

Model

Under Development

Designation	FRK11G	220-240V/50Hz 1~	208-230V/60Hz 1~
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cST	Displacement	8,6cm³ / 0,52cu.in
Oil quantity	240cm³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	300g / 10,6oz		
Free gas volume comp.	1495cm³ / 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	Good robustness against liquid intake. Ice-cube maker optimization - indirect suction intake.		



General - Configurations with FRK11G

	Conf. 1	Conf. 2
Motorconfiguration	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1
Voltage range	187-254V	198-253V
Approvals		
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))	12,3A	12,3A
RLA (rated load amps / 1s/ U(N))	2,1A	2,1A
Cut in current (U(N))	12,3A	12,3A

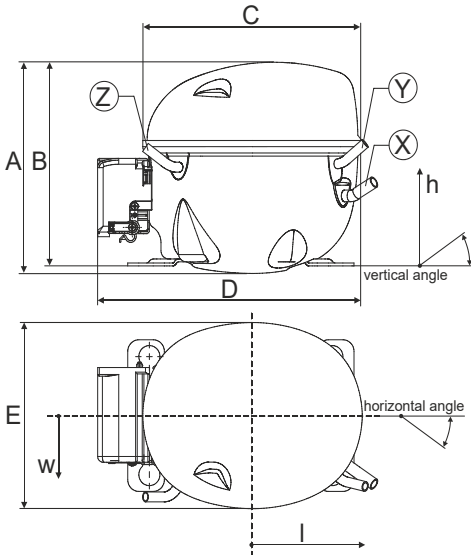
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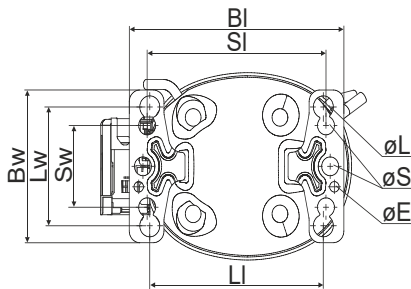
Compressor dimensions

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



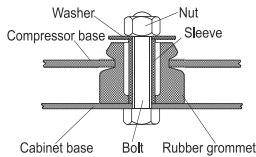
Connectors		Suction X	Discharge Y	Process Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	120/72/57	112/106/81	-97/94/72
	[in]	4,7/2,8/2,2	4,4/4,2/3,2	-3,8/3,7/2,8
Straight tube l.	[mm]	14	14	14
	[in]	0,5	0,5	0,5

Compressor fixation

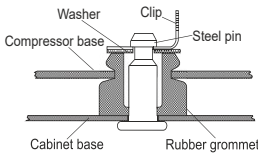


Baseplate	[mm]	[inch]
BI	204	8.03
BW	132	5.2
øE	ø 9.7	ø 0.38
Large holes		
LI	165	6.5
LW	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
SW	70	2.76
øS	ø 16	ø 0.63

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

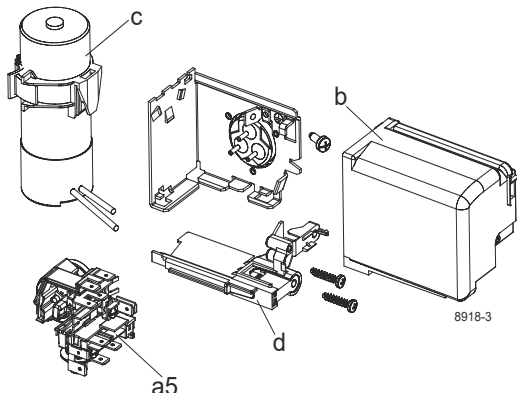
Under Development

Designation	FRK11G	220-240V/50Hz	Conf. 1
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Configuration

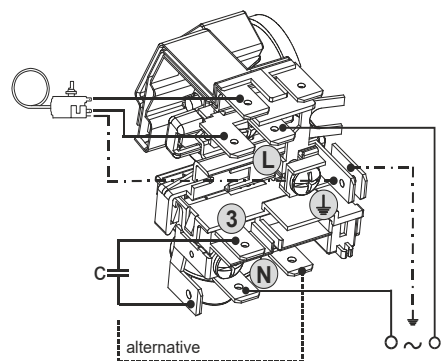
Electrical accessories / wiring diagram

Motorconfiguration	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz 1~	
Refrigerant	R134a	
Application	LBP+MBP+HBP	
Voltage range	187-254V	
Starting torque	HST	
Approvals		

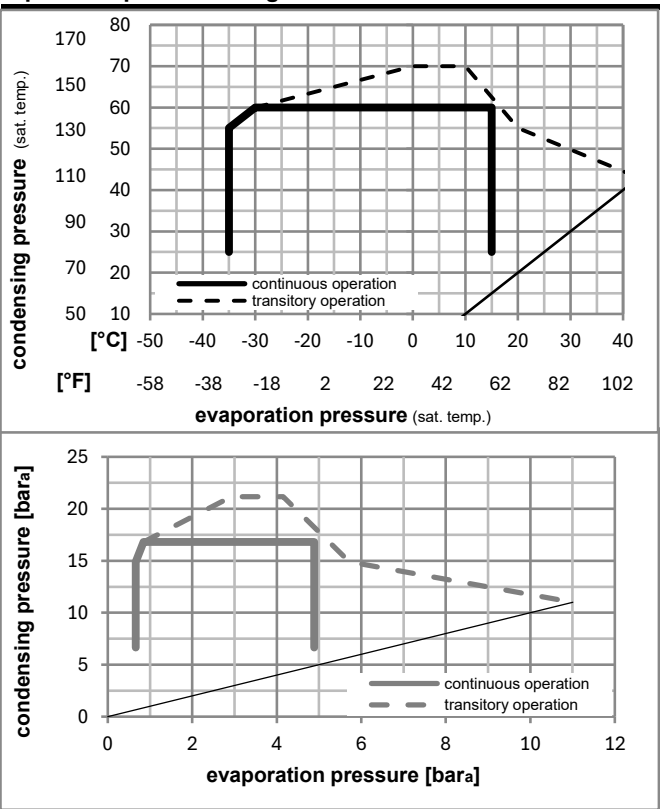


Ambient/ machine room temperatures minimum /maximum

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) in bag	103N1060

Alternative components

b, d	cover + clamp + screws(5VA-compl.)	103N0600
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Under Development

Model											
Designation	FRK11G			220-240V/50Hz			Conf. 1				

Optimization + standard conditionsR134a, 220V/50Hz, CSIR, fan 3m/s,

Evaporating pressure (saturation temperature)																
Condensing pressure (saturation temperature)										Power consumption						
Return gas temp.										Current consumption						
Liquid temp.										Ref. mass flow						
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		241,0	823	207,4	1,34	4,57	1,15	180,2	1,39		4,68	ASHRAE LBP
[°F]	-10	130	90	90												
[°C]	-7	54	35	46		502,9	1718	432,8	1,81	6,17	1,55	278,4	1,77		10,97	ASHRAE MBP
[°F]	20	130	95	115												
[°C]	7,2	54	35	46		877,8	2998	755,5	2,36	8,07	2,03	371,5	2,18		19,47	ASHRAE HBP
[°F]	45	130	95	115												
[°C]	-35	40	20	40		127,2	435	109,5	1,04	3,56	0,90	121,9	1,22		2,79	EN12900 LBP
[°F]	-31	104	68	104												
[°C]	-10	45	20	45		438,1	1496	377,0	1,83	6,24	1,57	239,8	1,61		10,25	EN12900 MBP
[°F]	14	113	68	113												
[°C]	5	50	20	50		752,6	2570	647,7	2,23	7,60	1,92	338,1	2,03		18,97	EN12900 HBP
[°F]	41	122	68	122												

Performance tablesR134a, 220V/50Hz, CSIR, fan 3m/s,

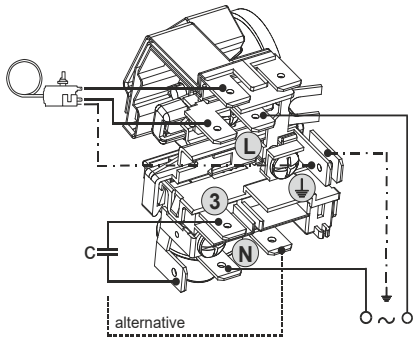
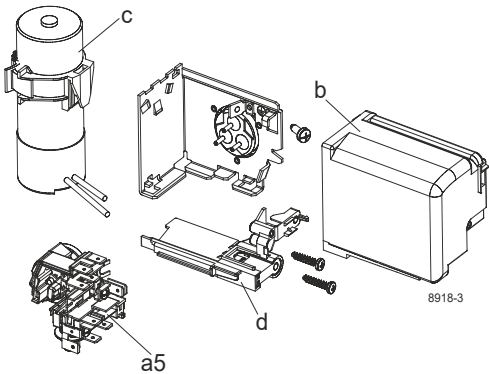
	pe		Cooling capacity			COP		EER		P1		I		m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]		[Btu/Wh]	[kcal/Wh]	[W]		[A]		[kg/h]	
[°C / °F]	-35	-31	119,9	409	103,2	0,98		3,36	0,85	121,9		1,22		2,59	
cond. pressure	-25	-13	210,4	718	181,1	1,26		4,31	1,09	166,8		1,35		4,56	
pc= 45/113	-15	5	357,7	1222	307,8	1,66		5,69	1,43	214,9		1,51		7,80	
return gas temp.	-10	14	454,5	1552	391,1	1,90		6,47	1,63	239,8		1,61		9,95	
RGT= 32/90	0	32	698,0	2384	600,7	2,40		8,20	2,07	290,5		1,82		15,44	
liquid temp	5	41	846,1	2890	728,2	2,68		9,14	2,30	316,2		1,93		18,84	
Tliq= 45/113	15	59	1198,8	4094	1031,7	3,27		11,15	2,81	367,1		2,16		27,15	
[°C / °F]	-35	-31	93,7	320	80,7	0,76		2,60	0,65	123,2		1,23		2,23	
cond. pressure	-25	-13	176,5	603	151,9	1,03		3,51	0,88	171,8		1,36		4,22	
pc= 55/131	-15	5	306,2	1046	263,5	1,34		4,59	1,16	227,9		1,56		7,37	
return gas temp	-10	14	390,4	1333	336,0	1,51		5,16	1,30	258,4		1,69		9,44	
RGT= 32/90	0	32	601,2	2053	517,4	1,86		6,34	1,60	323,8		1,97		14,71	
liquid temp	5	41	729,3	2491	627,6	2,04		6,95	1,75	358,3		2,12		17,97	
Tliq= 55/131	15	59	1034,4	3533	890,2	2,40		8,21	2,07	430,3		2,46		25,98	

Under Development			
Model			
Designation	FRK11G	208-230V/60Hz	Conf. 2

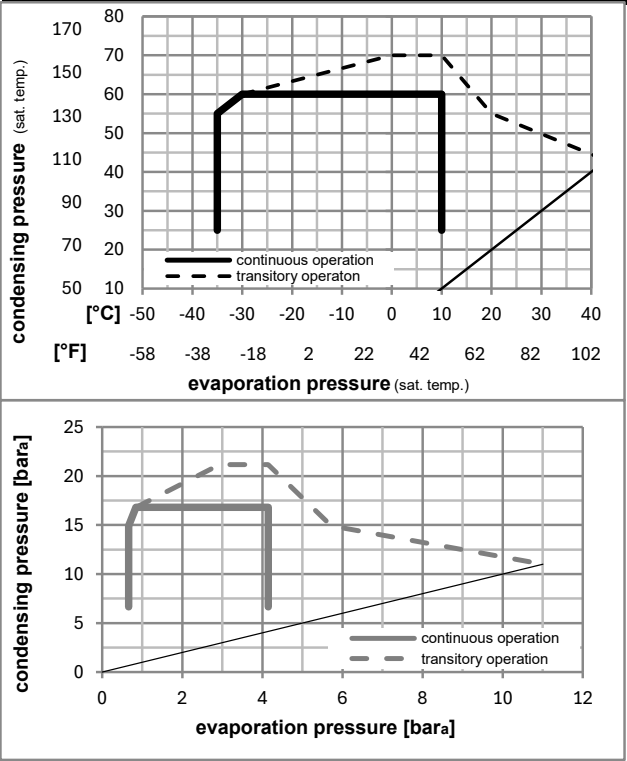
Configuration	Electrical accessories / wiring diagram		
Motorconfiguration	CSIR	CSIR	
Power supply (nominal)	208-230V/60Hz 1~		
Refrigerant	R134a		
Application	LBP+MBP		
Voltage range	198-253V		
Starting torque	HST		
Approvals			

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) in bag	103N1060

Alternative components

b, d	cover + clamp + screws(5VA-compl.)	103N0600
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Model	Under Development													
Designation	FRK11G				208-230V/60Hz				Conf. 2					

Optimization + standard conditions

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

Evaporating pressure (saturation temperature) Condensing pressure (saturation temperature) Return gas temp. Liquid temp. Cooling capacity COP EER Power consumption Current consumption Ref. mass flow														
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	-23	54	32	32	283,8	969	244,3	1,33	4,55	1,15	213,1	1,38	5,51	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	593,6	2027	510,9	1,79	6,10	1,54	332,4	1,80	12,95	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	1037,9	3545	893,2	2,33	7,97	2,01	444,8	2,26	23,03	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	147,5	504	127,0	1,05	3,59	0,90	140,5	1,17	3,24	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	516,4	1764	444,4	1,81	6,18	1,56	285,4	1,63	12,09	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	889,3	3037	765,4	2,20	7,50	1,89	404,7	2,09	22,41	EN12900 HBP
[°F]	41	122	68	122										

Performance tables												R134a, 230V/60Hz, CSIR, fan 3m/s,		
	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	138,6	473	119,3	0,99	3,38	0,85		140,2	1,17	2,99		
cond. pressure	-25	-13	246,8	843	212,4	1,26	4,30	1,08		195,8	1,33	5,35		
pc= 45/113	-15	5	421,3	1439	362,6	1,65	5,64	1,42		254,9	1,52	9,18		
return gas temp.	-10	14	535,8	1830	461,1	1,88	6,41	1,62		285,4	1,63	11,73		
RGT= 32/90	0	32	823,8	2813	709,0	2,37	8,10	2,04		347,2	1,86	18,22		
liquid temp	5	41	999,2	3413	859,9	2,64	9,02	2,27		378,2	1,98	22,25		
Tliq= 45/113	15	59	1417,5	4841	1219,9	3,22	11,01	2,77		439,7	2,24	32,11		
[°C / °F]	-35	-31	109,5	374	94,2	0,76	2,61	0,66		143,2	1,18	2,61		
cond. pressure	-25	-13	207,9	710	178,9	1,02	3,50	0,88		202,8	1,35	4,97		
pc= 55/131	-15	5	361,1	1233	310,8	1,33	4,55	1,15		271,2	1,58	8,69		
return gas temp	-10	14	460,7	1573	396,5	1,49	5,10	1,29		308,3	1,71	11,14		
RGT= 32/90	0	32	710,2	2425	611,2	1,83	6,26	1,58		387,2	2,02	17,37		
liquid temp	5	41	862,0	2944	741,8	2,01	6,86	1,73		428,8	2,19	21,24		
Tliq= 55/131	15	59	1224,5	4182	1053,8	2,38	8,11	2,04		515,4	2,56	30,76		