Technical Data Compressor

SECOP

Model

Designation	**FRK5G**	**220-240V/50Hz 1~**	**208-230V/60Hz 1~**	Sales code:	**106G5463**

Compressor design

Oil type	Polyolester	Refrigerant(s)	**R134a, R513A**
Oil viscosity	19,2cSt	Displacement	4cm³ / 0,24cu.in
Oil quantity	240cm³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1560cm³ / 52,7fl.oz		
Weight	8,9kg / 19,6lbs		
Motor protection	external		
Winding resistance main	13,1Ω (at 25°C)		
Winding resistance aux	25,3Ω (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 FRK5G

	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	Electrical equipment is included and pre-assembled to compressor.	

Applications with FRK5G

	Conf. 1	**Conf. 2**
Refrigerant	R134a	R134a
Application	LBP+MBP+HBP	LBP+MBP
System cooling	static	static
Hot gas defrost	OK	OK
Long interval pull down	OK	OK

Electrical data - Configurations with FRK5G

	Conf. 1	**Conf. 2**
Starting device type	relay	relay
Run capacitor	-/-	-/-
Start capacitor	80µF	80µF
LRA (locked rotor amps / 4s/ U(N))	10,2A	
RLA (rated load amps / 1s/ U(N))	1,4A	
Cut in current (U(N))	10,2A	

Model

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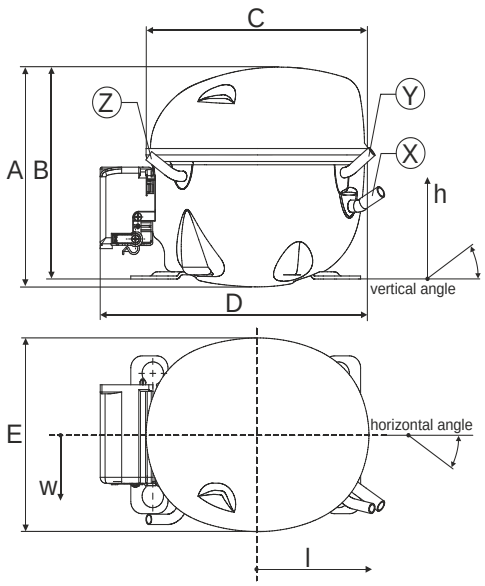
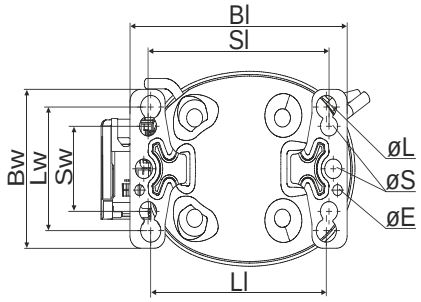
Compressor dimensions

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**	**Discharge**	**Process**
		X	**Y**	**Z**
Diameter	[mm]	øi 6,16-6,24	øi 5,1-5,2	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,24-0,25	øi 0,2-0,2	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

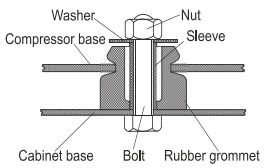


Baseplate	[mm]	[inch]
Bl	204	8.03
Bw	132	5.2
øE	ø 9.7	ø 0.38

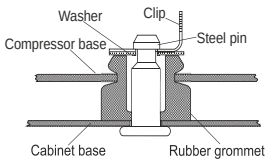
Large holes	[mm]	[inch]
Ll	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75

Small holes	[mm]	[inch]
Sl	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					
	FRK5G	**220-240V/50Hz**	**Conf. 1**	Sales code:	**106G5463**

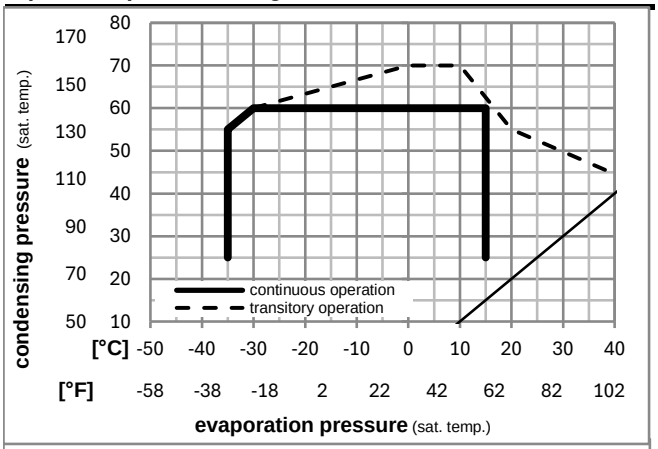
Configuration

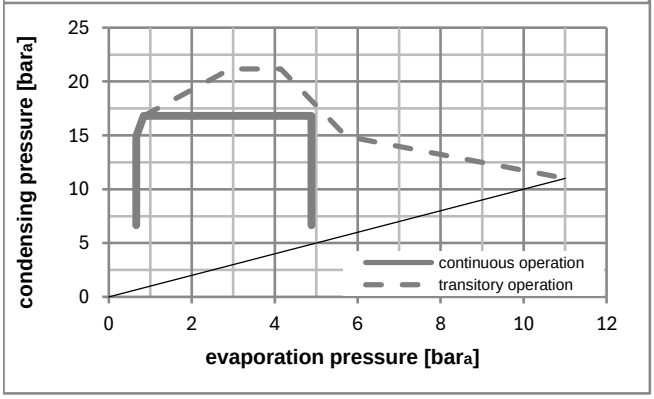
Motor configuration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP+MBP+HBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE
	CB
	UL in progress

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:	static

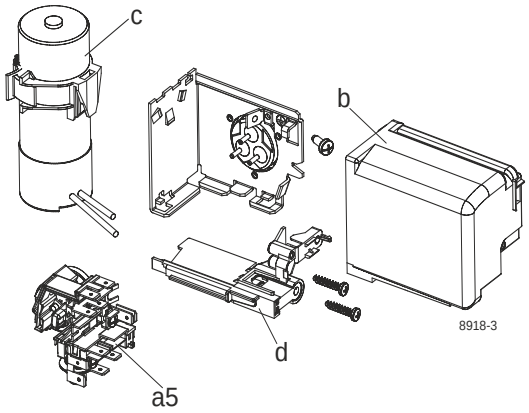
Operation pressure range

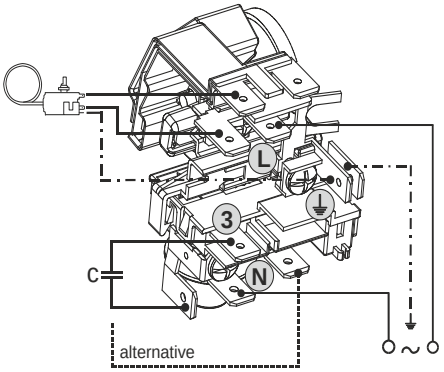




Electrical accessories / wiring diagram

CSIR





Components (incl. and pre. assembl.)

a5	current relay (T1189/L6-S3)	117U7073
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 **FRK5G** **220-240V/50Hz** **Conf. 1** Sales code: **106G5463**

Optimization + standard conditions R134a, 220V/50Hz, CSIR, static, VDE, CB, UL in progress

	Evaporating pressure (saturation temperature) pe	Condensing pressure (saturation temperature) pc	Return gas temp. RGT	Liquid temp. Tliq	Cooling capacity [W]	Cooling capacity [Btu/h]	Cooling capacity [kcal/h]	COP [W/W]	EER [Btu/Wh]	EER [kcal/Wh]	Power consumption P1 [W]	Current consumption I [A]	Ref. mass flow ṁ [kg/h]	
[°C]	-23	54	32	32	98,4	336	84,7	1,11	3,79	0,96	88,6	0,91	1,91	**ASHRAE LBP**
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	215,0	734	185,1	1,72	5,86	1,48	125,3	1,00	4,69	**ASHRAE MBP**
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	386,4	1320	332,5	2,50	8,54	2,15	154,5	1,07	8,57	**ASHRAE HBP**
[°F]	45	130	95	115										
[°C]	-35	40	20	40	44,6	152	38,4	0,68	2,34	0,59	65,1	0,86	0,98	**EN12900 LBP**
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	185,6	634	159,7	1,69	5,77	1,45	109,8	0,96	4,34	**EN12900 MBP**
[°F]	14	113	68	113										
[°C]	5	50	20	50	329,2	1124	283,3	2,29	7,82	1,97	143,8	1,04	8,30	**EN12900 HBP**
[°F]	41	122	68	122										

Performance tables R134a, 220V/50Hz, CSIR, static, 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	42,1	144	36,2	0,65	2,22	0,56	64,8	0,86	0,91
cond. pressure	-25	-13	84,2	287	72,4	1,02	3,47	0,87	82,8	0,90	1,82
pc= 45/113	-15	5	149,6	511	128,8	1,48	5,07	1,28	100,8	0,94	3,26
return gas temp.	-10	14	192,5	657	165,7	1,75	5,99	1,51	109,8	0,96	4,21
RGT= 32/90	0	32	301,6	1030	259,6	2,36	8,06	2,03	127,8	1,00	6,67
liquid temp	5	41	369,0	1260	317,5	2,70	9,21	2,32	136,8	1,02	8,21
Tliq= 45/113	15	59	532,1	1817	457,9	3,44	11,74	2,96	154,9	1,08	12,05
[°C / °F]	-35	-31	34,3	117	29,6	0,56	1,91	0,48	61,4	0,86	0,82
cond. pressure	-25	-13	71,6	244	61,6	0,84	2,88	0,73	84,8	0,91	1,71
pc= 55/131	-15	5	128,5	439	110,6	1,20	4,08	1,03	107,5	0,95	3,09
return gas temp	-10	14	165,7	566	142,6	1,40	4,77	1,20	118,5	0,98	4,01
RGT= 32/90	0	32	260,7	890	224,3	1,86	6,35	1,60	140,1	1,03	6,38
liquid temp	5	41	319,6	1091	275,0	2,12	7,24	1,83	150,6	1,06	7,87
Tliq= 55/131	15	59	463,0	1581	398,4	2,70	9,23	2,33	171,3	1,13	11,63

Model

Designation					
	FRK5G	**208-230V/60Hz**	**Conf. 2**	Sales code:	**106G5463**

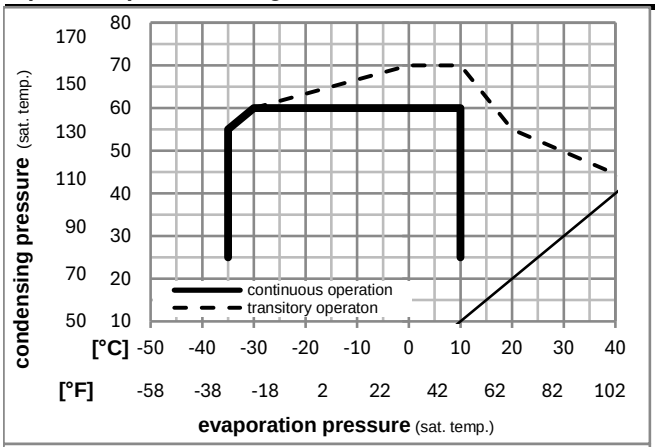
Configuration

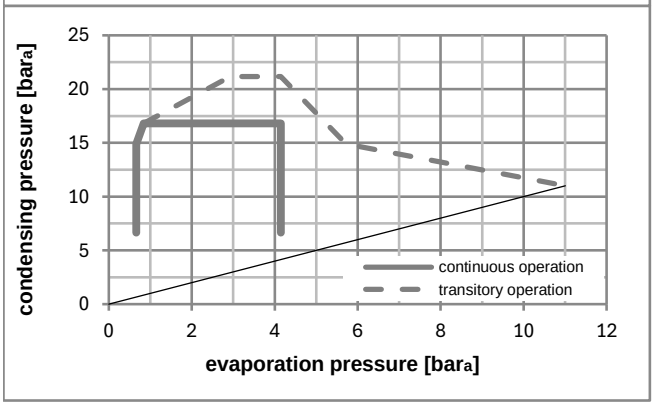
Motor configuration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP+MBP
Voltage range	198-253V
Starting torque	HST
Approvals	VDE
	CB
	UL in progress

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:	static

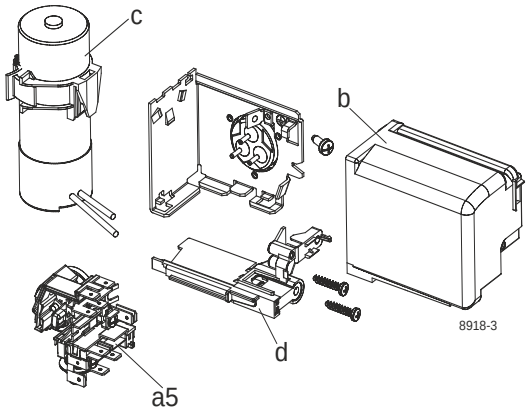
Operation pressure range

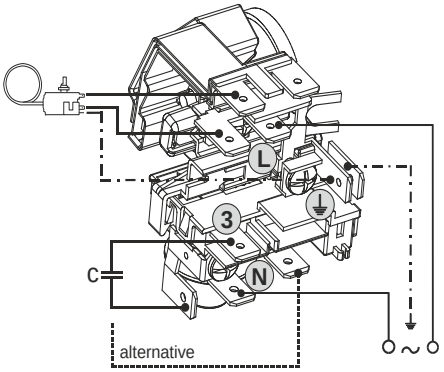




Electrical accessories / wiring diagram

CSIR





Components (incl. and pre. assembl.)

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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 **FRK5G** **208-230V/60Hz** **Conf. 2** Sales code: **106G5463**

Optimization + standard conditions R134a, 230V/60Hz, CSIR, static, VDE, CB, UL in progress

	Evaporating pressure (saturation temperature) pe	Condensing pressure (saturation temperature) pc	Return gas temp. RGT	Liquid temp. Tliq	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	Power consumption P1 [W]	Current consumption I [A]	Ref. mass flow ṁ [kg/h]	
[°C]	-23	54	32	32	119,2	407	102,6	1,17	3,98	1,00	102,2	1,10	2,32	**ASHRAE LBP**
[°F]	-10	130	90	90										
[°C]	-7	54	35	46	253,7	866	218,3	1,77	6,03	1,52	143,7	1,19	5,53	**ASHRAE MBP**
[°F]	20	130	95	115										
[°C]	7,2	54	35	46	451,2	1541	388,3	2,50	8,54	2,15	180,3	1,28	10,01	**ASHRAE HBP**
[°F]	45	130	95	115										
[°C]	-35	40	20	40	53,4	182	45,9	0,71	2,41	0,61	75,6	1,06	1,17	**EN12900 LBP**
[°F]	-31	104	68	104										
[°C]	-10	45	20	45	217,7	744	187,4	1,71	5,85	1,47	127,2	1,15	5,10	**EN12900 MBP**
[°F]	14	113	68	113										
[°C]	5	50	20	50	383,8	1311	330,3	2,27	7,74	1,95	169,4	1,25	9,67	**EN12900 HBP**
[°F]	41	122	68	122										

Performance tables R134a, 230V/60Hz, CSIR, static, 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	49,3	168	42,5	0,66	2,27	0,57	74,4	1,06	1,06
cond. pressure	-25	-13	101,4	346	87,3	1,07	3,65	0,92	94,9	1,09	2,20
pc= 45/113	-15	5	176,9	604	152,3	1,52	5,20	1,31	116,2	1,13	3,86
return gas temp.	-10	14	225,9	771	194,4	1,78	6,06	1,53	127,2	1,15	4,94
RGT= 32/90	0	32	351,1	1199	302,1	2,33	7,97	2,01	150,4	1,20	7,76
liquid temp	5	41	429,3	1466	369,4	2,64	9,01	2,27	162,6	1,23	9,56
Tliq= 45/113	15	59	621,6	2123	534,9	3,29	11,25	2,83	188,7	1,30	14,08
[°C / °F]	-35	-31	37,7	129	32,5	0,51	1,74	0,44	74,0	1,06	0,90
cond. pressure	-25	-13	86,8	296	74,7	0,88	3,01	0,76	98,5	1,10	2,07
pc= 55/131	-15	5	153,9	526	132,4	1,25	4,27	1,08	123,2	1,14	3,70
return gas temp	-10	14	196,7	672	169,2	1,45	4,95	1,25	135,7	1,17	4,76
RGT= 32/90	0	32	305,4	1043	262,9	1,89	6,46	1,63	161,5	1,23	7,47
liquid temp	5	41	373,4	1275	321,3	2,14	7,29	1,84	174,9	1,26	9,20
Tliq= 55/131	15	59	541,3	1849	465,8	2,67	9,12	2,30	202,8	1,35	13,60