Single
Packs

Single Pack FRK7.5G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4768**

Position	Title	Code	Amount
1	Compressor FRK7.5G	106G5653	1
2	Starting relay (QLZ-4.4A, overload protector T0089/L6)	117U7070	1
3	Starting capacitor (80µF 220V, 6.3mm)	117U5001	1
4	KL accessories	103N1060	1
5	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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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

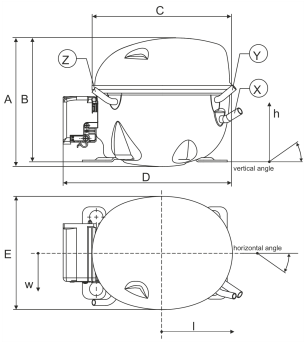
Oil type	**POE**	Winding resistance main	**10.7 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**17 Ohm**
Oil quantity	**240 cm3 / 8.12fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,535 cm3 / 51.90fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

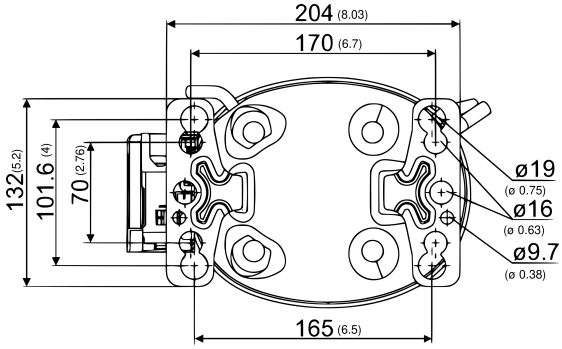
A Height	**182mm / 7.17in**
B Height	**175mm / 6.89in**
C Length shell	**198mm / 7.80in**
D Length w. cover	**238mm / 9.37in**
E Width	**160mm / 6.30in**

Find 3D Model here



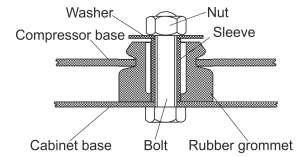
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59 / 4.69/2.87/2.32in	117/107/66 / 4.61/4.21/2.60in	-88/101/71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

Mounting Accessories

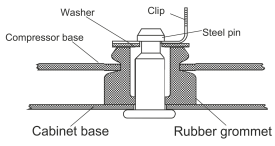


Dimensions in mm [in]

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

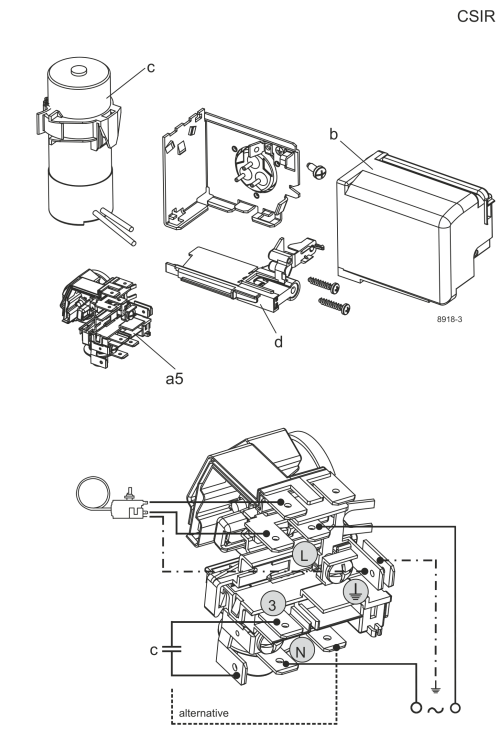
Configuration

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



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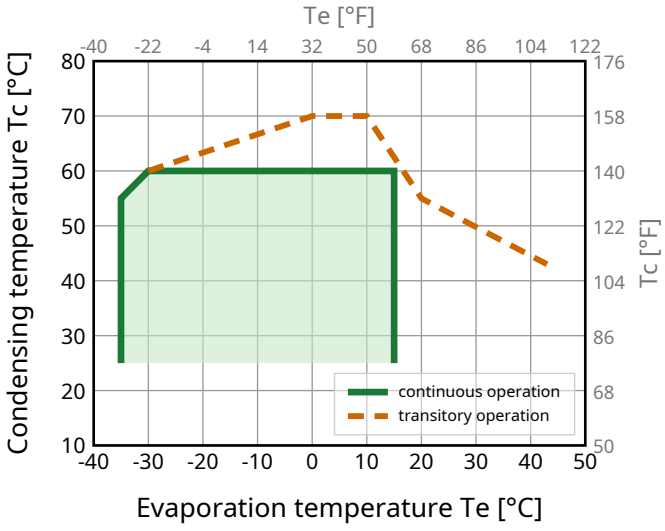
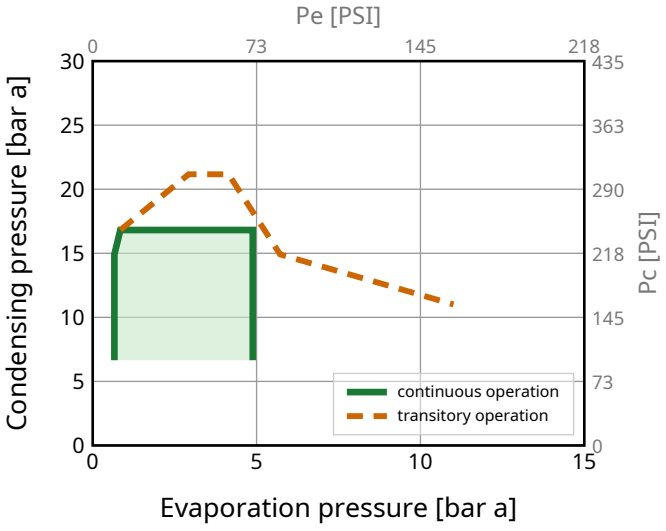
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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 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
FRK7.5G Configuration 2

Sales code:
106G5653

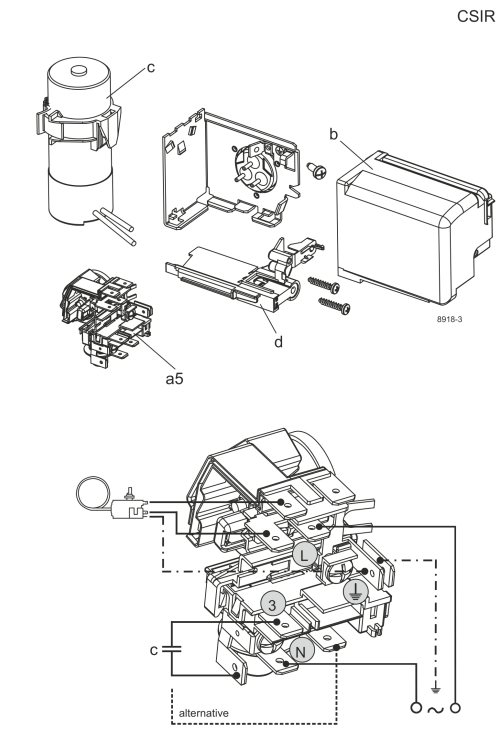
Configuration

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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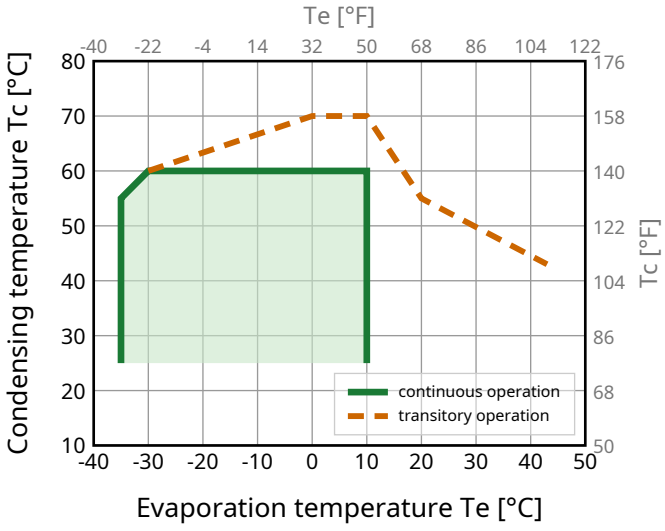
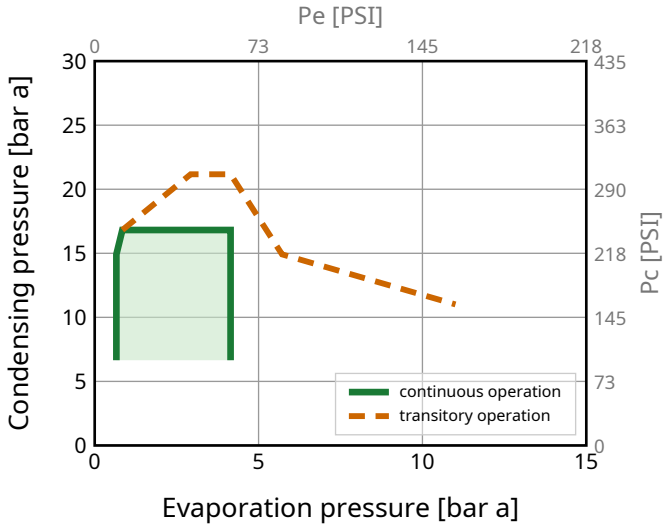
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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

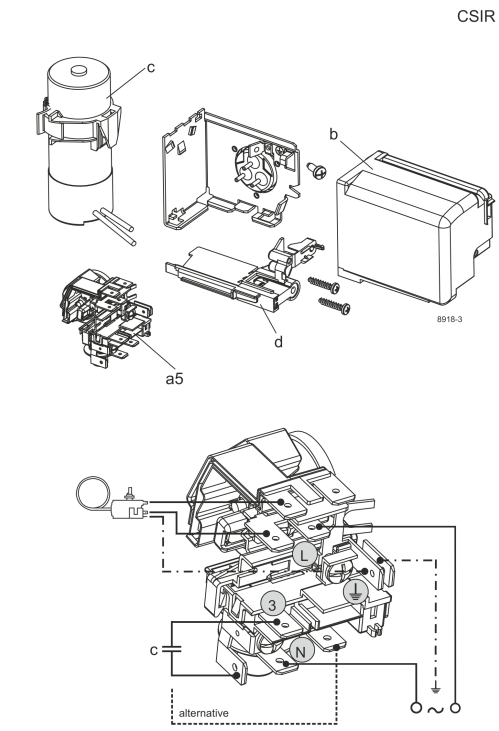
Configuration

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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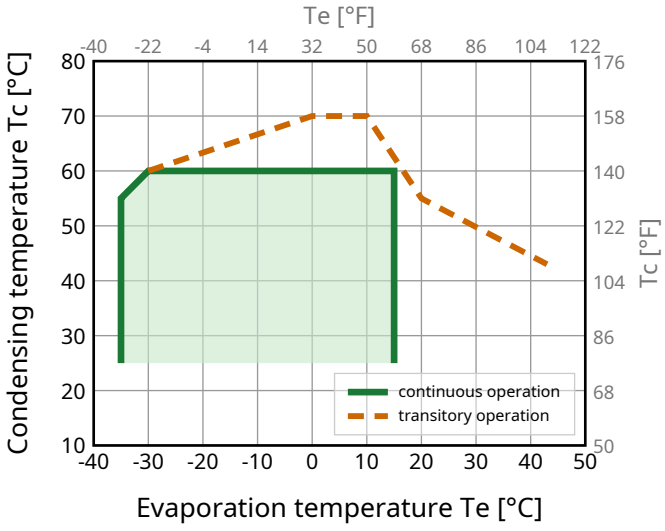
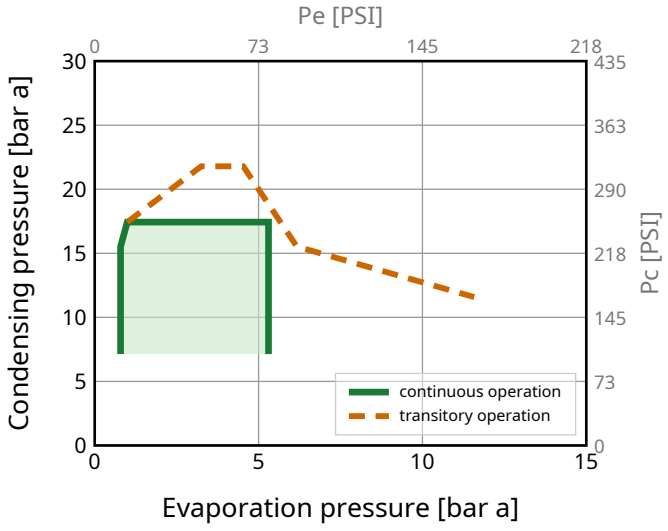
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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

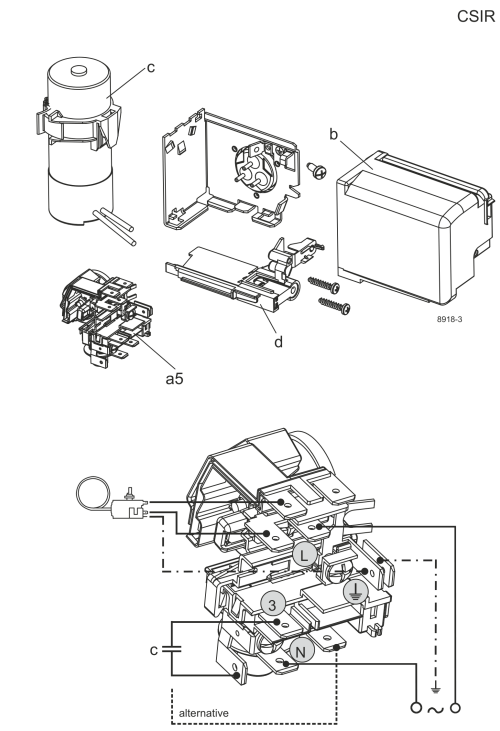
Configuration

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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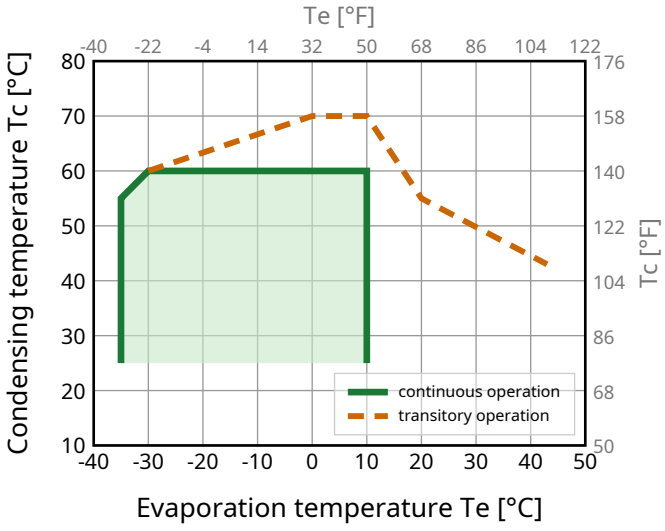
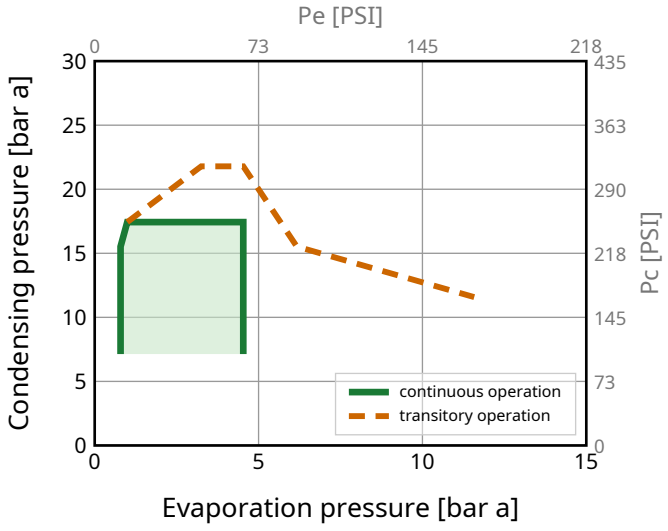
Components
a5 current relay (T0089/L6-S2) 117U7070
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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

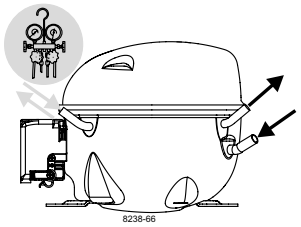
R513A, 230 V/60 Hz, CSIR, fan 3m/s

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



FRK Compressors

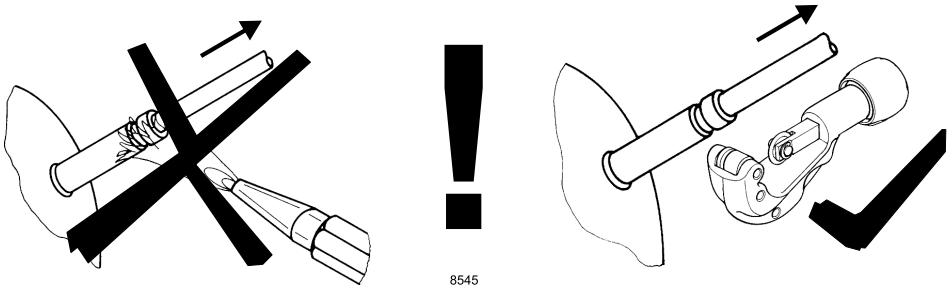
SECOP

Keep electrical equipment clear from oil, chemicals, and water

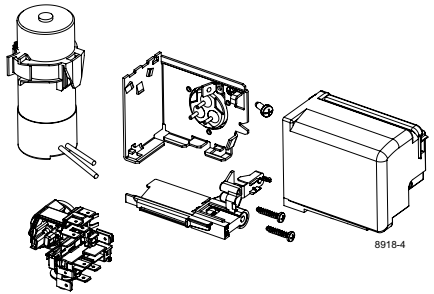
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

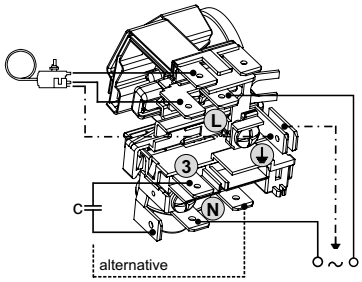
Service/Repair – R1234yf

(applies to all flammable refrigerants)



CSIR





Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**