Model
FRK11G

Sales code:
106G5953

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**700g / 24.69oz**
Weight	**9.70 kg / 21.38lbs**
Displacement	**8.60 cm3 / 0.52cu.in**
Compressors on pallet	**100**

General – Configurations With FRK11G

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240 V/50 Hz	208-230 V/60 Hz	220-240 V/50 Hz	208-230 V/60 Hz
Number of phases	1	1	1	1
Voltage range	187-254 V	198-253 V	187-254 V	198-253 V
Approvals	VDE, CB, UL	VDE, CB, UL	VDE, CB, UL	VDE, CB, UL
Starting torque	HST	HST	HST	HST
Refrigerant	R134a	R134a	R513A	R513A
Application	LBP+MBP+HBP	LBP+MBP	LBP+MBP+HBP	LBP+MBP
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Application Notes

- Provision for PE Grounding is located at the PE Stamp on the compressor
- Suctiongas connector and Process connector can be switched (minor loss of cooling capacity)
- Very good robustness against liquid intake.
- Ice-cube maker optimization - indirect suction intake.
- Special design for high refrigerant charge

Model
FRK11G

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Compressor Design

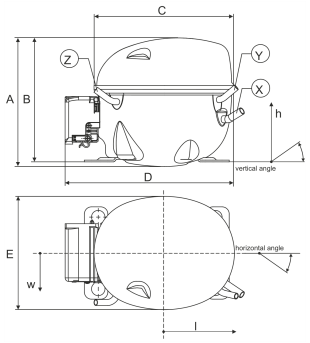
Oil type	**POE**	Winding resistance main	**8.4 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**11.9 Ohm**
Oil quantity	**240 cm3 / 8.12fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,495 cm3 / 50.55fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

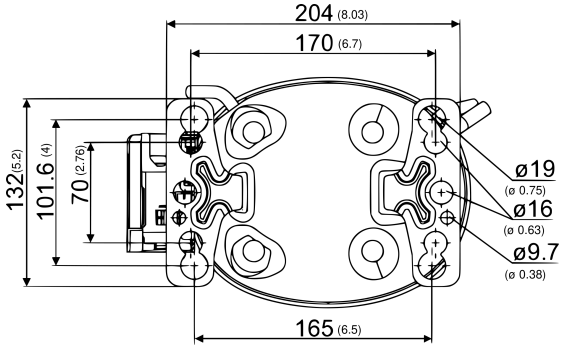
A Height	**182mm / 7.17in**
B Height	**175mm / 6.89in**
C Length shell	**198mm / 7.80in**
D Length w. cover	**238mm / 9.37in**
E Width	**160mm / 6.30in**

Find 3D Model here



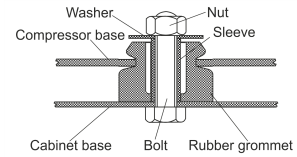
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59 / 4.69/2.87/2.32in	117/107/66 / 4.61/4.21/2.60in	-88/101/71 / -3.46/3.98/2.80in
Straight tube l. [mm]	13.5 / 0.53in	13.5 / 0.53in	13.5 / 0.53in

Mounting Accessories

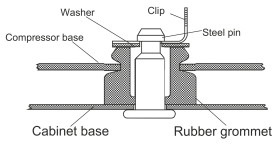


Dimensions in mm [in]

Bolt joint



Snap-on



	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

Model
FRK11G Configuration 1

Sales code:
106G5953

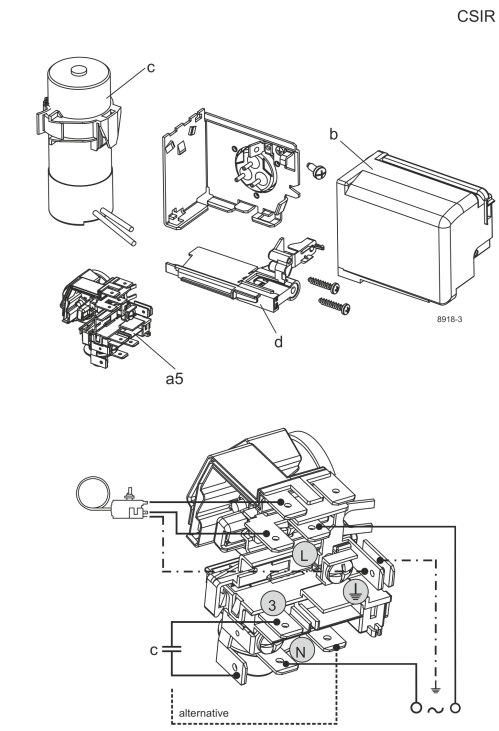
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**LBP+MBP+HBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CB, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**13.4 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**12.3 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 3m/s

Electrical Accessories / Wiring Diagram



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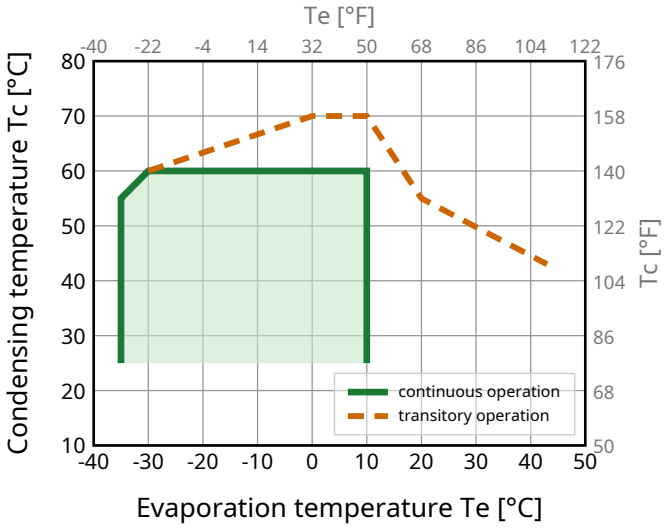
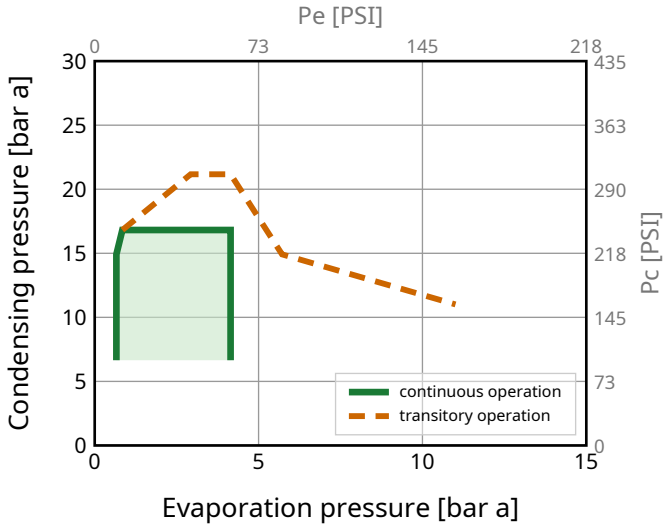
Components
a5 current relay (T0377/L6-S1) 117U7071
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

Alternative components
b, d 100x cover + clamp + screws (5VA) 103N2060
b, d cover + clamp + screws (5VA) in bag 103N1060

Operation Pressure Range





Model Sales code:

FRK11G Configuration 1 **106G5953**

Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**240**	818	206	**1.32**	4.52	181	1.39	4.65	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**494**	1687	425	**1.79**	6.12	276	1.76	10.76	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**865**	2952	744	**2.43**	8.28	357	2.11	19.15	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**124**	422	106	**0.91**	3.09	136	1.27	2.71	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**432**	1473	371	**1.79**	6.10	241	1.61	10.06	**EN12900 MBP**
5 41	50 122	20 68	50 122	**743**	2536	639	**2.25**	7.68	330	1.99	18.64	**EN12900 HBP**

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**118**	401	101	**0.87**	2.96	135	1.26	2.53
-30	-22	**156**	532	134	**1.03**	3.51	152	1.30	3.37
-20	-4	**272**	929	234	**1.41**	4.81	193	1.43	5.91
-10	14	**447**	1525	384	**1.85**	6.32	241	1.61	9.76
0	32	**687**	2343	591	**2.37**	8.07	290	1.82	15.15
10	50	**998**	3406	858	**2.99**	10.20	334	2.01	22.34

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**95**	325	82	**0.73**	2.50	130	1.25	2.26
-30	-22	**130**	445	112	**0.87**	2.98	150	1.29	3.10
-20	-4	**233**	795	200	**1.17**	4.00	199	1.46	5.57
-10	14	**385**	1313	331	**1.50**	5.11	257	1.68	9.28
0	32	**593**	2022	510	**1.87**	6.37	317	1.94	14.45
10	50	**863**	2945	742	**2.31**	7.87	374	2.19	21.38

Model
FRK11G Configuration 2

Sales code:
106G5953

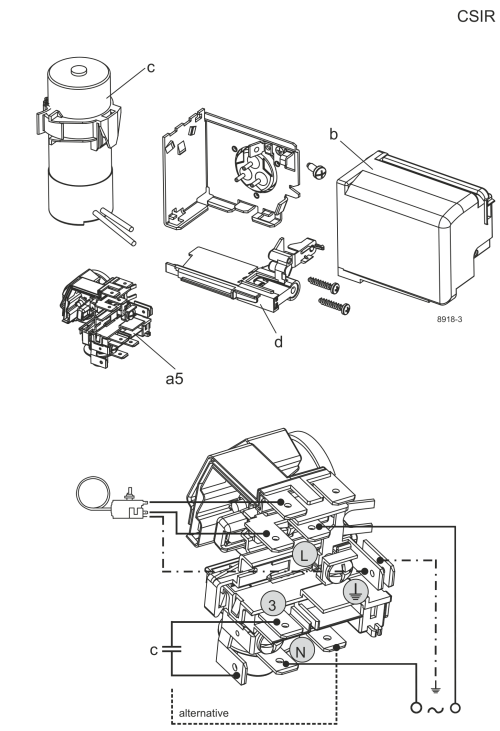
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**LBP+MBP**
Voltage range	**198-253 V**
Starting torque	**HST**
Approvals	**VDE, CB, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**13.4 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**12.3 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 3m/s

Electrical Accessories / Wiring Diagram



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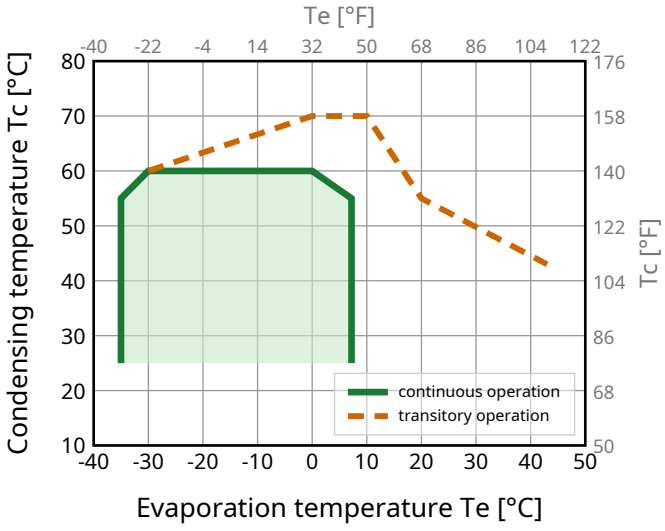
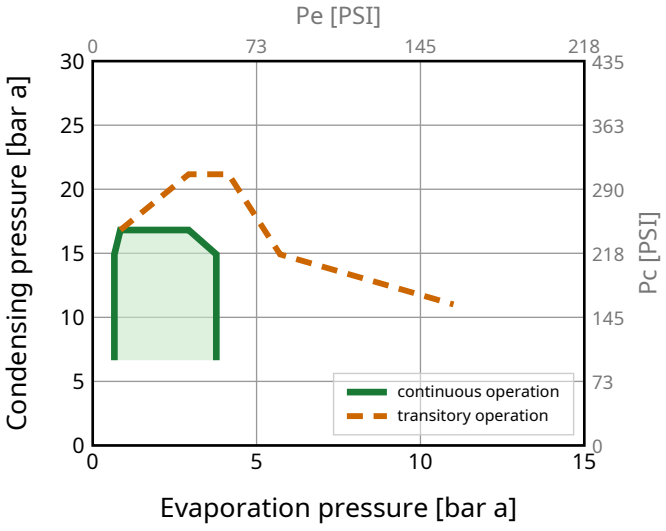
Components
a5 current relay (T0377/L6-S1) 117U7071
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

Alternative components
b, d 100x cover + clamp + screws (5VA) 103N2060
b, d cover + clamp + screws (5VA) in bag 103N1060

Operation Pressure Range





Model Sales code:

FRK11G Configuration 2 **106G5953**

Standard Conditions

R134a, 230 V/60 Hz, CSIR, fan 3m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**286**	976	246	**1.34**	4.59	213	1.38	5.55	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**589**	2011	507	**1.78**	6.08	331	1.80	12.83	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**1030**	3515	886	**2.34**	7.97	441	2.24	22.80	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**150**	510	129	**1.12**	3.81	134	1.16	3.27	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**515**	1757	443	**1.81**	6.17	285	1.62	12.01	**EN12900 MBP**
5 41	50 122	20 68	50 122	**886**	3022	762	**2.21**	7.53	401	2.08	22.21	**EN12900 HBP**

Performance Tables

R134a, 230 V/60 Hz, CSIR, fan 3m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**141**	481	121	**1.05**	3.58	135	1.16	3.04
-30	-22	**187**	638	161	**1.13**	3.86	166	1.24	4.03
-20	-4	**326**	1111	280	**1.44**	4.92	226	1.42	7.06
-10	14	**533**	1820	459	**1.87**	6.39	285	1.62	11.65
0	32	**819**	2793	704	**2.38**	8.11	344	1.85	18.06
7.2	45	**1077**	3675	926	**2.77**	9.46	388	2.03	24.00

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**113**	384	97	**0.83**	2.82	136	1.16	2.67
-30	-22	**155**	529	133	**0.92**	3.14	169	1.25	3.69
-20	-4	**278**	949	239	**1.18**	4.02	236	1.45	6.66
-10	14	**459**	1566	395	**1.49**	5.09	307	1.71	11.07
0	32	**706**	2409	607	**1.84**	6.26	384	2.01	17.21
7.2	45	**929**	3171	799	**2.09**	7.14	444	2.26	22.91

Model
FRK11G Configuration 3

Sales code:
106G5953

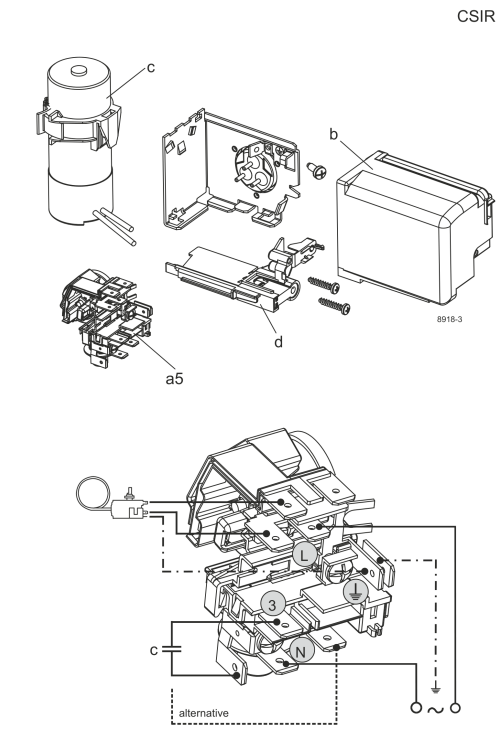
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R513A**
Application	**LBP+MBP+HBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, CB, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**13.4 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**12.3 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 3m/s

Electrical Accessories / Wiring Diagram



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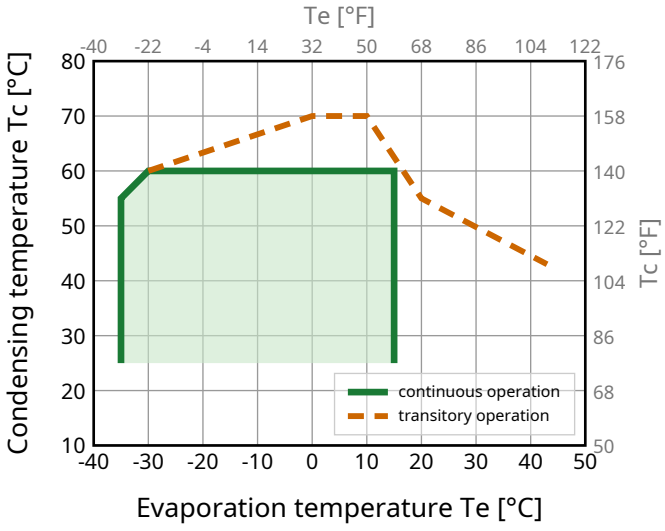
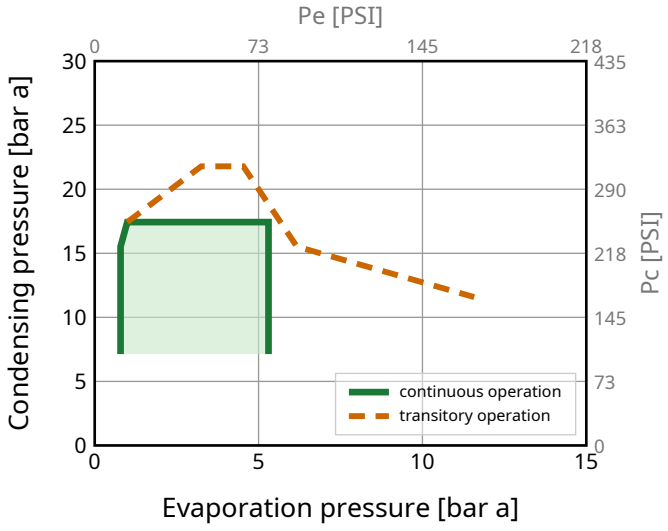
Components
a5 current relay (T0377/L6-S1) 117U7071
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

Alternative components
b, d 100x cover + clamp + screws (5VA) 103N2060
b, d cover + clamp + screws (5VA) in bag 103N1060

Operation Pressure Range





Model Sales code:

FRK11G Configuration 3 **106G5953**

Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**264**	899	227	**1.33**	4.53	199	1.45	5.77	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**518**	1766	445	**1.77**	6.03	293	1.83	12.90	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**888**	3031	764	**2.37**	8.10	374	2.19	22.57	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**137**	468	118	**0.95**	3.25	144	1.29	3.45	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**448**	1529	385	**1.74**	5.92	258	1.68	12.13	**EN12900 MBP**
5 41	50 122	20 68	50 122	**747**	2550	643	**2.16**	7.37	346	2.06	22.04	**EN12900 HBP**

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**132**	450	113	**0.91**	3.10	145	1.28	3.24
-30	-22	**172**	587	148	**1.04**	3.55	165	1.34	4.24
-20	-4	**292**	997	251	**1.39**	4.74	210	1.50	7.25
-10	14	**470**	1604	404	**1.82**	6.22	258	1.68	11.77
0	32	**711**	2427	612	**2.33**	7.94	306	1.89	18.02
10	50	**1021**	3483	878	**2.93**	9.98	349	2.08	26.29
15	59	**1203**	4105	1035	**3.27**	11.16	368	2.17	31.32

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**107**	365	92	**0.75**	2.56	143	1.27	2.95
-30	-22	**143**	487	123	**0.86**	2.94	165	1.34	3.94
-20	-4	**247**	842	212	**1.14**	3.88	217	1.52	6.86
-10	14	**398**	1360	343	**1.45**	4.95	275	1.75	11.18
0	32	**604**	2059	519	**1.80**	6.16	334	2.01	17.16
10	50	**867**	2959	746	**2.21**	7.53	393	2.28	25.13
15	59	**1023**	3490	880	**2.43**	8.30	420	2.41	29.99

Model
FRK11G Configuration 4

Sales code:
106G5953

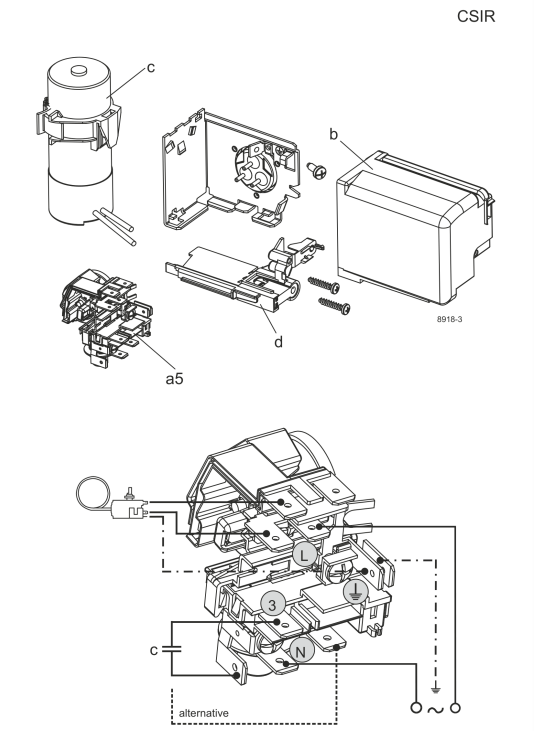
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R513A**
Application	**LBP+MBP**
Voltage range	**198-253 V**
Starting torque	**HST**
Approvals	**VDE, CB, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**13.4 A**
RLA (rated load amps / 1s/ U(N))	**1.8 A**
Cut in current (U(N))	**12.3 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 3m/s

Electrical Accessories / Wiring Diagram



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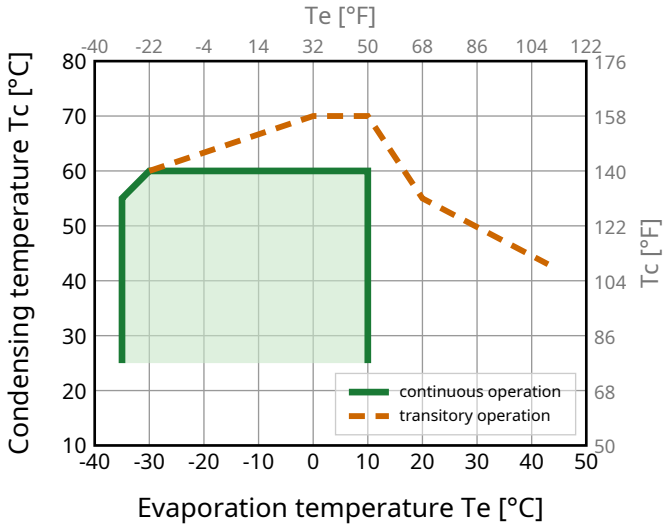
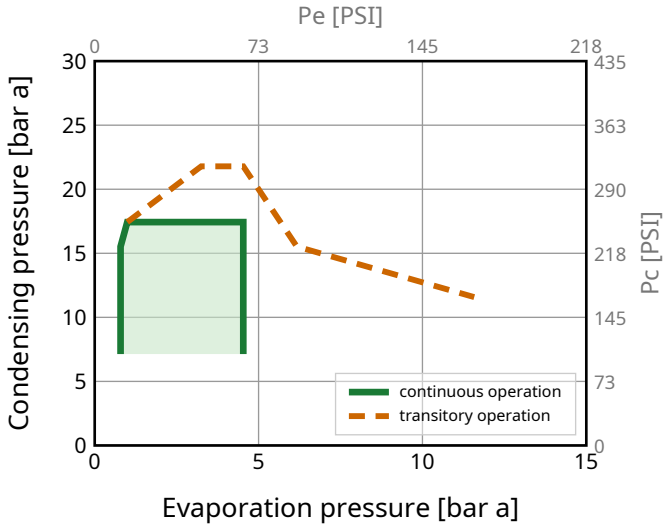
Components
a5 current relay (T0377/L6-S1) 117U7071
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

Alternative components
b, d 100x cover + clamp + screws (5VA) 103N2060
b, d cover + clamp + screws (5VA) in bag 103N1060

Operation Pressure Range





Model Sales code:

FRK11G Configuration 4 **106G5953**

Standard Conditions

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

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**315**	1074	271	**1.35**	4.61	233	1.44	6.89	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**617**	2106	531	**1.75**	5.98	352	1.88	15.39	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**1058**	3609	910	**2.28**	7.79	463	2.34	26.88	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**166**	566	143	**1.11**	3.80	149	1.19	4.17	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**535**	1825	460	**1.76**	6.01	304	1.70	14.48	**EN12900 MBP**
5 41	50 122	20 68	50 122	**891**	3039	766	**2.11**	7.20	422	2.16	26.26	**EN12900 HBP**

Performance Tables

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

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**158**	539	136	**1.05**	3.59	150	1.19	3.89
-30	-22	**206**	704	177	**1.13**	3.86	182	1.28	5.09
-20	-4	**349**	1192	300	**1.43**	4.89	244	1.48	8.67
-10	14	**561**	1915	483	**1.85**	6.30	304	1.70	14.05
0	32	**848**	2894	730	**2.33**	7.96	364	1.93	21.49
10	50	**1218**	4154	1047	**2.87**	9.78	425	2.18	31.36
15	59	**1435**	4897	1234	**3.14**	10.73	456	2.31	37.36

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**126**	431	109	**0.82**	2.80	154	1.20	3.48
-30	-22	**170**	580	146	**0.91**	3.09	188	1.30	4.69
-20	-4	**295**	1005	253	**1.15**	3.92	256	1.52	8.19
-10	14	**475**	1622	409	**1.45**	4.93	329	1.79	13.34
0	32	**719**	2454	619	**1.77**	6.04	407	2.10	20.45
10	50	**1033**	3524	888	**2.10**	7.18	491	2.46	29.92
15	59	**1218**	4155	1047	**2.27**	7.75	536	2.65	35.71