

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 capacitor (80 μ F 220V, 6.3mm)	117U5001	1
3	Starting relay (QLZ-4.4A, overload protector T0089/L6)	117U7070	1
4	KL accessories	103N1060	1
5	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	FRK7.5G	220-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	106G5653
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	5,6cm ³ / 0,34cu.in
Oil quantity	240cm ³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1535cm ³ / 51,9fl.oz		
Weight	9,5kg / 20,9lbs		
Motor protection	external		
Winding resistance main	10,7Ω (at 25°C)		
Winding resistance aux	17Ω (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 FRK7.5G

	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 FRK7.5G

	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 FRK7.5G

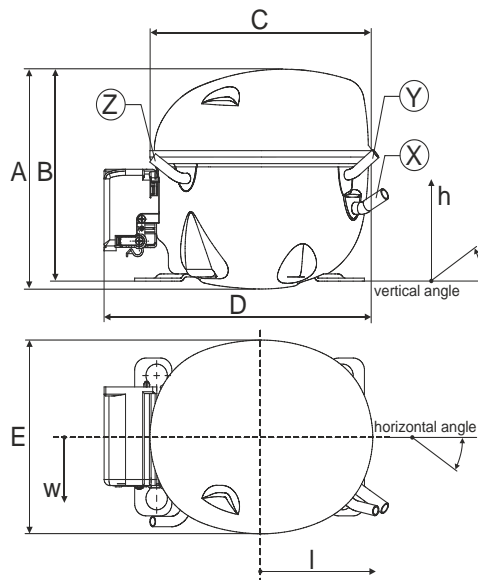
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	11,4A	
RLA (rated load amps / 1s/ U(N))	1,6A	
Cut in current (U(N))	10,7A	

Model

Designation **FRK7.5G** **220-240V/50Hz 1~ 208-230V/60Hz 1~** Sales code: **106G5653**

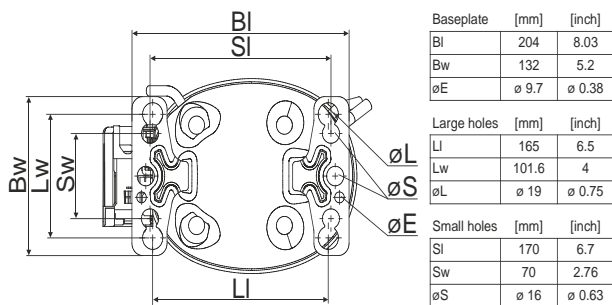
Compressor dimensions

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

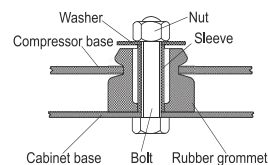


Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	119/73/59	117/107/66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

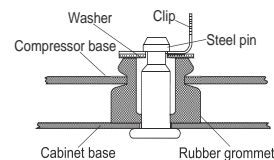
Compressor fixation



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

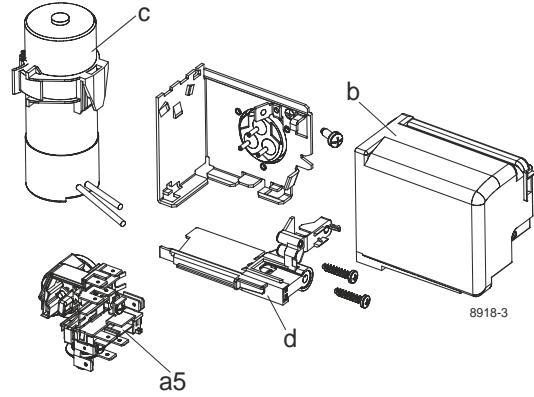
Designation	FRK7.5G	220-240V/50Hz	Conf. 1	Sales code:	106G5653
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Configuration

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

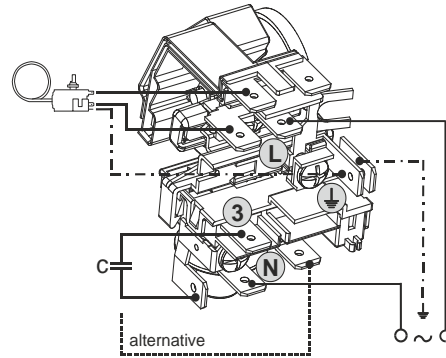
Electrical accessories / wiring diagram

CSIR

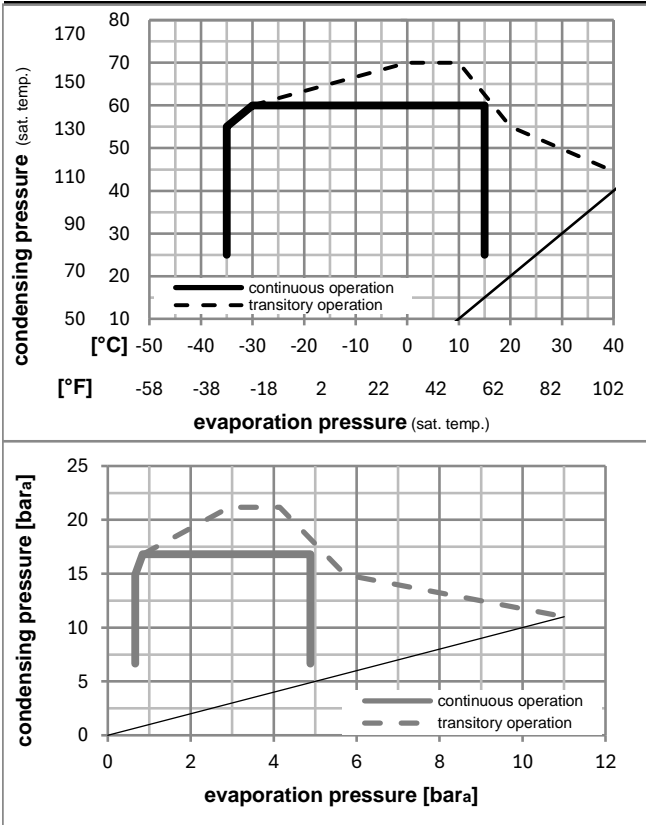


Ambient/ machine room temperatures minimum /maximum

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 (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

Model

Designation **FRK7.5G** **220-240V/50Hz** Conf. 1 Sales code: **106G5653**

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	[W]	[A]	[kg/h]						
[°C]	-23	54	32	32	151,7	518	130,6	1,28	4,38	1,10	118,3	1,06	2,95								
[°F]	-10	130	90	90																	
[°C]	-7	54	35	46	325,4	1111	280,1	1,86	6,37	1,60	174,6	1,21	7,10							ASHRAE MBP	
[°F]	20	130	95	115																	
[°C]	7,2	54	35	46	583,4	1992	502,1	2,65	9,06	2,28	219,9	1,36	12,94							ASHRAE HBP	
[°F]	45	130	95	115																	
[°C]	-35	40	20	40	79,0	270	68,0	0,96	3,28	0,83	82,2	0,99	1,73							EN12900 LBP	
[°F]	-31	104	68	104																	
[°C]	-10	45	20	45	281,1	960	241,9	1,87	6,37	1,61	150,6	1,14	6,58							EN12900 MBP	
[°F]	14	113	68	113																	
[°C]	5	50	20	50	497,7	1700	428,3	2,45	8,37	2,11	203,1	1,30	12,54							EN12900 HBP	
[°F]	41	122	68	122																	

Performance tables

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

	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]
[°C / °F]	-35	-31	74,4	254	64,0	0,91	3,11	0,78	81,7	0,99	1,60
cond. pressure	-25	-13	131,0	447	112,7	1,20	4,08	1,03	109,5	1,04	2,84
pc= 45/113	-15	5	227,1	776	195,5	1,66	5,66	1,43	136,9	1,11	4,95
return gas temp.	-10	14	291,6	996	251,0	1,94	6,61	1,67	150,6	1,14	6,38
RGT= 32/90	0	32	456,4	1559	392,8	2,56	8,75	2,20	178,2	1,22	10,09
liquid temp	5	41	558,1	1906	480,3	2,90	9,92	2,50	192,1	1,27	12,42
Tliq= 45/113	15	59	802,8	2742	690,9	3,64	12,43	3,13	220,5	1,37	18,18
[°C / °F]	-35	-31	61,0	208	52,5	0,80	2,72	0,69	76,6	0,98	1,45
cond. pressure	-25	-13	111,2	380	95,7	0,99	3,37	0,85	112,6	1,05	2,66
pc= 55/131	-15	5	195,0	666	167,8	1,32	4,52	1,14	147,2	1,13	4,69
return gas temp	-10	14	250,9	857	216,0	1,53	5,22	1,32	164,1	1,18	6,07
RGT= 32/90	0	32	394,2	1346	339,3	2,00	6,82	1,72	197,4	1,28	9,64
liquid temp	5	41	482,7	1649	415,5	2,26	7,71	1,94	213,9	1,34	11,90
Tliq= 55/131	15	59	696,7	2379	599,6	2,83	9,65	2,43	246,6	1,46	17,50

Model

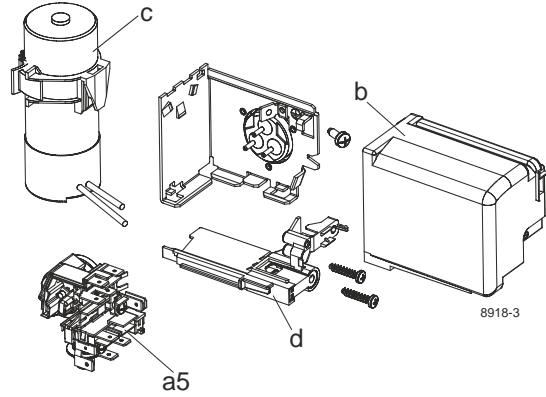
Designation	FRK7.5G	208-230V/60Hz	Conf. 2	Sales code:	106G5653
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Configuration

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

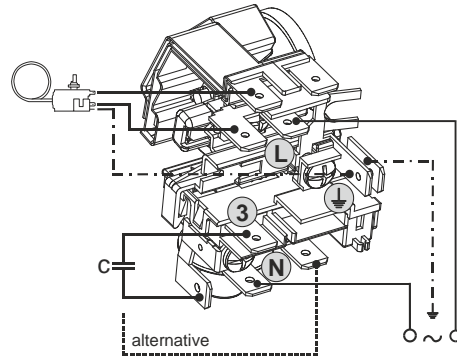
Electrical accessories / wiring diagram

CSIR

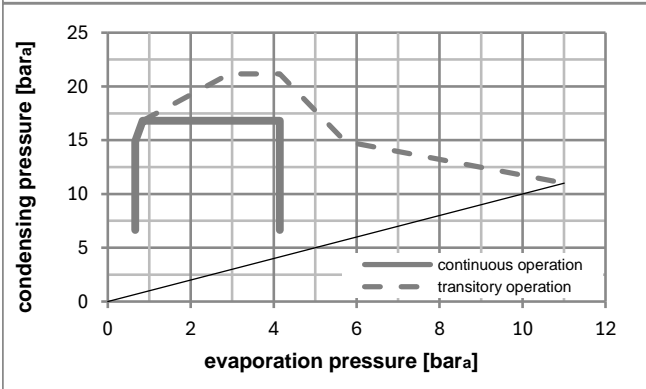
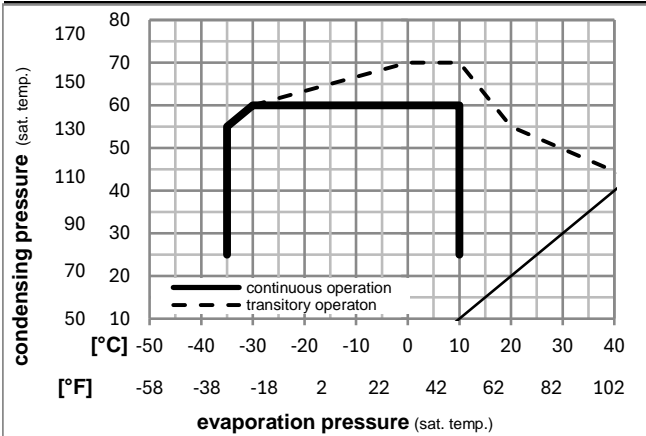


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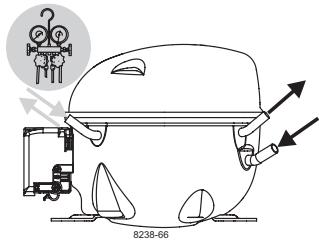
Optimization + standard conditions R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.		Liquid temp.		Cooling capacity			COP	EER	Power consumption			Ref. mass flow m	ASHRAE LBP
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I									
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]							[W]	[A]	[kg/h]								
-23	-10	54	130	32	90	32	90	187,0	639	160,9	1,34	4,56	1,15	140,0	1,18	3,63						
-7	20	54	130	35	95	46	115	384,7	1314	331,1	1,89	6,45	1,63	203,7	1,35	8,39						
7,2	45	54	130	35	95	46	115	681,9	2329	586,8	2,65	9,04	2,28	257,7	1,53	15,13						
-35	-31	40	104	20	68	40	104	96,1	328	82,7	1,05	3,58	0,90	91,6	1,08	2,11						
-10	14	45	113	20	68	45	113	330,6	1129	284,6	1,86	6,34	1,60	178,1	1,27	7,74						
5	41	50	122	20	68	50	122	580,4	1982	499,5	2,40	8,20	2,07	241,6	1,47	14,62						

Performance tables

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

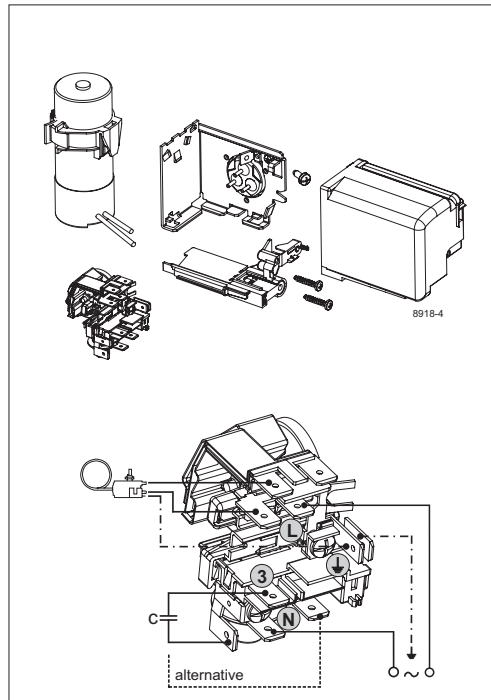
	pe		Cooling capacity			COP	EER	P1			I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C / °F]	-35	-31	89,5	306	77,0	0,99	3,38	0,85	90,5	1,08	1,93	
cond. pressure	-25	-13	160,4	548	138,0	1,26	4,32	1,09	126,9	1,15	3,47	
pc= 45/113	-15	5	270,2	923	232,5	1,68	5,73	1,44	161,1	1,23	5,89	
return gas temp.	-10	14	343,0	1172	295,2	1,93	6,58	1,66	178,1	1,27	7,51	
RGT= 32/90	0	32	531,1	1814	457,1	2,49	8,52	2,15	212,9	1,38	11,75	
liquid temp	5	41	649,0	2217	558,6	2,81	9,58	2,41	231,3	1,44	14,45	
Tliq= 45/113	15	59	939,2	3208	808,3	3,46	11,82	2,98	271,3	1,57	21,27	
[°C / °F]	-35	-31	70,0	239	60,2	0,76	2,60	0,65	91,9	1,08	1,67	
cond. pressure	-25	-13	137,4	469	118,2	1,03	3,50	0,88	134,0	1,16	3,28	
pc= 55/131	-15	5	235,2	803	202,4	1,36	4,65	1,17	172,9	1,26	5,66	
return gas temp	-10	14	298,8	1021	257,2	1,56	5,32	1,34	191,8	1,31	7,23	
RGT= 32/90	0	32	462,1	1578	397,7	2,01	6,86	1,73	229,9	1,43	11,30	
liquid temp	5	41	564,5	1928	485,8	2,26	7,72	1,95	249,6	1,50	13,91	
Tliq= 55/131	15	59	817,1	2790	703,2	2,80	9,57	2,41	291,4	1,65	20,52	



FRK Compressors

SECOP

Keep electrical equipment
clear from oil, chemicals,
and water



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