

Model

Designation	FRK8.5G	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	106G5763
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	6,6cm ³ / 0,4cu.in
Oil quantity	240cm ³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1510cm ³ / 51,1fl.oz		
Weight	9,5kg / 20,9lbs		
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 FRK8.5G

	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	VDE, CB, UL
Starting torque	HST	HST
Note	Electrical equipment is included and pre-assembled to compressor.	

Applications with FRK8.5G

	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 FRK8.5G

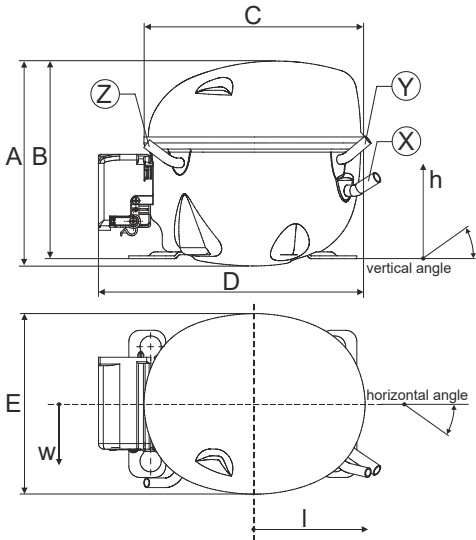
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	13,4A	13,2A
RLA (rated load amps / 1s/ U(N))	1,8A	2A
Cut in current (U(N))	12,3A	12,3A

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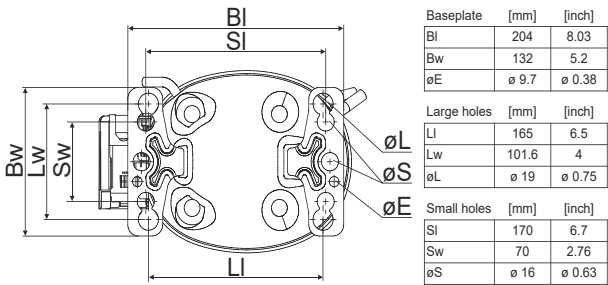
Compressor dimensions

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
	[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

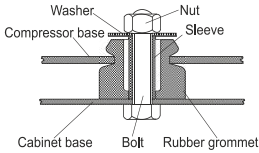


Compressor fixation

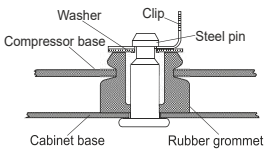


Baseplate	[mm]	[inch]
BI	204	8.03
BW	132	5.2
øE	ø 9.7	ø 0.38
Large holes	[mm]	[inch]
LI	165	6.5
LW	101.6	4
øL	ø 19	ø 0.75
Small holes	[mm]	[inch]
SI	170	6.7
SW	70	2.76
øS	ø 16	ø 0.63

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

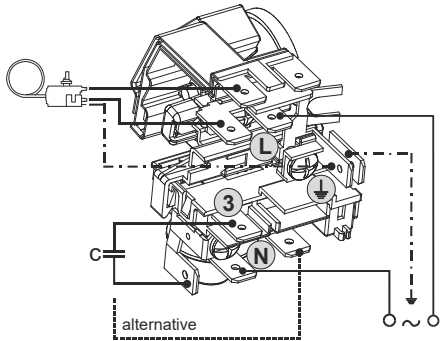
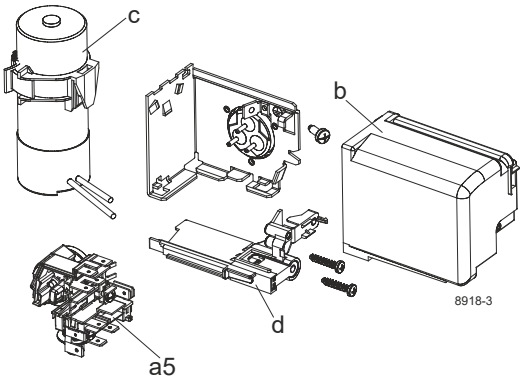
Provision for PE Grounding is located at the PE Stamp on the compressor

Suctiongas connector and Process connector can be switched (minor loss of cooling capacity)

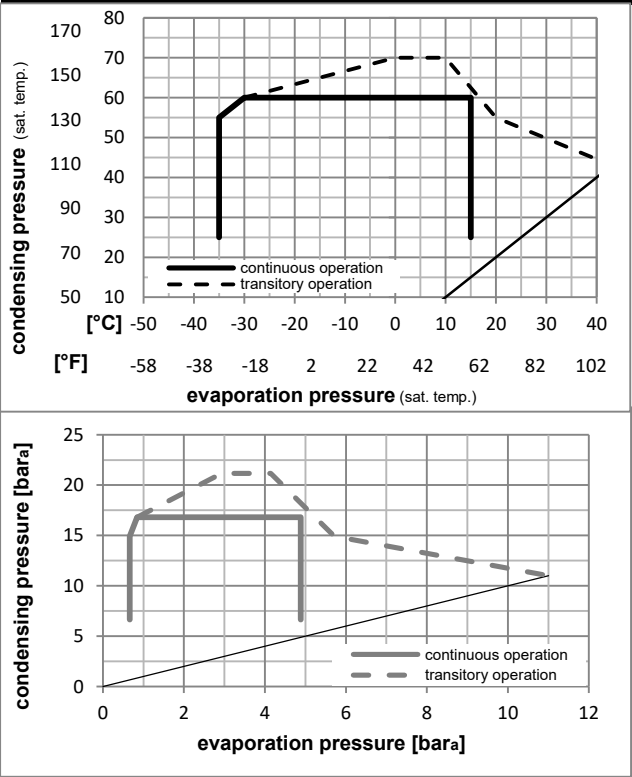
Model				
Designation	FRK8.5G	220-240V/50Hz	Conf. 1	Sales code: 106G5763
Configuration		Electrical accessories / wiring diagram		
Motor configuration	CSIR	CSIR		
Power supply (nominal)	220-240V/50Hz 1~			
Refrigerant	R134a			
Application	LBP+MBP+HBP			
Voltage range	187-254V			
Starting torque	HST			
Approvals	VDE			
	CB			
	UL			

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 (incl. and pre. assembl.)

a5	current relay (T0377/L6-S1)	117U7071
c	start capacitor (80µF, 6.3mm)	117U5001
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Alternative comp.

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA) in bag	103N1060

Model

Designation **FRK8.5G** **220-240V/50Hz** Conf. 1 Sales code: **106G5763**

Optimization + standard conditions

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

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																																								
Return gas temp.					Current consumption						Ref. mass flow																																																																								
Liquid temp.					Cooling capacity						COP				EER				P1				I				m																																																								
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]																							
[°C]					-23	54	32	32	185,1					632					159,3					1,23					4,19					1,06					150,8					1,30					3,59					ASHRAE LBP																													
[°F]					-10	130	90	90																																																																											
[°C]					-7	54	35	46	393,0					1342					338,3					1,78					6,08					1,53					220,8					1,54					8,58					ASHRAE MBP																													
[°F]					20	130	95	115																																																																											
[°C]					7,2	54	35	46	701,6					2396					603,8					2,48					8,46					2,13					283,4					1,79					15,57					ASHRAE HBP																													
[°F]					45	130	95	115																																																																											
[°C]					-35	40	20	40	97,3					332					83,8					0,89					3,02					0,76					110,0					1,21					2,14					EN12900 LBP																													
[°F]					-31	104	68	104																																																																											
[°C]					-10	45	20	45	340,0					1161					292,6					1,80					6,16					1,55					188,5					1,42					7,96					EN12900 MBP																													
[°F]					14	113	68	113																																																																											
[°C]					5	50	20	50	599,2					2046					515,6					2,30					7,86					1,98					260,3					1,69					15,10					EN12900 HBP																													
[°F]					41	122	68	122																																																																											

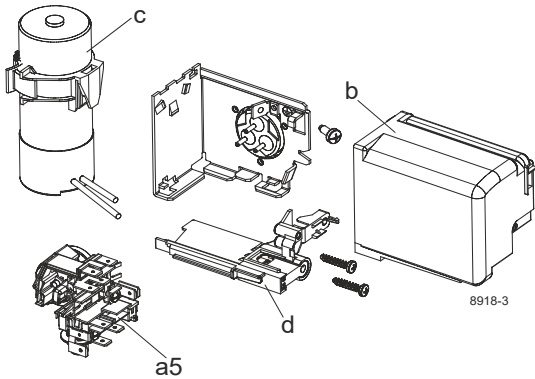
Performance tables

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

	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	91,8	314	79,0	0,82	2,79	0,70	112,3	1,21	1,98
cond. pressure	-25	-13	160,2	547	137,8	1,16	3,97	1,00	137,9	1,26	3,47
pc= 45/113	-15	5	275,5	941	237,1	1,62	5,52	1,39	170,5	1,36	6,01
return gas temp.	-10	14	352,8	1205	303,6	1,87	6,39	1,61	188,5	1,42	7,72
RGT= 32/90	0	32	550,4	1880	473,6	2,43	8,31	2,09	226,3	1,56	12,17
liquid temp	5	41	672,2	2296	578,5	2,74	9,36	2,36	245,4	1,63	14,97
Tliq= 45/113	15	59	966,1	3299	831,4	3,42	11,69	2,95	282,2	1,78	21,88
[°C / °F]	-35	-31	74,3	254	63,9	0,67	2,28	0,57	111,3	1,20	1,77
cond. pressure	-25	-13	135,7	464	116,8	0,94	3,20	0,81	144,7	1,28	3,25
pc= 55/131	-15	5	236,5	808	203,5	1,28	4,37	1,10	185,0	1,41	5,69
return gas temp	-10	14	303,5	1037	261,2	1,47	5,01	1,26	206,8	1,48	7,34
RGT= 32/90	0	32	474,9	1622	408,7	1,88	6,43	1,62	252,2	1,66	11,62
liquid temp	5	41	580,8	1984	499,8	2,11	7,21	1,82	275,1	1,75	14,31
Tliq= 55/131	15	59	836,9	2858	720,2	2,62	8,95	2,26	319,3	1,95	21,02

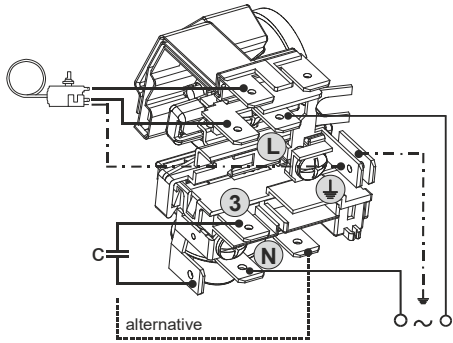
Model				
Designation	FRK8.5G	208-230V/60Hz	Conf. 2	Sales code: 106G5763

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

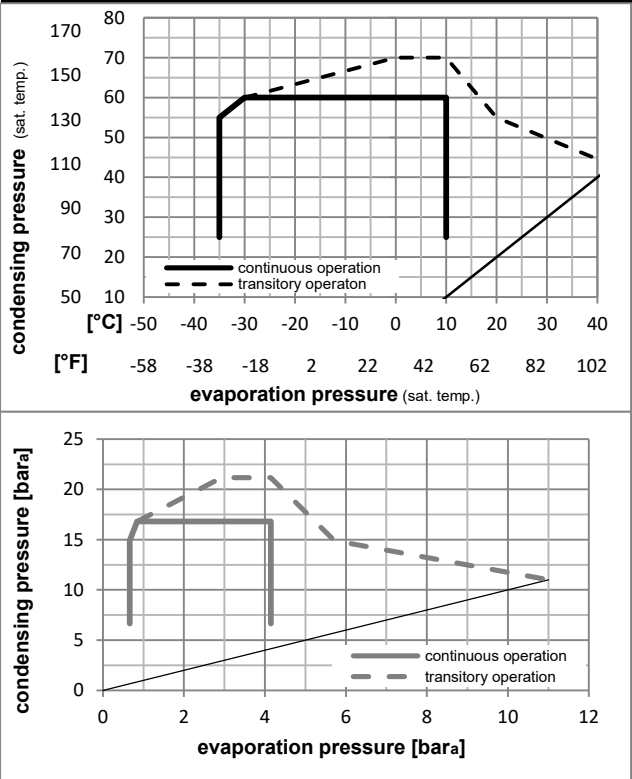


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
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Operation pressure range



Components (incl. and pre. assembl.)

a5	current relay (T0377/L6-S1)	117U7071
c	start capacitor (80µF, 6.3mm)	117U5001
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Alternative comp.

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA) in bag	103N1060

Model

Designation **FRK8.5G** **208-230V/60Hz** Conf. 2 Sales code: **106G5763**

Optimization + standard conditions

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

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																																			
Return gas temp.					Current consumption						Ref. mass flow																																																																			
Liquid temp.					Cooling capacity						COP				EER				P1				I				ṁ																																																			
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]																		
[°C]					-23	54	32	32	224,3					766					193,0					1,32					4,51					1,14					169,9					1,25					4,35					ASHRAE LBP																								
[°F]					-10	130	90	90																																																																						
[°C]					-7	54	35	46	464,9					1588					400,1					1,84					6,27					1,58					253,3					1,51					10,14					ASHRAE MBP																								
[°F]					20	130	95	115																																																																						
[°C]					7,2	54	35	46	821,8					2807					707,2					2,52					8,60					2,17					326,3					1,78					18,23					ASHRAE HBP																								
[°F]					45	130	95	115																																																																						
[°C]					-35	40	20	40	116,1					396					99,9					1,07					3,64					0,92					108,9					1,11					2,55					EN12900 LBP																								
[°F]					-31	104	68	104																																																																						
[°C]					-10	45	20	45	399,5					1365					343,9					1,81					6,18					1,56					220,8					1,40					9,35					EN12900 MBP																								
[°F]					14	113	68	113																																																																						
[°C]					5	50	20	50	700,4					2392					602,8					2,31					7,88					1,98					303,7					1,70					17,65					EN12900 HBP																								
[°F]					41	122	68	122																																																																						

Performance tables

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

	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	109,2	373	94,0	1,01	3,46	0,87	107,8	1,11	2,36		
cond. pressure	-25	-13	192,8	659	166,0	1,24	4,23	1,07	155,6	1,22	4,18		
pc= 45/113	-15	5	326,0	1113	280,6	1,64	5,59	1,41	199,3	1,34	7,11		
return gas temp.	-10	14	414,5	1416	356,7	1,88	6,41	1,62	220,8	1,40	9,07		
RGT= 32/90	0	32	642,1	2193	552,6	2,42	8,26	2,08	265,6	1,56	14,20		
liquid temp	5	41	783,8	2677	674,6	2,70	9,23	2,33	289,9	1,64	17,45		
Tliq= 45/113	15	59	1129,9	3859	972,4	3,28	11,20	2,82	344,6	1,84	25,59		
[°C / °F]	-35	-31	84,4	288	72,7	0,80	2,74	0,69	105,3	1,10	2,01		
cond. pressure	-25	-13	164,5	562	141,6	1,02	3,48	0,88	161,6	1,23	3,93		
pc= 55/131	-15	5	283,5	968	244,0	1,33	4,55	1,15	212,7	1,38	6,82		
return gas temp	-10	14	360,9	1232	310,6	1,52	5,19	1,31	237,6	1,46	8,73		
RGT= 32/90	0	32	558,2	1906	480,4	1,94	6,61	1,67	288,3	1,64	13,65		
liquid temp	5	41	680,9	2325	586,0	2,16	7,38	1,86	315,2	1,74	16,78		
Tliq= 55/131	15	59	980,7	3349	844,0	2,62	8,95	2,25	374,3	1,96	24,63		