

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	546cm ³ / 18,5fl.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
IP class	21	21	21

Model

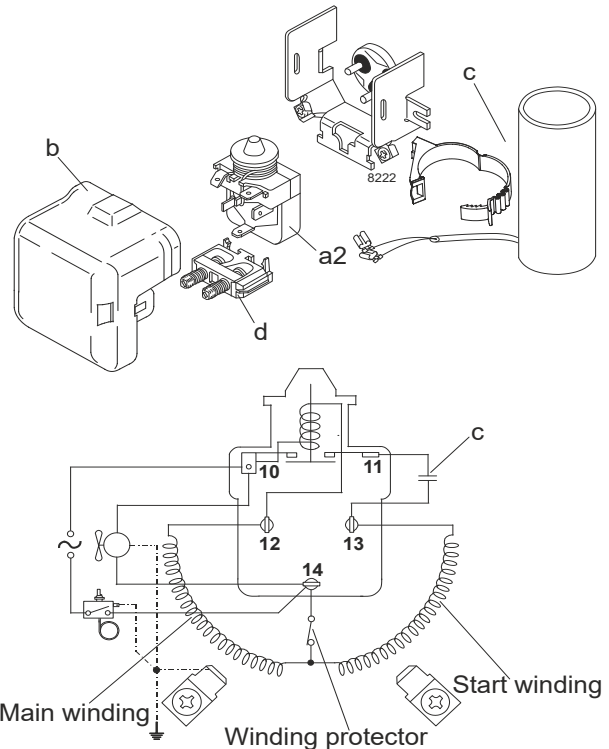
Designation	SC21MFX	220-240V/50Hz	Conf. 1	Sales code:	104G8120
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Configuration

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

CSIR

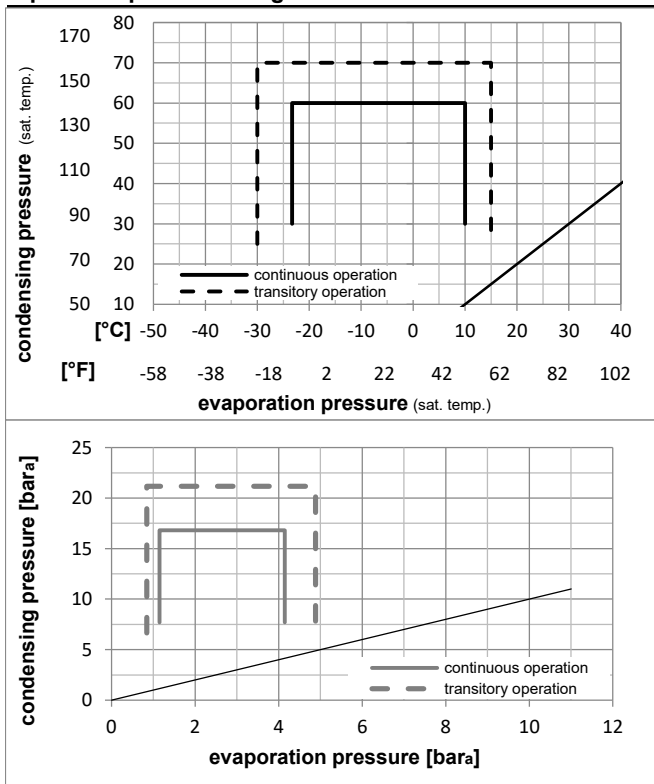


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	fan 3m/s	n/a

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														
Current consumption														
Ref. mass flow														
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
ASHRAE MBP	-6,66	54,4	35	46,1	1082,2	3696	931,4	1,65	5,63	1,42	656,3	4,48	23,61	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	20	130	95	115										
cecomaf MBP	-10	55	32	55	840,0	2869	722,9	1,37	4,66	1,18	615,0	4,35	20,31	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	14	131	89,6	131										
EN12900 MBP	-10	45	20	45	940,6	3212	809,5	1,62	5,52	1,39	581,7	4,18	22,02	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	14	113	68	113										
ARI540 MBP	-6,66	48,9	18,3	48,9	1024,1	3497	881,3	1,61	5,51	1,39	634,5	4,37	25,30	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	20	120	65	120										
opt	-10	45	32	45	975,9	3333	839,8	1,68	5,73	1,44	581,7	4,18	21,36	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	14	113	89,6	113										
opt	-25	45	32	45	464,8	1587	400,0	1,14	3,88	0,98	408,8	3,47	10,07	
	[°F]	[°F]	[°F]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-13	113	89,6	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]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]
[°C / °F]	-23,3	-10	509,3	1739	438,3	1,19	4,06	1,02	428,3	3,55	11,04	428,3	3,55	11,04	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	466,1	3,72	13,13	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	523,6	3,95	16,86	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	581,7	4,18	21,36	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	701,4	4,59	33,14	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	763,7	4,78	40,69	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	828,2	4,96	49,54	828,2	4,96	49,54
[°C / °F]	-23,3	-10	429,7	1467	369,8	0,97	3,33	0,84	441,3	3,69	10,28	441,3	3,69	10,28	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	484,7	3,86	12,32	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	550,0	4,11	15,93	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	615,0	4,35	20,31	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	746,0	4,79	31,87	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	812,7	4,99	39,33	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	880,8	5,18	48,14	880,8	5,18	48,14

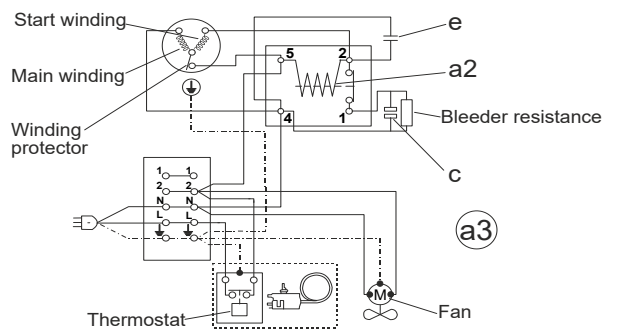
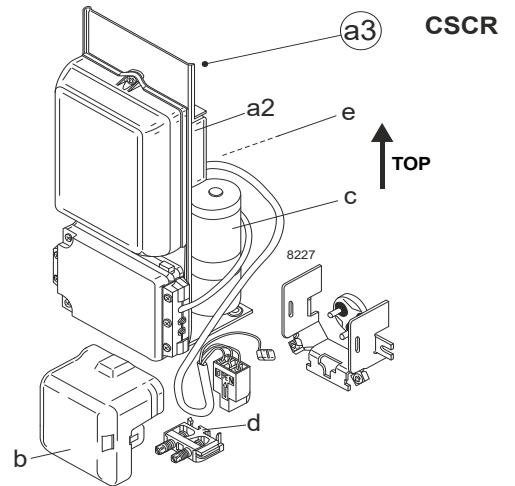
Model

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

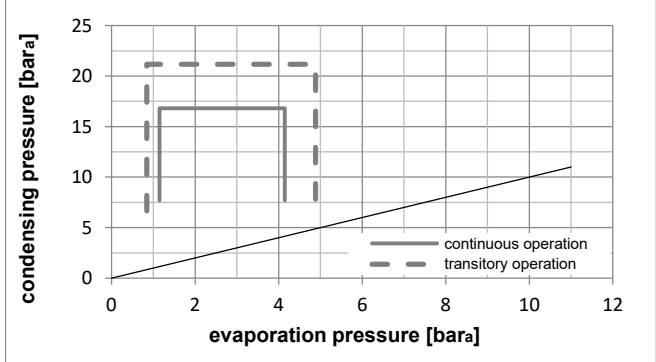
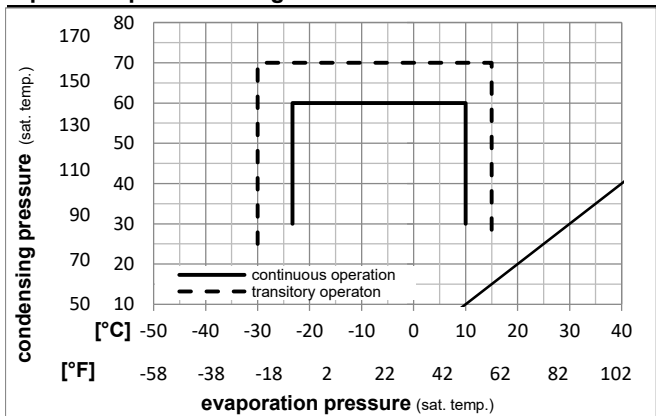


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	fan 3m/s	n/a

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.			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]	-6,7	54,4	35	46,1	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						cecmaf MBP
[°F]	14	131	89,6	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]	-6,7	48,9	18,3	48,9	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	89,6	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	89,6	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

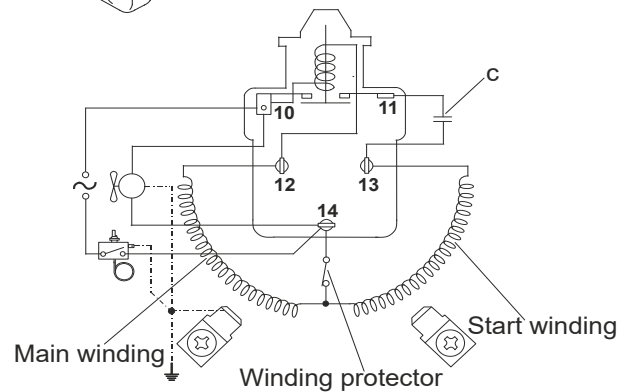
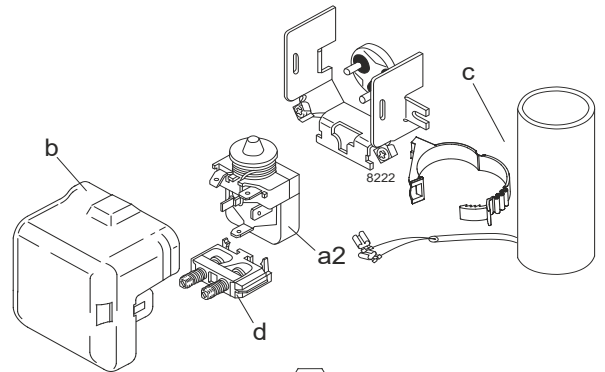
Designation	SC21MFX	220-240V/50Hz	Conf. 3	Sales code:	104G8120
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Configuration

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

CSIR

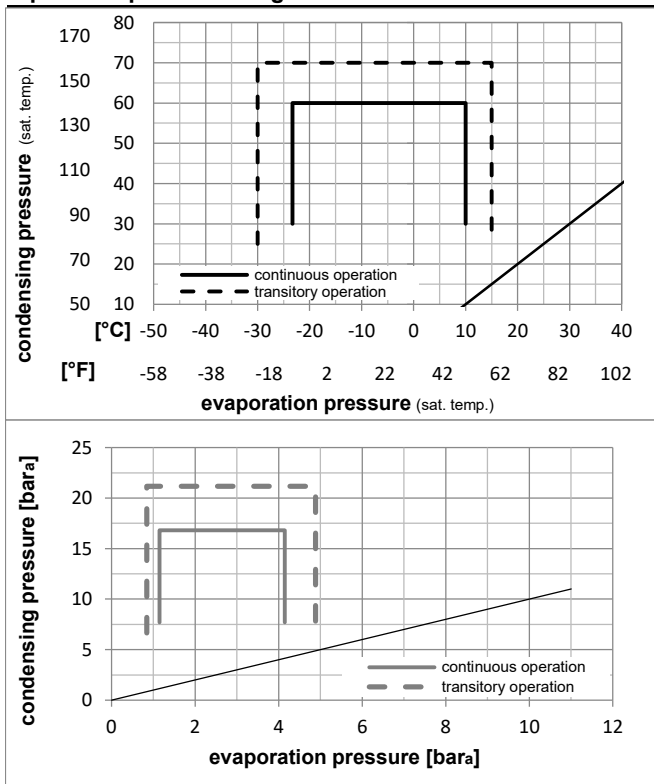


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 3m/s	n/a
38°C / 100°F	n/a	fan 3m/s	n/a
43°C / 110°F	n/a	fan 3m/s	n/a

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)														
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]	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
-6,66	54,4	35	46,1	1131,2	3863	973,5	1,62	5,55	1,40	696,6	4,57	27,71	ASHRAE	
20	130	95	115										MBP	
-10	55	32	55	867,3	2962	746,4	1,32	4,52	1,14	655,8	4,41	23,98	cecomaf	
14	131	89,6	131										MBP	
-10	45	20	45	979,7	3346	843,1	1,58	5,40	1,36	619,9	4,28	25,97	EN12900	
14	113	68	113										MBP	
-6,66	48,9	18,3	48,9	1053,0	3596	906,2	1,56	5,34	1,35	673,0	4,48	29,67	ARI540	
20	120	65	120										MBP	
-10	45	32	45	1024,5	3499	881,7	1,65	5,64	1,42	619,9	4,28	25,19	opt	
14	113	89,6	113											
-25	45	32	45	501,7	1713	431,8	1,12	3,83	0,97	447,2	3,62	12,23	opt	
-13	113	89,6	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]	-23,3	-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]	-23,3	-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				