

Single Pack SC21MFX 220-240V 50Hz CSIR

Single pack code number: **195B4765**

Position	Title	Code	Amount
1	Compressor SC21MFX	104G8120	1
2	Starting relay	117U6019	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	SC21MFX	220-240V/50Hz 1~	Sales code:	104G8120
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
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	3,4Ω (at 25°C)		
Winding resistance aux	14,4Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with SC21MFX

	Conf. 1	Conf. 2	Conf. 3
Motorconfiguration	CSIR	CSCR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1	1
Voltage range	187-254V	187-254V	187-254V
Approvals	VDE, CCC, EAC	VDE, CCC, EAC	VDE, CCC, EAC
Starting torque	HST	HST	HST
Note	- / -		

Applications with SC21MFX

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

Electrical data - Configurations with SC21MFX

	Conf. 1	Conf. 2	Conf. 3
Starting device type	relay	relay	relay
Run capacitor	- / -	10μF	- / -
Start capacitor	80μF	80μF	80μF
LRA (locked rotor amps / 4s)	23,4A	23,4A	23,4A
RLA (rated load amps / 1s)	4,3A	4,3A	4,3A
Cut in current	23,4A	23,4A	23,4A

Model

Designation

SC21MFX

220-240V/50Hz 1~

Sales code:

104G8120

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

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	SC21MFX	220-240V/50Hz	Conf. 1	Sales code:	104G8120
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Configuration

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

Electrical accessories / wiring diagram

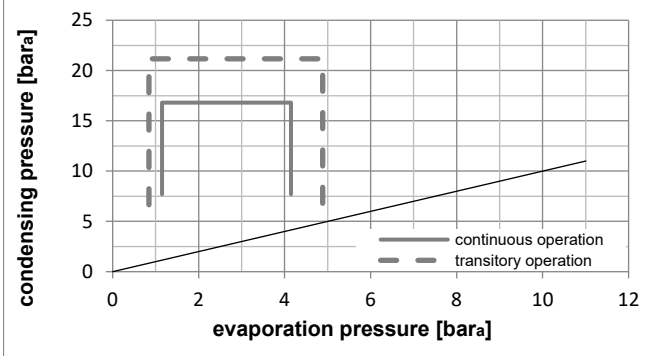
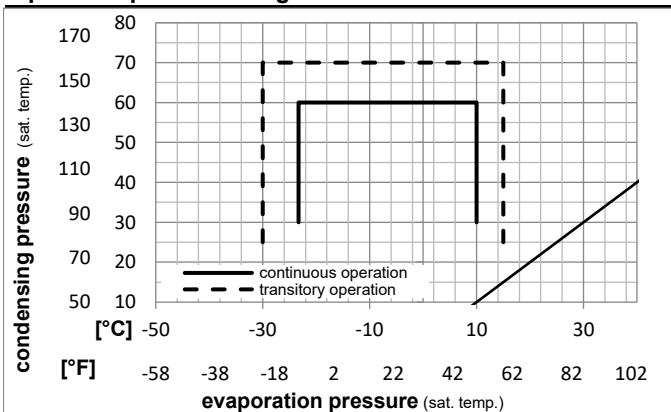


Ambient/ machine room temperatures minimum /maximum

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 **SC21MFX** **220-240V/50Hz** Conf. 1 Sales code: **104G8120**

Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			ASHRAE MBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	Ref. mass flow	
[°C]	-7	54	35	46	1082,2	3696	931,4	1,65	5,63	1,42	656,3	4,48	23,61			
[°F]	20	130	95	115												
	-10	55	32	55	840,0	2869	722,9	1,37	4,66	1,18	615,0	4,35	20,31	cecomaf MBP		
	-10	45	20	45	940,6	3212	809,5	1,62	5,52	1,39	581,7	4,18	22,02	EN12900 MBP		
	-10	113	68	113												
	-7	49	18	49	1024,1	3497	881,3	1,61	5,51	1,39	634,5	4,37	25,30	ARI540 MBP		
	-7	120	65	120												
	-10	45	32	45	975,9	3333	839,8	1,68	5,73	1,44	581,7	4,18	21,36	opt		
	-10	113	90	113												
	-25	45	32	45	464,8	1587	400,0	1,14	3,88	0,98	408,8	3,47	10,07	opt		
	-25	113	90	113												

Performance tables

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

	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]	-23	-10	509,3	1739	438,3	1,19	4,06	1,02	428,3	3,55	11,04
cond. pressure	-20	-4	604,5	2065	520,3	1,30	4,43	1,12	466,1	3,72	13,13
pc= 45/113	-15	5	773,4	2641	665,6	1,48	5,04	1,27	523,6	3,95	16,86
return gas temp.	-10	14	975,9	3333	839,8	1,68	5,73	1,44	581,7	4,18	21,36
RGT= 32/90	0	32	1498,6	5118	1289,7	2,14	7,30	1,84	701,4	4,59	33,14
liquid temp	5	41	1827,7	6242	1572,9	2,39	8,17	2,06	763,7	4,78	40,69
Tliq= 45/113	10	50	2207,7	7540	1900,0	2,67	9,10	2,29	828,2	4,96	49,54
[°C / °F]	-23	-10	429,7	1467	369,8	0,97	3,33	0,84	441,3	3,69	10,28
cond. pressure	-20	-4	513,5	1754	441,9	1,06	3,62	0,91	484,7	3,86	12,32
pc= 55/131	-15	5	661,9	2261	569,7	1,20	4,11	1,04	550,0	4,11	15,93
return gas temp	-10	14	840,0	2869	722,9	1,37	4,66	1,18	615,0	4,35	20,31
RGT= 32/90	0	32	1302,7	4449	1121,1	1,75	5,96	1,50	746,0	4,79	31,87
liquid temp	5	41	1596,0	5451	1373,6	1,96	6,71	1,69	812,7	4,99	39,33
Tliq= 55/131	10	50	1936,4	6613	1666,5	2,20	7,51	1,89	880,8	5,18	48,14

Model

Designation	SC21MFX	220-240V/50Hz	Conf. 2	Sales code:	104G8120
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Configuration

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

Electrical accessories / wiring diagram

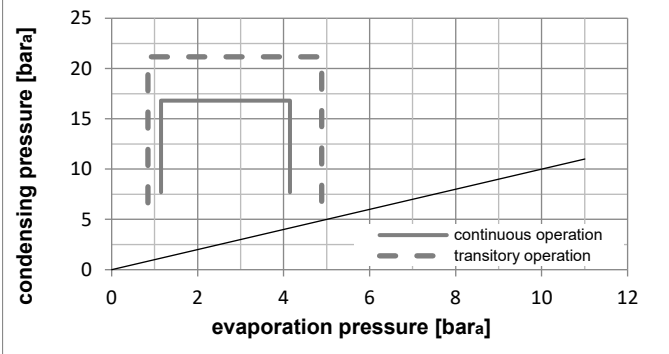
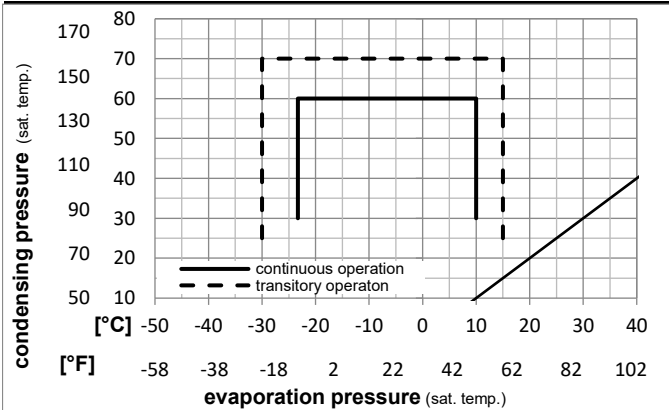


Ambient/ machine room temperatures minimum /maximum

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

a3	SC starter kit (550mm)	117-7039
b	plastic cover	103N2009
d	cord relief	103N1004

Alternative components

a3	SC starter kit (1000mm)	117-7043
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Model

Designation **SC21MFX** **220-240V/50Hz** Conf. 2 Sales code: **104G8120**

Optimization + standard conditions

R134a, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC, EAC

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.				Liquid temp.						Current consumption			Ref. mass flow
		Cooling capacity				COP	EER	P1			I	m			
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-7	54	35	46	1115,5	3810	960,1	1,76	6,01	1,52	633,6	3,69	24,34	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	866,0	2957	745,2	1,46	4,98	1,25	594,0	3,52	20,94	cecomaf MBP	
[°F]	14	131	90	131											
[°C]	-10	45	20	45	969,6	3311	834,4	1,73	5,89	1,48	562,1	3,28	22,70	EN12900 MBP	
[°F]	14	113	68	113											
[°C]	-7	49	18	49	1055,5	3605	908,4	1,72	5,88	1,48	612,7	3,52	26,07	ARI540 MBP	
[°F]	20	120	65	120											
[°C]	-10	45	32	45	1005,9	3435	865,7	1,79	6,11	1,54	562,1	3,28	22,01	opt	
[°F]	14	113	90	113											
[°C]	-25	45	32	45	479,3	1637	412,5	1,21	4,13	1,04	396,2	2,38	10,38	opt	
[°F]	-13	113	90	113											

Performance tables

R134a, 220V/50Hz, CSCR, fan 3m/s, VDE, CCC, EAC

	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]	-23	-10	525,2	1794	452,0	1,27	4,32	1,09	414,8	2,49	11,39	
cond. pressure	-20	-4	623,3	2129	536,4	1,38	4,72	1,19	451,1	2,69	13,54	
pc= 45/113	-15	5	797,3	2723	686,2	1,57	5,38	1,36	506,3	2,99	17,38	
return gas temp.	-10	14	1005,9	3435	865,7	1,79	6,11	1,54	562,1	3,28	22,01	
RGT= 32/90	0	32	1544,5	5275	1329,2	2,28	7,79	1,96	676,9	3,80	34,16	
liquid temp	5	41	1883,5	6433	1621,0	2,56	8,73	2,20	736,7	4,04	41,93	
Tliq= 45/113	10	50	2275,0	7770	1957,9	2,85	9,73	2,45	798,5	4,26	51,05	
[°C / °F]	-23	-10	443,2	1513	381,4	1,04	3,54	0,89	427,3	2,65	10,61	
cond. pressure	-20	-4	529,5	1808	455,7	1,13	3,86	0,97	468,9	2,88	12,70	
pc= 55/131	-15	5	682,4	2331	587,3	1,28	4,38	1,10	531,6	3,21	16,43	
return gas temp.	-10	14	866,0	2957	745,2	1,46	4,98	1,25	594,0	3,52	20,94	
RGT= 32/90	0	32	1342,7	4585	1155,5	1,87	6,37	1,61	719,7	4,10	32,84	
liquid temp	5	41	1644,8	5617	1415,6	2,10	7,17	1,81	783,7	4,36	40,53	
Tliq= 55/131	10	50	1995,6	6815	1717,4	2,35	8,03	2,02	849,0	4,61	49,61	

Model

Designation	SC21MFX	220-240V/50Hz	Conf. 3	Sales code:	104G8120
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R513A
Application	MBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE CCC EAC

Electrical accessories / wiring diagram

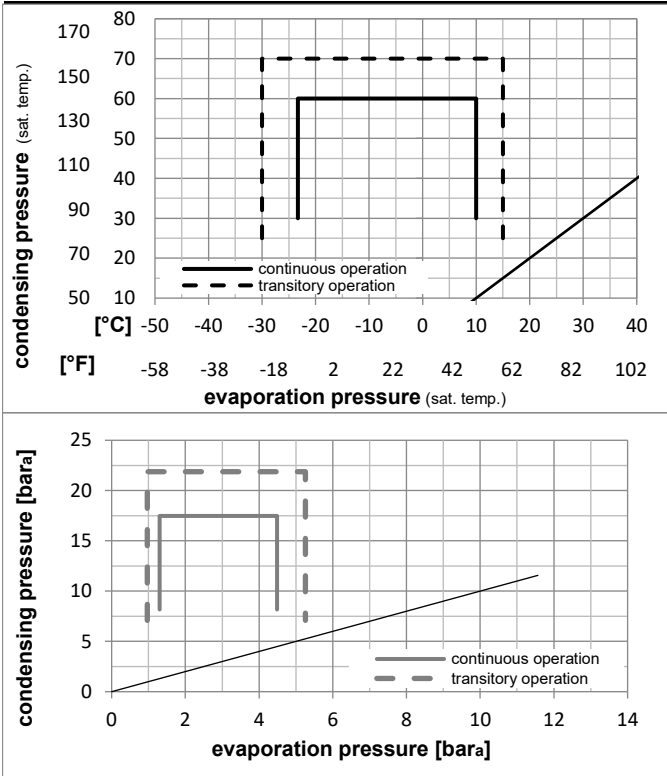


Ambient/ machine room temperatures minimum /maximum

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 **SC21MFX** **220-240V/50Hz** Conf. 3 Sales code: **104G8120**

Optimization + standard conditions

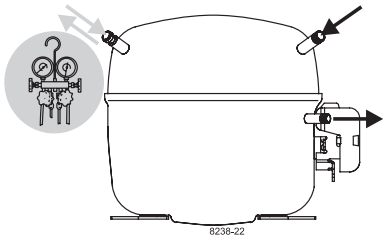
R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, EAC

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.		Liquid temp.		Cooling capacity		COP	EER		Current consumption		Ref. mass flow		
		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]	
[°C]	-7	54	35	46	1131,2	3863	973,5	1,62	5,55	1,40	696,6	4,57	27,71	ASHRAE MBP	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	867,3	2962	746,4	1,32	4,52	1,14	655,8	4,41	23,98	cecomaf MBP	
[°F]	14	131	90	131											
[°C]	-10	45	20	45	979,7	3346	843,1	1,58	5,40	1,36	619,9	4,28	25,97	EN12900 MBP	
[°F]	14	113	68	113											
[°C]	-7	49	18	49	1053,0	3596	906,2	1,56	5,34	1,35	673,0	4,48	29,67	ARI540 MBP	
[°F]	20	120	65	120											
[°C]	-10	45	32	45	1024,5	3499	881,7	1,65	5,64	1,42	619,9	4,28	25,19	opt	
[°F]	14	113	90	113											
[°C]	-25	45	32	45	501,7	1713	431,8	1,12	3,83	0,97	447,2	3,62	12,23	opt	
[°F]	-13	113	90	113											

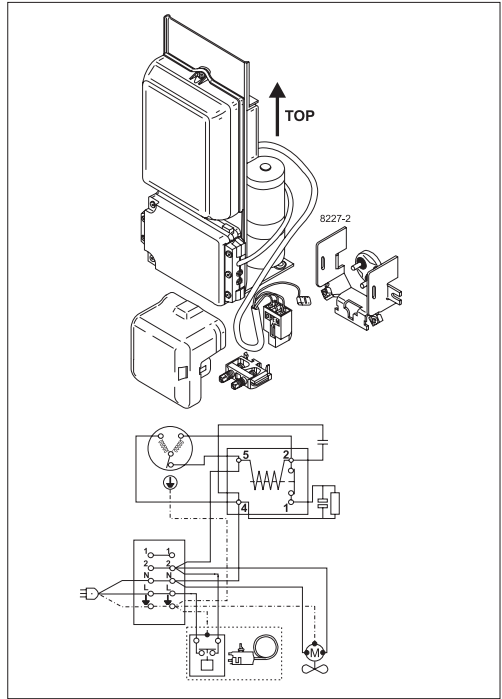
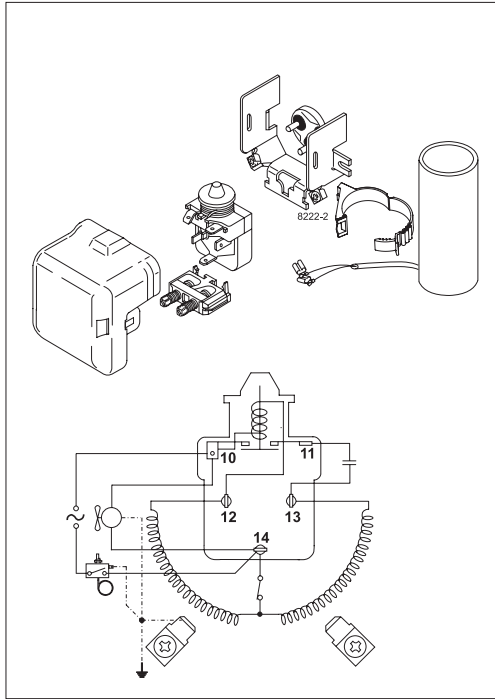
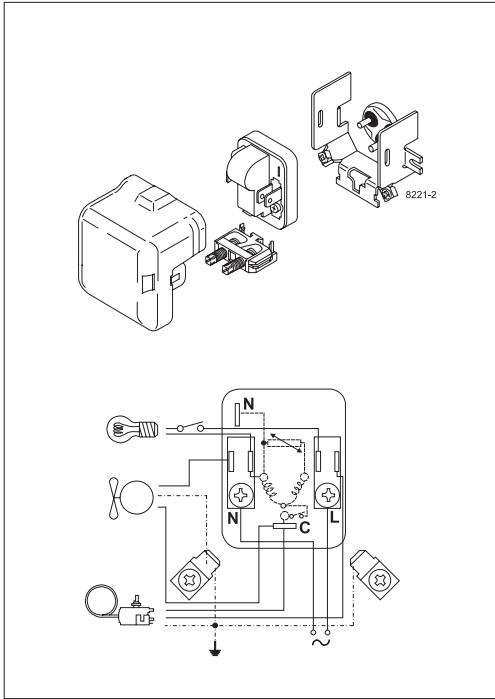
Performance tables

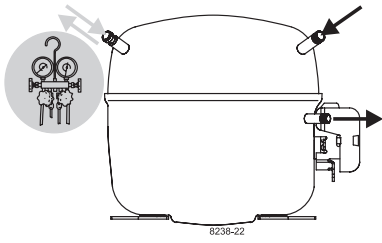
R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, EAC

	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]	-23	-10	547,7	1871	471,4	1,17	4,00	1,01	467,2	3,70	13,36
cond. pressure	-20	-4	645,8	2206	555,8	1,28	4,36	1,10	505,6	3,84	15,78
pc= 45/113	-15	5	818,8	2796	704,7	1,45	4,97	1,25	562,8	4,06	20,06
return gas temp.	-10	14	1024,5	3499	881,7	1,65	5,64	1,42	619,9	4,28	25,19
RGT= 32/90	0	32	1549,8	5293	1333,8	2,10	7,16	1,81	738,8	4,73	38,44
liquid temp	5	41	1877,3	6411	1615,6	2,34	7,98	2,01	803,0	4,97	46,82
Tliq= 45/113	10	50	2253,2	7695	1939,2	2,58	8,82	2,22	872,0	5,24	56,57
[°C / °F]	-23	-10	455,5	1556	392,0	0,95	3,23	0,81	481,7	3,75	12,48
cond. pressure	-20	-4	540,4	1845	465,0	1,03	3,51	0,88	525,8	3,92	14,84
pc= 55/131	-15	5	689,6	2355	593,5	1,17	3,98	1,00	591,1	4,17	19,00
return gas temp.	-10	14	867,3	2962	746,4	1,32	4,52	1,14	655,8	4,41	23,98
RGT= 32/90	0	32	1323,7	4521	1139,2	1,68	5,74	1,45	787,6	4,91	36,97
liquid temp	5	41	1610,3	5500	1385,9	1,88	6,42	1,62	857,3	5,18	45,25
Tliq= 55/131	10	50	1941,2	6629	1670,6	2,08	7,12	1,79	931,0	5,46	54,96



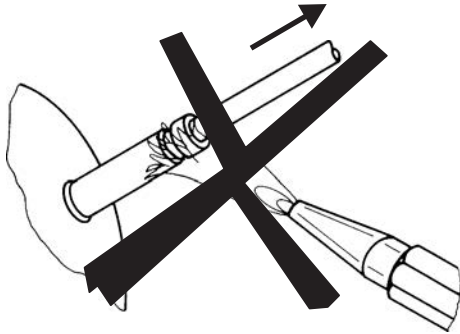
SC Compressors



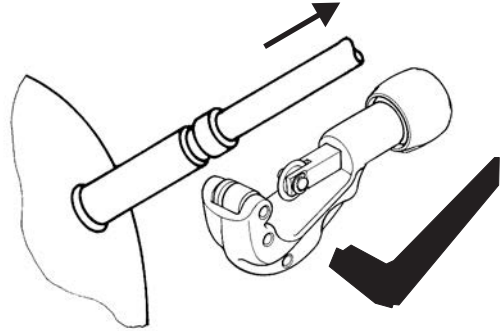


SC Compressors

Service/Repair – R290



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