

Single Pack FRK11G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4772**

Position	Title	Code	Amount
1	Compressor FRK11G	106G5953	1
2	Starting capacitor (80 μ F 220V, 6.3mm)	117U5001	1
3	Starting relay (QLZ-5.5A, overload protector T0377/L6)	117U7071	1
4	KL accessories	103N1060	1
5	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	FRK11G	220-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	106G5953
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	8,6cm ³ / 0,52cu.in
Oil quantity	240cm ³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1495cm ³ / 50,6fl.oz		
Weight	9,7kg / 21,4lbs		
Motor protection	external		
Winding resistance main	8,4Ω (at 25°C)		
Winding resistance aux	11,9Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		
Additional note	Very good robustness against liquid intake. Ice-cube maker optimization - indirect suction intake. Special design for high refrigerant charge		



General - Configurations with FRK11G

	Conf. 1	Conf. 2
Motor configuration	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1
Voltage range	187-254V	198-253V
Approvals	VDE, CB, UL in progress	VDE, CB, UL in progress
Starting torque	HST	HST
Note	- / -	

Applications with FRK11G

	Conf. 1	Conf. 2
Refrigerant	R134a	R134a
Application	LBP+MBP+HBP	LBP+MBP
System cooling	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK
Long interval pull down	OK	OK

Electrical data - Configurations with FRK11G

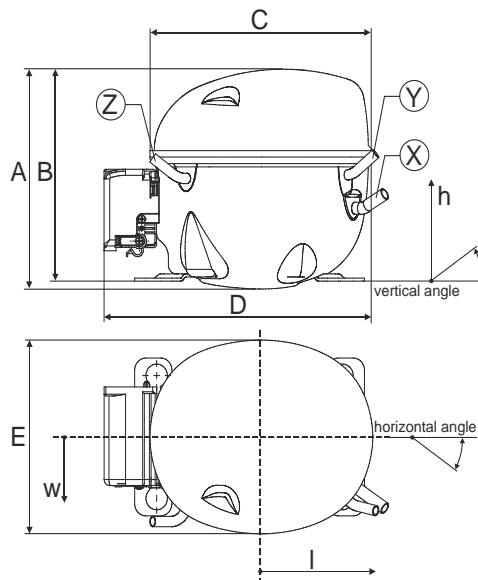
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	13,5A	13,5A
RLA (rated load amps / 1s/ U(N))	2,1A	2,1A
Cut in current (U(N))	12,3A	12,3A

Model

Designation **FRK11G** **220-240V/50Hz 1~ 208-230V/60Hz 1~** Sales code: **106G5953**

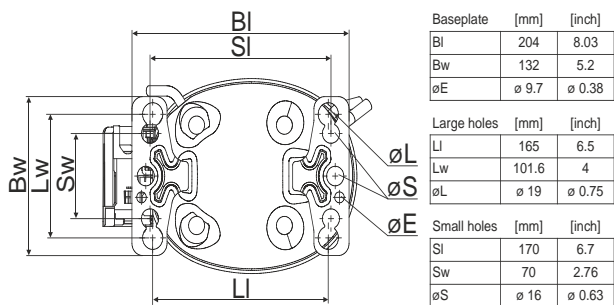
Compressor dimensions

Housing	A Height	182mm / 7,17in
	B Height	175mm / 6,89in
	C Length shell	198mm / 7,8in
	D Length w. cover	238mm / 9,37in
	E Width	160mm / 6,3in

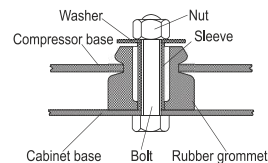


Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	119/73/59	117/107/66	-88/101/71
	[in]	4,7/2,9/2,3	4,6/4,2/2,6	-3,5/4/2,8
Straight tube l.	[mm]	14	14	14
	[in]	0,5	0,5	0,5

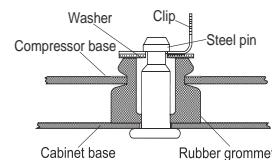
Compressor fixation



Bolt joint



Snap-on



Mounting accessories	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

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)

Model

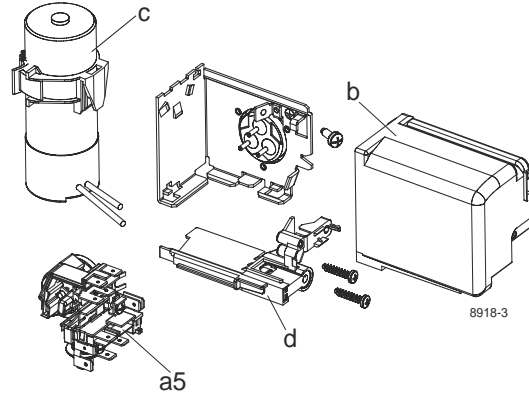
Designation **FRK11G** **220-240V/50Hz** Conf. 1 Sales code: **106G5953**

Configuration

Motor configuration CSIR
 Power supply (nominal) 220-240V/50Hz 1~
 Refrigerant R134a
 Application LBP+MBP+HBP
 Voltage range 187-254V
 Starting torque HST
 Approvals VDE
 CB
 UL in progress

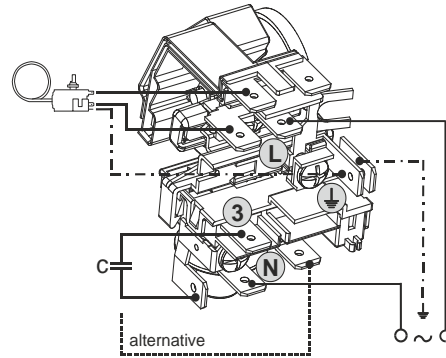
Electrical accessories / wiring diagram

CSIR

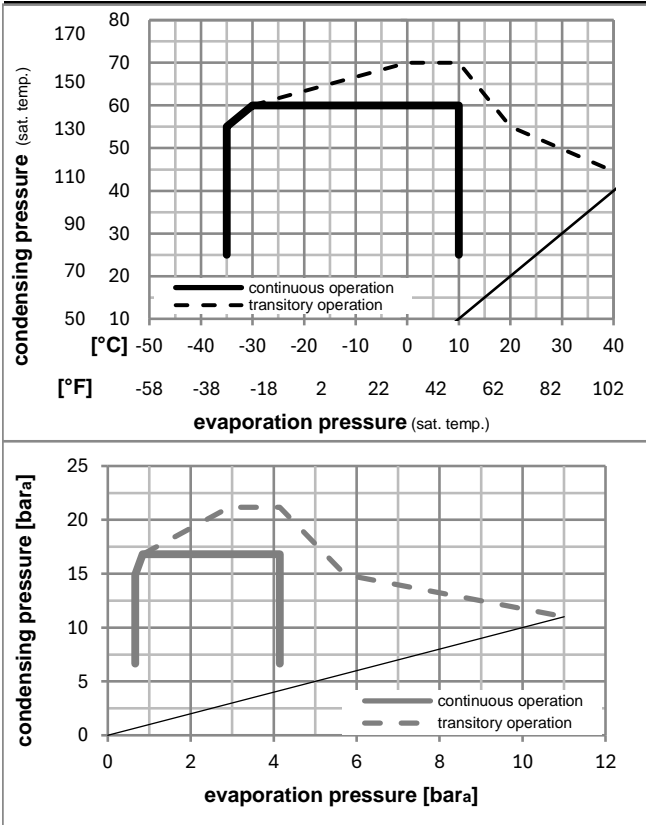


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F
 Machine room temperature range: 10 - 48°C / 50 - 119°F
 Compressor cooling: fan 3m/s



Operation pressure range



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

Model

Designation **FRK11G** **220-240V/50Hz** Conf. 1 Sales code: **106G5953**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.			Liquid temp.			Cooling capacity			COP	EER	Power consumption			ASHRAE LBP
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow							ASHRAE MBP		
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]							[W]	[A]	[kg/h]									
-23	-10	54	130	32	90	239,6	818	206,2	1,32	4,52	1,14	180,9	1,39	4,65									
7,2	45	54	130	35	95	495,5	1692	426,5	1,80	6,13	1,55	276,0	1,76	10,81									
7,2	45	54	130	35	95	866,5	2959	745,7	2,43	8,29	2,09	357,0	2,12	19,22									
-35	-31	40	104	20	68	123,5	422	106,3	0,91	3,09	0,78	136,3	1,27	2,71									
-10	14	45	113	20	68	430,9	1472	370,8	1,79	6,10	1,54	241,4	1,62	10,09									
5	41	50	122	20	68	741,9	2534	638,5	2,25	7,68	1,93	330,0	1,99	18,69									

Performance tables

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

[°C / °F]	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
-35 / -31	-35	-31	117,5	401	101,1	0,87	2,97	0,75	135,3	1,26	2,54
cond. pressure	-25	-13	207,3	708	178,4	1,21	4,14	1,04	171,2	1,36	4,49
pc= 45/113	-15	5	352,0	1202	303,0	1,62	5,55	1,40	216,8	1,52	7,67
return gas temp.	-10	14	447,0	1527	384,7	1,85	6,32	1,59	241,4	1,62	9,78
RGT= 32/90	0	32	686,7	2345	591,0	2,37	8,08	2,04	290,3	1,82	15,19
liquid temp	5	41	833,0	2845	716,9	2,66	9,09	2,29	313,1	1,92	18,54
Tliq= 45/113	10	50	998,1	3409	858,9	2,99	10,21	2,57	333,8	2,01	22,40
-35 / -31	-35	-31	95,3	326	82,0	0,73	2,51	0,63	129,8	1,25	2,27
cond. pressure	-25	-13	176,0	601	151,4	1,02	3,48	0,88	172,8	1,37	4,21
pc= 55/131	-15	5	302,4	1033	260,2	1,33	4,54	1,14	227,3	1,56	7,28
return gas temp	-10	14	384,8	1314	331,2	1,50	5,11	1,29	257,0	1,68	9,31
RGT= 32/90	0	32	592,6	2024	510,0	1,87	6,38	1,61	317,4	1,94	14,49
liquid temp	5	41	719,5	2457	619,2	2,08	7,09	1,79	346,6	2,07	17,73
Tliq= 55/131	10	50	863,0	2947	742,7	2,31	7,88	1,99	374,1	2,19	21,45

Model

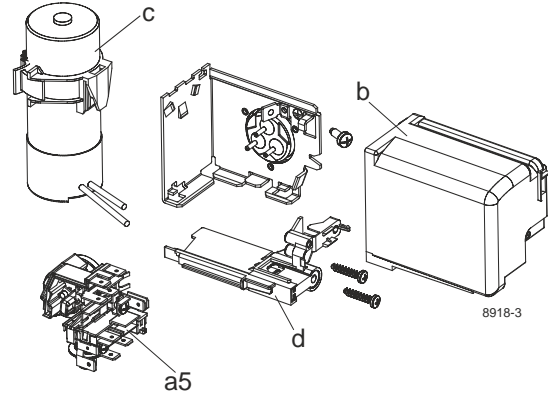
Designation	FRK11G	208-230V/60Hz	Conf. 2	Sales code:	106G5953
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Configuration

Motor configuration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP+MBP
Voltage range	198-253V
Starting torque	HST
Approvals	VDE
	CB
	UL in progress

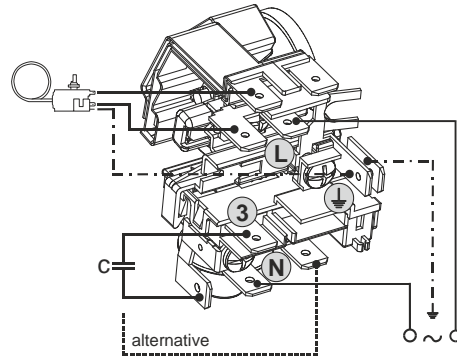
Electrical accessories / wiring diagram

CSIR

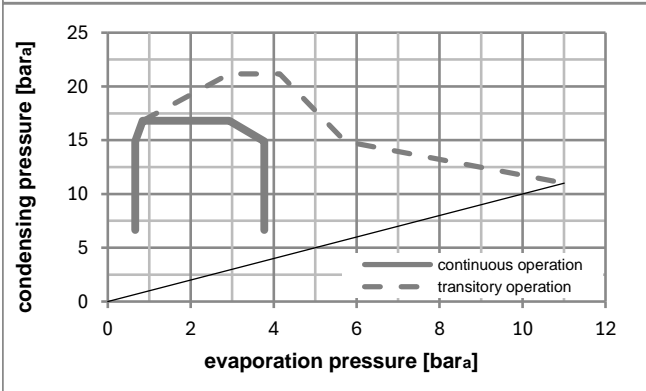
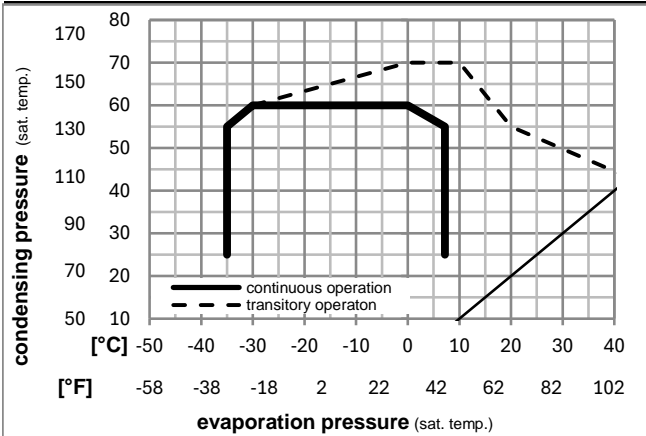


Ambient/ machine room temperatures minimum /maximum

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Operation pressure range



Components

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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

Model

Designation **FRK11G** **208-230V/60Hz** Conf. 2 Sales code: **106G5953**

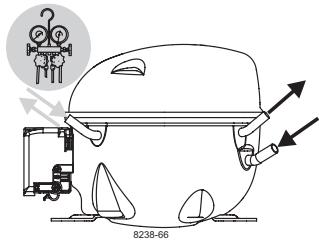
Optimization + standard conditions R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			COP	EER	Power consumption			ASHRAE	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]			P1	I	Ref. mass flow		
	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	286,0	977	246,1	1,34	4,59	1,16	212,7	1,38	5,55	ASHRAE LBP
	[°F]	-10	130	90										
	-7	54	35	46	590,8	2018	508,5	1,79	6,10	1,54	331,0	1,80	12,89	ASHRAE MBP
	[°F]	20	130	95										
	7,2	54	35	46	1031,9	3524	888,0	2,34	7,98	2,01	441,4	2,25	22,89	ASHRAE HBP
	[°F]	45	130	95										
	-35	40	20	40	149,2	510	128,4	1,11	3,81	0,96	133,9	1,16	3,27	EN12900 LBP
	[°F]	-31	104	68										
	-10	45	20	45	514,0	1756	442,4	1,81	6,17	1,55	284,7	1,62	12,03	EN12900 MBP
	[°F]	14	113	68										
	5	50	20	50	884,1	3019	760,8	2,20	7,52	1,90	401,3	2,08	22,28	EN12900 HBP
	[°F]	41	122	68										

Performance tables

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

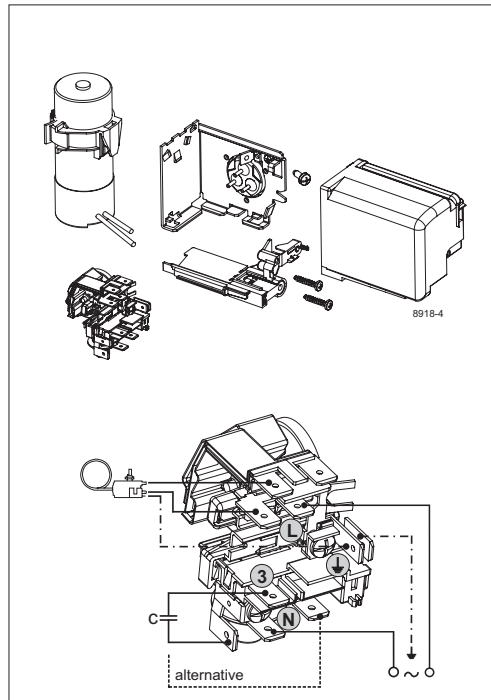
	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-35	-31	141,0	482	121,3	1,05	3,58	0,90	134,6	1,16	3,04
cond. pressure	-25	-13	248,1	847	213,5	1,27	4,33	1,09	195,7	1,33	5,37
pc= 45/113	-15	5	420,2	1435	361,7	1,65	5,62	1,42	255,2	1,52	9,16
return gas temp.	-10	14	533,3	1821	459,0	1,87	6,40	1,61	284,7	1,62	11,67
RGT= 32/90	-5	23	665,8	2274	573,0	2,12	7,23	1,82	314,4	1,73	14,64
liquid temp	0	32	818,7	2796	704,6	2,38	8,12	2,05	344,4	1,85	18,11
Tliq= 45/113	7,2	45	1077,0	3678	926,9	2,77	9,47	2,39	388,5	2,03	24,06
[°C / °F]	-35	-31	112,6	385	96,9	0,83	2,82	0,71	136,2	1,16	2,68
cond. pressure	-25	-13	210,0	717	180,7	1,04	3,55	0,90	201,9	1,35	5,02
pc= 55/131	-15	5	360,9	1233	310,6	1,33	4,55	1,15	271,1	1,58	8,69
return gas temp	-10	14	459,1	1568	395,1	1,49	5,10	1,29	307,4	1,71	11,10
RGT= 32/90	-5	23	573,7	1959	493,8	1,66	5,68	1,43	345,1	1,85	13,95
liquid temp	0	32	706,0	2411	607,6	1,84	6,27	1,58	384,4	2,01	17,27
Tliq= 55/131	7,2	45	929,4	3174	799,9	2,09	7,15	1,80	444,2	2,26	22,99



FRK Compressors

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Keep electrical equipment
clear from oil, chemicals,
and water



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