Model
FRK5G

Sales code:
106G5463

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**700g / 24.69oz**
Weight	**8.90 kg / 19.62lbs**
Displacement	**4.00 cm3 / 0.24cu.in**
Compressors on pallet	**100**

General – Configurations With FRK5G

–	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

- Electrical equipment is included and pre-assembled to compressor.
- 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
FRK5G

Sales code:
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Compressor Design

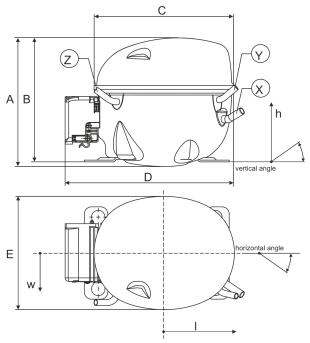
Oil type	**POE**	Winding resistance main	**13.1 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**25.3 Ohm**
Oil quantity	**240 cm3 / 8.12fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,560 cm3 / 52.75fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

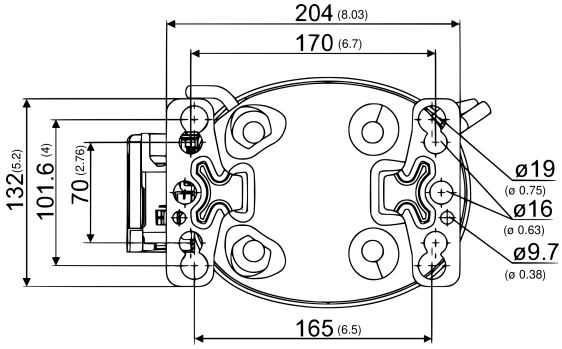
A Height	**182mm / 7.17in**
B Height	**175mm / 6.89in**
C Length shell	**198mm / 7.80in**
D Length w. cover	**238mm / 9.37in**
E Width	**160mm / 6.30in**

Find 3D Model here



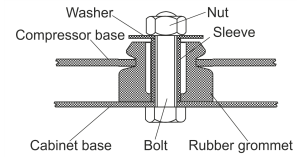
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 6.16–6.24 / 0.24–0.25in	øi 5.1–5.2 / 0.20–0.20in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59 / 4.69/2.87/2.32in	117/107/66 / 4.61/4.21/2.60in	-88/101/71 / -3.46/3.98/2.80in
Straight tube l. [mm]	13.5 / 0.53in	13.5 / 0.53in	13.5 / 0.53in

Mounting Accessories

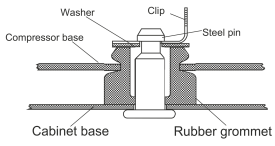


Dimensions in mm [in]

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
FRK5G Configuration 1

Sales code:
106G5463

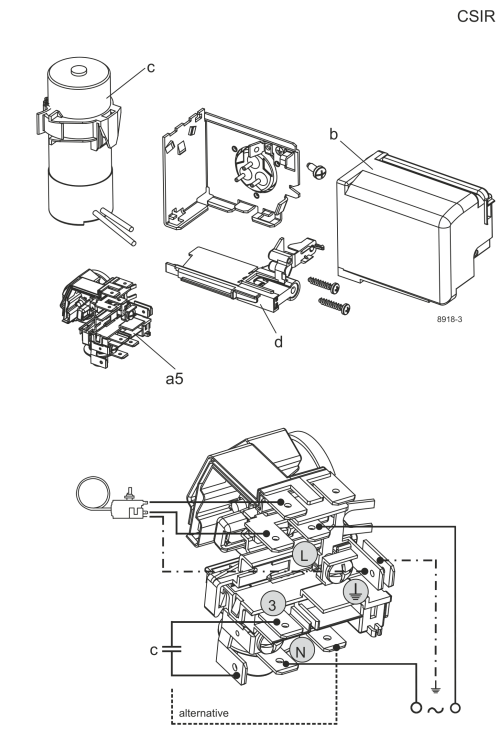
Configuration

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))	**10.5 A**
RLA (rated load amps / 1s/ U(N))	**1 A**
Cut in current (U(N))	**10.2 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
static

Electrical Accessories / Wiring Diagram

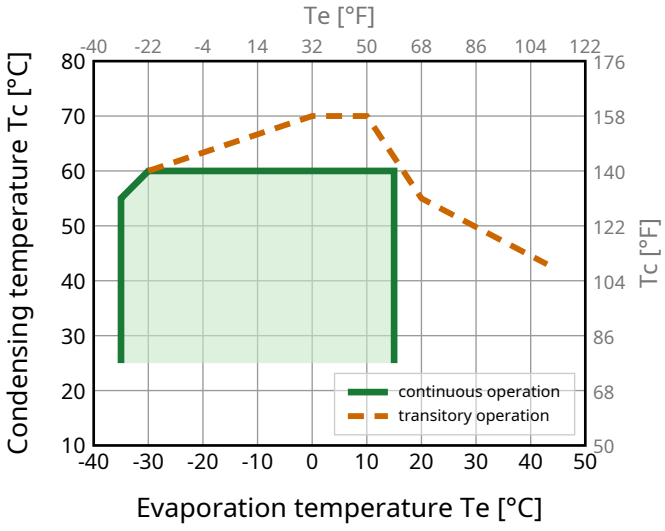


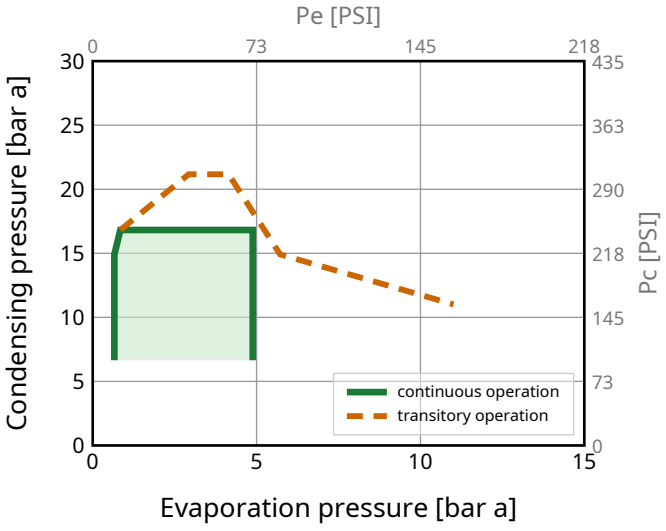
View full size

Components (already pre-assembled)
a5 current relay (T1189/L6-S3) 117U7073
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:

FRK5G Configuration 1 **106G5463**

Standard Conditions

R134a, 220 V/50 Hz, CSIR, static

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	**98**	336	85	**1.11**	3.79	89	0.91	1.91	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**214**	732	184	**1.71**	5.84	125	0.99	4.67	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**386**	1316	332	**2.50**	8.53	154	1.07	8.54	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**45**	152	38	**0.69**	2.34	65	0.86	0.98	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**186**	634	160	**1.69**	5.78	110	0.96	4.33	**EN12900 MBP**
5 41	50 122	20 68	50 122	**330**	1125	284	**2.29**	7.83	144	1.04	8.27	**EN12900 HBP**

Performance Tables

R134a, 220 V/50 Hz, CSIR, static

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	**42**	144	36	**0.65**	2.22	65	0.86	0.91
-30	-22	**60**	206	52	**0.82**	2.80	74	0.88	1.30
-20	-4	**114**	388	98	**1.24**	4.22	92	0.92	2.46
-10	14	**192**	657	166	**1.75**	5.98	110	0.96	4.20
0	32	**302**	1029	259	**2.36**	8.06	128	1.00	6.66
10	50	**446**	1520	383	**3.06**	10.43	146	1.05	9.97
15	59	**532**	1816	458	**3.44**	11.72	155	1.08	12.02

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

-35	-31	**34**	117	29	**0.56**	1.91	61	0.86	0.81
-30	-22	**51**	173	44	**0.69**	2.37	73	0.88	1.21
-20	-4	**97**	332	84	**1.01**	3.45	96	0.93	2.33
-10	14	**166**	565	143	**1.40**	4.77	118	0.98	4.00
0	32	**261**	890	224	**1.86**	6.35	140	1.03	6.36
10	50	**387**	1320	333	**2.40**	8.20	161	1.09	9.58
15	59	**463**	1580	398	**2.70**	9.22	171	1.13	11.59

Model
FRK5G Configuration 2

Sales code:
106G5463

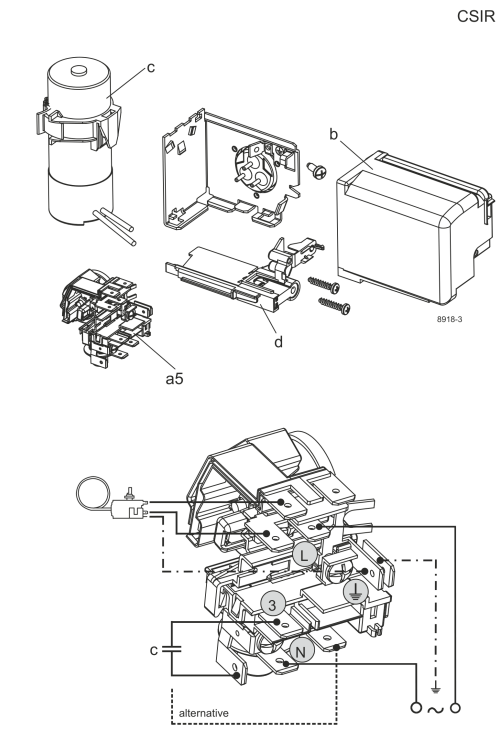
Configuration

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
static

Electrical Accessories / Wiring Diagram

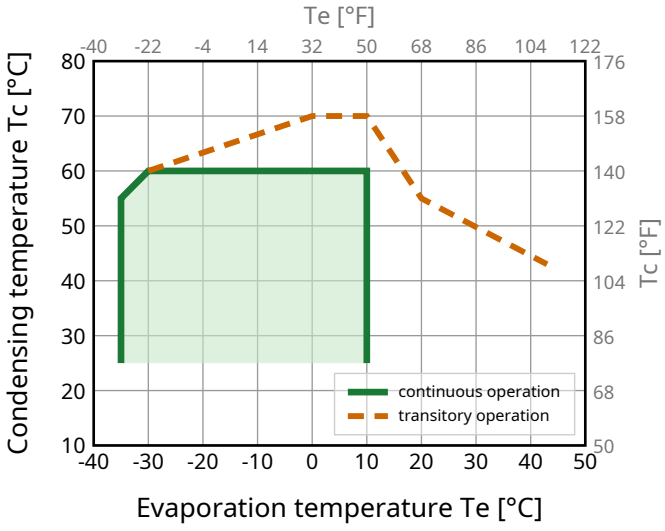


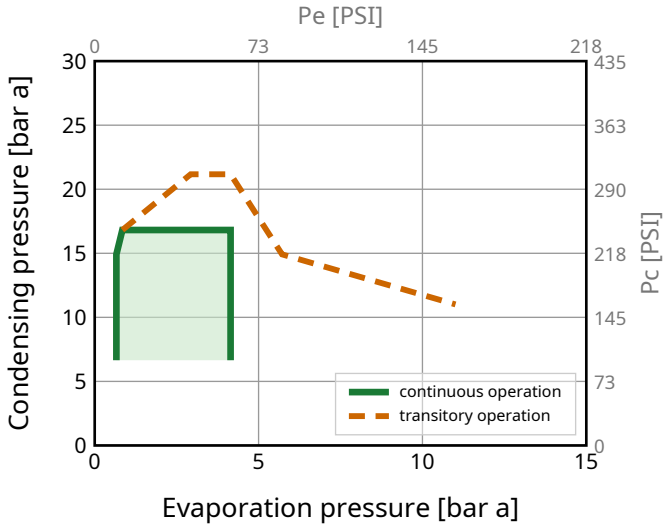
View full size

Components (already pre-assembled)
a5 current relay (T1189/L6-S3) 117U7073
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:

FRK5G Configuration 2 **106G5463**

Standard Conditions

R134a, 230 V/60 Hz, CSIR, static

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	**119**	407	103	**1.17**	3.98	102	1.10	2.31	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**253**	863	218	**1.76**	6.01	144	1.19	5.51	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**450**	1537	387	**2.50**	8.53	180	1.28	9.97	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**54**	183	46	**0.71**	2.41	76	1.06	1.17	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**218**	744	188	**1.71**	5.85	127	1.15	5.09	**EN12900 MBP**
5 41	50 122	20 68	50 122	**384**	1312	331	**2.27**	7.75	169	1.25	9.64	**EN12900 HBP**

Performance Tables

R134a, 230 V/60 Hz, CSIR, static

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	**49**	168	42	**0.66**	2.26	74	1.06	1.06
-30	-22	**73**	249	63	**0.86**	2.94	85	1.07	1.57
-20	-4	**136**	463	117	**1.29**	4.39	105	1.11	2.94
-10	14	**226**	771	194	**1.78**	6.06	127	1.15	4.93
0	32	**351**	1198	302	**2.33**	7.96	150	1.20	7.75
10	50	**519**	1771	446	**2.96**	10.10	175	1.27	11.62
15	59	**622**	2121	535	**3.29**	11.24	189	1.30	14.04

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

-35	-31	**38**	129	32	**0.51**	1.74	74	1.06	0.90
-30	-22	**60**	206	52	**0.70**	2.39	86	1.08	1.44
-20	-4	**118**	401	101	**1.06**	3.62	111	1.12	2.81
-10	14	**197**	671	169	**1.45**	4.94	136	1.17	4.74
0	32	**305**	1042	263	**1.89**	6.45	162	1.23	7.45
10	50	**452**	1541	388	**2.40**	8.17	189	1.30	11.19
15	59	**541**	1847	466	**2.67**	9.11	203	1.35	13.55

Model
FRK5G Configuration 3

Sales code:
106G5463

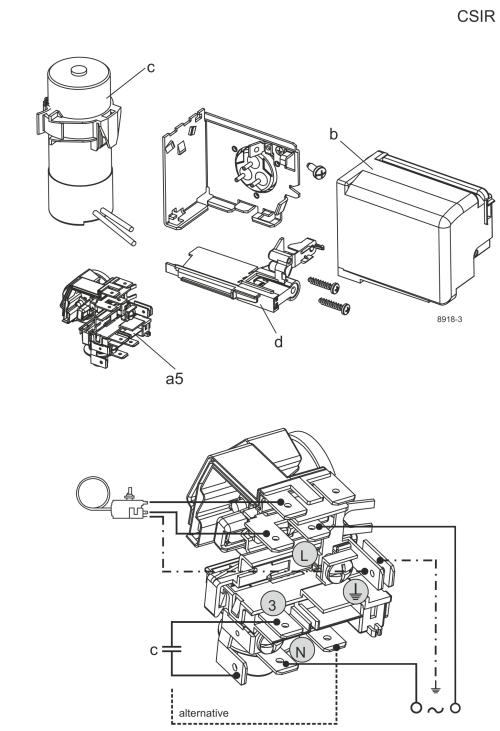
Configuration

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))	**10.5 A**
RLA (rated load amps / 1s/ U(N))	**1 A**
Cut in current (U(N))	**10.2 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
static

Electrical Accessories / Wiring Diagram



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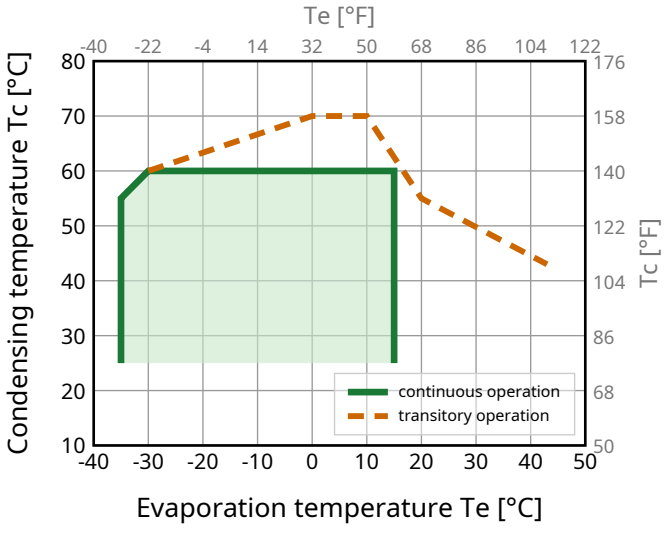
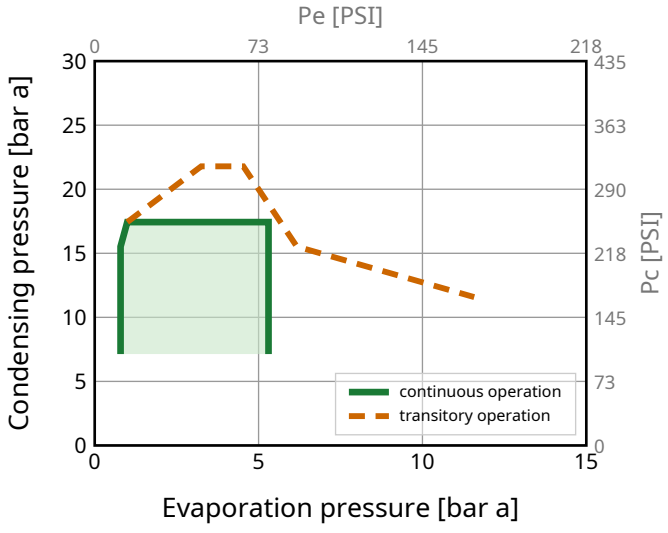
Components (already pre-assembled)
a5 current relay (T1189/L6-S3) 117U7073
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK5G Configuration 3 **106G5463**

Standard Conditions

R513A, 220 V/50 Hz, CSIR, static

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	**108**	370	93	**1.15**	3.91	95	0.93	2.37	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**225**	768	194	**1.71**	5.82	132	1.01	5.61	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**397**	1354	341	**2.47**	8.43	161	1.09	10.09	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**50**	169	43	**0.70**	2.39	71	0.88	1.25	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**193**	660	166	**1.67**	5.71	116	0.97	5.24	**EN12900 MBP**
5 41	50 122	20 68	50 122	**332**	1134	286	**2.22**	7.56	150	1.06	9.80	**EN12900 HBP**

Performance Tables

R513A, 220 V/50 Hz, CSIR, static

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	**47**	161	41	**0.67**	2.29	70	0.88	1.16
-30	-22	**67**	228	57	**0.84**	2.87	79	0.90	1.65
-20	-4	**122**	417	105	**1.26**	4.29	97	0.93	3.03
-10	14	**203**	692	174	**1.76**	5.99	116	0.97	5.08
0	32	**313**	1068	269	**2.34**	7.99	134	1.02	7.93
10	50	**457**	1558	393	**3.02**	10.29	151	1.06	11.76
15	59	**542**	1850	466	**3.39**	11.57	160	1.09	14.12

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

-35	-31	**39**	132	33	**0.57**	1.96	67	0.87	1.06
-30	-22	**56**	190	48	**0.70**	2.41	79	0.89	1.54
-20	-4	**103**	352	89	**1.01**	3.44	102	0.94	2.87
-10	14	**172**	587	148	**1.37**	4.69	125	0.99	4.82
0	32	**266**	908	229	**1.81**	6.19	147	1.05	7.57
10	50	**390**	1330	335	**2.33**	7.96	167	1.11	11.29
15	59	**464**	1583	399	**2.63**	8.97	176	1.15	13.60

Model Sales code:

FRK5G Configuration 4 **106G5463**

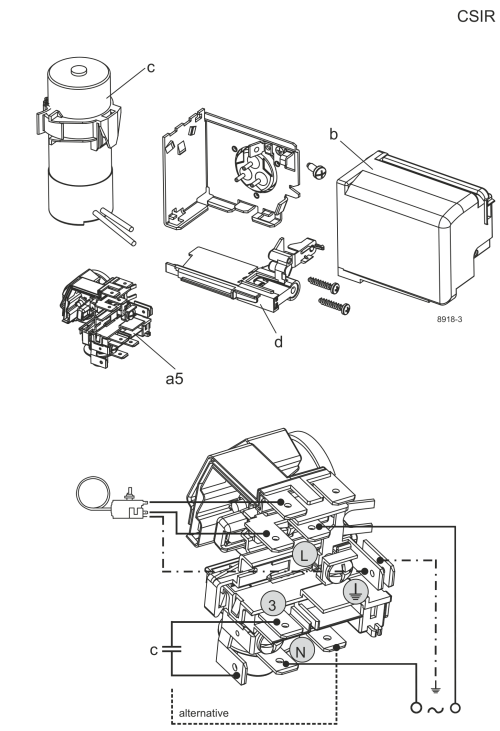
Configuration

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
static

Electrical Accessories / Wiring Diagram

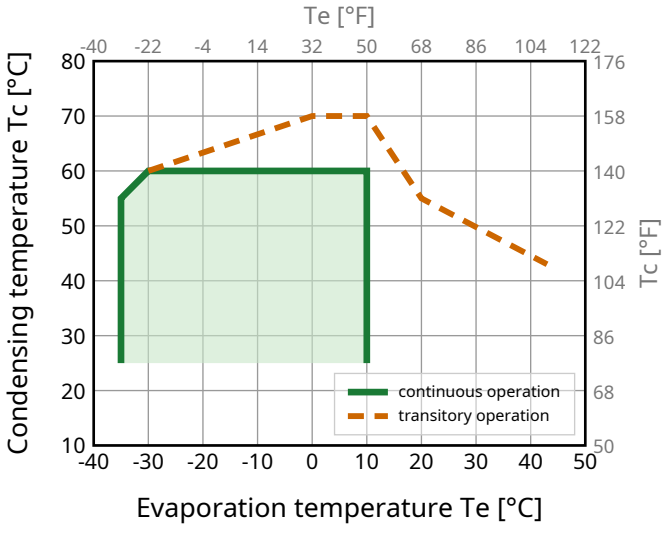


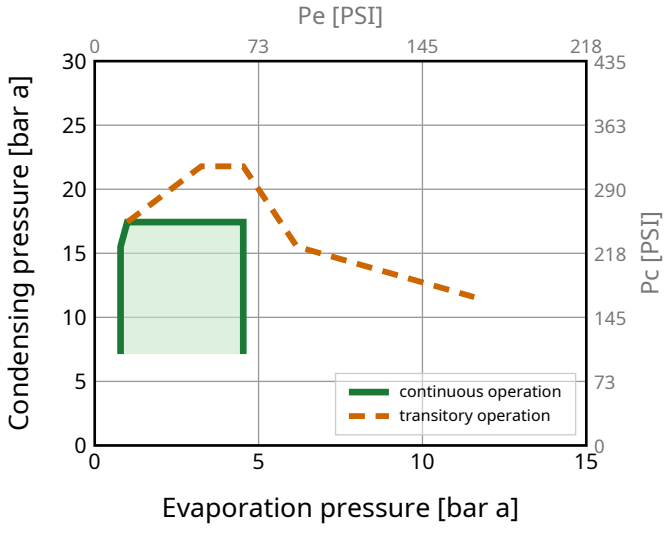
View full size

Components (already pre-assembled)
a5 current relay (T1189/L6-S3) 117U7073
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:

FRK5G Configuration 4 **106G5463**

Standard Conditions

R513A, 230 V/60 Hz, CSIR, static

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	**131**	448	113	**1.21**	4.11	109	1.11	2.88	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**266**	906	228	**1.76**	6.01	151	1.20	6.62	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**464**	1581	399	**2.47**	8.43	188	1.30	11.78	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**60**	203	51	**0.72**	2.45	83	1.07	1.50	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**227**	774	195	**1.70**	5.81	133	1.16	6.14	**EN12900 MBP**
5 41	50 122	20 68	50 122	**388**	1322	333	**2.20**	7.49	176	1.27	11.43	**EN12900 HBP**

Performance Tables

R513A, 230 V/60 Hz, CSIR, static

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	**56**	190	48	**0.68**	2.32	82	1.07	1.37
-30	-22	**80**	275	69	**0.88**	3.02	91	1.08	1.99
-20	-4	**146**	498	125	**1.31**	4.47	111	1.12	3.62
-10	14	**238**	812	205	**1.79**	6.09	133	1.16	5.96
0	32	**364**	1243	313	**2.32**	7.92	157	1.22	9.23
10	50	**532**	1815	458	**2.92**	9.97	182	1.28	13.70
15	59	**634**	2162	545	**3.25**	11.08	195	1.32	16.50

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

-35	-31	**43**	146	37	**0.52**	1.79	82	1.07	1.18
-30	-22	**66**	226	57	**0.71**	2.43	93	1.09	1.83
-20	-4	**125**	425	107	**1.06**	3.62	118	1.13	3.46
-10	14	**204**	696	176	**1.43**	4.88	143	1.18	5.73
0	32	**312**	1064	268	**1.85**	6.30	169	1.25	8.87
10	50	**455**	1553	391	**2.32**	7.93	196	1.33	13.18
15	59	**542**	1851	466	**2.59**	8.83	210	1.37	15.90