

Single Pack FRK6G 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4767**

Position	Title	Code	Amount
1	Compressor FRK6G	106G5553	1
2	Starting capacitor (80 μ F 220V, 6.3mm)	117U5001	1
3	Starting relay (QLZ-4.6A, overload protector T1189/L6)	117U7073	1
4	KL accessories	103N1060	1
5	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

Secop GmbH • Lise-Meitner-Straße 29 • 24941 Flensburg, Germany • Tel: +49 461 4941 0 • www.secop.com

Secop accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Secop reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Secop GmbH. All rights reserved.

Model

Designation	FRK6G	220-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	106G5553
-------------	--------------	-------------------------	-------------------------	-------------	-----------------

Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	19,2cSt	Displacement	4,8cm ³ / 0,29cu.in
Oil quantity	240cm ³ / 8,1fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	700g / 24,7oz		
Free gas volume comp.	1545cm ³ / 52,2fl.oz		
Weight	9,3kg / 20,5lbs		
Motor protection	external		
Winding resistance main	2Ω (at 25°C)		
Winding resistance aux	8,5Ω (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 FRK6G

	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 FRK6G

	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 FRK6G

	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	

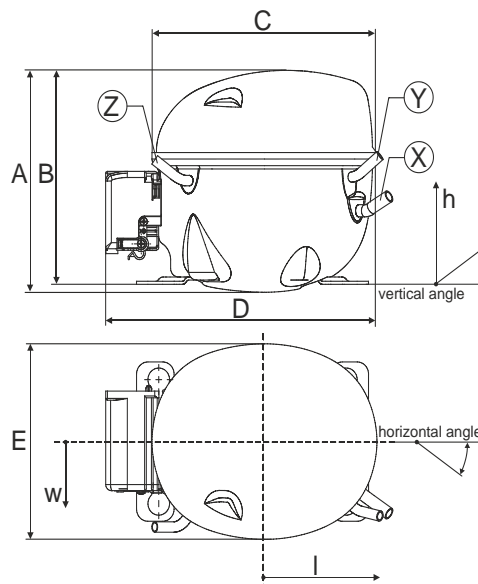
Model

Designation **FRK6G** **220-240V/50Hz 1~ 208-230V/60Hz 1~** Sales code: **106G5553**

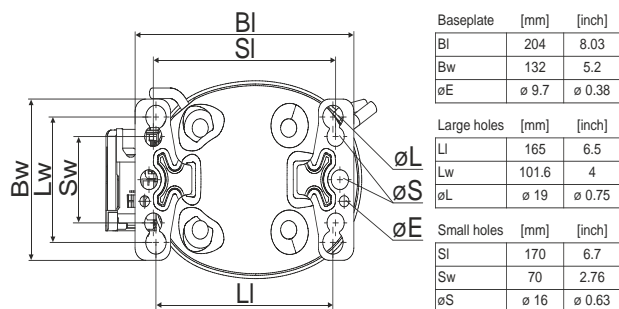
Compressor dimensions

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

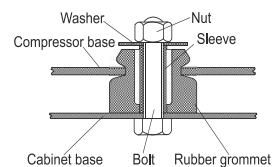
Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	119/73/59	117/107/66	-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



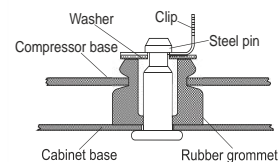
Compressor fixation



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

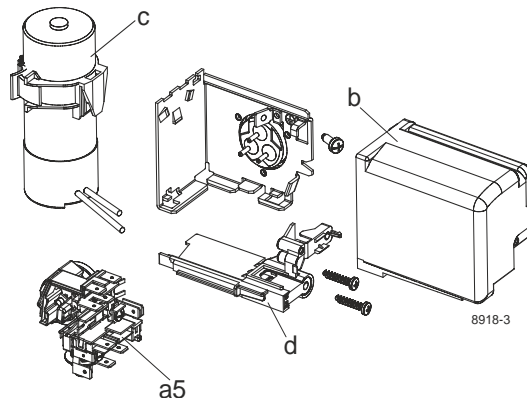
Designation	FRK6G	220-240V/50Hz	Conf. 1	Sales code:	106G5553
-------------	--------------	----------------------	---------	-------------	-----------------

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

Electrical accessories / wiring diagram

CSIR

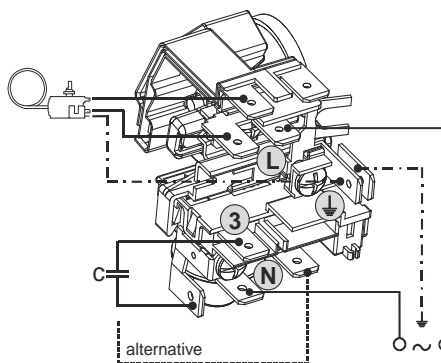


Ambient/ machine room temperatures minimum /maximum

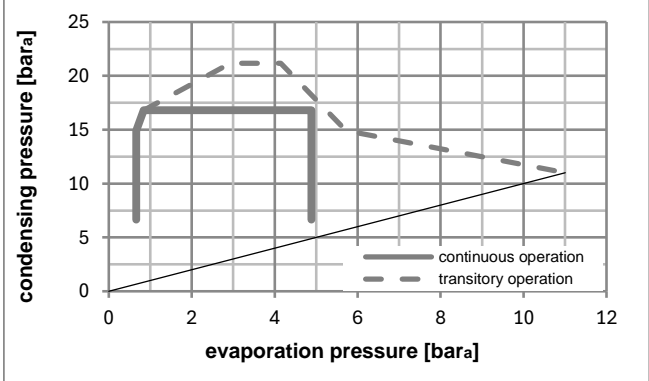
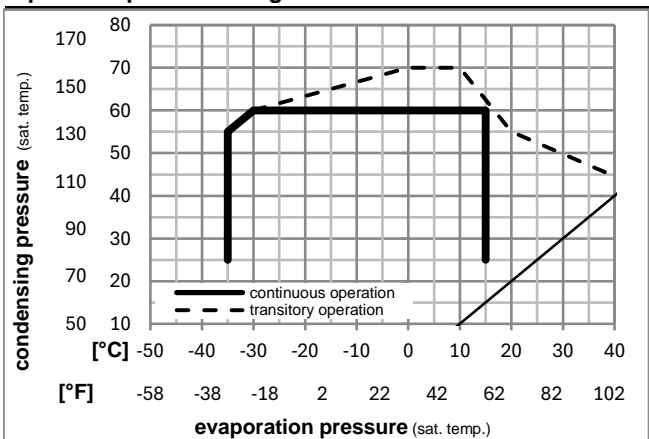
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s



Operation pressure range



Components

a5	current relay (T1189/L6-S3)	117U7073
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 **FRK6G** **220-240V/50Hz** Conf. 1 Sales code: **106G5553**

Optimization + standard conditions

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

	pe	pc	RGT	Tliq	Cooling capacity		COP	EER		P1	I	Ref. mass flow	
	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
ASHRAE LBP	-23	54	32	32	125,8	430	108,3	1,23	4,19	1,06	102,5	0,94	2,44
	[°F]	[°F]	[°F]	[°F]									
	-10	130	90	90									
ASHRAE MBP	-7	54	35	46	271,5	927	233,6	1,82	6,23	1,57	148,9	1,06	5,92
	[°F]	[°F]	[°F]	[°F]									
	20	130	95	115									
ASHRAE HBP	7,2	54	35	46	487,2	1664	419,3	2,63	8,99	2,27	185,1	1,18	10,81
	[°F]	[°F]	[°F]	[°F]									
	45	130	95	115									
EN12900 LBP	-35	40	20	40	62,4	213	53,7	0,85	2,92	0,74	73,1	0,88	1,37
	[°F]	[°F]	[°F]	[°F]									
	-31	104	68	104									
EN12900 MBP	-10	45	20	45	234,4	801	201,8	1,81	6,20	1,56	129,2	1,00	5,49
	[°F]	[°F]	[°F]	[°F]									
	14	113	68	113									
EN12900 HBP	5	50	20	50	415,3	1418	357,4	2,42	8,25	2,08	171,9	1,13	10,47
	[°F]	[°F]	[°F]	[°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	58,6	200	50,4	0,81	2,76	0,70	72,4	0,88	1,26
cond. pressure	-25	-13	108,4	370	93,3	1,14	3,89	0,98	95,2	0,93	2,35
pc= 45/113	-15	5	189,4	647	163,0	1,61	5,49	1,38	117,9	0,98	4,13
return gas temp.	-10	14	243,2	831	209,3	1,88	6,43	1,62	129,2	1,00	5,32
RGT= 32/90	0	32	380,6	1300	327,6	2,51	8,56	2,16	151,8	1,07	8,42
liquid temp	5	41	465,5	1590	400,7	2,85	9,75	2,46	163,1	1,10	10,36
Tliq= 45/113	15	59	671,0	2292	577,5	3,62	12,35	3,11	185,5	1,18	15,20
[°C / °F]	-35	-31	47,4	162	40,8	0,70	2,38	0,60	67,8	0,87	1,13
cond. pressure	-25	-13	91,9	314	79,1	0,94	3,21	0,81	97,7	0,93	2,20
pc= 55/131	-15	5	162,6	555	139,9	1,29	4,39	1,11	126,5	1,00	3,91
return gas temp	-10	14	209,3	715	180,2	1,49	5,09	1,28	140,4	1,03	5,06
RGT= 32/90	0	32	328,9	1123	283,1	1,97	6,71	1,69	167,4	1,11	8,05
liquid temp	5	41	403,0	1376	346,9	2,23	7,63	1,92	180,4	1,16	9,93
Tliq= 55/131	15	59	583,1	1991	501,8	2,84	9,69	2,44	205,5	1,26	14,65

Model

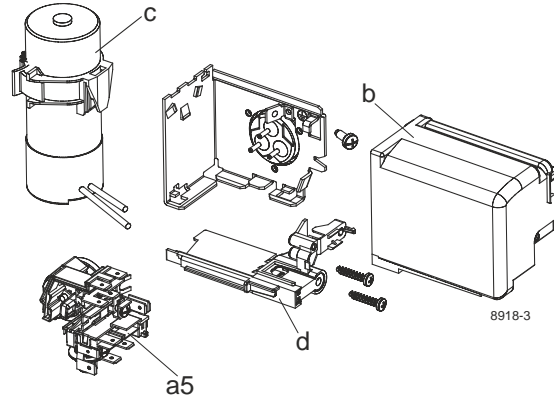
Designation	FRK6G	208-230V/60Hz	Conf. 2	Sales code:	106G5553
-------------	--------------	----------------------	---------	-------------	-----------------

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

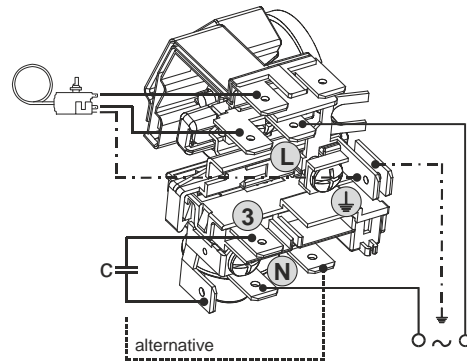
Electrical accessories / wiring diagram

CSIR

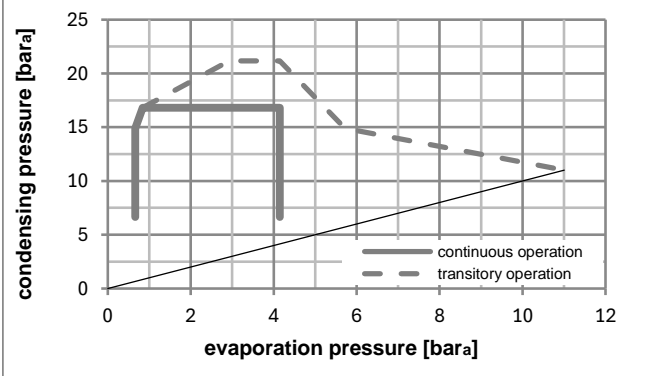
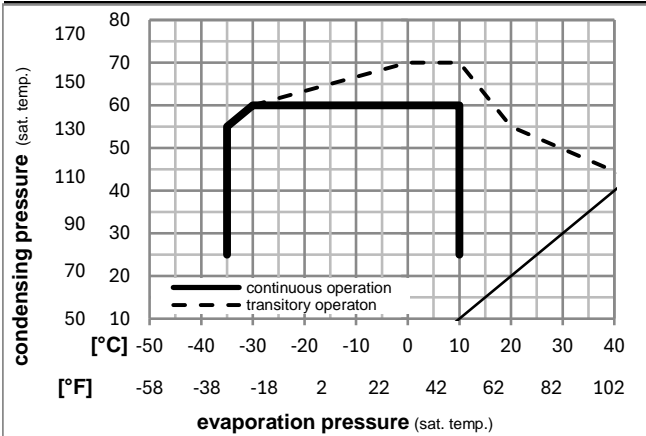


Ambient/ machine room temperatures minimum /maximum

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 (T1189/L6-S3)	117U7073
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 **FRK6G** **208-230V/60Hz** Conf. 2 Sales code: **106G5553**

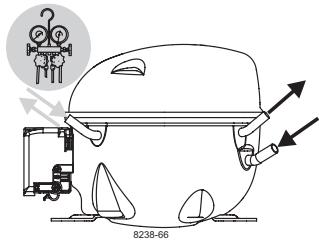
Optimization + standard conditions R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, CB, UL in progress

Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)				Power consumption				ASHRAE LBP	
Return gas temp.		Liquid temp.		Cooling capacity		COP	EER	Current consumption		Ref. mass flow			
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I		m
[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
-23	54	32	32	149,8	511	128,9	1,27	4,33	1,09	118,2	1,13	2,91	ASHRAE LBP
[-10]	[130]	[90]	[90]										
-7	54	35	46	320,6	1095	275,9	1,86	6,35	1,60	172,3	1,26	6,99	ASHRAE MBP
[-20]	[130]	[95]	[115]										
7,2	54	35	46	569,7	1946	490,3	2,63	8,97	2,26	216,9	1,39	12,64	ASHRAE HBP
[45]	[130]	[95]	[115]										
-35	40	20	40	79,1	270	68,1	0,90	3,08	0,78	87,8	1,08	1,74	EN12900 LBP
[-31]	[104]	[68]	[104]										
-10	45	20	45	273,4	934	235,3	1,82	6,21	1,57	150,3	1,20	6,40	EN12900 MBP
[-14]	[113]	[68]	[113]										
5	50	20	50	485,8	1659	418,1	2,37	8,11	2,04	204,5	1,35	12,24	EN12900 HBP
[41]	[122]	[68]	[122]										

Performance tables

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

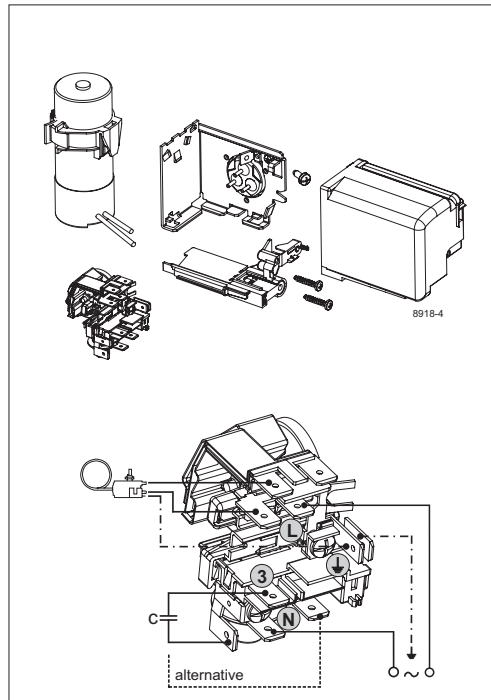
	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-35	-31	73,8	252	63,5	0,86	2,92	0,74	86,1	1,08	1,59
cond. pressure	-25	-13	127,3	435	109,5	1,18	4,03	1,01	107,9	1,11	2,76
pc= 45/113	-15	5	220,7	754	189,9	1,63	5,57	1,40	135,3	1,17	4,81
return gas temp.	-10	14	283,6	969	244,1	1,89	6,44	1,62	150,3	1,20	6,21
RGT= 32/90	0	32	444,4	1518	382,4	2,45	8,38	2,11	181,2	1,28	9,83
liquid temp	5	41	543,2	1855	467,5	2,77	9,44	2,38	196,4	1,33	12,09
Tliq= 45/113	15	59	780,2	2664	671,4	3,47	11,85	2,99	224,9	1,42	17,67
[°C / °F]	-35	-31	59,2	202	50,9	0,69	2,34	0,59	86,3	1,08	1,41
cond. pressure	-25	-13	109,8	375	94,5	0,97	3,30	0,83	113,6	1,12	2,62
pc= 55/131	-15	5	192,8	658	165,9	1,33	4,53	1,14	145,2	1,19	4,64
return gas temp	-10	14	247,7	846	213,2	1,53	5,23	1,32	161,8	1,23	5,99
RGT= 32/90	0	32	386,9	1321	333,0	1,98	6,78	1,71	194,9	1,32	9,46
liquid temp	5	41	472,2	1613	406,4	2,24	7,65	1,93	210,8	1,37	11,64
Tliq= 55/131	15	59	676,5	2310	582,2	2,82	9,65	2,43	239,5	1,48	16,99



FRK Compressors

SECOP

Keep electrical equipment
clear from oil, chemicals,
and water



Secop accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Secop reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Secop GmbH. All rights reserved. www.secop.com