

Technical Data

Compressor

SECOP

Model

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

Compressor design

Oil type	Polyester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	7,7cm ³ / 0,47cu.in
Oil quantity	240cm ³ / 8,1fl.oz	Compressors on pallet	100

Refr. charge - tech. limit
Free gas volume comp.
Weight

Motor protection
Winding resistance main
Winding resistance aux
Max. winding temp.
Max. discharge temp.



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	VDE, CB, UL
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))	13,4A	13,2A
RLA (rated load amps / 1s/ U(N))	1,8A	2A
Cut in current (U(N))	12,3A	12,3A

Model

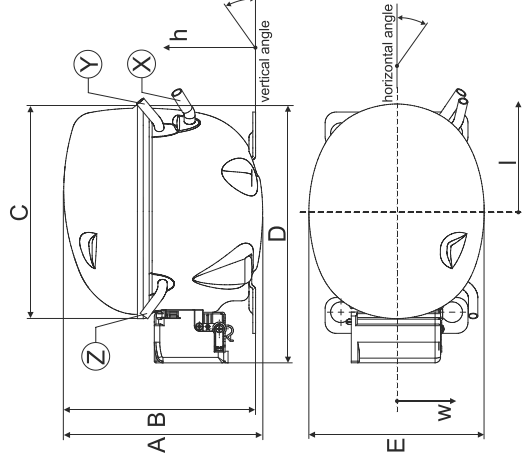
 Designation **FRK10G**

220-240V/50Hz 1~ 208-230V/60Hz 1~

Sales code:

106G5853
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	



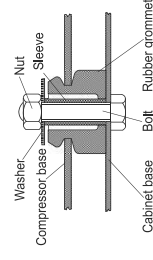
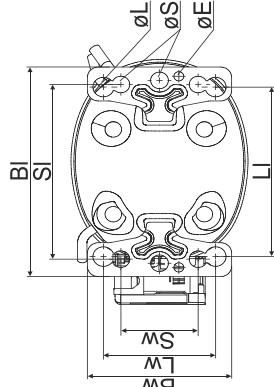
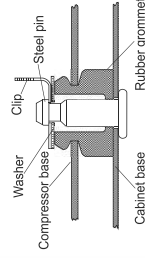
Connectors	Suction	Discharge	Process
Diameter [mm]	X ø 8,11-8,29	Y ø 6,11-6,29	Z ø 6,11-6,29
(i:inside, o:outside) [in]	ø 0,32-0,33	ø 0,24-0,25	ø 0,24-0,25
Material	copper	copper	copper
Horizontal angle	±2°	13°	0°
Vertical angle	±2°	40°	145°
Position l/h/w [mm]	119/73/59	117/107/66	-88/101/71
[in]	4,7/2,9/2,3	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

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


Snap-on

Mounting accessories

one comp.	multi pack
Bolt joint M6 ø16mm	118-1917
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 FRK10G **Conf. 1** **220-240V/50Hz** **Sales code:** 106G5853

Configuration **Electrical accessories / wiring diagram**

Motor configuration CSIR

Power supply (nominal) 220-240V/50Hz 1~

Refrigerant R134a

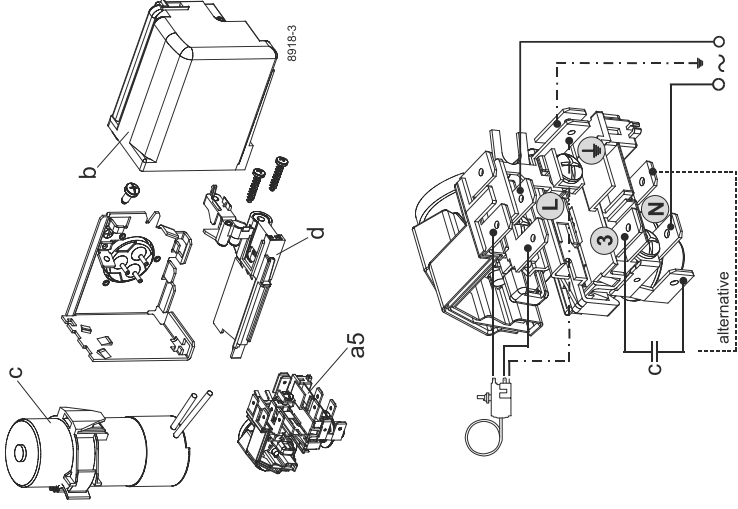
Application LBP+MBP+HBP

Voltage range 187-254V

Starting torque HST

Approvals VDE
CB
UL

CSIR



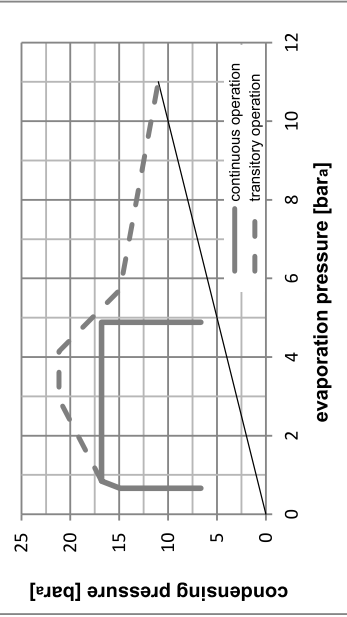
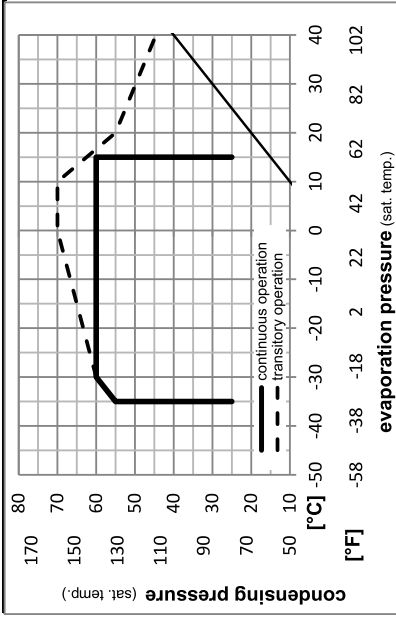
Ambient/ machine room temperatures minimum /maximum

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 (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

Technical Data

Compressor

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Model

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

Optimization + standard conditions

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

		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 [°C]	pc [°F]	RG T [°C]	Tliq [°F]	[kcal/h]	[Btu/h]	[W/W]	[kcal/h]	[Btu/W/h]	[W/W]	[kcal/W/h]	[W]	[A]	[W]	[A]	[kg/h]	[kg/h]			
		-23	54	32	32	213,7	730	183,9	1,30	4,43	1,12	164,6	1,34	4,15	ASHRAE LBP						
		-10	130	90	90																
		-7	54	35	46	437,6	1494	376,6	1,82	6,22	1,57	240,2	1,61	9,55	ASHRAE MBP						
		20	130	95	115																
		7,2	54	35	46	765,7	2615	659,0	2,42	8,27	2,08	316,2	1,93	16,99	ASHRAE HBP						
		45	130	95	115																
		-35	40	20	40	110,9	379	95,4	0,96	3,27	0,82	115,8	1,21	2,43	EN12900 LBP						
		-31	104	68	104																
		-10	45	20	45	381,4	1303	328,3	1,82	6,22	1,57	209,5	1,49	8,93	EN12900 MBP						
		14	113	68	113																
		5	50	20	50	655,1	2237	563,8	2,27	7,76	1,96	288,3	1,81	16,51	EN12900 HBP						
		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]	[W/W]	[Btu/W/h]	[kcal/W/h]	[W]	[A]	[A]	[kg/h]			
		-35	-31	105,4	360	0,89	3,05	0,77	117,9	1,22	2,27				
	cond. pressure	-25	-13	186,0	635	1,21	4,15	1,05	153,2	1,31	4,03				
	pc= 45/113	-15	5	312,7	1068	1,64	5,61	1,41	190,3	1,42	6,82				
	return gas temp.	-10	14	395,7	1351	1,89	6,45	1,63	209,5	1,49	8,66				
	RG T= 32/90	0	32	606,2	2070	2,43	8,29	2,09	249,6	1,65	13,41				
	liquid temp	5	41	735,6	2512	2,72	9,29	2,34	270,4	1,74	16,38				
	Tliq= 45/113	15	59	1047,8	3578	3,34	11,40	2,87	313,8	1,92	23,73				
		-35	-31	83,8	286	0,69	2,35	0,59	121,9	1,23	1,99				
	cond. pressure	-25	-13	157,0	536	0,99	3,39	0,85	158,3	1,32	3,75				
	pc= 55/131	-15	5	268,0	915	1,33	4,56	1,15	200,9	1,46	6,45				
	return gas temp	-10	14	340,2	1162	1,52	5,18	1,30	224,5	1,55	8,23				
	RG T= 32/90	0	32	522,9	1786	1,89	6,46	1,63	276,6	1,76	12,79				
	liquid temp	5	41	635,4	2170	2,08	7,11	1,79	305,0	1,88	15,66				
	Tliq= 55/131	15	59	907,7	3100	2,47	8,45	2,13	366,9	2,16	22,80				

Model

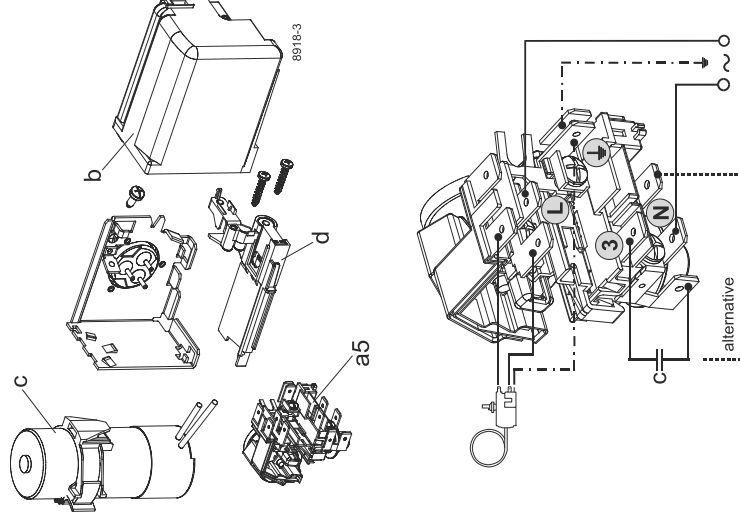
Designation **FRK10G** **208-230V/60Hz** Conf. 2 Sales code: **106G5853**

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

Electrical accessories / wiring diagram

CSIR



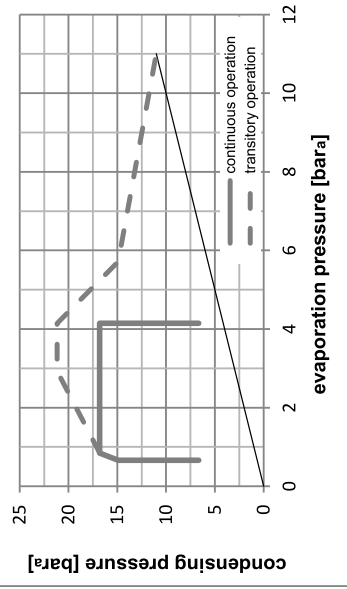
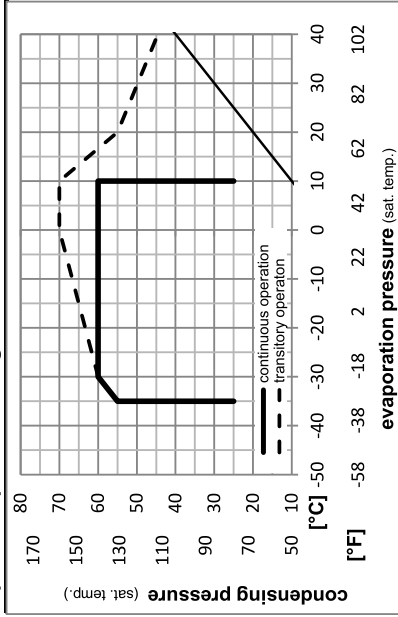
Ambient/ machine room temperatures minimum /maximum

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 (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

Technical Data

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Model

106G5853

Designation

FRK10G 208-230V/60Hz

Conf. 2

Sales code:

Optimization + standard conditions

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

		Evaporating pressure (saturation temperature)		Condensing pressure (saturation temperature)		Return gas temp.		Liquid temp.		Cooling capacity		COP		EER		Power consumption	
		Return gas temp.		Liquid temp.		Cooling capacity		COP		EER		Power consumption		Current consumption		Ref. mass flow	
		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/W/h]	[kcal/W/h]	[W/W]	[Btu/W/h]	[kcal/W/h]	[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													

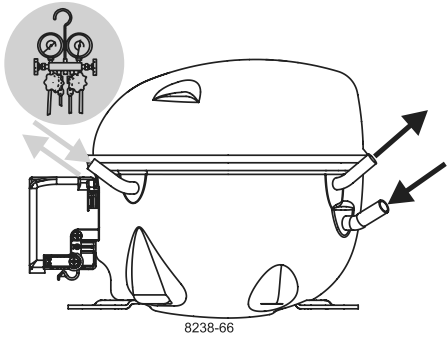
[°C]	-10	45	20	45	450,3	1538	387,6	1,87	6,37	1,61	241,4	1,47	10,54	EN12900 MBP			
[°F]	14	113	68	113													

[°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

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



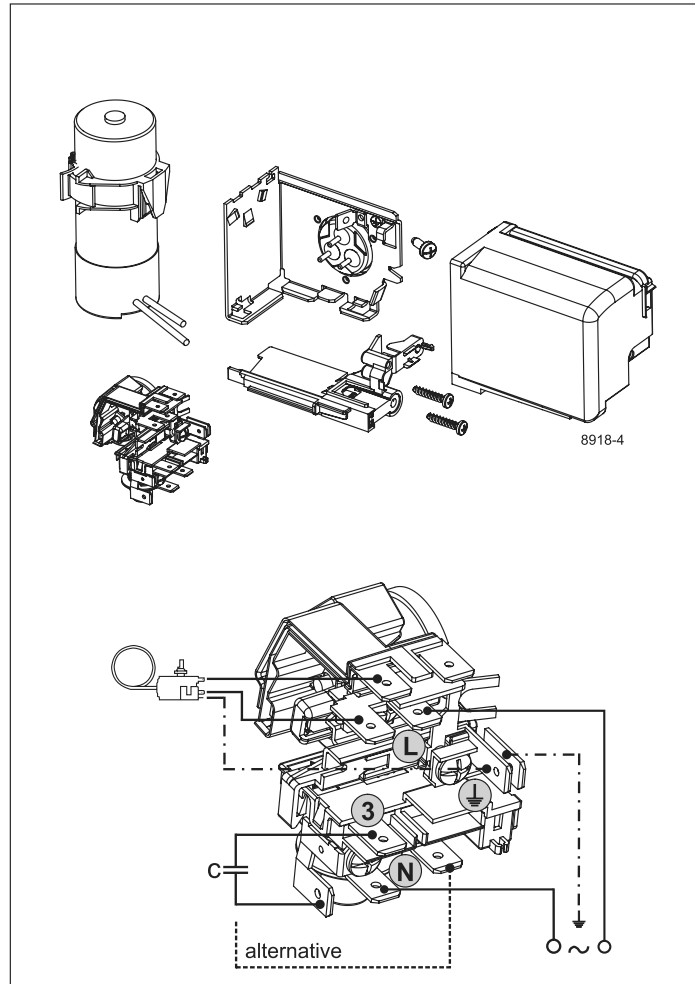
FRK Compressors

SECCOP

Keep electrical equipment
clear from oil, chemicals,
and water







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