1,95	4,44
pc= 45/113	-25	-13	283,3	968	243,8	1,08	3,67	0,93	263,3	2,04	6,14
return gas temp.	-23	-10	313,5	1071	269,8	1,14	3,90	0,98	274,4	2,08	6,80
RGT= 32/90	-20	-4	378,1	1291	325,4	1,28	4,36	1,10	296,2	2,15	8,21
liquid temp	-15	5	492,1	1681	423,5	1,49	5,09	1,28	330,3	2,27	10,73
Tliq= 45/113	-5	23	787,4	2689	677,7	1,93	6,60	1,66	407,4	2,55	17,32
[°C / °F]	-35	-31	102,5	350	88,3	0,56	1,91	0,48	183,7	1,84	2,44
cond. pressure	-30	-22	163,4	558	140,6	0,72	2,47	0,62	225,6	1,93	3,90
pc= 55/131	-25	-13	233,0	796	200,5	0,88	3,00	0,76	265,0	2,04	5,57
return gas temp	-23	-10	259,0	885	222,9	0,93	3,18	0,80	278,0	2,08	6,20
RGT= 32/90	-20	-4	313,6	1071	269,9	1,03	3,53	0,89	303,0	2,17	7,52
liquid temp	-15	5	407,6	1392	350,8	1,20	4,08	1,03	341,1	2,30	9,81
Tliq= 55/131	-5	23	644,9	2203	555,0	1,53	5,22	1,32	422,0	2,61	15,68

Model

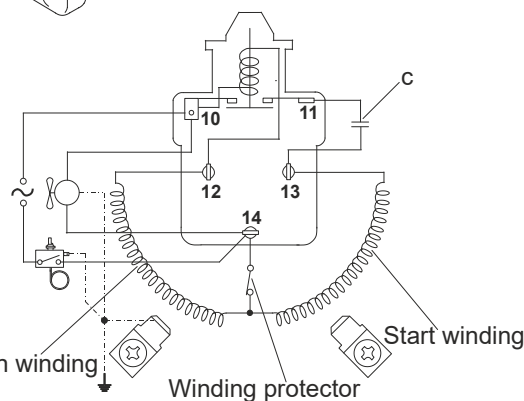
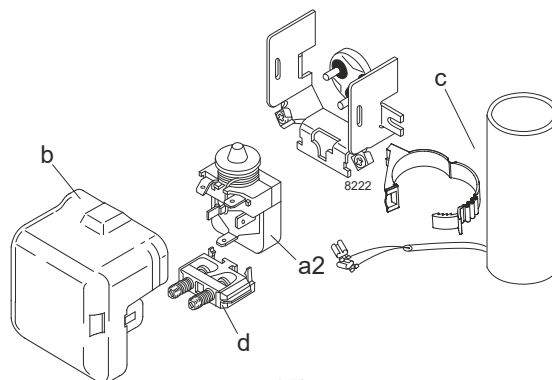
Designation	SC12FT	208-230V/60Hz	Conf. 2	Sales code:	104G8205
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC VDE

Electrical accessories / wiring diagram

CSIR



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

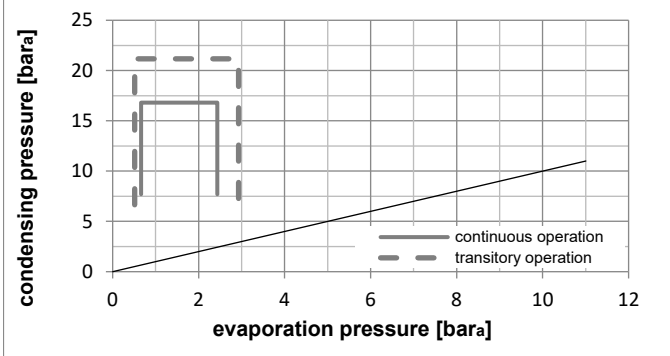
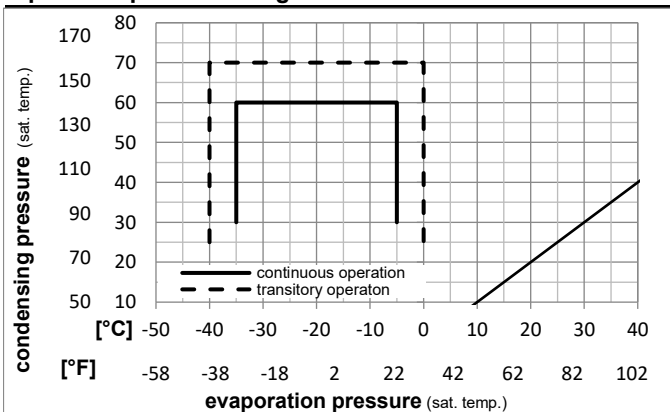
Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

Operation Limits

F1 at 43°C ambient temperature possible at 220V nominal (187-242V)

Operation pressure range



Components

a2	assy. relay	117U6003
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2009

Model

Designation **SC12FT** **208-230V/60Hz** Conf. 2 Sales code: **104G8205**

Optimization + standard conditions

R134a, 220V/60Hz, CSIR, fan 1,5m/s, CCC, VDE

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				l	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	373,8	1277	321,7	1,18	4,04	1,02	315,9	1,98	7,26	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	272,0	929	234,1	0,91	3,12	0,79	298,0	1,92	6,50	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	192,1	656	165,3	0,88	3,02	0,76	217,5	1,66	4,21	EN12900 LBP
	-31	104	68	104										
	-23	49	4,4	49	313,8	1072	270,1	0,99	3,37	0,85	317,6	1,98	8,29	ARI540 LBP
	-10	120	40	120										
	-23	41	32	32	437,8	1495	376,8	1,38	4,70	1,18	318,2	1,97	8,50	AHAM LBP
	-10	105	90	90										
	-35	45	32	45	172,6	589	148,5	0,82	2,81	0,71	210,1	1,64	3,72	opt
	-31	113	90	113										

Performance tables

R134a, 220V/60Hz, CSIR, fan 1,5m/s, CCC, VDE

	pe		Cooling capacity			COP	EER	P1	l	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-35	-31	172,6	589	148,5	0,82	2,81	0,71	210,1	1,64	3,72
cond. pressure	-30	-22	246,3	841	212,0	0,96	3,28	0,83	256,2	1,78	5,32
pc= 45/113	-25	-13	337,4	1152	290,4	1,11	3,81	0,96	302,7	1,93	7,31
return gas temp.	-23	-10	372,8	1273	320,8	1,17	4,00	1,01	318,5	1,98	8,08
RGT= 32/90	-20	-4	448,5	1532	386,0	1,28	4,39	1,11	349,3	2,08	9,74
liquid temp	-15	5	582,4	1989	501,2	1,47	5,02	1,27	395,8	2,25	12,69
Tliq= 45/113	-5	23	929,0	3173	799,5	1,90	6,51	1,64	487,7	2,61	20,43
[°C / °F]	-35	-31	124,5	425	107,2	0,64	2,20	0,55	193,3	1,58	2,96
cond. pressure	-30	-22	192,4	657	165,6	0,78	2,68	0,68	245,3	1,75	4,59
pc= 55/131	-25	-13	272,0	929	234,1	0,91	3,12	0,79	298,0	1,92	6,50
return gas temp	-23	-10	302,2	1032	260,1	0,96	3,27	0,82	316,0	1,98	7,23
RGT= 32/90	-20	-4	366,0	1250	315,0	1,04	3,56	0,90	351,2	2,10	8,78
liquid temp	-15	5	477,0	1629	410,5	1,18	4,03	1,01	404,6	2,30	11,48
Tliq= 55/131	-5	23	761,2	2599	655,1	1,49	5,08	1,28	511,3	2,71	18,50

Model

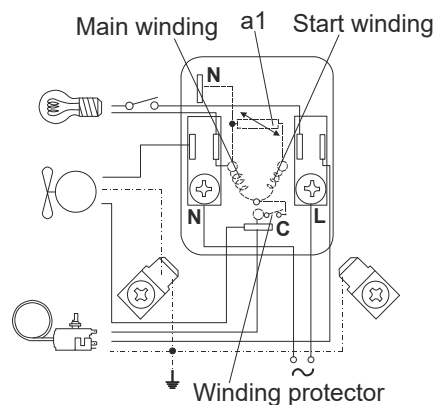
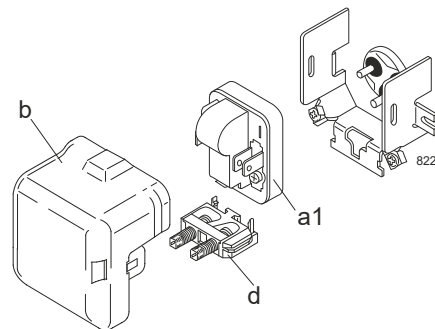
Designation	SC12FT	220-240V/50Hz	Conf. 3	Sales code:	104G8205
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	187-254V
Starting torque	LST
Approvals	CCC VDE

Electrical accessories / wiring diagram

RSIR



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

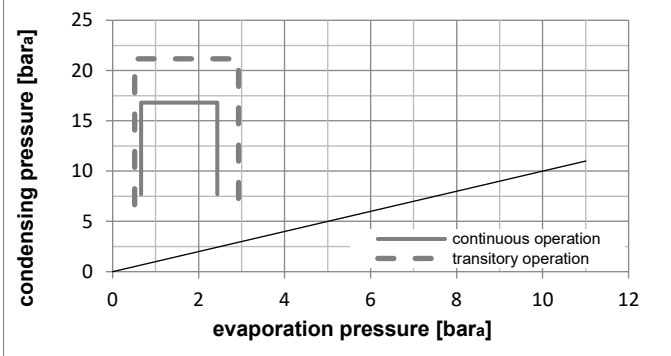
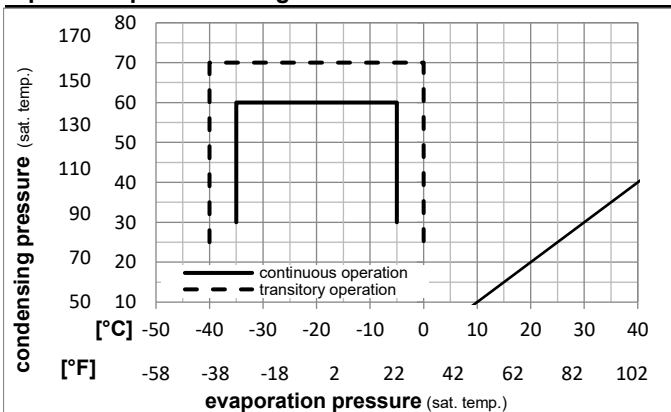
Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

Operation Limits

F1 at 43°C ambient temperature possible at 220V nominal (187-242V)

Operation pressure range



Components

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

Model

Designation	SC12FT	220-240V/50Hz	Conf. 3	Sales code:	104G8205
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Optimization + standard conditions

R134a, 220V/50Hz, RSIR, fan 1,5m/s, CCC, 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	m	
[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]				
-23	54	32	32	320,4	1094	275,8	1,15	3,94	0,99	277,9	2,08	6,22	ASHRAE LBP			
[°F]	-10	130	90													
-25	55	32	55	233,0	796	200,5	0,88	3,00	0,76	265,0	2,04	5,57	cecomaf LBP			
[°F]	-13	131	90													
-35	40	20	40	155,2	530	133,6	0,79	2,68	0,68	197,6	1,87	3,41	EN12900 LBP			
[°F]	-31	104	68													
-23	49	4,4	49	266,9	911	229,7	0,96	3,29	0,83	277,2	2,08	7,05	ARI540 LBP			
[°F]	-10	120	40													
-23	41	32	32	362,5	1238	312,0	1,35	4,60	1,16	268,9	2,07	7,04	AHAM LBP			
[°F]	-10	105	90													
-35	45	32	45	142,4	486	122,6	0,73	2,48	0,62	196,4	1,86	3,07	opt			
[°F]	-31	113	90													

Performance tables

R134a, 220V/50Hz, RSIR, fan 1,5m/s, CCC, 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	142,4	486	122,6	0,73	2,48	0,62	196,4	1,86	3,07
cond. pressure	-30	-22	205,6	702	176,9	0,89	3,05	0,77	230,5	1,95	4,44
pc= 45/113	-25	-13	283,3	968	243,8	1,08	3,67	0,93	263,3	2,04	6,14
return gas temp.	-23	-10	313,5	1071	269,8	1,14	3,90	0,98	274,4	2,08	6,80
RGT= 32/90	-20	-4	378,1	1291	325,4	1,28	4,36	1,10	296,2	2,15	8,21
liquid temp	-15	5	492,1	1681	423,5	1,49	5,09	1,28	330,3	2,27	10,73
Tliq= 45/113	-5	23	787,4	2689	677,7	1,93	6,60	1,66	407,4	2,55	17,32
[°C / °F]	-35	-31	102,5	350	88,3	0,56	1,91	0,48	183,7	1,84	2,44
cond. pressure	-30	-22	163,4	558	140,6	0,72	2,47	0,62	225,6	1,93	3,90
pc= 55/131	-25	-13	233,0	796	200,5	0,88	3,00	0,76	265,0	2,04	5,57
return gas temp	-23	-10	259,0	885	222,9	0,93	3,18	0,80	278,0	2,08	6,20
RGT= 32/90	-20	-4	313,6	1071	269,9	1,03	3,53	0,89	303,0	2,17	7,52
liquid temp	-15	5	407,6	1392	350,8	1,20	4,08	1,03	341,1	2,30	9,81
Tliq= 55/131	-5	23	644,9	2203	555,0	1,53	5,22	1,32	422,0	2,61	15,68

Model

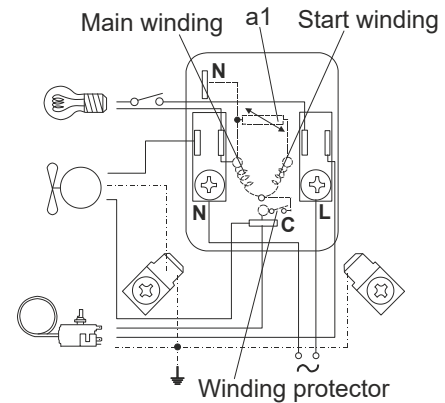
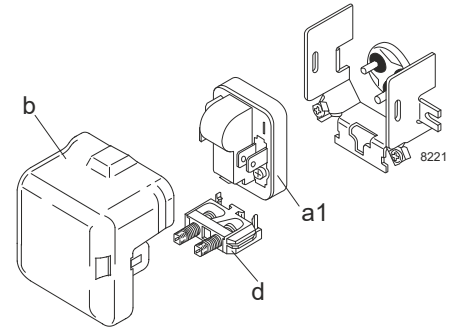
Designation	SC12FT	208-230V/60Hz	Conf. 4	Sales code:	104G8205
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	LST
Approvals	CCC VDE

Electrical accessories / wiring diagram

RSIR



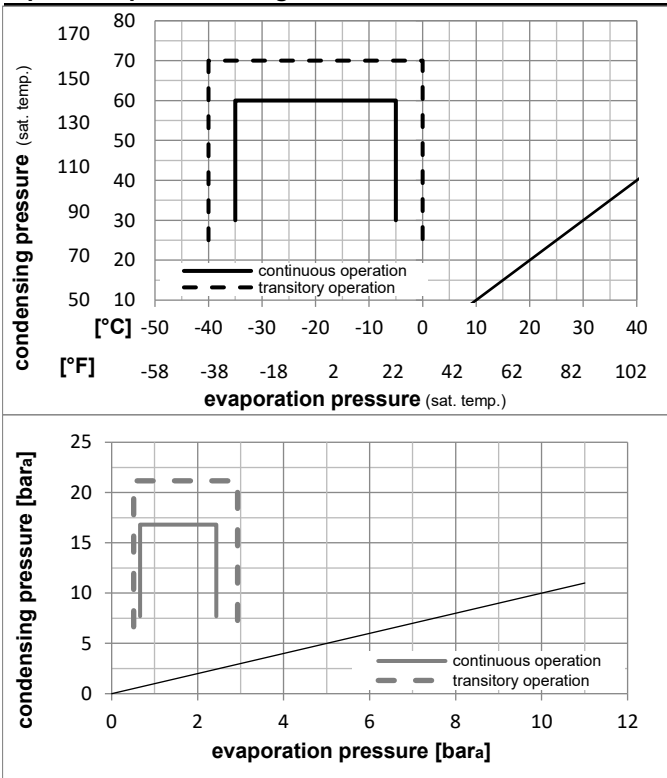
Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 1,5m/s

Operation Limits

F1 at 43°C ambient temperature possible at 220V nominal (187-242V)

Operation pressure range



Components

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

Model

Designation **SC12FT** **208-230V/60Hz** Conf. 4 Sales code: **104G8205**

Optimization + standard conditions

R134a, 220V/60Hz, RSIR, fan 1,5m/s, CCC, VDE

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				l	Current consumption	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	373,8	1277	321,7	1,18	4,04	1,02	315,9	1,98	7,26	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	272,0	929	234,1	0,91	3,12	0,79	298,0	1,92	6,50	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	192,1	656	165,3	0,88	3,02	0,76	217,5	1,66	4,21	EN12900 LBP
	-31	104	68	104										
	-23	49	4,4	49	313,8	1072	270,1	0,99	3,37	0,85	317,6	1,98	8,29	ARI540 LBP
	-10	120	40	120										
	-23	41	32	32	437,8	1495	376,8	1,38	4,70	1,18	318,2	1,97	8,50	AHAM LBP
	-10	105	90	90										
	-35	45	32	45	172,6	589	148,5	0,82	2,81	0,71	210,1	1,64	3,72	opt
	-31	113	90	113										

Performance tables

R134a, 220V/60Hz, RSIR, fan 1,5m/s, CCC, VDE

	pe		Cooling capacity			COP	EER	P1	l	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-35	-31	172,6	589	148,5	0,82	2,81	0,71	210,1	1,64	3,72
cond. pressure	-30	-22	246,3	841	212,0	0,96	3,28	0,83	256,2	1,78	5,32
pc= 45/113	-25	-13	337,4	1152	290,4	1,11	3,81	0,96	302,7	1,93	7,31
return gas temp.	-23	-10	372,8	1273	320,8	1,17	4,00	1,01	318,5	1,98	8,08
RGT= 32/90	-20	-4	448,5	1532	386,0	1,28	4,39	1,11	349,3	2,08	9,74
liquid temp	-15	5	582,4	1989	501,2	1,47	5,02	1,27	395,8	2,25	12,69
Tliq= 45/113	-5	23	929,0	3173	799,5	1,90	6,51	1,64	487,7	2,61	20,43
[°C / °F]	-35	-31	124,5	425	107,2	0,64	2,20	0,55	193,3	1,58	2,96
cond. pressure	-30	-22	192,4	657	165,6	0,78	2,68	0,68	245,3	1,75	4,59
pc= 55/131	-25	-13	272,0	929	234,1	0,91	3,12	0,79	298,0	1,92	6,50
return gas temp	-23	-10	302,2	1032	260,1	0,96	3,27	0,82	316,0	1,98	7,23
RGT= 32/90	-20	-4	366,0	1250	315,0	1,04	3,56	0,90	351,2	2,10	8,78
liquid temp	-15	5	477,0	1629	410,5	1,18	4,03	1,01	404,6	2,30	11,48
Tliq= 55/131	-5	23	761,2	2599	655,1	1,49	5,08	1,28	511,3	2,71	18,50



SC Compressors





SC Compressors

Service/Repair – R290



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