

Model

Designation	SC18G	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	104G8820
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	22cSt	Displacement	17,69cm ³ / 1,08cu.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	13,6kg / 30lbs		
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 SC18G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/60Hz	220-240V/50Hz	220-240V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	198-254V	187-254V	198-254V
Approvals	VDE, UL, CCC, EAC, KC	VDE, UL, CCC, EAC, KC	VDE, UL, CCC	VDE, UL, CCC
Starting torque	HST	HST	HST	HST
Note	- / -			

Applications with SC18G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R513A	R513A
Application	LBP+MBP+HBP	LBP	LBP+MBP+HBP	LBP
System cooling	fan 3m/s	fan 3m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with SC18G

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	relay	relay	relay
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	20,43A	19A	20,43A	19A
RLA (rated load amps / 1s/ U(N))	3,9A	3,5A	3,9A	3,5A
Cut in current (U(N))	20,43A	19A	20,43A	19A

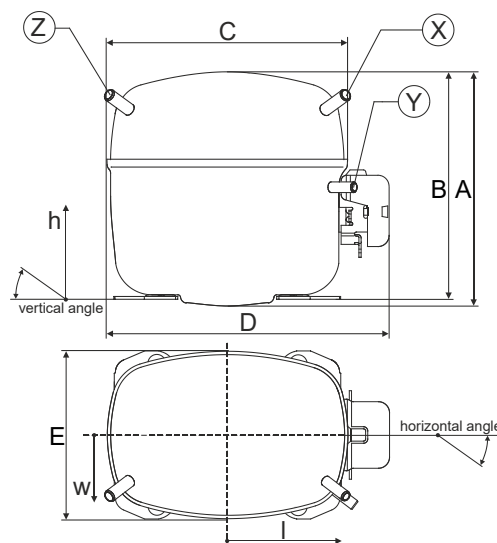
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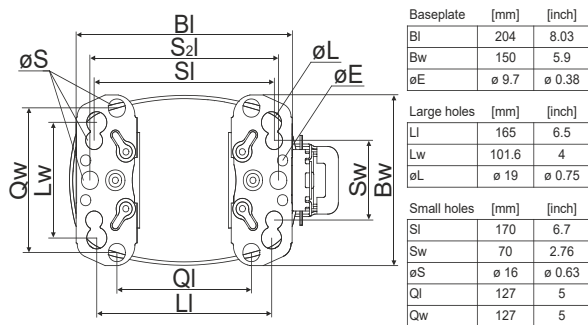
Compressor dimensions

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

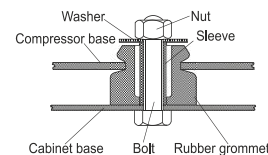
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 10,11-10,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,4-0,41	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle	±2° 37°	37°	143°
Vertical angle	±2° 30°	0°	150°
Position l/h/w [mm]	107/193/55	115/110/63	-107/193/55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



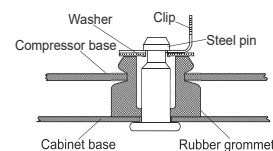
Compressor fixation



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

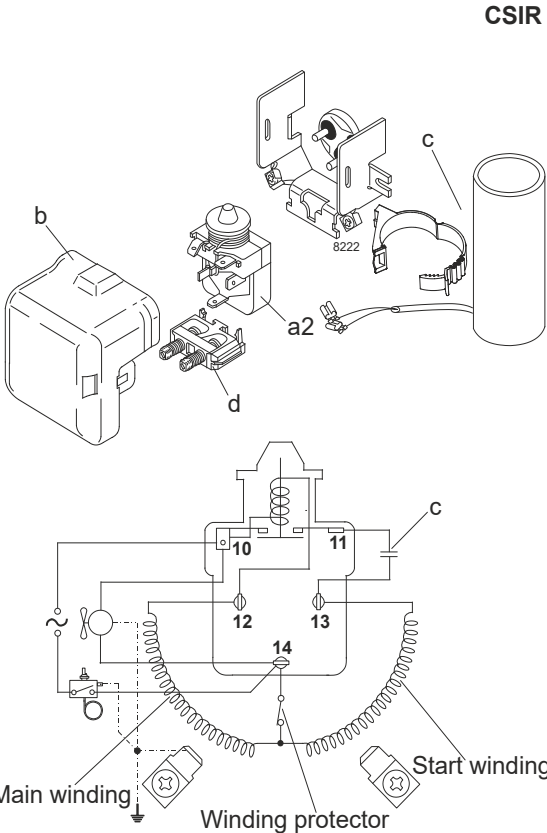
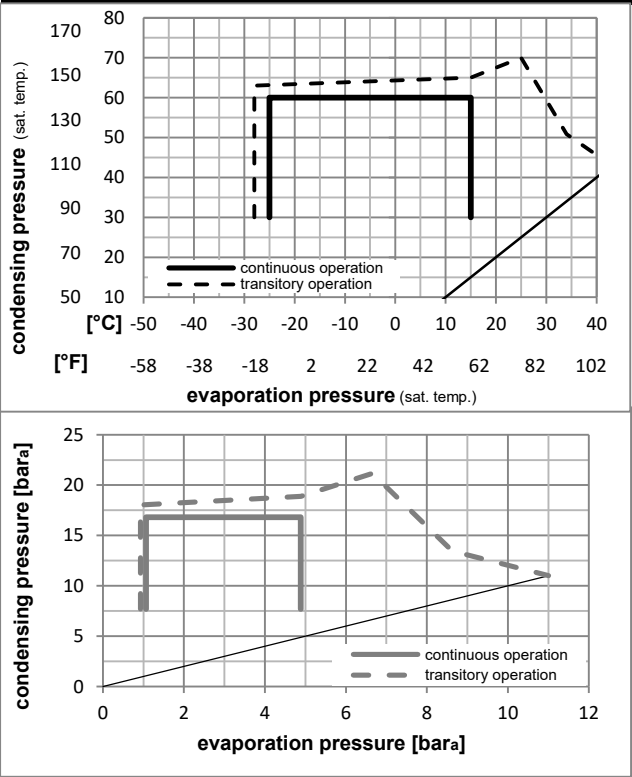
Model					
Designation	SC18G	220-240V/50Hz	Conf. 1	Sales code:	104G8820

Configuration	Electrical accessories / wiring diagram				
Motor configuration	CSIR				
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R134a				
Application	LBP+MBP+HBP				
Voltage range	187-254V				
Starting torque	HST				
Approvals	VDE				
	UL				
	CCC				
	EAC				
	KC				

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 pressure range



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

Model

Designation **SC18G** **220-240V/50Hz** Conf. 1 Sales code: **104G8820**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC, EAC, KC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption			
Return gas temp.					Liquid temp.						Current consumption			
Cooling capacity					COP		EER		P1		I		Ref. mass flow	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	-23	54	32	32	396,4	1354	341,2	1,13	3,87	0,97	350,1	2,61	7,70	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	894,7	3055	770,0	1,58	5,41	1,36	565,2	3,17	19,52	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	1613,1	5509	1388,3	2,21	7,55	1,90	729,8	3,82	35,79	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	146,0	499	125,7	0,67	2,30	0,58	217,1	2,26	3,20	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	763,6	2608	657,2	1,54	5,27	1,33	495,2	2,91	17,87	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	1359,1	4642	1169,7	2,03	6,92	1,74	670,4	3,58	34,25	EN12900 HBP
[°F]	41	122	68	122										

Performance tables

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC, EAC, KC

	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]	-25	-13	332,6	1136	286,2	1,00	3,42	0,86	332,4	2,51	7,21
cond. pressure	-20	-4	462,8	1581	398,3	1,18	4,04	1,02	390,9	2,64	10,05
pc= 45/113	-10	14	792,2	2706	681,8	1,60	5,46	1,38	495,2	2,91	17,34
return gas temp.	-5	23	997,8	3408	858,7	1,84	6,27	1,58	543,4	3,07	21,94
RGT= 32/90	0	32	1235,0	4218	1062,8	2,09	7,14	1,80	590,3	3,25	27,31
liquid temp	5	41	1506,8	5146	1296,8	2,36	8,08	2,03	637,3	3,46	33,55
Tliq= 45/113	15	59	2167,5	7402	1865,3	2,95	10,06	2,54	735,6	4,00	49,09
[°C / °F]	-25	-13	285,6	975	245,8	0,88	2,99	0,75	325,8	2,56	6,83
cond. pressure	-20	-4	398,5	1361	343,0	1,00	3,43	0,86	397,0	2,72	9,56
pc= 55/131	-10	14	689,1	2353	593,1	1,31	4,47	1,13	526,8	3,05	16,66
return gas temp	-5	23	873,2	2982	751,5	1,49	5,07	1,28	587,8	3,24	21,23
RGT= 32/90	0	32	1087,4	3714	935,8	1,68	5,73	1,44	647,7	3,46	26,60
liquid temp	5	41	1334,8	4559	1148,8	1,89	6,44	1,62	707,6	3,71	32,89
Tliq= 55/131	15	59	1942,4	6634	1671,7	2,33	7,97	2,01	832,0	4,34	48,79

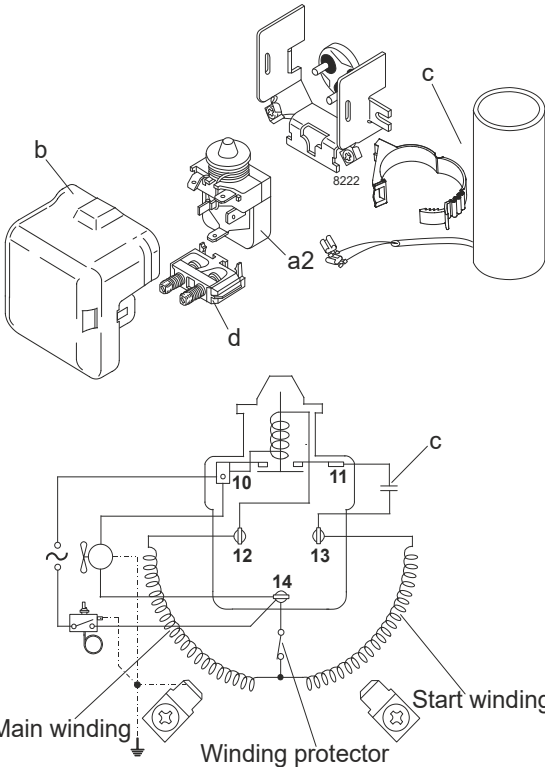
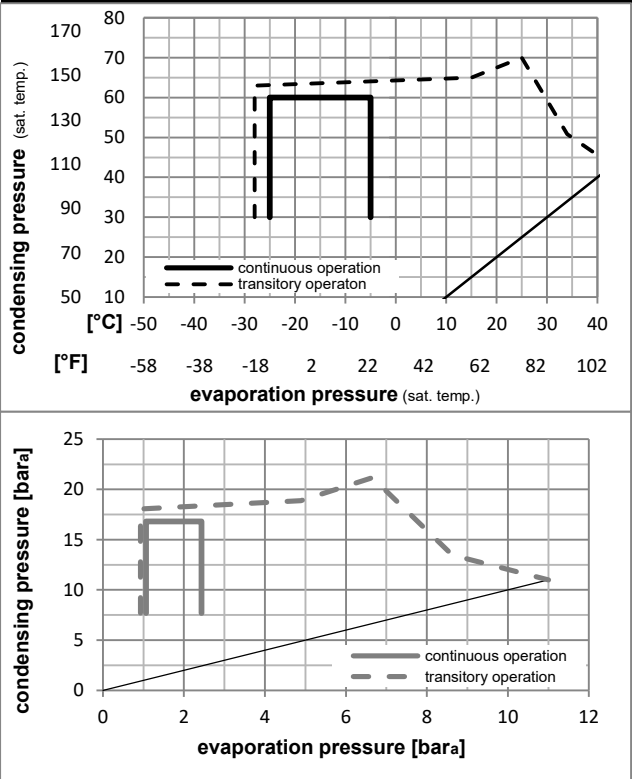
Model				
Designation	SC18G	220-240V/60Hz	Conf. 2	Sales code: 104G8820

Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R134a			
Application	LBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	UL			
	CCC			
	EAC			
	KC			

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 pressure range



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

Model

Designation **SC18G** **220-240V/60Hz** Conf. 2 Sales code: **104G8820**

Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC, EAC, KC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Performance tables

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC, EAC, KC

	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]	-25	-13	393,7	1344	338,8	1,00	3,41	0,86	394,6	2,99	8,53
cond. pressure	-23	-10	442,0	1509	380,4	1,06	3,62	0,91	417,1	3,03	9,58
pc= 45/113	-20	-4	543,8	1857	468,0	1,18	4,04	1,02	459,5	3,10	11,81
return gas temp.	-18	0	618,0	2111	531,9	1,27	4,34	1,09	486,8	3,16	13,45
RGT= 32/90	-15	5	720,3	2460	619,9	1,38	4,73	1,19	520,6	3,24	15,70
liquid temp	-10	14	926,5	3164	797,4	1,60	5,47	1,38	578,6	3,40	20,28
Tliq= 45/113	-5	23	1165,7	3981	1003,2	1,84	6,27	1,58	634,5	3,58	25,63
[°C / °F]	-25	-13	337,6	1153	290,6	0,88	2,99	0,75	385,7	3,05	8,07
cond. pressure	-23	-10	379,5	1296	326,6	0,92	3,13	0,79	413,6	3,10	9,08
pc= 55/131	-20	-4	468,2	1599	402,9	1,00	3,43	0,86	466,2	3,19	11,23
return gas temp	-18	0	533,3	1821	458,9	1,07	3,64	0,92	500,3	3,26	12,81
RGT= 32/90	-15	5	623,4	2129	536,5	1,15	3,92	0,99	542,7	3,36	15,01
liquid temp	-10	14	806,5	2754	694,1	1,31	4,47	1,13	616,0	3,56	19,50
Tliq= 55/131	-5	23	1020,8	3486	878,6	1,49	5,07	1,28	687,0	3,79	24,81

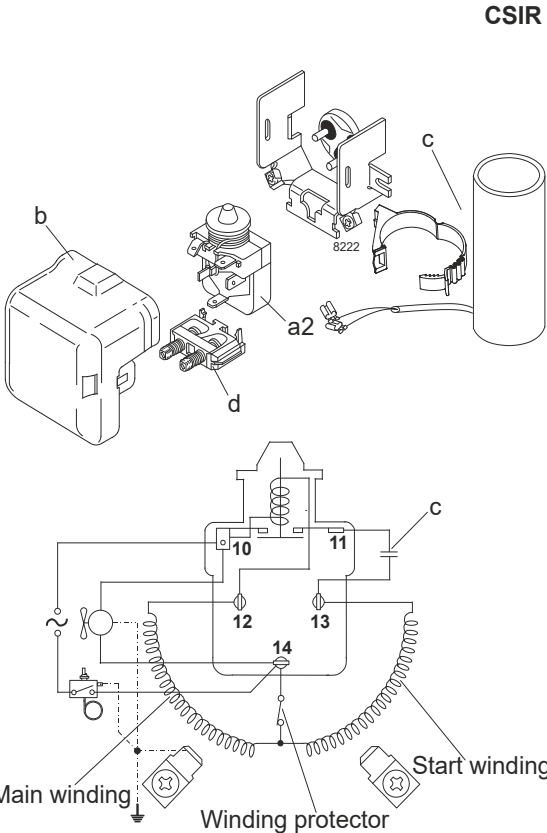
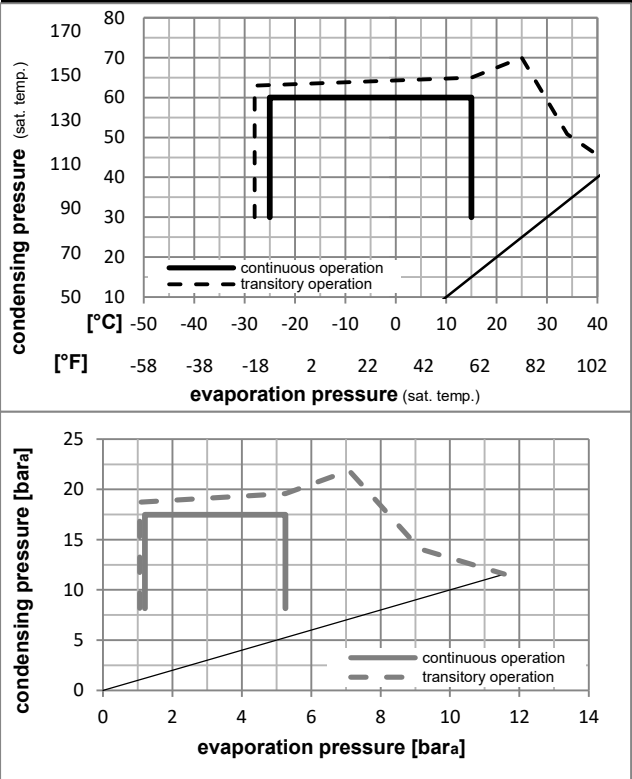
Model					
Designation	SC18G	220-240V/50Hz	Conf. 3	Sales code:	104G8820

Configuration	Electrical accessories / wiring diagram				
Motor configuration	CSIR				
Power supply (nominal)	220-240V/50Hz 1~				
Refrigerant	R513A				
Application	LBP+MBP+HBP				
Voltage range	187-254V				
Starting torque	HST				
Approvals	VDE				
	UL				
	CCC				

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 pressure range



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

Model

Designation **SC18G** **220-240V/50Hz** Conf. 3 Sales code: **104G8820**

Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																			
Return gas temp.					Current consumption						Ref. mass flow																			
Liquid temp.					Cooling capacity						COP				EER				P1				I				ṁ			
pe	pc	RGT	Tliq		[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]																	
[°C]	-23	54	32	32	441,2	1507	379,7	1,16	3,95	0,99	381,7	2,86	9,50																	
[°F]	-10	130	90	90																										
																		ASHRAE LBP												
[°C]	-7	54	35	46	940,0	3210	809,0	1,56	5,34	1,35	601,1	3,54	23,02																	
[°F]	20	130	95	115																										
[°C]	7,2	54	35	46	1658,1	5663	1426,9	2,17	7,41	1,87	764,4	4,22	41,19																	
[°F]	45	130	95	115																										
[°C]	-35	40	20	40	167,0	570	143,7	0,70	2,39	0,60	238,5	2,51	4,13																	
[°F]	-31	104	68	104																										
[°C]	-10	45	20	45	798,8	2728	687,5	1,51	5,17	1,30	527,4	3,26	21,17																	
[°F]	14	113	68	113																										
[°C]	5	50	20	50	1379,0	4710	1186,8	1,96	6,70	1,69	703,0	3,97	39,54																	
[°F]	41	122	68	122																										

Performance tables

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

	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]	-25	-13	363,8	1242	313,1	1,01	3,44	0,87	361,1	2,78	8,87		
cond. pressure	-20	-4	498,8	1703	429,2	1,18	4,04	1,02	421,7	2,94	12,19		
pc= 45/113	-10	14	835,3	2853	718,9	1,58	5,41	1,36	527,4	3,26	20,54		
return gas temp.	-5	23	1042,9	3562	897,5	1,81	6,19	1,56	575,3	3,43	25,75		
RGT= 32/90	0	32	1280,8	4374	1102,3	2,06	7,04	1,77	621,6	3,62	31,77		
liquid temp	5	41	1552,1	5301	1335,8	2,32	7,94	2,00	667,8	3,82	38,71		
Tliq= 45/113	15	59	2206,9	7537	1899,3	2,88	9,85	2,48	765,1	4,29	55,84		
[°C / °F]	-25	-13	309,8	1058	266,7	0,87	2,97	0,75	356,5	2,80	8,48		
cond. pressure	-20	-4	424,8	1451	365,6	0,99	3,37	0,85	430,5	2,99	11,66		
pc= 55/131	-10	14	716,1	2445	616,2	1,27	4,34	1,09	562,8	3,41	19,80		
return gas temp	-5	23	898,4	3068	773,2	1,44	4,92	1,24	623,9	3,62	24,96		
RGT= 32/90	0	32	1109,4	3789	954,7	1,62	5,54	1,40	683,4	3,86	30,98		
liquid temp	5	41	1351,9	4617	1163,5	1,82	6,22	1,57	742,7	4,12	37,99		
Tliq= 55/131	15	59	1944,0	6639	1673,0	2,24	7,67	1,93	866,1	4,70	55,52		

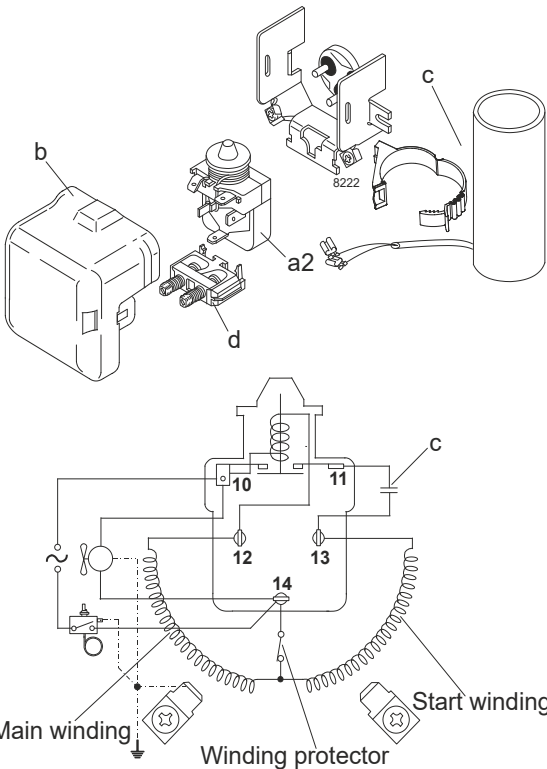
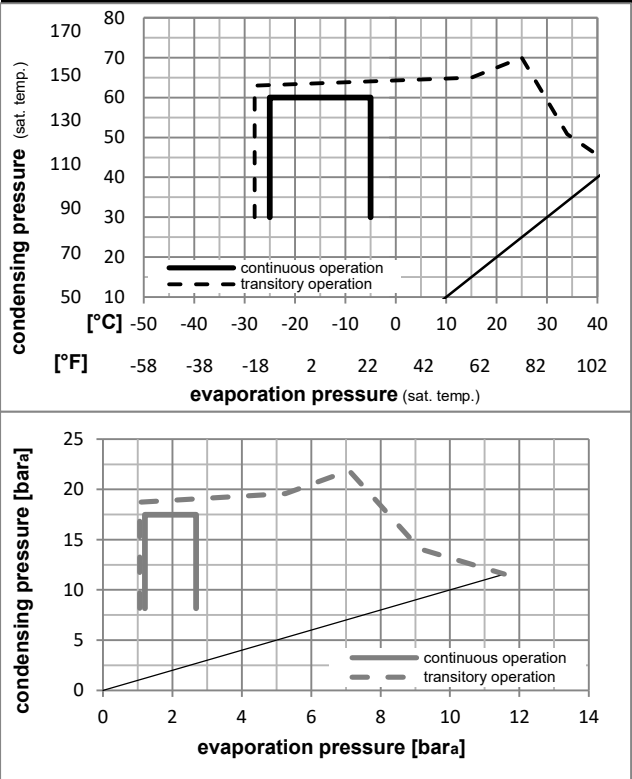
Model				
Designation	SC18G	220-240V/60Hz	Conf. 4	Sales code: 104G8820

Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	220-240V/60Hz 1~			
Refrigerant	R513A			
Application	LBP			
Voltage range	198-254V			
Starting torque	HST			
Approvals	VDE			
	UL			
	CCC			

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 pressure range



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

Model

Designation **SC18G** **220-240V/60Hz** Conf. 4 Sales code: **104G8820**

Optimization + standard conditions

R513A, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC

Evaporating pressure (saturation temperature) Condensing pressure (saturation temperature) Return gas temp. Liquid temp. Cooling capacity COP EER Power consumption Current consumption Ref. mass flow													
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]										[W]	[A]	[kg/h]	
[°F]													
-23	54	32	32	519,9	1775	447,4	1,15	3,92	0,99	452,7	3,12	11,19	ASHRAE LBP
-10	130	90	90										
-7	54	35	46	1098,4	3751	945,3	1,56	5,32	1,34	704,8	3,93	26,90	ASHRAE MBP
20	130	95	115										
7,2	54	35	46	1929,9	6591	1660,8	2,16	7,37	1,86	894,5	4,53	47,94	ASHRAE HBP
45	130	95	115										
-35	40	20	40	211,0	720	181,6	0,69	2,36	0,59	305,8	2,65	5,22	EN12900 LBP
-31	104	68	104										
-10	45	20	45	933,6	3189	803,5	1,51	5,16	1,30	617,9	3,65	24,75	EN12900 MBP
14	113	68	113										
5	50	20	50	1606,0	5485	1382,1	1,95	6,67	1,68	822,8	4,31	46,05	EN12900 HBP
41	122	68	122										

Performance tables

R513A, 230V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC

	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]	-25	-13	430,3	1470	370,4	1,00	3,41	0,86	431,0	3,05	10,49
cond. pressure	-23	-10	480,5	1641	413,5	1,06	3,61	0,91	454,2	3,13	11,72
pc= 45/113	-20	-4	585,8	2001	504,1	1,18	4,02	1,01	497,6	3,26	14,31
return gas temp.	-18	0	662,1	2261	569,8	1,26	4,30	1,08	525,4	3,35	16,20
RGT= 32/90	-15	5	766,7	2619	659,9	1,37	4,68	1,18	559,6	3,46	18,79
liquid temp	-10	14	976,3	3334	840,2	1,58	5,40	1,36	617,9	3,65	24,00
Tliq= 45/113	-5	23	1217,5	4158	1047,8	1,81	6,17	1,56	673,6	3,83	30,06
[°C / °F]	-25	-13	366,1	1250	315,1	0,86	2,94	0,74	424,6	3,03	10,03
cond. pressure	-23	-10	408,8	1396	351,8	0,90	3,08	0,78	453,5	3,12	11,20
pc= 55/131	-20	-4	498,8	1704	429,3	0,98	3,36	0,85	507,7	3,30	13,70
return gas temp	-18	0	564,4	1928	485,8	1,04	3,55	0,90	542,7	3,41	15,52
RGT= 32/90	-15	5	654,9	2237	563,6	1,12	3,82	0,96	585,9	3,55	18,04
liquid temp	-10	14	837,4	2860	720,7	1,27	4,33	1,09	660,2	3,79	23,16
Tliq= 55/131	-5	23	1049,5	3584	903,2	1,43	4,90	1,23	731,6	4,01	29,15