

Single Pack FRK10G 220-240V 50Hz / 208-230V 60Hz CSIR

Codice Imballo Singolo: **195B4770**

Posizione	Titolo	Codice	Quantità
1	Compressor FRK10G	106G5853	1
2	Starting capacitor (80µF 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 ø16mm	118-1917	1

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Model

Designation	FRK10G	220-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	106G5853
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	7,7cm³ / 0,47cu.in
Oil quantity	240cm³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1505cm³ / 50,9fl.oz		
Weight	9,6kg / 21,2lbs		
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 FRK10G

	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 FRK10G

	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 FRK10G

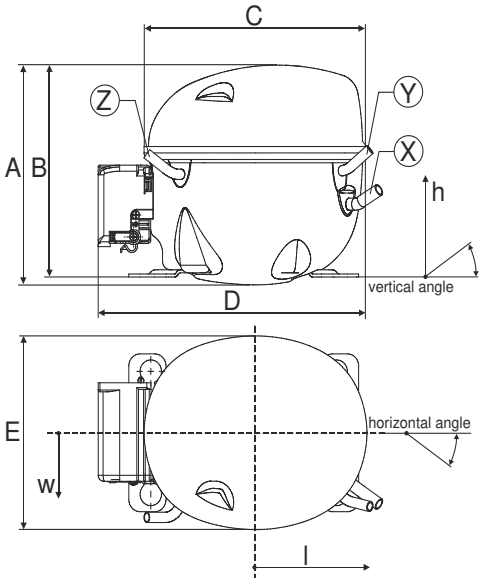
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	80μF	80μF
LRA (locked rotor amps / 4s/ U(N))	13,5A	13,5A
RLA (rated load amps / 1s/ U(N))	2,1A	2,1A
Cut in current (U(N))	12,3A	12,3A

Model				
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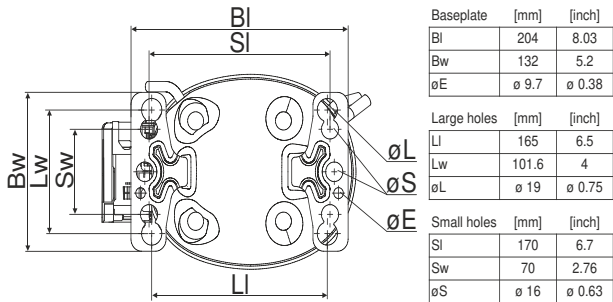
Compressor dimensions

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	

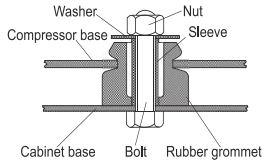
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	35°	13°	0°
Vertical angle ±2°	30°	40°	145°
Position l/h/w [mm]	119/73/59	117/107/66	-88/101/71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



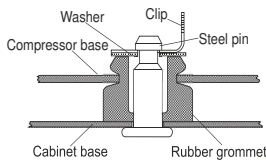
Compressor fixation



Bolt joint



Snap-on



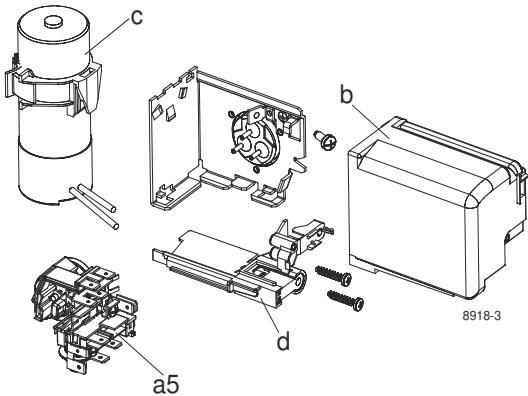
Mounting accessories	one comp.	multi pack
Bolt joint M6 ø16mm	118-1917	118-1918
Bolt joint ø1/4" ø16mm	118-1946	
Bolt joint ø1/4" ø19mm	118-1949	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Application notes

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

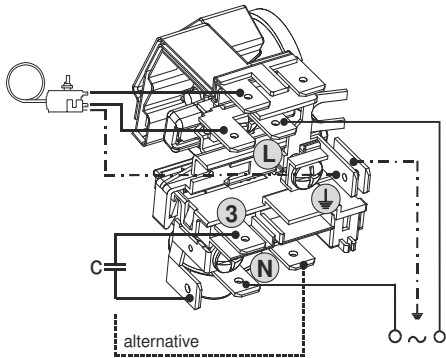
Suctiongas connector and Process connector can be switched (minor loss of cooling capacity)

Model				
Designation	FRK10G	220-240V/50Hz	Conf. 1	Sales code: 106G5853
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 in progress			

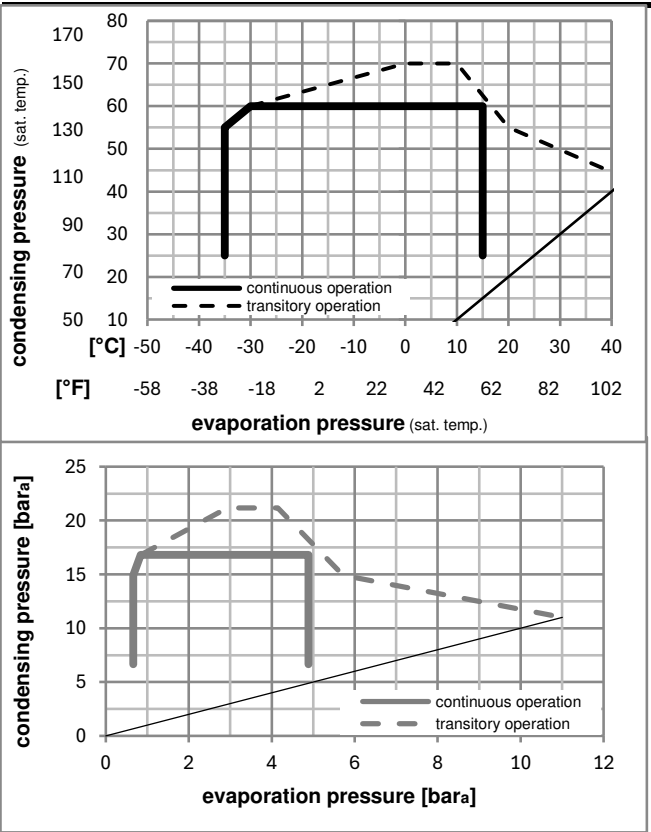


Ambient/ machine room temperatures minimum /maximum

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	FRK10G	220-240V/50Hz	Conf. 1	Sales code:	106G5853
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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														
Current consumption														
Ref. mass flow														
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
											[W]	[A]	[kg/h]	
[°C]	-23	54	32	32	213,7	730	183,9	1,30	4,43	1,12	164,6	1,34	4,15	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	437,6	1494	376,6	1,82	6,22	1,57	240,2	1,61	9,55	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	765,7	2615	659,0	2,42	8,27	2,08	316,2	1,93	16,99	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	110,9	379	95,4	0,96	3,27	0,82	115,8	1,21	2,43	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	381,4	1303	328,3	1,82	6,22	1,57	209,5	1,49	8,93	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	655,1	2237	563,8	2,27	7,76	1,96	288,3	1,81	16,51	EN12900 HBP
[°F]	41	122	68	122										

Performance tables

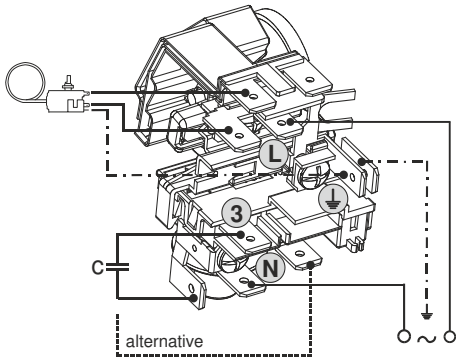
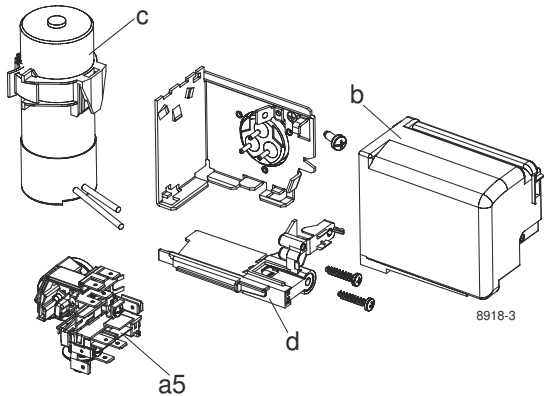
R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

	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	105,4	360	90,7	0,89	3,05	0,77	117,9	1,22	2,27
cond. pressure	-25	-13	186,0	635	160,1	1,21	4,15	1,05	153,2	1,31	4,03
pc= 45/113	-15	5	312,7	1068	269,1	1,64	5,61	1,41	190,3	1,42	6,82
return gas temp.	-10	14	395,7	1351	340,6	1,89	6,45	1,63	209,5	1,49	8,66
RGT= 32/90	0	32	606,2	2070	521,7	2,43	8,29	2,09	249,6	1,65	13,41
liquid temp	5	41	735,6	2512	633,1	2,72	9,29	2,34	270,4	1,74	16,38
Tliq= 45/113	15	59	1047,8	3578	901,7	3,34	11,40	2,87	313,8	1,92	23,73
[°C / °F]	-35	-31	83,8	286	72,1	0,69	2,35	0,59	121,9	1,23	1,99
cond. pressure	-25	-13	157,0	536	135,1	0,99	3,39	0,85	158,3	1,32	3,75
pc= 55/131	-15	5	268,0	915	230,7	1,33	4,56	1,15	200,9	1,46	6,45
return gas temp	-10	14	340,2	1162	292,8	1,52	5,18	1,30	224,5	1,55	8,23
RGT= 32/90	0	32	522,9	1786	450,0	1,89	6,46	1,63	276,6	1,76	12,79
liquid temp	5	41	635,4	2170	546,9	2,08	7,11	1,79	305,0	1,88	15,66
Tliq= 55/131	15	59	907,7	3100	781,2	2,47	8,45	2,13	366,9	2,16	22,80

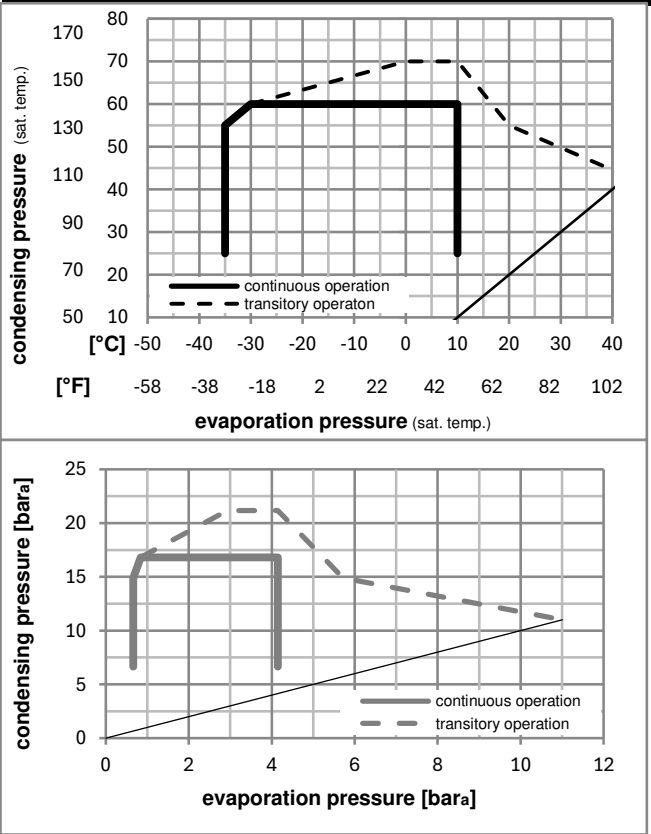
Model					
Designation	FRK10G	208-230V/60Hz	Conf. 2	Sales code:	106G5853
Configuration			Electrical accessories / wiring diagram		
Motor configuration	CSIR		CSIR		
Power supply (nominal)	208-230V/60Hz 1~				
Refrigerant	R134a				
Application	LBP+MBP				
Voltage range	198-253V				
Starting torque	HST				
Approvals	VDE				
	CB				
	UL in progress				

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
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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 **FRK10G** **208-230V/60Hz** Conf. 2 Sales code: **106G5853**

Optimization + standard conditions

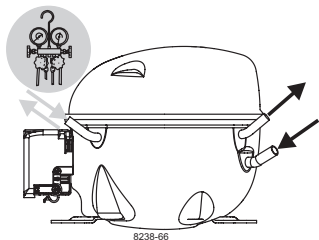
R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

Evaporating pressure (saturation temperature)														
Condensing pressure (saturation temperature)														
Return gas temp.														
Liquid temp.														
Cooling capacity														
COP														
EER														
Power consumption														
Current consumption														
Ref. mass flow														
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
											[W]	[A]	[kg/h]	
[°C]	-23	54	32	32	253,7	867	218,4	1,38	4,71	1,19	183,8	1,29	4,93	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	517,7	1768	445,5	1,86	6,34	1,60	278,7	1,60	11,29	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	905,6	3093	779,4	2,48	8,46	2,13	365,7	1,93	20,09	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	-35	40	20	40	129,2	441	111,2	1,10	3,75	0,94	117,8	1,12	2,84	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	450,3	1538	387,6	1,87	6,37	1,61	241,4	1,47	10,54	EN12900 MBP
[°F]	14	113	68	113										
[°C]	5	50	20	50	774,2	2644	666,3	2,32	7,92	2,00	333,8	1,81	19,51	EN12900 HBP
[°F]	41	122	68	122										

Performance tables

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

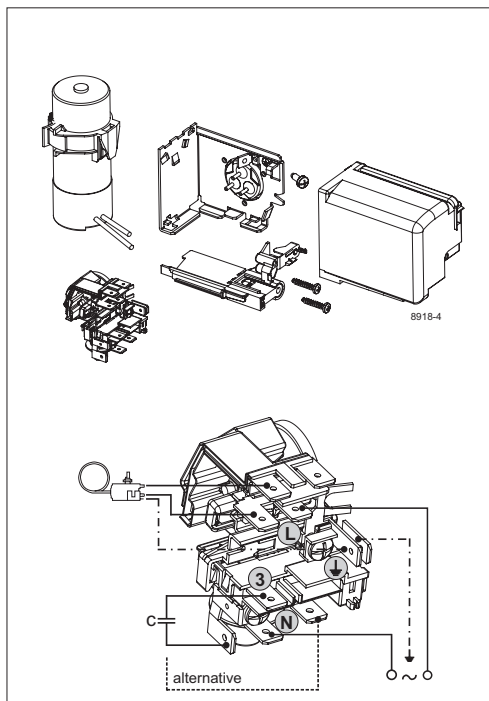
	pe		Cooling capacity			COP		EER		P1		I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C / °F]	-35	-31	122,6	419	105,5	1,06	3,62	0,91	115,8	1,12	2,65		
cond. pressure	-25	-13	219,9	751	189,2	1,29	4,42	1,11	169,8	1,25	4,76		
pc= 45/113	-15	5	369,4	1262	317,9	1,69	5,78	1,46	218,2	1,40	8,05		
return gas temp.	-10	14	467,2	1596	402,1	1,94	6,61	1,67	241,4	1,47	10,23		
RGT= 32/90	0	32	715,4	2443	615,7	2,48	8,48	2,14	288,1	1,64	15,82		
liquid temp	5	41	868,5	2966	747,4	2,78	9,49	2,39	312,5	1,73	19,34		
Tliq= 45/113	15	59	1239,4	4233	1066,7	3,39	11,58	2,92	365,5	1,93	28,07		
[°C / °F]	-35	-31	97,9	334	84,2	0,85	2,89	0,73	115,6	1,12	2,33		
cond. pressure	-25	-13	186,5	637	160,5	1,07	3,64	0,92	174,7	1,27	4,46		
pc= 55/131	-15	5	317,7	1085	273,5	1,37	4,69	1,18	231,6	1,44	7,65		
return gas temp	-10	14	402,8	1376	346,6	1,55	5,28	1,33	260,3	1,54	9,74		
RGT= 32/90	0	32	618,2	2111	532,1	1,93	6,59	1,66	320,5	1,76	15,12		
liquid temp	5	41	751,4	2566	646,6	2,13	7,27	1,83	352,9	1,88	18,52		
Tliq= 55/131	15	59	1075,2	3672	925,3	2,53	8,65	2,18	424,4	2,17	27,01		



FRK Compressors

SECOP

Keep electrical equipment
clear from oil, chemicals,
and water



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