Model
FRK7.5G

Sales code:
106G5653

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**700g / 24.69oz**
Weight	**9.50 kg / 20.94lbs**
Displacement	**5.60 cm3 / 0.34cu.in**
Compressors on pallet	**100**

General – Configurations With FRK7.5G

–	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
FRK7.5G

Sales code:
106G5653

Compressor Design

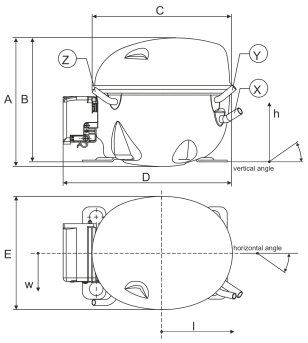
Oil type	**POE**	Winding resistance main	**10.7 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**17 Ohm**
Oil quantity	**240 cm3 / 8.12fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,535 cm3 / 51.90fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

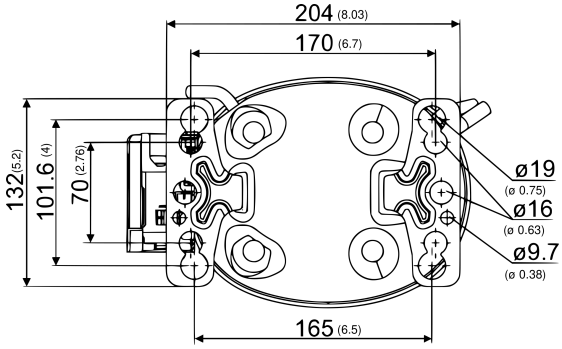
A Height	**182mm / 7.17in**
B Height	**175mm / 6.89in**
C Length shell	**198mm / 7.80in**
D Length w. cover	**238mm / 9.37in**
E Width	**160mm / 6.30in**

Find 3D Model here



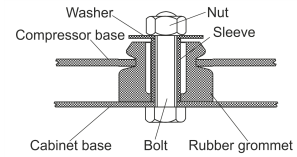
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59 / 4.69/2.87/2.32in	117/107/66 / 4.61/4.21/2.60in	-88/101/71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

Mounting Accessories

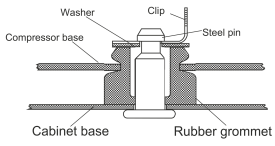


Dimensions in mm [in]

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
FRK7.5G Configuration 1

Sales code:
106G5653

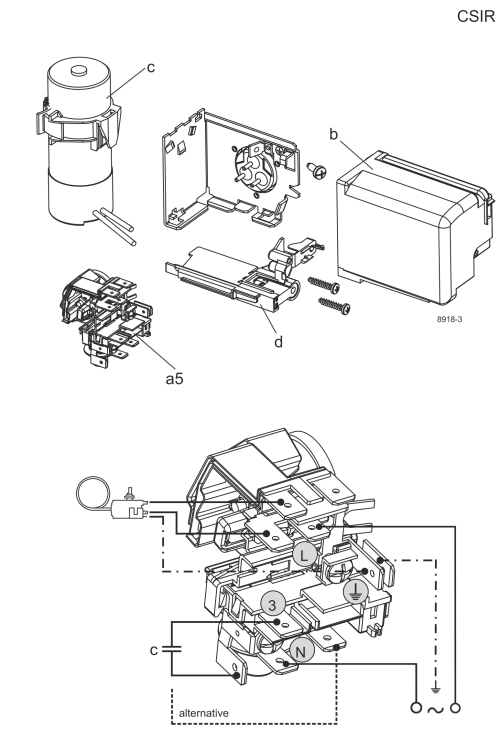
Configuration

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))	**11.4 A**
RLA (rated load amps / 1s/ U(N))	**1.6 A**
Cut in current (U(N))	**10.7 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

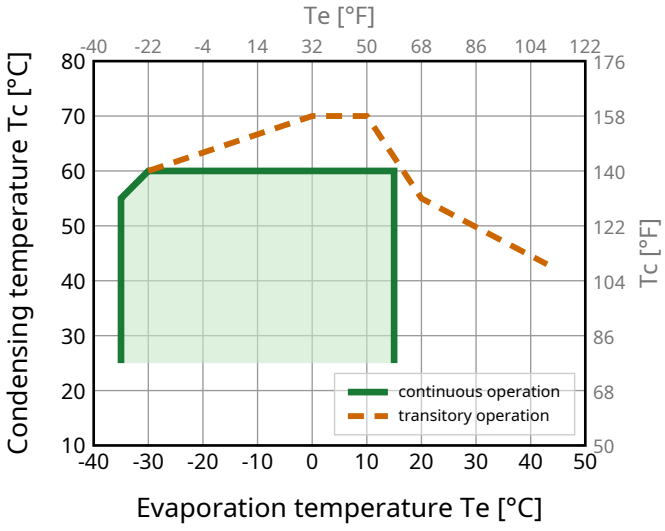


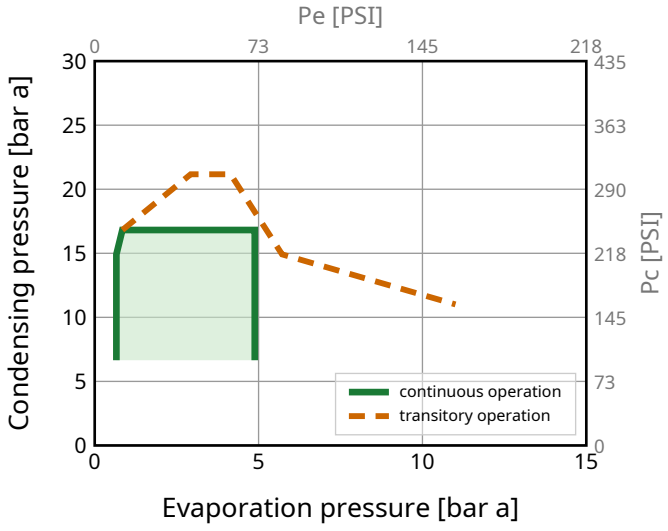
View full size

Components
a5 current relay (T0089/L6-S2) 117U7070
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:

FRK7.5G Configuration 1 **106G5653**

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	**152**	518	131	**1.28**	4.37	118	1.06	2.94	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**325**	1108	279	**1.86**	6.35	174	1.21	7.07	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**582**	1987	501	**2.65**	9.04	220	1.36	12.89	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**79**	270	68	**0.96**	3.29	82	0.99	1.73	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**282**	960	242	**1.87**	6.38	151	1.14	6.57	**EN12900 MBP**
5 41	50 122	20 68	50 122	**499**	1701	429	**2.46**	8.38	203	1.30	12.51	**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	**74**	254	64	**0.91**	3.10	82	0.99	1.60
-30	-22	**98**	334	84	**1.02**	3.50	96	1.02	2.12
-20	-4	**174**	593	149	**1.41**	4.81	123	1.07	3.77
-10	14	**292**	995	251	**1.94**	6.61	151	1.14	6.37
0	32	**456**	1557	393	**2.56**	8.74	178	1.22	10.07
10	50	**673**	2297	579	**3.27**	11.14	206	1.31	15.07
15	59	**803**	2739	690	**3.64**	12.42	220	1.36	18.14

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

-35	-31	**61**	208	52	**0.80**	2.72	77	0.98	1.45
-30	-22	**82**	280	71	**0.87**	2.96	95	1.01	1.96
-20	-4	**149**	507	128	**1.14**	3.90	130	1.09	3.55
-10	14	**251**	856	216	**1.53**	5.22	164	1.18	6.05
0	32	**394**	1345	339	**2.00**	6.81	197	1.28	9.61
10	50	**583**	1991	502	**2.53**	8.64	230	1.40	14.45
15	59	**697**	2377	599	**2.83**	9.64	247	1.46	17.44

Model Sales code:

FRK7.5G Configuration 2 **106G5653**

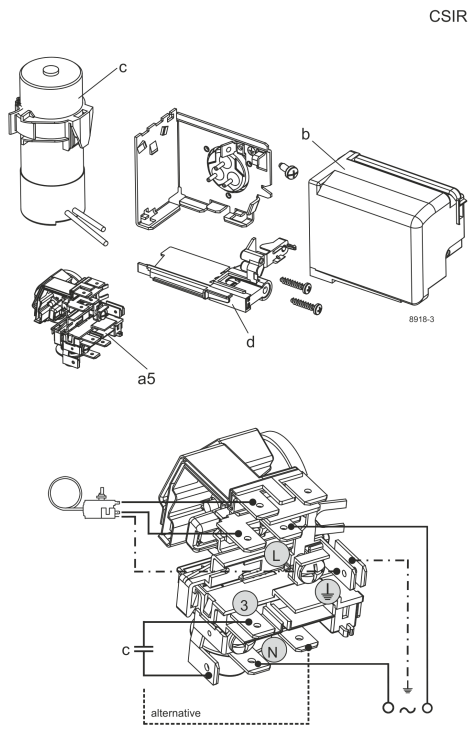
Configuration

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**
RLA (rated load amps / 1s/ U(N))	**-/-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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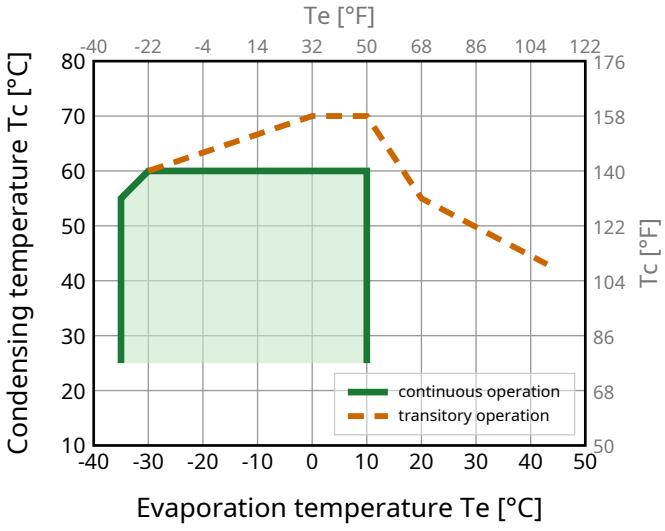
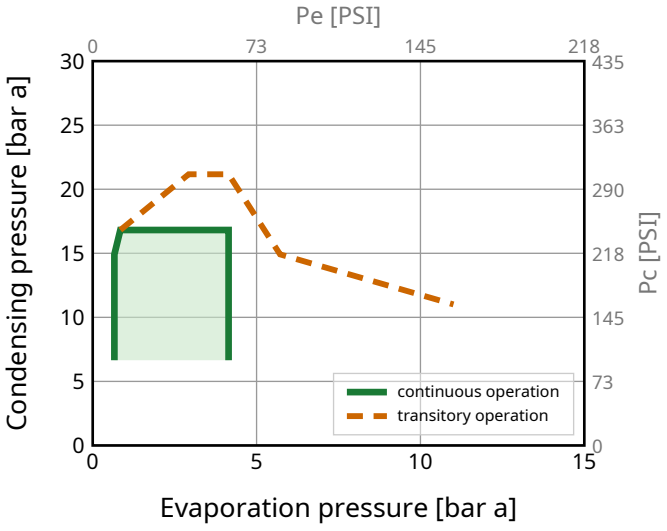
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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

Operation Pressure Range





Model

FRK7.5G Configuration 2

Sales code:

106G5653

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	**187**	638	161	**1.33**	4.56	140	1.18	3.63	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**384**	1309	330	**1.89**	6.44	204	1.35	8.36	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**681**	2323	585	**2.64**	9.02	258	1.53	15.07	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**96**	328	83	**1.05**	3.58	92	1.08	2.10	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**331**	1130	285	**1.86**	6.35	178	1.27	7.72	**EN12900 MBP**
5 41	50 122	20 68	50 122	**581**	1984	500	**2.41**	8.21	242	1.47	14.58	**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	**90**	305	77	**0.99**	3.37	90	1.08	1.93
-30	-22	**121**	412	104	**1.11**	3.78	109	1.11	2.60
-20	-4	**210**	716	180	**1.46**	4.96	144	1.19	4.55
-10	14	**343**	1170	295	**1.93**	6.57	178	1.27	7.49
0	32	**531**	1812	457	**2.49**	8.51	213	1.38	11.72
10	50	**785**	2677	675	**3.13**	10.68	251	1.50	17.56
15	59	**939**	3205	808	**3.46**	11.81	271	1.57	21.22

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

-35	-31	**70**	239	60	**0.76**	2.60	92	1.08	1.66
-30	-22	**100**	343	86	**0.89**	3.02	114	1.12	2.39
-20	-4	**182**	620	156	**1.18**	4.04	154	1.21	4.35
-10	14	**299**	1020	257	**1.56**	5.32	192	1.31	7.21
0	32	**462**	1577	397	**2.01**	6.86	230	1.43	11.27
10	50	**682**	2328	587	**2.53**	8.62	270	1.57	16.91
15	59	**817**	2788	703	**2.80**	9.57	291	1.65	20.45

Model
FRK7.5G Configuration 3

Sales code:
106G5653

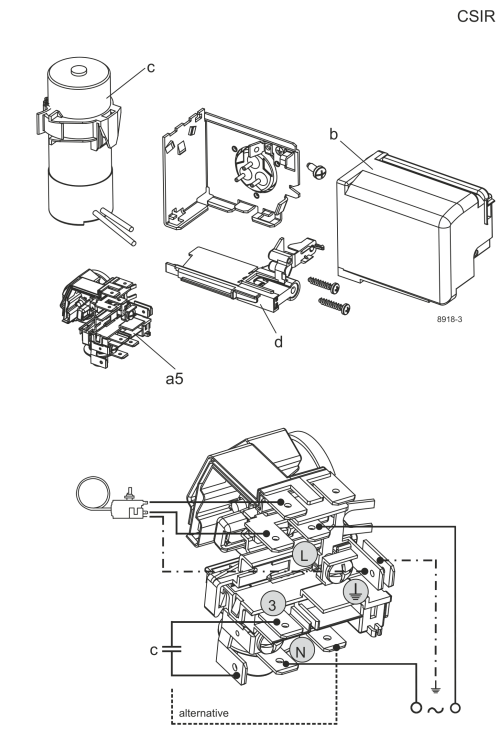
Configuration

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))	**11.4 A**
RLA (rated load amps / 1s/ U(N))	**1.6 A**
Cut in current (U(N))	**10.7 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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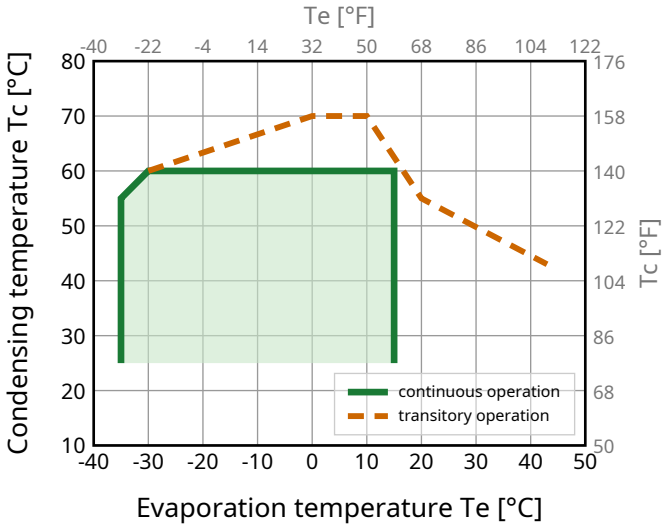
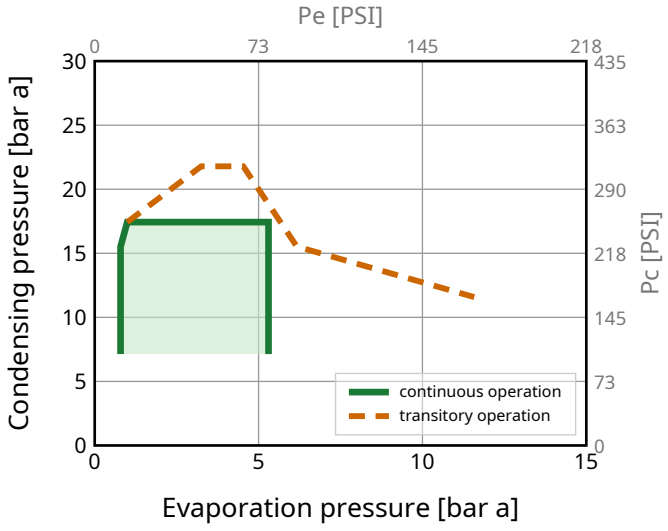
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK7.5G Configuration 3 **106G5653**

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	**167**	570	144	**1.31**	4.47	128	1.08	3.66	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**340**	1161	293	**1.85**	6.32	184	1.24	8.48	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**599**	2043	515	**2.61**	8.91	229	1.40	15.22	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**88**	300	76	**1.00**	3.42	88	1.00	2.21	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**293**	999	252	**1.84**	6.27	159	1.17	7.92	**EN12900 MBP**
5 41	50 122	20 68	50 122	**502**	1713	432	**2.37**	8.09	212	1.33	14.80	**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	**83**	285	72	**0.95**	3.24	88	1.00	2.05
-30	-22	**108**	369	93	**1.05**	3.58	103	1.03	2.67
-20	-4	**187**	637	161	**1.41**	4.82	132	1.09	4.63
-10	14	**307**	1048	264	**1.93**	6.57	159	1.17	7.69
0	32	**473**	1615	407	**2.54**	8.67	186	1.25	11.99
10	50	**690**	2353	593	**3.22**	10.97	214	1.34	17.76
15	59	**818**	2790	703	**3.57**	12.17	229	1.39	21.29

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

-35	-31	**68**	234	59	**0.82**	2.81	83	0.99	1.89
-30	-22	**90**	308	78	**0.88**	2.99	103	1.03	2.49
-20	-4	**158**	537	135	**1.13**	3.85	140	1.11	4.38
-10	14	**260**	888	224	**1.50**	5.11	174	1.21	7.30
0	32	**402**	1372	346	**1.94**	6.63	207	1.32	11.43
10	50	**587**	2004	505	**2.44**	8.34	240	1.44	17.01
15	59	**697**	2379	600	**2.71**	9.24	257	1.50	20.45

Model
FRK7.5G Configuration 4

Sales code:
106G5653

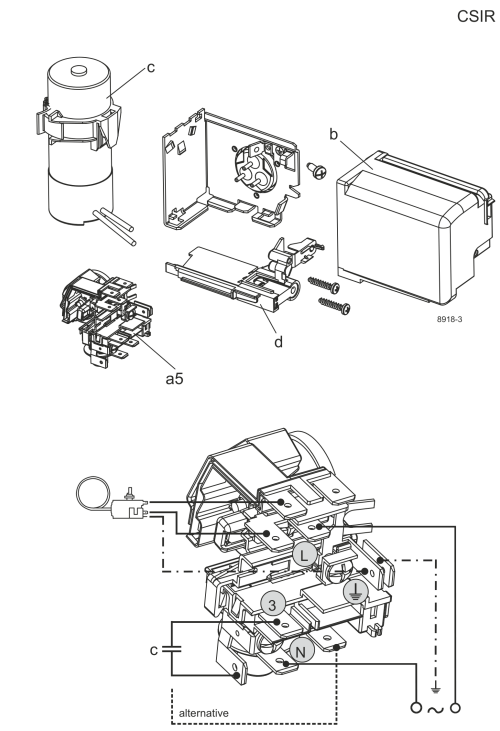
Configuration

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**
RLA (rated load amps / 1s/ U(N))	**-/-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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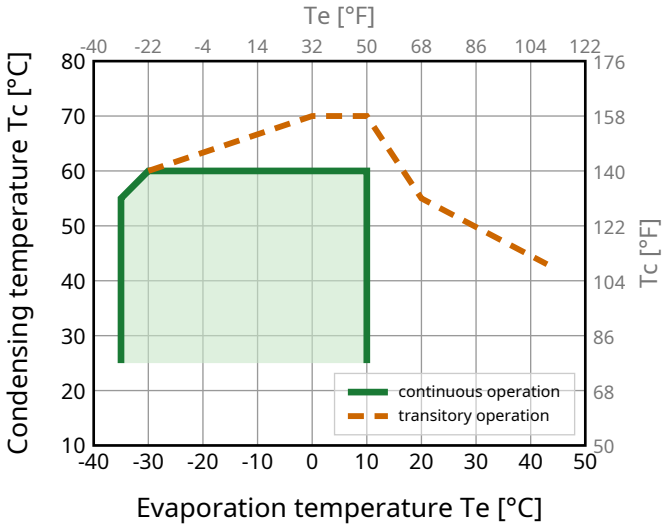
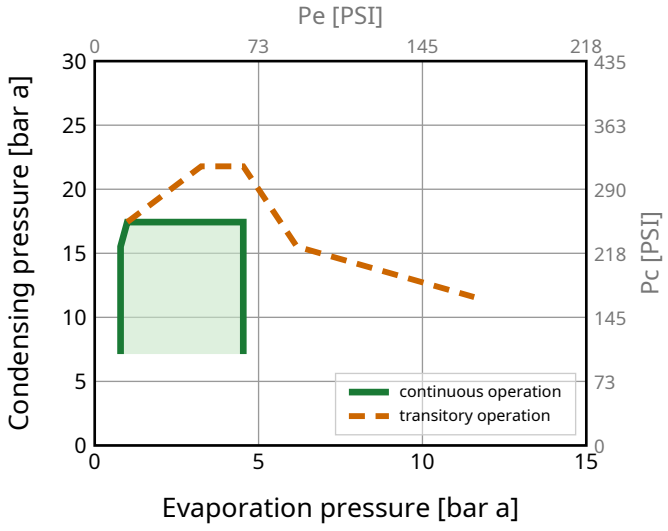
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK7.5G Configuration 4 **106G5653**

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	**206**	703	177	**1.36**	4.65	151	1.20	4.51	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**402**	1373	346	**1.87**	6.38	215	1.39	10.03	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**700**	2389	602	**2.61**	8.90	268	1.57	17.79	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**107**	365	92	**1.09**	3.72	98	1.09	2.69	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**344**	1175	296	**1.83**	6.23	189	1.30	9.32	**EN12900 MBP**
5 41	50 122	20 68	50 122	**586**	1998	504	**2.32**	7.92	252	1.51	17.27	**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	**101**	344	87	**1.03**	3.52	98	1.09	2.48
-30	-22	**133**	455	115	**1.13**	3.87	118	1.13	3.29
-20	-4	**225**	769	194	**1.46**	4.98	154	1.21	5.59
-10	14	**361**	1233	311	**1.92**	6.54	189	1.30	9.04
0	32	**551**	1880	474	**2.47**	8.42	223	1.41	13.96
10	50	**804**	2743	691	**3.08**	10.52	261	1.54	20.70
15	59	**957**	3265	823	**3.40**	11.61	281	1.61	24.91

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

-35	-31	**79**	269	68	**0.78**	2.68	101	1.09	2.17
-30	-22	**110**	376	95	**0.89**	3.04	124	1.14	3.04
-20	-4	**193**	657	166	**1.17**	3.98	165	1.24	5.36
-10	14	**310**	1057	267	**1.52**	5.19	204	1.35	8.70
0	32	**472**	1609	405	**1.95**	6.67	241	1.47	13.41
10	50	**687**	2344	591	**2.45**	8.35	281	1.61	19.91
15	59	**818**	2792	704	**2.71**	9.25	302	1.69	23.99