

## Single Pack SC18G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4018**

Position	Title	Code	Amount
1	Compressor SC18G	104G8820	1
2	Starting relay	117U6019	1
3	Starting capacitor (80 $\mu$ 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	<b>SC18G</b>	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	<b>104G8820</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R134a, R513A</b>
Oil viscosity	22cST	Displacement	17,69cm <sup>3</sup> / 1,08cu.in
Oil quantity	550cm <sup>3</sup> / 18,6fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	1300g / 45,9oz		
Free gas volume comp.	1460cm <sup>3</sup> / 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.	130°C / 266°F		



## General - Configurations with SC18G

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Motorconfiguration	CSIR	CSIR	CSIR	CSIR
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	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

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
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

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

## Model

Designation

**SC18G**

220-240V/50Hz 1~ 208-230V/60Hz 1~

Sales code:

**104G8820**

## Compressor dimensions

<b>Housing</b>	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

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

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

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

## Model

Designation	<b>SC18G</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>104G8820</b>
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## Configuration

Motorconfiguration	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

## 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 3m/s

## Operation Limits

## 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)			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]																
	-23	54	32	32	396,4	1354	341,2	1,13	3,87	0,97	350,1	2,61	7,70			
	-10	130	90	90												
	-25	55	32	55	285,6	975	245,8	0,88	2,99	0,75	325,8	2,56	6,83			
	-13	131	90	131												
	-35	40	20	40	146,0	499	125,7	0,67	2,30	0,58	217,1	2,26	3,20			
	-31	104	68	104												
	-7	54	35	46	894,7	3055	770,0	1,58	5,41	1,36	565,2	3,17	19,52			
	20	130	95	115												
	-10	55	32	55	689,1	2353	593,1	1,31	4,47	1,13	526,8	3,05	16,66			
	14	131	90	131												
	-10	45	20	45	763,6	2608	657,2	1,54	5,27	1,33	495,2	2,91	17,87			
	14	113	68	113												

### 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

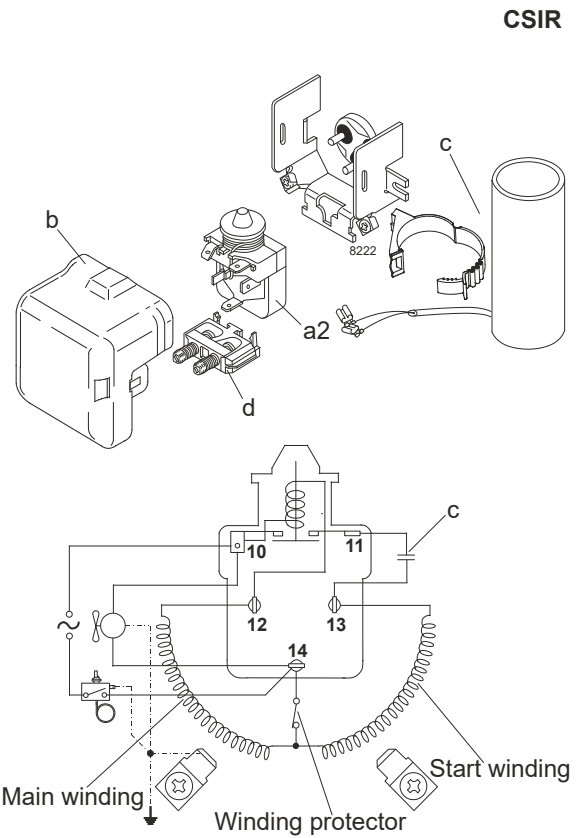
## Model

Designation	<b>SC18G</b>	<b>208-230V/60Hz</b>	<b>Conf. 2</b>	Sales code:	<b>104G8820</b>
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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	VDE UL CCC EAC KC

## Electrical accessories / wiring diagram

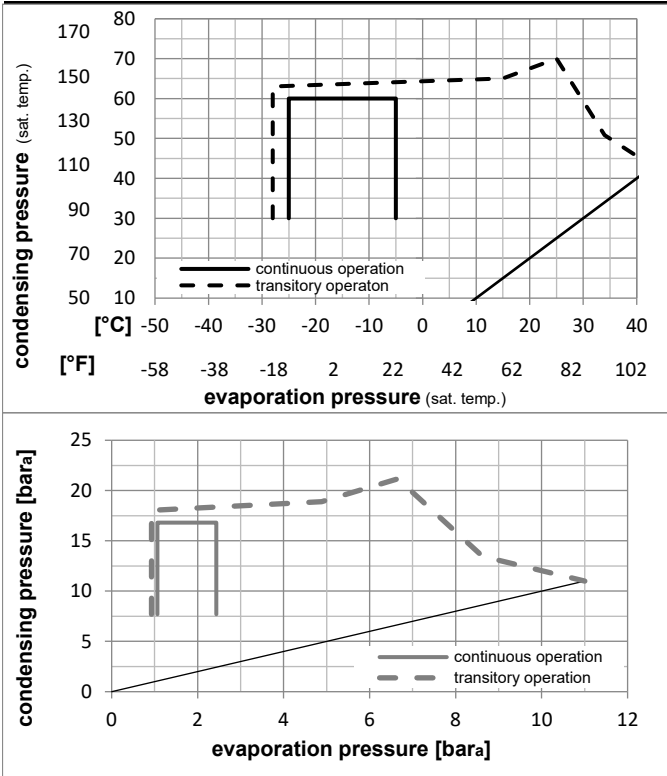


## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 3m/s

## Operation Limits

## Operation pressure range



## Components

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

### Model

Designation **SC18G** **208-230V/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)			Return gas temp.		Liquid temp.		Cooling capacity			COP	EER	Power consumption		
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m						
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]							[W]	[A]	[kg/h]						
-23	-10	54	130	32	90	32	90	467,3	1596	402,2	1,13	3,86	0,97	413,1	3,09	9,07				ASHRAE LBP
-25	-13	55	131	32	90	55	131	337,6	1153	290,6	0,88	2,99	0,75	385,7	3,05	8,07				cecomaf LBP
-35	-31	40	104	20	68	40	104	185,4	633	159,5	0,68	2,31	0,58	274,4	2,85	4,07				EN12900 LBP
-7	20	54	130	35	95	46	115	1046,2	3573	900,4	1,58	5,41	1,36	660,6	3,69	22,83				ASHRAE MBP
-10	14	55	131	32	90	55	131	806,5	2754	694,1	1,31	4,47	1,13	616,0	3,56	19,50				cecomaf MBP
-10	14	45	113	20	68	45	113	893,1	3050	768,6	1,54	5,27	1,33	578,6	3,40	20,91				EN12900 MBP

### 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

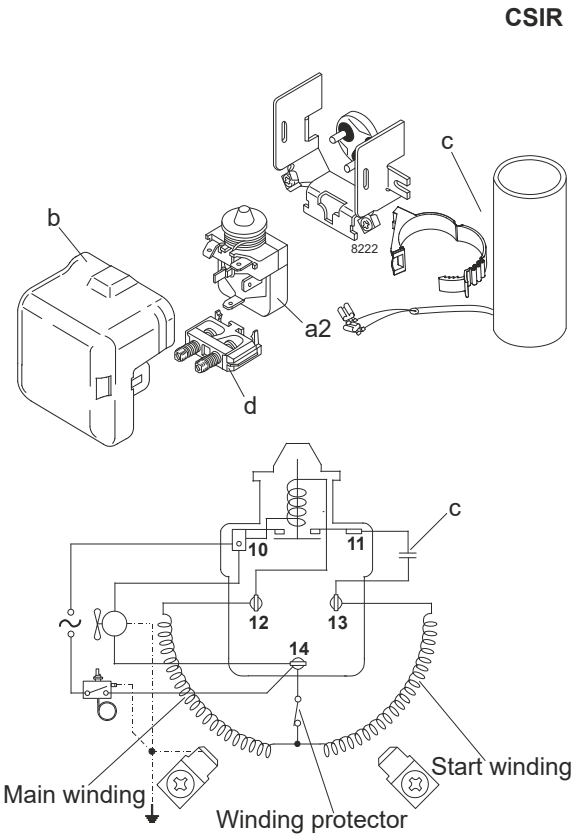
## Model

Designation	<b>SC18G</b>	<b>220-240V/50Hz</b>	<b>Conf. 3</b>	Sales code:	<b>104G8820</b>
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## Configuration

Motorconfiguration	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

## 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 3m/s

## Operation Limits

## Operation pressure range



## Components

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



### Model

Designation	<b>SC18G</b>	<b>220-240V/50Hz</b>	<b>Conf. 3</b>	Sales code:	<b>104G8820</b>
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### Optimization + standard conditions

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

	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	441,2	1507	379,7	1,16	3,95	0,99	381,7	2,86	9,50	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	309,8	1058	266,7	0,87	2,97	0,75	356,5	2,80	8,48	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	167,0	570	143,7	0,70	2,39	0,60	238,5	2,51	4,13	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	940,0	3210	809,0	1,56	5,34	1,35	601,1	3,54	23,02	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	716,1	2445	616,2	1,27	4,34	1,09	562,8	3,41	19,80	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	798,8	2728	687,5	1,51	5,17	1,30	527,4	3,26	21,17	EN12900 MBP
	14	113	68	113										

### Performance tables

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

	pe		Cooling capacity			COP	EER	P1	l	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/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

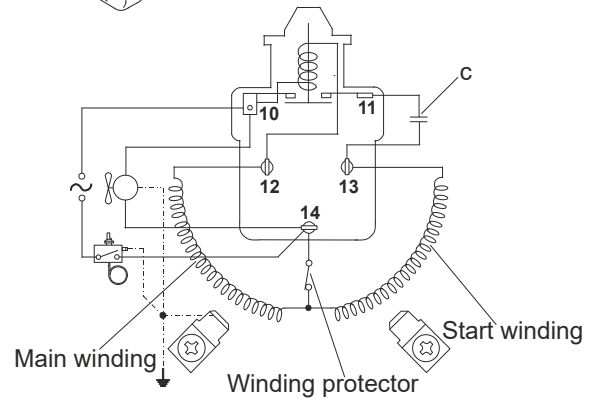
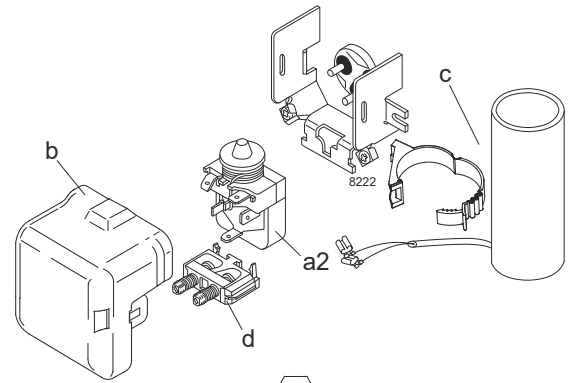
Designation	<b>SC18G</b>	<b>208-230V/60Hz</b>	<b>Conf. 4</b>	Sales code:	<b>104G8820</b>
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## Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R513A
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE UL CCC

## Electrical accessories / wiring diagram

CSIR

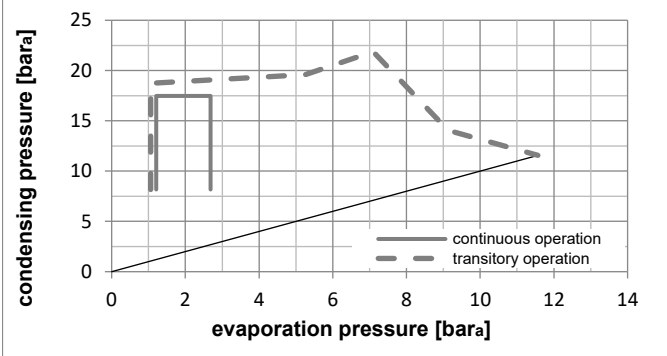
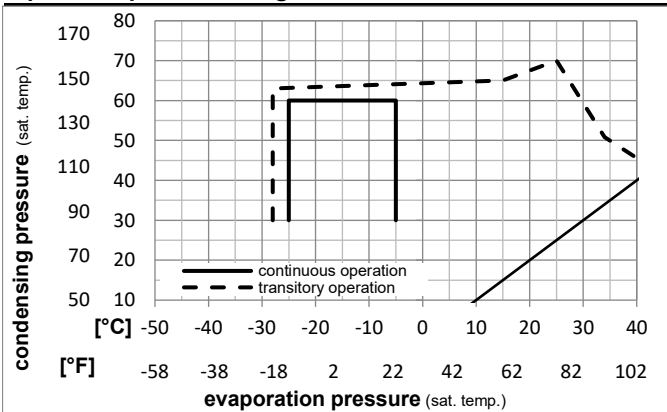


## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 3m/s

## Operation Limits

## Operation pressure range



## Components

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

### Model

Designation	<b>SC18G</b>	<b>208-230V/60Hz</b>	<b>Conf. 4</b>	Sales code:	<b>104G8820</b>
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### Optimization + standard conditions

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

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.		Liquid temp.		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	519,9	1775	447,4	1,15	3,92	0,99	452,7	3,12	11,19	ASHRAE LBP	
[°F]	-10	130	90	90											
[°C]	-25	55	32	55	366,1	1250	315,1	0,86	2,94	0,74	424,6	3,03	10,03	cecomaf LBP	
[°F]	-13	131	90	131											
[°C]	-35	40	20	40	211,0	720	181,6	0,69	2,36	0,59	305,8	2,65	5,22	EN12900 LBP	
[°F]	-31	104	68	104											
[°C]	-7	54	35	46	1098,4	3751	945,3	1,56	5,32	1,34	704,8	3,93	26,90	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	837,4	2860	720,7	1,27	4,33	1,09	660,2	3,79	23,16	cecomaf MBP	
[°F]	14	131	90	131											
[°C]	-10	45	20	45	933,6	3189	803,5	1,51	5,16	1,30	617,9	3,65	24,75	EN12900 MBP	
[°F]	14	113	68	113											

### 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



# SC Compressors





# SC Compressors

## Service/Repair – R290



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