

Model

Designation	SC12G	115V/60Hz 1~	Sales code:	104G7250
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	22cST	Displacement	12,87cm ³ / 0,79cu.in
Oil quantity	500cm ³ / 16,9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1460cm ³ / 49,4fl.oz		
Weight	13,1kg / 28,9lbs		
Motor protection	1# internal		
Winding resistance main	0,98Ω (at 25°C)		
Winding resistance aux	4,18Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC12G

	Conf. 1	Conf. 2
Motorconfiguration	CSIR	CSIR
Power supply (nominal)	115V/60Hz	115V/60Hz
Number of phases	1	1
Voltage range	103-127V	103-127V
Approvals	UL	UL
Starting torque	HST	HST
Note	- / -	

Applications with SC12G

	Conf. 1	Conf. 2
Refrigerant	R134a	R513A
Application	LBP+MBP+HBP	LBP+MBP+HBP
System cooling	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	OK	OK
Long interval pull down	OK	OK

Electrical data - Configurations with SC12G

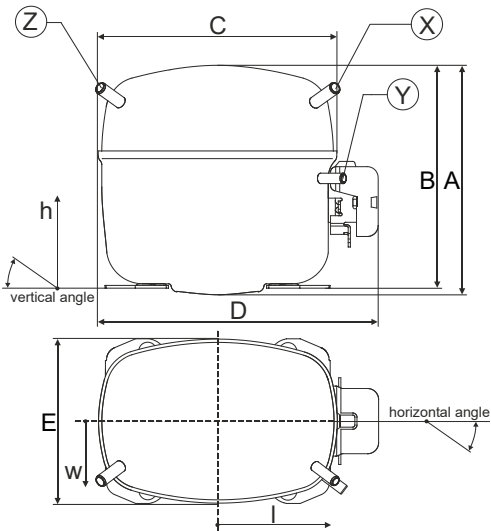
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	240μF	240μF
LRA (locked rotor amps / 4s)	23,4A	23,4A
RLA (rated load amps / 1s)	4,3A	4,3A
Cut in current	23,4A	23,4A

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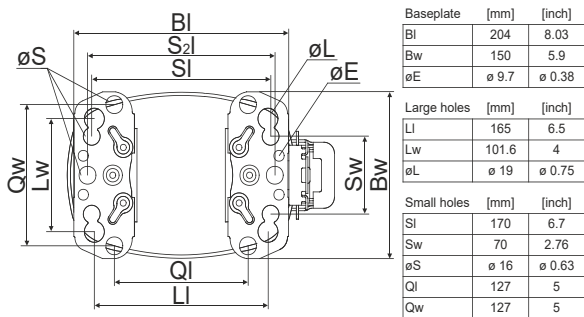
Compressor dimensions

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 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,25-0,26	øi 0,25-0,26
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

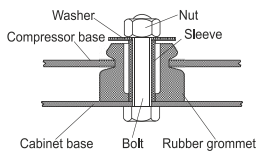


Mounting accessories	one comp.	multi pack
Bolt joint M6 ø16mm	118-1917	118-1918
Bolt joint ø1/4" ø16mm	118-1946	
Bolt joint ø1/4" ø19mm	118-1949	
Snap-on ø7,3 ø16mm	118-1947	118-1919

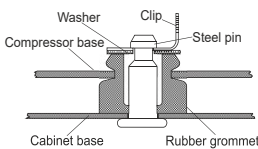
Application notes

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

Bolt joint



Snap-on



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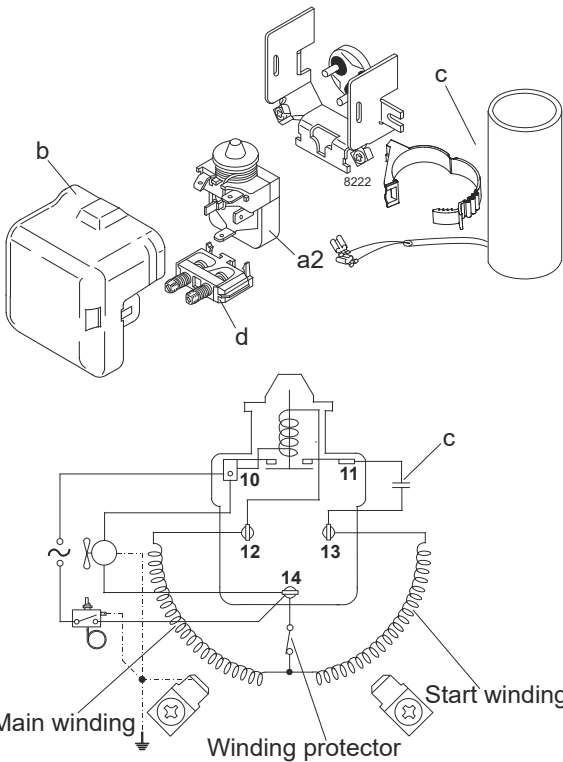
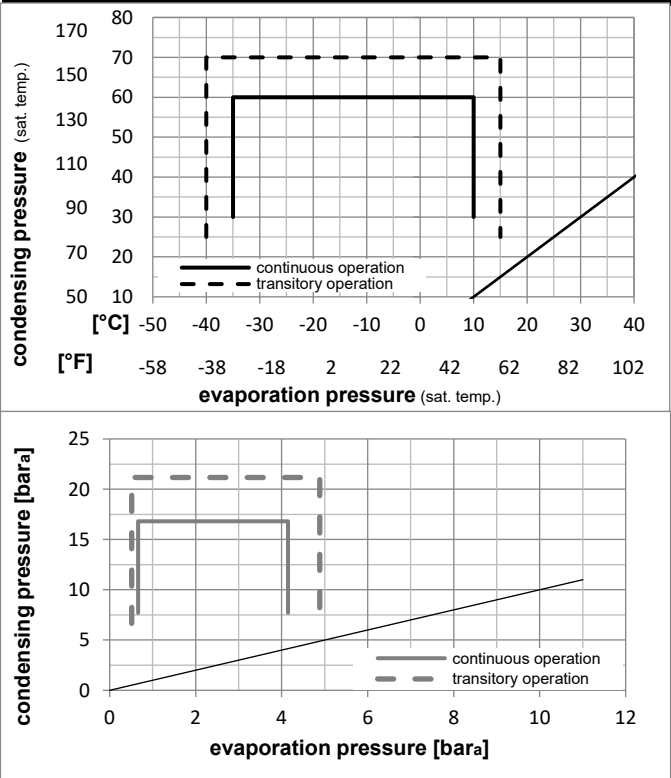
Configuration		Electrical accessories / wiring diagram		
Motorconfiguration	CSIR	CSIR		
Power supply (nominal)	115V/60Hz 1~			
Refrigerant	R134a			
Application	LBP+MBP+HBP			
Voltage range	103-127V			
Starting torque	HST			
Approvals	UL			

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

Operation pressure range



Components		
a2	relay	117U6020
c	start capacitor (240μF)	117U5023
d	cord relief	103N1004
b	plastic cover	103N2008

Model										
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Optimization + standard conditions

R134a, 115V/60Hz, CSIR, fan 1,5m/s, UL

Evaporating pressure (saturation temperature)														
Condensing pressure (saturation temperature)											Power consumption			ASHRAE LBP
Return gas temp.					Cooling capacity					Current consumption				
Liquid temp.										P1	I	Ref. mass flow		
													Ref. mass flow	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	COP	EER					
	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	294,8	1007	253,7	0,99	3,38	0,85	297,9	5,06	5,72	ASHRAE LBP
	[°F]	-10	130	90										
	-7	54	35	46	746,4	2549	642,3	1,56	5,33	1,34	478,3	6,05	16,28	ASHRAE MBP
	[°F]	20	130	95										
	7,2	54	35	46	1403,9	4795	1208,2	2,24	7,64	1,93	627,5	7,18	31,15	ASHRAE HBP
	[°F]	45	130	95										
	-35	40	20	40	131,1	448	112,8	0,64	2,20	0,55	203,8	4,92	2,88	EN12900 LBP
	[°F]	-31	104	68										
	-10	45	20	45	669,4	2286	576,1	1,59	5,44	1,37	420,3	5,71	15,67	EN12900 MBP
	[°F]	14	113	68										
	5	50	20	50	1204,3	4113	1036,4	2,09	7,13	1,80	576,7	6,85	30,35	EN12900 HBP
	[°F]	41	122	68										

Performance tables

R134a, 115V/60Hz, CSIR, fan 1,5m/s, UL

	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	118,0	403	101,6	0,61	2,08	0,52	193,5	4,81	2,55
cond. pressure	-23	-10	326,0	1113	280,6	1,06	3,64	0,92	306,3	5,12	7,07
pc= 45/113	-15	5	536,1	1831	461,4	1,42	4,84	1,22	378,3	5,46	11,69
return gas temp.	-9	15	713,7	2438	614,3	1,68	5,74	1,45	425,0	5,75	15,63
RGT= 32/90	0	32	1099,8	3756	946,5	2,17	7,42	1,87	505,9	6,34	24,32
liquid temp	4,4	40	1323,7	4521	1139,2	2,42	8,28	2,09	546,2	6,66	29,45
Tliq= 45/113	10	50	1646,5	5623	1417,0	2,74	9,37	2,36	600,1	7,11	36,95
[°C / °F]	-35	-31	42,6	146	36,7	0,28	0,97	0,24	149,8	4,61	1,01
cond. pressure	-23	-10	233,9	799	201,3	0,79	2,69	0,68	296,8	5,06	5,60
pc= 55/131	-15	5	421,7	1440	362,9	1,08	3,69	0,93	390,6	5,51	10,15
return gas temp	-9	15	579,7	1980	498,9	1,29	4,40	1,11	450,4	5,86	14,02
RGT= 32/90	0	32	923,6	3154	794,9	1,68	5,72	1,44	551,3	6,57	22,59
liquid temp	4,4	40	1123,9	3838	967,2	1,87	6,40	1,61	600,0	6,95	27,67
Tliq= 55/131	10	50	1413,6	4828	1216,6	2,13	7,28	1,83	663,4	7,47	35,14

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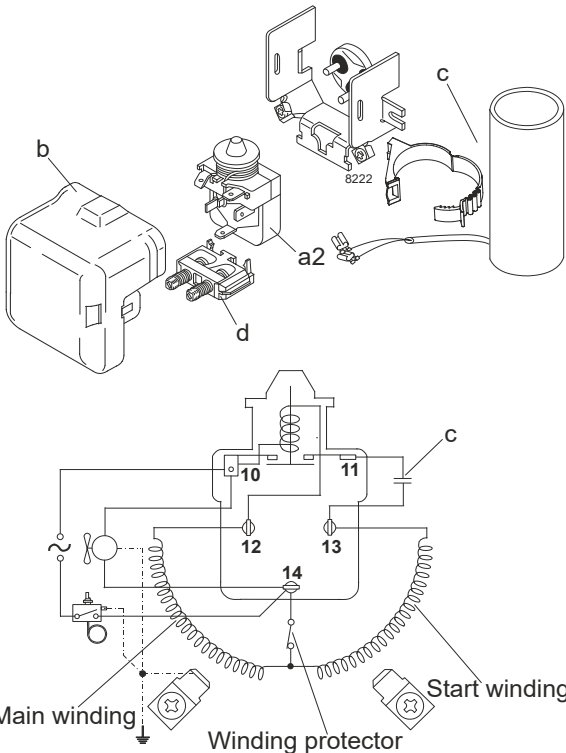
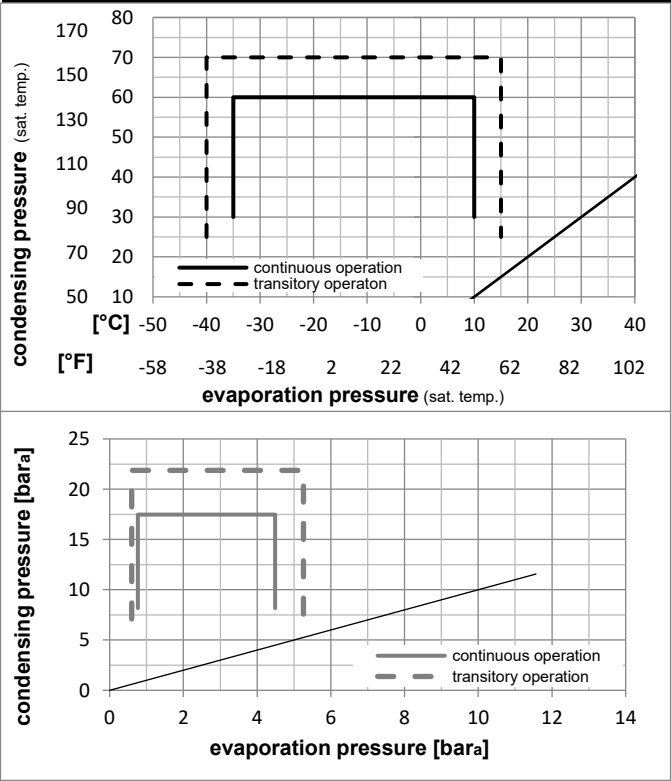
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Motorconfiguration	CSIR	CSIR		
Power supply (nominal)	115V/60Hz 1~			
Refrigerant	R513A			
Application	LBP+MBP+HBP			
Voltage range	103-127V			
Starting torque	HST			
Approvals	UL			

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 3m/s

Operation Limits

Operation pressure range



Components		
a2	relay	117U6020
c	start capacitor (240μF)	117U5023
d	cord relief	103N1004
b	plastic cover	103N2008

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Optimization + standard conditions

R513A, 115V/60Hz, CSIR, fan 3m/s, UL

ASHRAE LBP														
ASHRAE MBP														
ASHRAE HBP														
EN12900 LBP														
EN12900 MBP														
EN12900 HBP														

Performance tables

R513A, 115V/60Hz, CSIR, fan 3m/s, UL

	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	136,0	465	117,1	0,67	2,27	0,57	204,5	3,55	3,30
cond. pressure	-23	-10	333,3	1138	286,8	1,09	3,74	0,94	304,4	4,21	8,13
pc= 45/113	-15	5	541,5	1849	466,0	1,43	4,90	1,23	377,7	4,69	13,27
return gas temp.	-9	15	718,5	2454	618,3	1,68	5,74	1,45	427,3	5,02	17,67
RGT= 32/90	0	32	1100,8	3760	947,4	2,15	7,33	1,85	512,7	5,58	27,30
liquid temp	4,4	40	1320,5	4510	1136,4	2,39	8,15	2,05	553,2	5,85	32,91
Tliq= 45/113	10	50	1634,7	5583	1406,8	2,71	9,24	2,33	604,0	6,18	41,04
[°C / °F]	-35	-31	86,2	294	74,2	0,44	1,52	0,38	193,9	3,48	2,35
cond. pressure	-23	-10	249,6	853	214,8	0,81	2,78	0,70	307,1	4,22	6,84
pc= 55/131	-15	5	426,8	1458	367,3	1,09	3,72	0,94	391,5	4,78	11,76
return gas temp	-9	15	579,8	1980	499,0	1,29	4,41	1,11	449,2	5,16	16,04
RGT= 32/90	0	32	915,6	3127	788,0	1,67	5,69	1,43	549,6	5,82	25,57
liquid temp	4,4	40	1110,8	3794	956,0	1,86	6,35	1,60	597,8	6,14	31,19
Tliq= 55/131	10	50	1392,1	4754	1198,0	2,11	7,22	1,82	658,7	6,54	39,41