Single
Packs

Single Pack FRK6G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4767**

Position	Title	Code	Amount
1	Compressor FRK6G	106G5553	1
2	Starting relay (QLZ-4.6A, overload protector T1189/L6)	117U7073	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
FRK6G

Sales code:
106G5553

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**700g / 24.69oz**
Weight	**9.30 kg / 20.50lbs**
Displacement	**4.80 cm3 / 0.29cu.in**
Compressors on pallet	**100**

General – Configurations With FRK6G

–	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
FRK6G

Sales code:
106G5553

Compressor Design

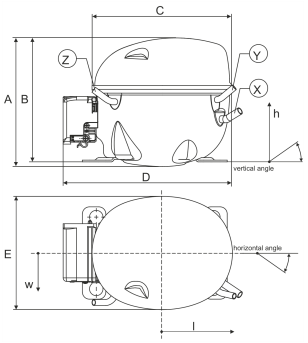
Oil type	**POE**	Winding resistance main	**13.1 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**25.3 Ohm**
Oil quantity	**240 cm3 / 8.12fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**1,545 cm3 / 52.24fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**external**		

Compressor Dimensions

Housing

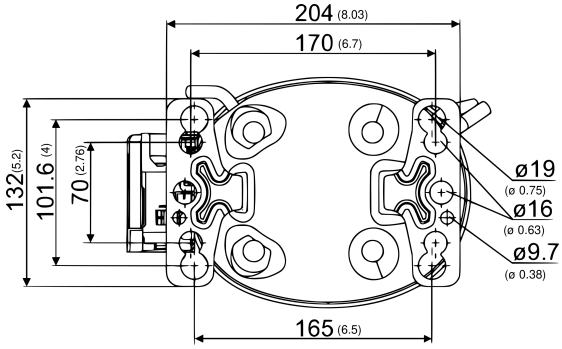
A Height	**182mm / 7.17in**
B Height	**175mm / 6.89in**
C Length shell	**198mm / 7.80in**
D Length w. cover	**238mm / 9.37in**
E Width	**160mm / 6.30in**

Find 3D Model here



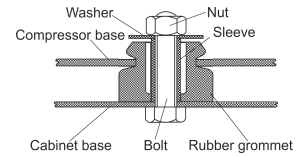
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59 / 4.69/2.87/2.32in	117/107/66 / 4.61/4.21/2.60in	-88/101/71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

Mounting Accessories

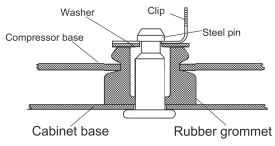


Dimensions in mm [in]

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
FRK6G Configuration 1

Sales code:
106G5553

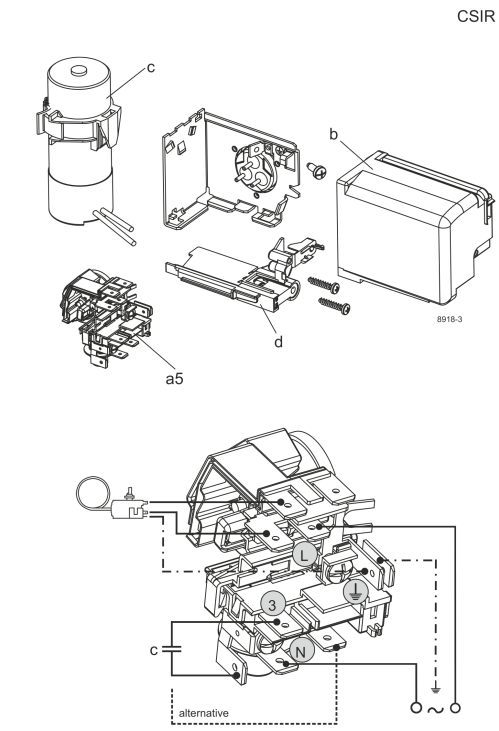
Configuration

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
fan 3m/s

Electrical Accessories / Wiring Diagram



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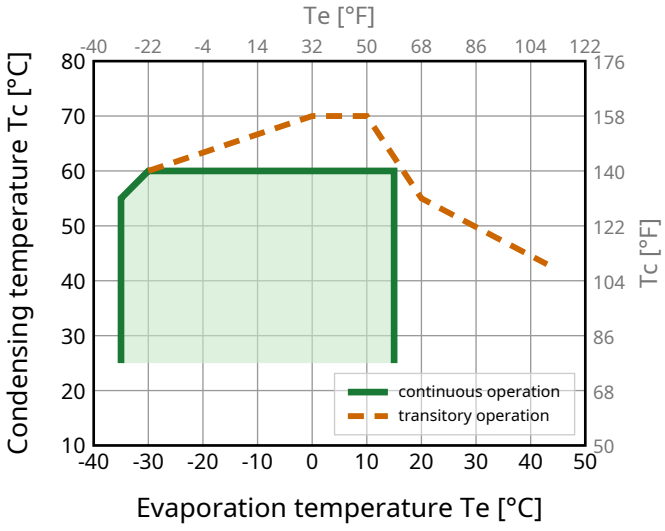
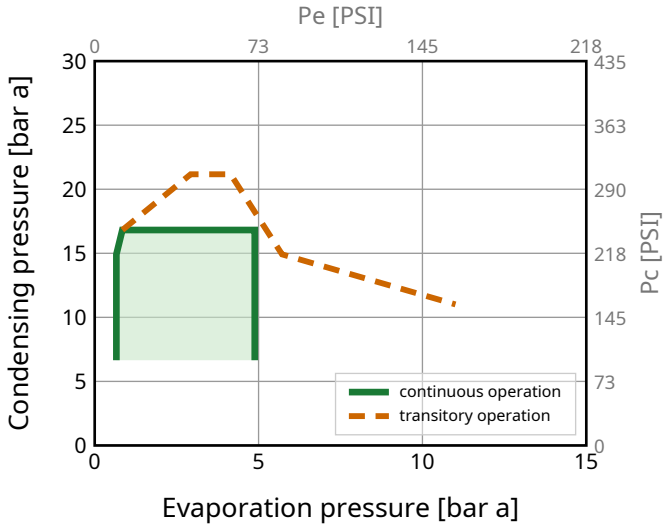
Components
a5 current relay (T1189/L6-S3) 117U7073
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK6G Configuration 1 **106G5553**

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	**126**	429	108	**1.23**	4.18	103	0.94	2.44	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**271**	924	233	**1.82**	6.21	149	1.06	5.90	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**486**	1660	418	**2.63**	8.97	185	1.18	10.77	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**62**	213	54	**0.85**	2.92	73	0.88	1.37	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**235**	801	202	**1.82**	6.20	129	1.00	5.48	**EN12900 MBP**
5 41	50 122	20 68	50 122	**416**	1420	358	**2.42**	8.26	172	1.13	10.44	**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	**59**	200	50	**0.81**	2.76	72	0.88	1.26
-30	-22	**80**	273	69	**0.95**	3.26	84	0.90	1.72
-20	-4	**145**	494	124	**1.36**	4.63	107	0.95	3.14
-10	14	**243**	830	209	**1.88**	6.42	129	1.00	5.31
0	32	**381**	1299	327	**2.51**	8.55	152	1.07	8.40
10	50	**562**	1918	483	**3.23**	11.00	174	1.14	12.58
15	59	**671**	2289	577	**3.62**	12.34	186	1.18	15.16

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

-35	-31	**47**	162	41	**0.70**	2.38	68	0.87	1.12
-30	-22	**67**	228	57	**0.80**	2.74	83	0.90	1.59
-20	-4	**124**	422	106	**1.10**	3.76	112	0.96	2.96
-10	14	**209**	714	180	**1.49**	5.09	140	1.03	5.05
0	32	**329**	1122	283	**1.97**	6.70	167	1.11	8.02
10	50	**488**	1664	419	**2.52**	8.62	193	1.21	12.08
15	59	**583**	1990	501	**2.84**	9.68	206	1.26	14.60

Model
FRK6G Configuration 2

Sales code:
106G5553

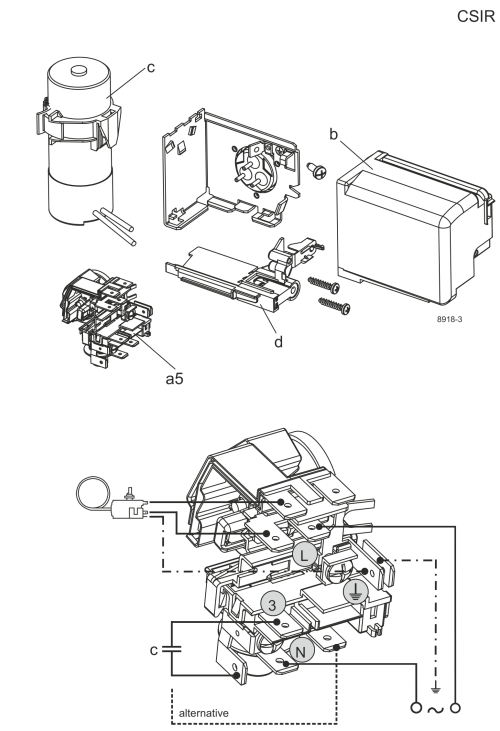
Configuration

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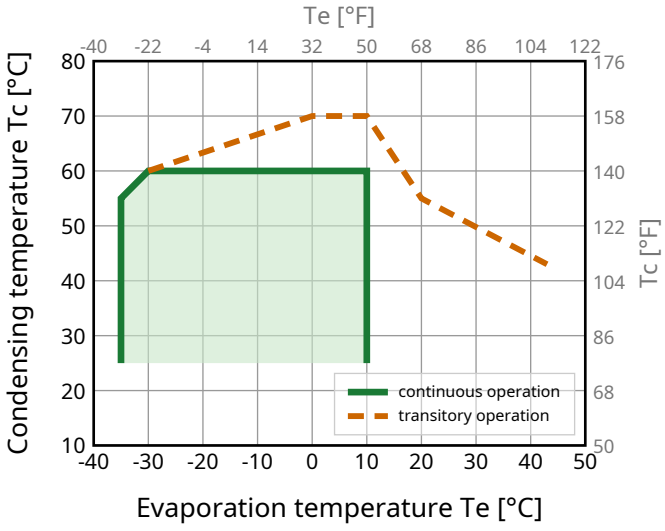
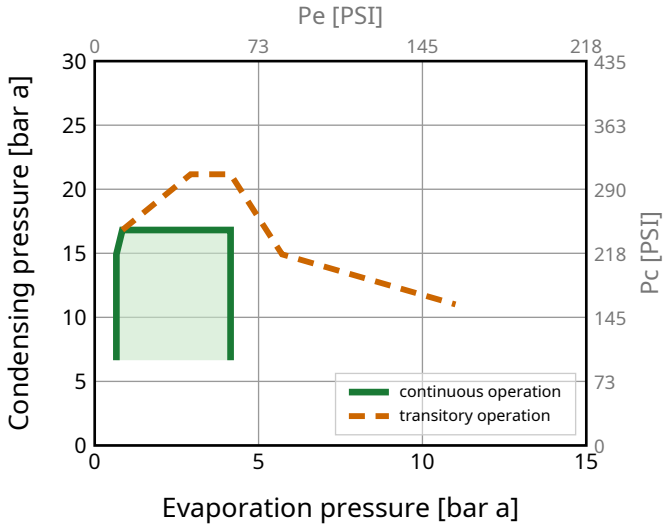
Components
a5 current relay (T1189/L6-S3) 117U7073
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK6G Configuration 2 **106G5553**

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	**150**	511	129	**1.27**	4.32	118	1.13	2.91	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**320**	1091	275	**1.86**	6.34	172	1.26	6.96	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**569**	1941	489	**2.62**	8.95	217	1.39	12.59	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**79**	271	68	**0.90**	3.08	88	1.08	1.73	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**274**	934	235	**1.82**	6.22	150	1.20	6.39	**EN12900 MBP**
5 41	50 122	20 68	50 122	**487**	1660	418	**2.38**	8.12	204	1.35	12.21	**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	**74**	252	63	**0.86**	2.92	86	1.08	1.59
-30	-22	**96**	327	82	**1.00**	3.40	96	1.09	2.07
-20	-4	**169**	576	145	**1.39**	4.75	121	1.14	3.66
-10	14	**284**	968	244	**1.89**	6.44	150	1.20	6.19
0	32	**444**	1516	382	**2.45**	8.37	181	1.28	9.80
10	50	**655**	2235	563	**3.10**	10.59	211	1.37	14.66
15	59	**780**	2662	671	**3.47**	11.84	225	1.42	17.63

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

-35	-31	**59**	202	51	**0.69**	2.34	86	1.08	1.41
-30	-22	**81**	275	69	**0.81**	2.77	99	1.10	1.92
-20	-4	**147**	502	126	**1.14**	3.89	129	1.15	3.52
-10	14	**248**	845	213	**1.53**	5.22	162	1.23	5.97
0	32	**387**	1320	333	**1.99**	6.77	195	1.32	9.44
10	50	**568**	1940	489	**2.52**	8.59	226	1.42	14.09
15	59	**676**	2308	582	**2.82**	9.64	240	1.48	16.93

Model
FRK6G Configuration 3

Sales code:
106G5553

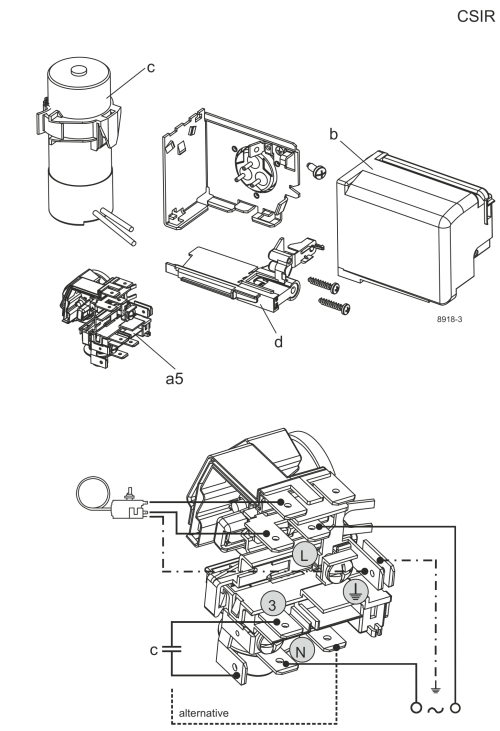
Configuration

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
fan 3m/s

Electrical Accessories / Wiring Diagram



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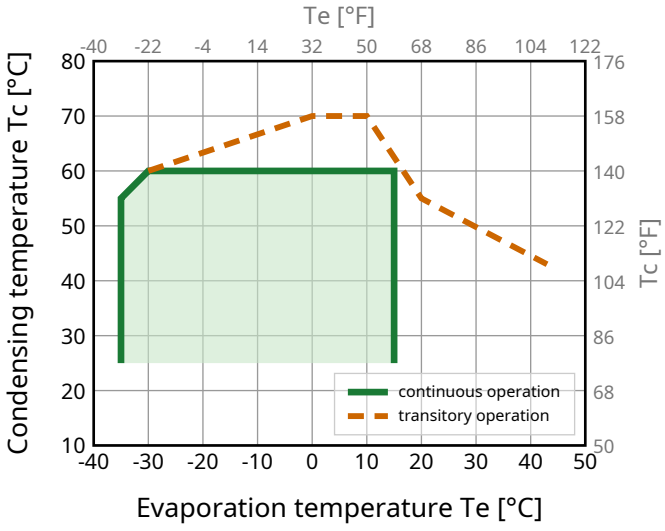
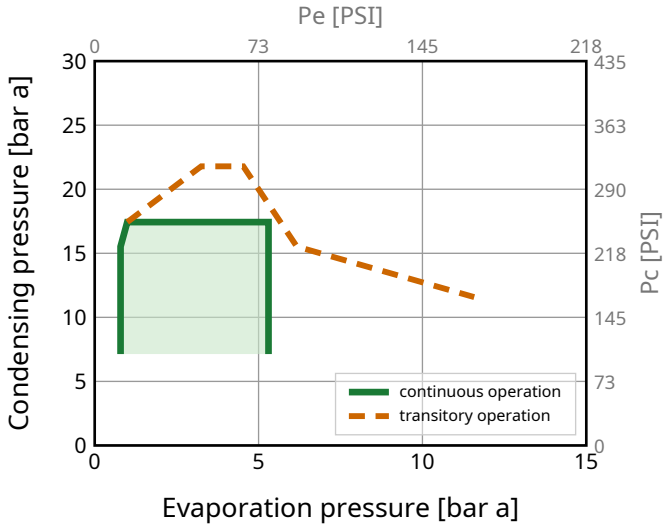
Components
a5 current relay (T1189/L6-S3) 117U7073
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK6G Configuration 3 **106G5553**

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	**139**	473	119	**1.26**	4.29	110	0.96	3.03	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**284**	969	244	**1.81**	6.16	157	1.08	7.08	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**500**	1707	430	**2.60**	8.87	193	1.20	12.71	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**69**	237	60	**0.89**	3.03	78	0.90	1.75	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**244**	833	210	**1.79**	6.09	137	1.02	6.61	**EN12900 MBP**
5 41	50 122	20 68	50 122	**419**	1430	360	**2.34**	7.97	179	1.16	12.36	**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	**66**	224	57	**0.85**	2.89	78	0.89	1.62
-30	-22	**88**	301	76	**0.98**	3.35	90	0.92	2.18
-20	-4	**156**	531	134	**1.37**	4.67	114	0.97	3.86
-10	14	**256**	874	220	**1.87**	6.39	137	1.02	6.41
0	32	**395**	1347	340	**2.48**	8.47	159	1.09	10.00
10	50	**576**	1965	495	**3.18**	10.86	181	1.16	14.83
15	59	**684**	2333	588	**3.57**	12.17	192	1.20	17.80

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

-35	-31	**53**	182	46	**0.72**	2.47	74	0.88	1.47
-30	-22	**73**	249	63	**0.82**	2.78	90	0.92	2.02
-20	-4	**131**	447	113	**1.09**	3.72	120	0.98	3.64
-10	14	**217**	741	187	**1.46**	4.97	149	1.06	6.09
0	32	**336**	1145	289	**1.91**	6.52	176	1.14	9.54
10	50	**491**	1676	422	**2.45**	8.36	200	1.24	14.23
15	59	**584**	1993	502	**2.75**	9.39	212	1.28	17.12

Model
FRK6G Configuration 4

Sales code:
106G5553

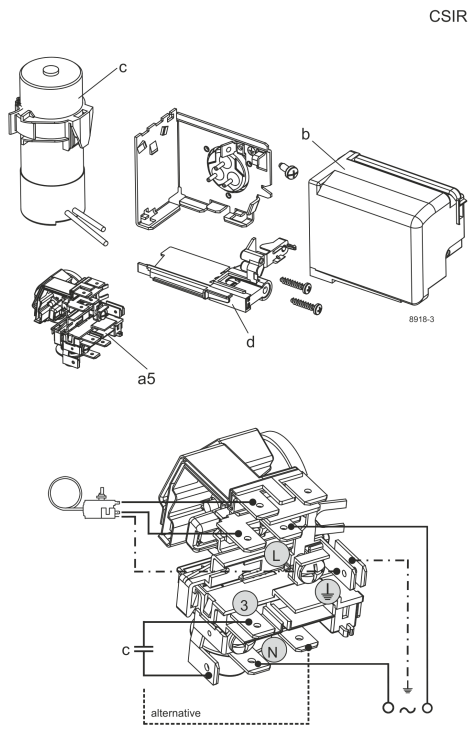
Configuration

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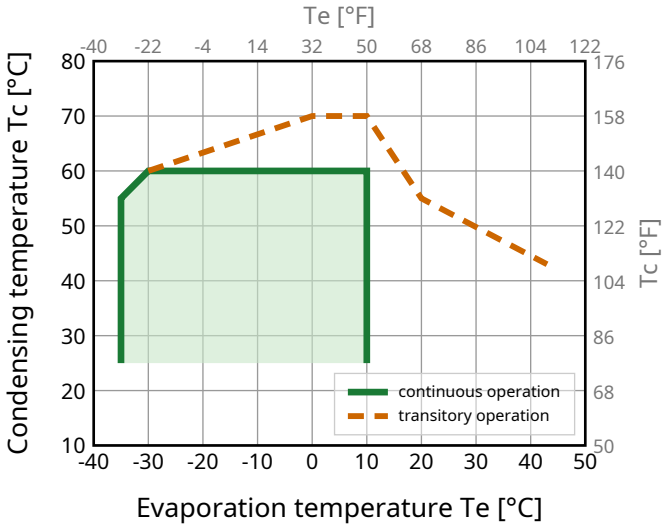
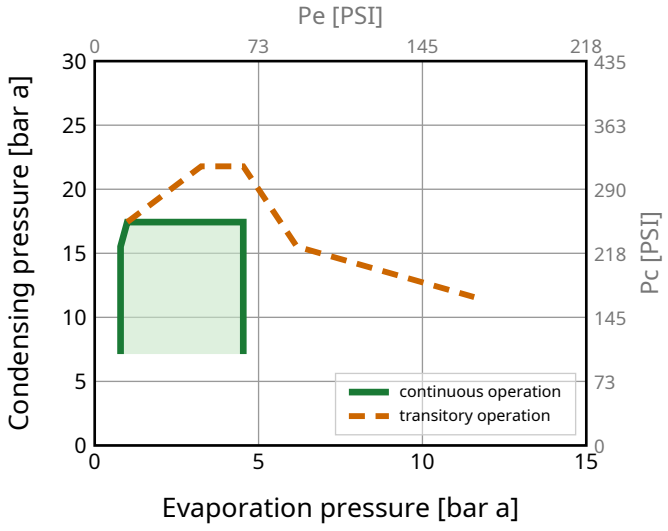
Components
a5 current relay (T1189/L6-S3) 117U7073
c start capacitor (80µF, 6.3mm) 117U5001
b, d cover + clamp + screws (5VA-compl.) 103N0600

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:

FRK6G Configuration 4 **106G5553**

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	**165**	563	142	**1.30**	4.45	127	1.15	3.61	**ASHRAE LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**335**	1144	288	**1.84**	6.30	182	1.28	8.36	**ASHRAE MBP**
7.2 45	54.4 129.9	35 95	46.1 115	**585**	1997	503	**2.60**	8.86	225	1.42	14.87	**ASHRAE HBP**
-35 -31	40 104	20 68	40 104	**88**	300	76	**0.92**	3.13	96	1.09	2.21	**EN12900 LBP**
-10 14	45 113	20 68	45 113	**285**	972	245	**1.80**	6.13	159	1.22	7.71	**EN12900 MBP**
5 41	50 122	20 68	50 122	**490**	1673	422	**2.30**	7.84	213	1.38	14.46	**EN12900 HBP**

Performance Tables

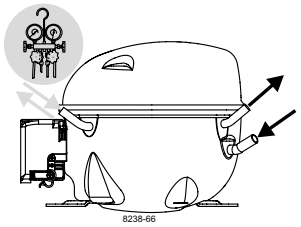
R513A, 230 V/60 Hz, CSIR, fan 3m/s

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	**83**	282	71	**0.88**	2.99	94	1.09	2.04
-30	-22	**106**	361	91	**1.02**	3.48	104	1.10	2.61
-20	-4	**181**	619	156	**1.41**	4.81	129	1.15	4.50
-10	14	**299**	1020	257	**1.88**	6.43	159	1.22	7.48
0	32	**461**	1573	397	**2.43**	8.28	190	1.31	11.68
10	50	**671**	2290	577	**3.06**	10.45	219	1.40	17.29
15	59	**795**	2713	684	**3.43**	11.71	232	1.44	20.70

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

-35	-31	**66**	227	57	**0.70**	2.40	95	1.09	1.83
-30	-22	**88**	302	76	**0.82**	2.81	108	1.11	2.44
-20	-4	**156**	532	134	**1.13**	3.86	138	1.17	4.33
-10	14	**257**	877	221	**1.50**	5.11	171	1.25	7.21
0	32	**395**	1347	340	**1.93**	6.59	204	1.35	11.23
10	50	**573**	1954	493	**2.45**	8.37	234	1.45	16.59
15	59	**678**	2312	583	**2.76**	9.42	245	1.50	19.86



FRK Compressors

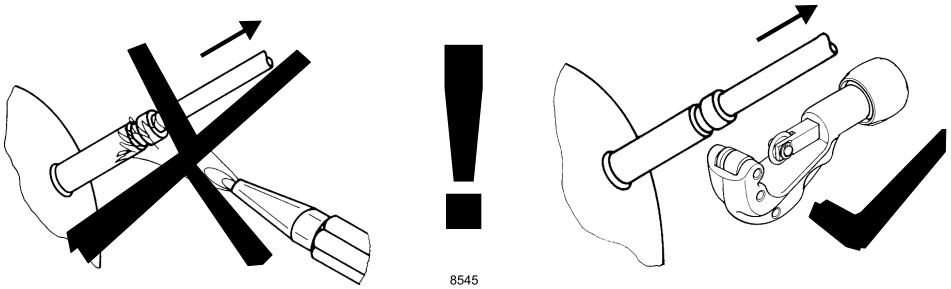
SECOP

Keep electrical equipment clear from oil, chemicals, and water

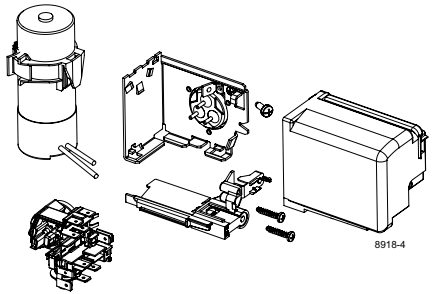
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

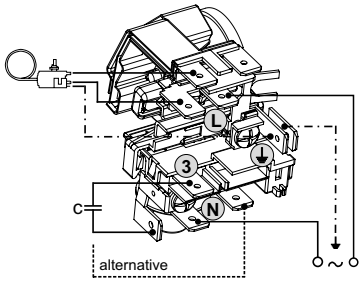
Service/Repair – R1234yf

(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**