

Model

Under Development

Designation	FRK7.5G	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	5,6cm³ / 0,34cu.in
Oil quantity	240cm³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	1535cm³ / 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	Good robustness against liquid intake. Ice-cube maker optimization - indirect suction intake.		



General - Configurations with FRK7.5G

	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 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))	10,7A	
RLA (rated load amps / 1s/ U(N))	1,7A	
Cut in current (U(N))	10,7A	

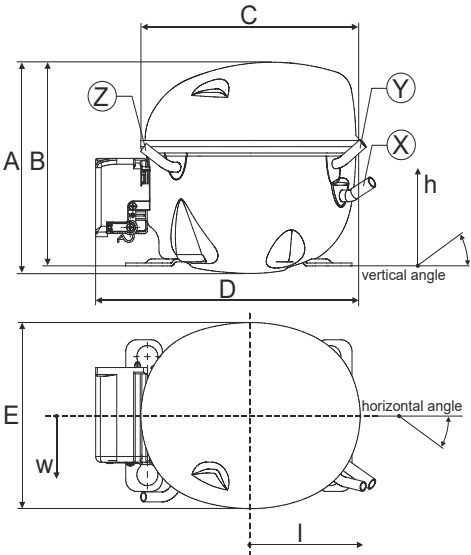
Model

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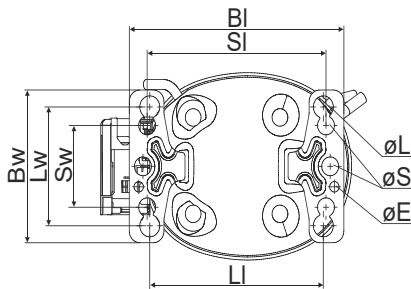
Compressor dimensions

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



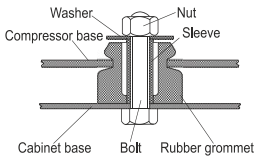
Connectors		Suction X	Discharge Y	Process Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	120/72/57	112/106/81	-97/94/72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

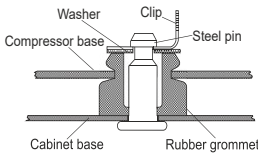


Baseplate	[mm]	[inch]
BI	204	8.03
BW	132	5.2
øE	ø 9.7	ø 0.38
Large holes		
LI	165	6.5
LW	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
SW	70	2.76
øS	ø 16	ø 0.63

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

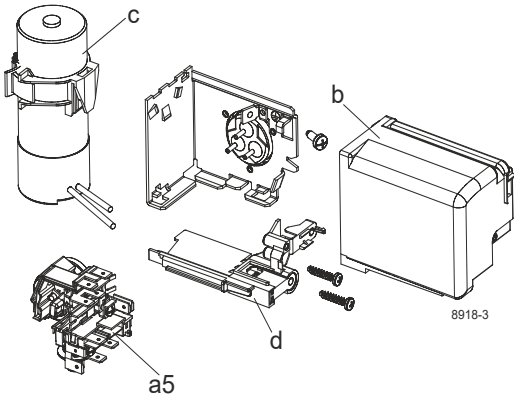
Application notes

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)

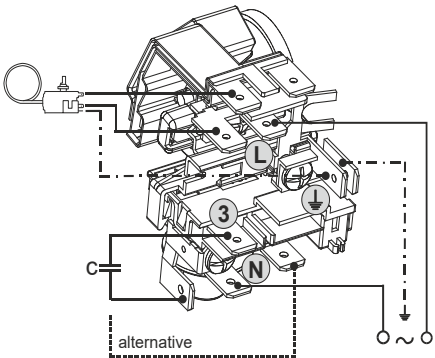
Model			
Designation	FRK7.5G	220-240V/50Hz	Conf. 1

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			

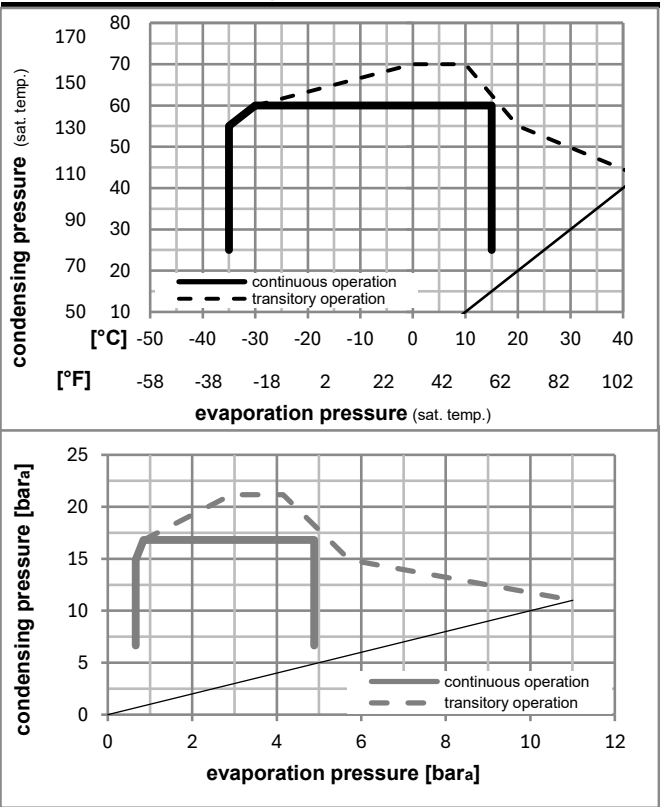


Ambient/ machine room temperatures minimum /maximum

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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Model	Under Development													
Designation	FRK7.5G			220-240V/50Hz				Conf. 1						

Optimization + standard conditions

R134a, 220V/50Hz, 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	ṁ		
[°C]										[W]	[A]	[kg/h]		
-23	54	32	32	155,6	531	133,9	1,27	4,33	1,09	122,8	1,23	3,02	ASHRAE LBP	
-10	130	90	90											
-7	54	35	46	335,1	1145	288,4	1,83	6,25	1,58	183,1	1,40	7,31	ASHRAE MBP	
20	130	95	115											
7,2	54	35	46	600,3	2050	516,7	2,60	8,89	2,24	230,6	1,57	13,32	ASHRAE HBP	
45	130	95	115											
-35	40	20	40	77,4	264	66,6	0,94	3,20	0,81	82,7	1,15	1,70	EN12900 LBP	
-31	104	68	104											
-10	45	20	45	289,7	989	249,3	1,84	6,27	1,58	157,6	1,32	6,78	EN12900 MBP	
14	113	68	113											
5	50	20	50	512,1	1749	440,7	2,40	8,21	2,07	213,0	1,51	12,90	EN12900 HBP	
41	122	68	122											

Performance tables

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

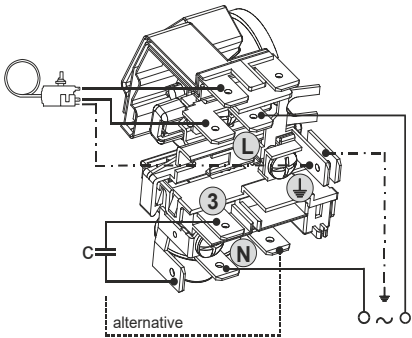
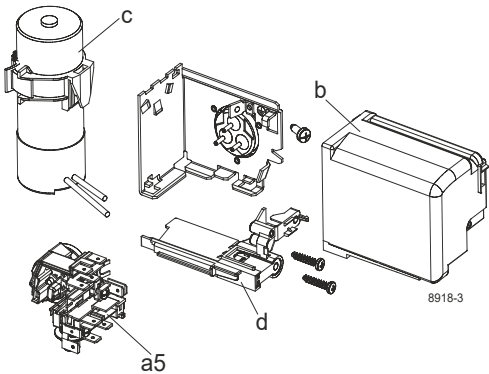
	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	72,6	248	62,5	0,89	3,02	0,76	82,0	1,15	1,57
cond. pressure	-25	-13	134,2	458	115,5	1,18	4,05	1,02	113,2	1,21	2,91
pc= 45/113	-15	5	234,2	800	201,5	1,64	5,59	1,41	143,0	1,28	5,10
return gas temp.	-10	14	300,5	1026	258,6	1,91	6,51	1,64	157,6	1,32	6,58
RGT= 32/90	0	32	469,8	1604	404,3	2,52	8,59	2,17	186,8	1,41	10,39
liquid temp	5	41	574,3	1961	494,2	2,85	9,74	2,45	201,4	1,46	12,79
Tliq= 45/113	15	59	826,8	2824	711,5	3,57	12,20	3,07	231,4	1,58	18,73
[°C / °F]	-35	-31	58,7	201	50,6	0,77	2,63	0,66	76,3	1,13	1,40
cond. pressure	-25	-13	113,7	388	97,9	0,98	3,34	0,84	116,4	1,21	2,72
pc= 55/131	-15	5	200,9	686	172,9	1,30	4,46	1,12	154,0	1,31	4,84
return gas temp	-10	14	258,5	883	222,5	1,50	5,13	1,29	172,0	1,36	6,25
RGT= 32/90	0	32	405,7	1385	349,1	1,96	6,69	1,69	207,1	1,48	9,92
liquid temp	5	41	496,7	1696	427,5	2,21	7,56	1,91	224,3	1,55	12,24
Tliq= 55/131	15	59	717,7	2451	617,6	2,78	9,48	2,39	258,5	1,69	18,03

Model			
Designation	FRK7.5G	208-230V/60Hz	Conf. 2

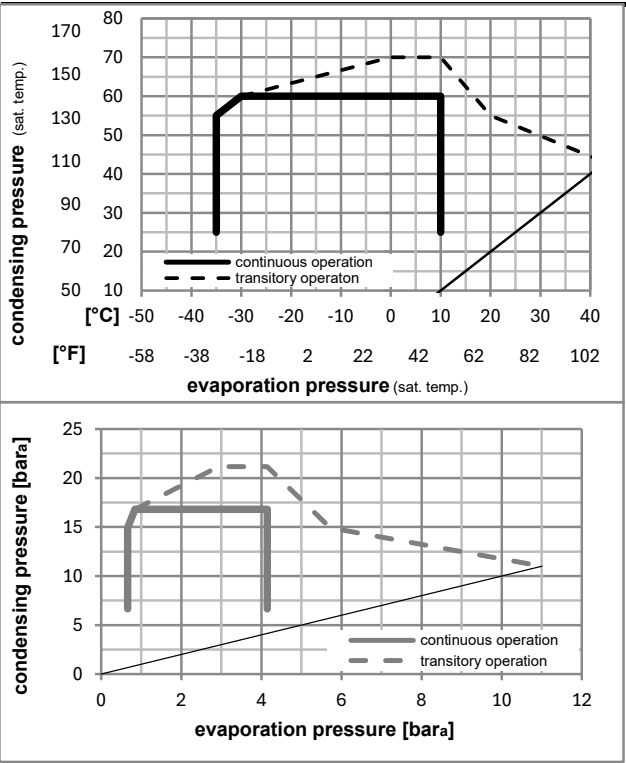
Configuration		Electrical accessories / wiring diagram	
Motorconfiguration	CSIR	CSIR	
Power supply (nominal)	208-230V/60Hz 1~		
Refrigerant	R134a		
Application	LBP+MBP		
Voltage range	198-253V		
Starting torque	HST		
Approvals			

Ambient/ machine room temperatures minimum /maximum

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



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Alternative components

b, d	cover + clamp + screws(5VA-compl.)	103N0600
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Model	Under Development													
Designation	FRK7.5G			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	184,2	629	158,5	1,29	4,42	1,11	142,4	1,18	3,58	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	396,1	1353	340,9	1,86	6,36	1,60	212,9	1,38	8,64	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	702,3	2398	604,4	2,59	8,85	2,23	271,1	1,58	15,58	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	90,2	308	77,7	0,96	3,29	0,83	93,7	1,09	1,98	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	338,2	1155	291,0	1,83	6,24	1,57	185,1	1,30	7,92	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	599,0	2046	515,5	2,36	8,05	2,03	254,3	1,52	15,09	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	83,6	285	71,9	0,91		3,10	0,78	92,1		1,08	1,80
cond. pressure	-25	-13	155,8	532	134,1	1,21		4,14	1,04	128,7		1,15	3,38
pc= 45/113	-15	5	273,2	933	235,1	1,64		5,62	1,42	166,1		1,24	5,95
return gas temp.	-10	14	350,8	1198	301,9	1,89		6,47	1,63	185,1		1,30	7,68
RGT= 32/90	0	32	548,4	1873	472,0	2,45		8,37	2,11	223,8		1,41	12,13
liquid temp	5	41	670,0	2288	576,6	2,75		9,40	2,37	243,5		1,48	14,92
Tliq= 45/113	15	59	963,0	3289	828,8	3,40		11,61	2,92	283,4		1,62	21,81
[°C / °F]	-35	-31	66,0	225	56,8	0,71		2,42	0,61	93,2		1,08	1,57
cond. pressure	-25	-13	134,4	459	115,6	0,99		3,38	0,85	135,9		1,17	3,21
pc= 55/131	-15	5	238,7	815	205,4	1,34		4,57	1,15	178,4		1,28	5,75
return gas temp	-10	14	306,5	1047	263,7	1,54		5,24	1,32	199,6		1,34	7,41
RGT= 32/90	0	32	477,3	1630	410,8	1,97		6,74	1,70	241,7		1,47	11,68
liquid temp	5	41	582,1	1988	501,0	2,22		7,57	1,91	262,7		1,55	14,34
Tliq= 55/131	15	59	834,6	2850	718,3	2,74		9,36	2,36	304,5		1,70	20,96