

Single Pack KLF7.7MFT 200-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4689**

Position	Title	Code	Amount
1	Compressor KLF7.7MFT	106G2802	1
2	KL accessories	103N1060	1
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5001	1
4	Starting relay (QLZ-5.5A, overload protector T0377/L6)	117U7071	1
5	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	KLF7.7MFT	200-240V/50Hz 1~	208-230V/60Hz 1~	Sales code:	106G2802
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	10,4cSt	Displacement	7,7cm ³ / 0,47cu.in
Oil quantity	174cm ³ / 5,9fl.oz	Compressors on pallet	100
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	1575cm ³ / 53,3fl.oz		
Weight	9,4kg / 20,7lbs		
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		



General - Configurations with KLF7.7MFT

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	RSCR	CSIR	RSCR
Power supply (nominal)	200-240V/50Hz	200-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	170-254V	170-254V	198-253V	198-253V
Approvals	VDE, UL, CCC	VDE, UL, CCC	VDE, UL, CCC	VDE, UL, CCC
Starting torque	HST	LST	HST	LST
Note	Compressor can operate safely in LBP, no official third-party approval yet			

Applications with KLF7.7MFT

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R134a	R134a	R134a	R134a
Application	MBP	MBP	MBP	MBP
System cooling	fan 3m/s	fan 3m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

Electrical data - Configurations with KLF7.7MFT

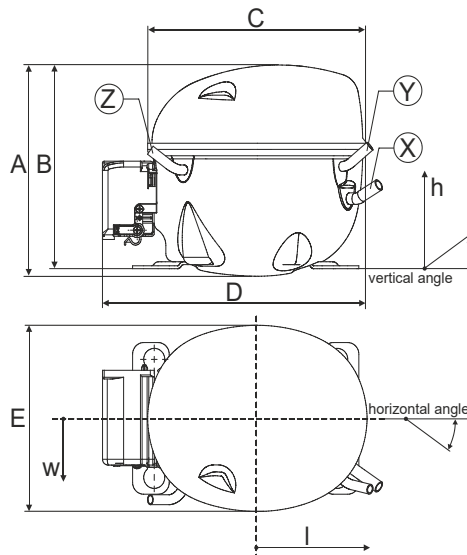
	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	PTC	relay	PTC
Run capacitor	-/-	5μF	-/-	5μF
Start capacitor	80μF	-/-	80μF	-/-
LRA (locked rotor amps / 4s/ U(N))	13,5A	13,5A	13,5A	13,5A
RLA (rated load amps / 1s/ U(N))	2,1A	2,1A	2,1A	2,1A
Cut in current (U(N))	12,3A	18,1A	12,3A	18,1A

Model

Designation	KLF7.7MFT	200-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	106G2802
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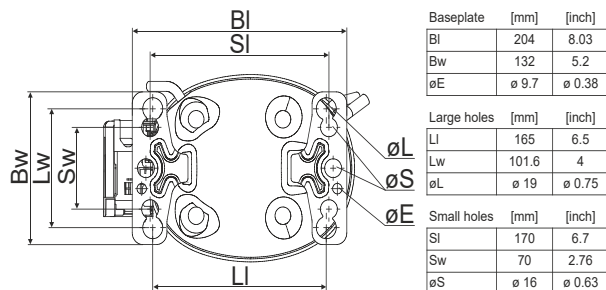
Compressor dimensions

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

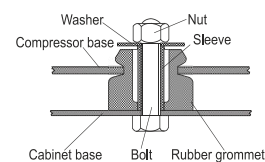


Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	35°	13°	0°
Vertical angle	±2°	30°	40°	145°
Position l/h/w	[mm]	119/73/59	117/107/66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

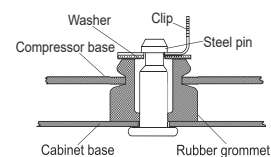
Compressor fixation



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

Model

Designation	KLF7.7MFT	200-240V/50Hz	Conf. 1	Sales code:	106G2802
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	200-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	170-254V
Starting torque	HST
Approvals	VDE
	UL
	CCC

Electrical accessories / wiring diagram

CSIR

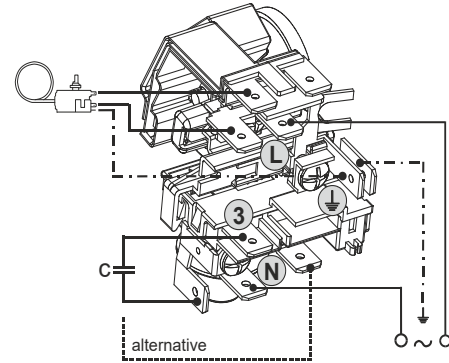


Ambient/ machine room temperatures minimum /maximum

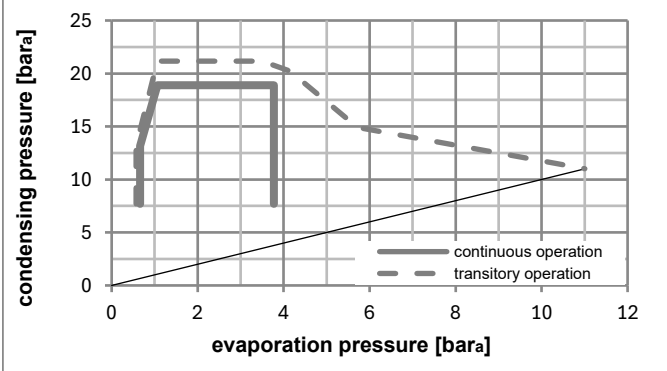
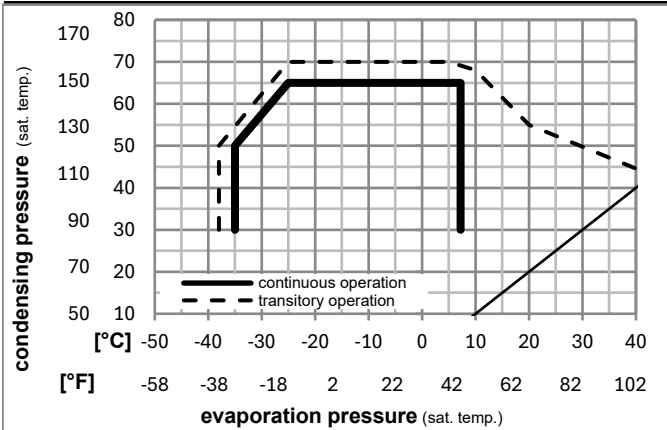
Ambient temperature range: 10 - 43°C / 50 - 110°F

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) in bag	103N1060

Alternative components

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Model

Designation **KLF7.7MFT** **200-240V/50Hz** Conf. 1 Sales code: **106G2802**

Optimization + standard conditions

R134a, 200V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			COP	EER	Power consumption			ASHRAE LBP	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]			P1	I	m		
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	220,7	754	190,0	1,37	4,70	1,18	160,6	1,33	4,29	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	161,7	552	139,2	1,05	3,60	0,91	153,4	1,31	3,87	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	116,2	397	100,0	1,04	3,57	0,90	111,2	1,20	2,55	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	462,0	1578	397,6	1,89	6,46	1,63	244,1	1,63	10,08	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	358,4	1224	308,4	1,58	5,39	1,36	227,2	1,56	8,67	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	402,0	1373	346,0	1,90	6,50	1,64	211,4	1,50	9,41	EN12900 MBP
	14	113	68	113										

Performance tables

R134a, 200V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

	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]	-30	-22	145,0	495	124,8	1,12	3,82	0,96	129,5	1,24	3,13
cond. pressure	-25	-13	192,7	658	165,9	1,29	4,42	1,11	149,0	1,29	4,18
pc= 45/113	-15	5	328,1	1120	282,3	1,73	5,89	1,49	190,1	1,42	7,15
return gas temp.	-10	14	417,1	1424	358,9	1,97	6,74	1,70	211,4	1,50	9,13
RGT= 32/90	-5	23	521,3	1780	448,6	2,24	7,65	1,93	232,9	1,58	11,46
liquid temp	0	32	641,5	2191	552,0	2,52	8,61	2,17	254,4	1,67	14,19
Tliq= 45/113	7,2	45	843,9	2882	726,3	2,96	10,11	2,55	285,1	1,80	18,85
[°C / °F]	-30	-22	118,7	406	102,2	0,90	3,08	0,78	131,8	1,25	2,83
cond. pressure	-25	-13	161,7	552	139,2	1,05	3,60	0,91	153,4	1,31	3,87
pc= 55/131	-15	5	280,8	959	241,6	1,39	4,76	1,20	201,3	1,46	6,76
return gas temp	-10	14	358,4	1224	308,4	1,58	5,39	1,36	227,2	1,56	8,67
RGT= 32/90	-5	23	448,9	1533	386,4	1,77	6,03	1,52	254,2	1,67	10,91
liquid temp	0	32	553,2	1889	476,1	1,96	6,70	1,69	282,0	1,78	13,53
Tliq= 55/131	7,2	45	728,9	2489	627,3	2,25	7,70	1,94	323,3	1,96	18,03

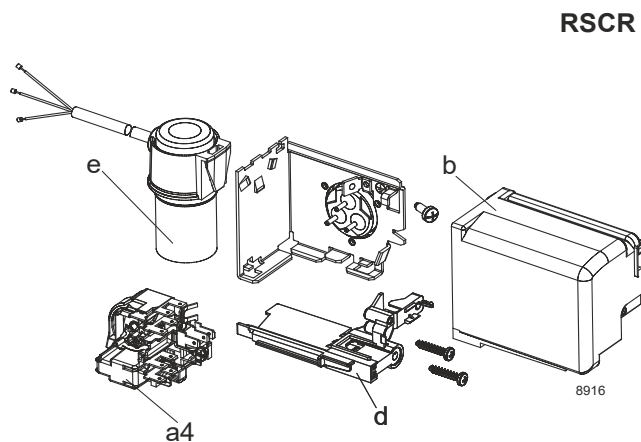
Model

Designation	KLF7.7MFT	200-240V/50Hz	Conf. 2	Sales code:	106G2802
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Configuration

Motorconfiguration	RSCR
Power supply (nominal)	200-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	170-254V
Starting torque	LST
Approvals	VDE
	UL
	CCC

Electrical accessories / wiring diagram

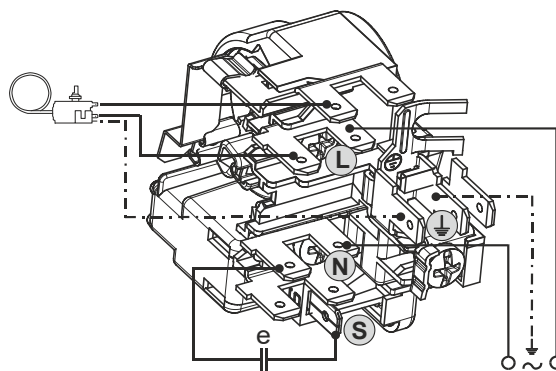


Ambient/ machine room temperatures minimum /maximum

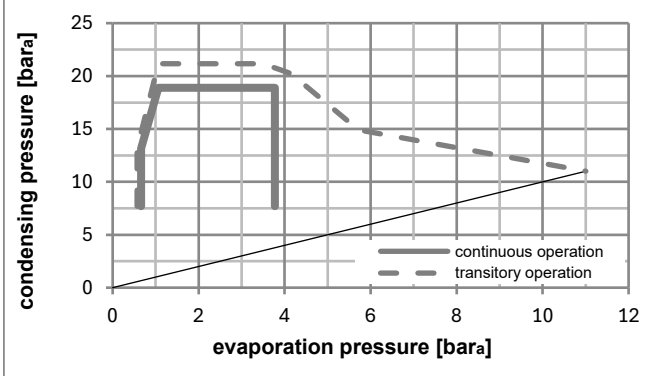
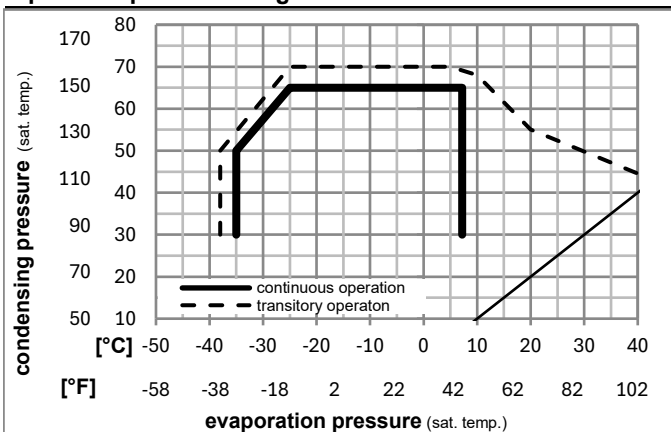
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s



Operation pressure range



Components

a4	DAS1 (PTC,6.3mm, T0377/L6 - S1)	103N0250
e	run capacitor (5µF, 6.3mm)	117-7191
b, d	cover + clamp + screws(5VA) in bag	103N1060

Alternative components

a4	ZAS1 (PTC,4.8mm, T0377/L6 - S1)	103N0252
e	run capacitor (5µF, 4.8mm)	117-7190

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Model

Designation **KLF7.7MFT** **200-240V/50Hz** Conf. 2 Sales code: **106G2802**

Optimization + standard conditions

R134a, 200V/50Hz, RSCR, fan 3m/s, VDE, UL, CCC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		ASHRAE LBP	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m		
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	221,1	755	190,3	1,45	4,94	1,24	152,9	1,00	4,29	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	161,9	553	139,4	1,11	3,79	0,95	146,0	0,98	3,87	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	116,3	397	100,0	1,11	3,78	0,95	105,2	0,84	2,55	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	463,3	1582	398,7	2,00	6,83	1,72	231,8	1,34	10,11	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	359,3	1227	309,2	1,66	5,68	1,43	216,0	1,27	8,69	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	403,0	1376	346,8	2,00	6,84	1,72	201,1	1,20	9,43	EN12900 MBP
	14	113	68	113										

Performance tables

R134a, 200V/50Hz, RSCR, fan 3m/s, VDE, UL, CCC

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-30	-22	145,1	496	124,9	1,18	4,03	1,02	123,0	0,89	3,14
cond. pressure	-25	-13	193,0	659	166,1	1,36	4,65	1,17	141,8	0,96	4,18
pc= 45/113	-15	5	328,7	1123	282,9	1,82	6,20	1,56	181,0	1,11	7,17
return gas temp.	-10	14	418,1	1428	359,8	2,08	7,10	1,79	201,1	1,20	9,15
RGT= 32/90	-5	23	522,7	1785	449,8	2,36	8,07	2,03	221,3	1,29	11,49
liquid temp	0	32	643,4	2197	553,7	2,66	9,10	2,29	241,5	1,38	14,23
Tliq= 45/113	7,2	45	846,9	2892	728,8	3,14	10,71	2,70	270,1	1,52	18,92
[°C / °F]	-30	-22	118,9	406	102,4	0,95	3,25	0,82	125,1	0,90	2,84
cond. pressure	-25	-13	161,9	553	139,4	1,11	3,79	0,95	146,0	0,98	3,87
pc= 55/131	-15	5	281,4	961	242,1	1,47	5,02	1,26	191,6	1,16	6,77
return gas temp	-10	14	359,3	1227	309,2	1,66	5,68	1,43	216,0	1,27	8,69
RGT= 32/90	-5	23	450,3	1538	387,5	1,87	6,38	1,61	241,2	1,38	10,95
liquid temp	0	32	555,2	1896	477,8	2,08	7,10	1,79	267,1	1,50	13,58
Tliq= 55/131	7,2	45	732,1	2500	630,1	2,40	8,19	2,06	305,4	1,69	18,11

Model

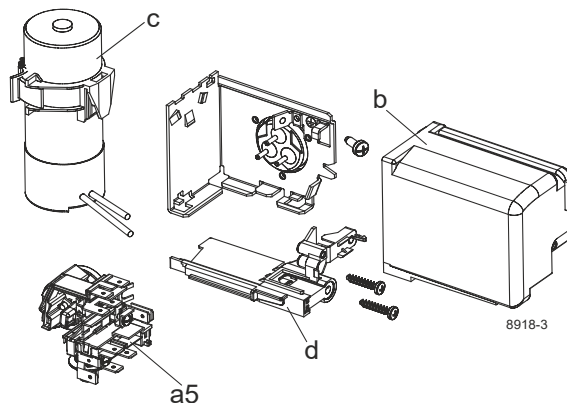
Designation	KLF7.7MFT	208-230V/60Hz	Conf. 3	Sales code:	106G2802
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	198-253V
Starting torque	HST
Approvals	VDE
	UL
	CCC

Electrical accessories / wiring diagram

CSIR

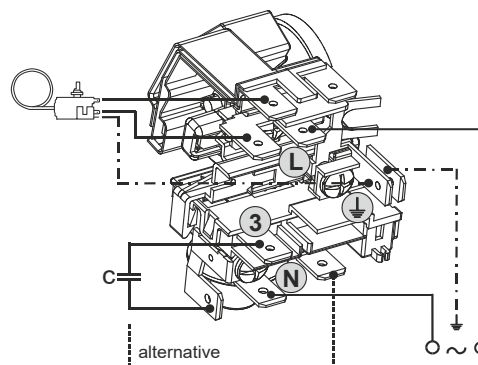


Ambient/ machine room temperatures minimum /maximum

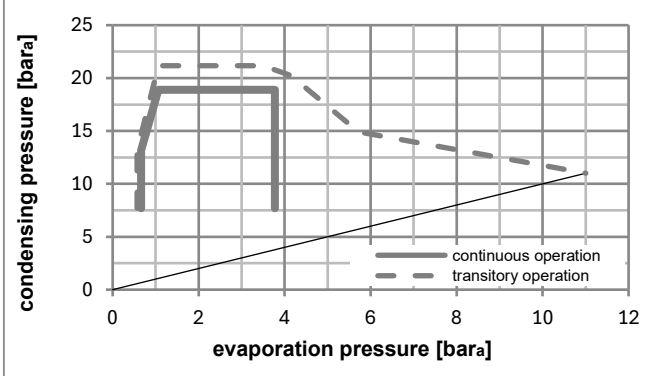
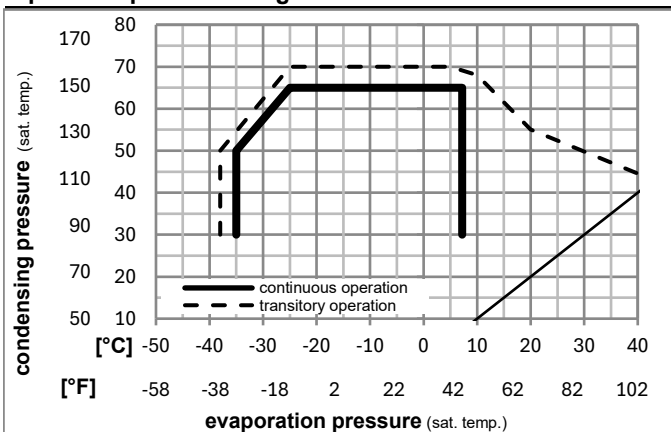
Ambient temperature range: 10 - 43°C / 50 - 110°F

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) in bag	103N1060

Alternative components

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Model

Designation **KLF7.7MFT** **208-230V/60Hz** Conf. 3 Sales code: **106G2802**

Optimization + standard conditions

R134a, 208V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.	Liquid temp.	Cooling capacity	COP	EER	Power consumption			Ref. mass flow
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]						P1	I	m	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
ASHRAE LBP	-23	54	32	32	259,9	888	223,7	1,37	4,68	1,18	189,6	1,31	5,05			
	-10	130	90	90												
cecomaf LBP	-25	55	32	55	190,4	650	163,9	1,05	3,60	0,91	180,7	1,28	4,55			
	-13	131	90	131												
EN12900 LBP	-35	40	20	40	134,7	460	116,0	1,07	3,65	0,92	126,1	1,15	2,96			
	-31	104	68	104												
ASHRAE MBP	-7	54	35	46	545,0	1861	469,0	1,87	6,40	1,61	290,9	1,65	11,89			
	20	130	95	115												
cecomaf MBP	-10	55	32	55	422,7	1444	363,8	1,56	5,33	1,34	270,6	1,57	10,22			
	14	131	90	131												
EN12900 MBP	-10	45	20	45	473,7	1618	407,7	1,89	6,44	1,62	251,1	1,51	11,09			
	14	113	68	113												

Performance tables

R134a, 208V/60Hz, CSIR, fan 3m/s, VDE, UL, CCC

	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]	-30	-22	169,1	578	145,6	1,13	3,85	0,97	149,9	1,20	3,66
cond. pressure	-25	-13	226,0	772	194,5	1,29	4,42	1,11	174,6	1,27	4,90
pc= 45/113	-15	5	386,2	1319	332,4	1,71	5,85	1,48	225,3	1,42	8,42
return gas temp.	-10	14	491,5	1678	422,9	1,96	6,68	1,68	251,1	1,51	10,76
RGT= 32/90	-5	23	614,6	2099	529,0	2,22	7,57	1,91	277,1	1,60	13,52
liquid temp	0	32	756,7	2584	651,2	2,50	8,52	2,15	303,2	1,69	16,73
Tliq= 45/113	7,2	45	996,2	3402	857,3	2,93	9,99	2,52	340,5	1,83	22,25
[°C / °F]	-30	-22	139,5	476	120,1	0,91	3,10	0,78	153,6	1,21	3,33
cond. pressure	-25	-13	190,4	650	163,9	1,05	3,60	0,91	180,7	1,28	4,55
pc= 55/131	-15	5	331,1	1131	284,9	1,38	4,72	1,19	239,3	1,46	7,97
return gas temp	-10	14	422,7	1444	363,8	1,56	5,33	1,34	270,6	1,57	10,22
RGT= 32/90	-5	23	529,7	1809	455,8	1,75	5,97	1,50	303,1	1,69	12,88
liquid temp	0	32	653,0	2230	562,0	1,94	6,62	1,67	336,7	1,82	15,97
Tliq= 55/131	7,2	45	861,0	2941	741,0	2,23	7,60	1,92	386,7	2,02	21,29

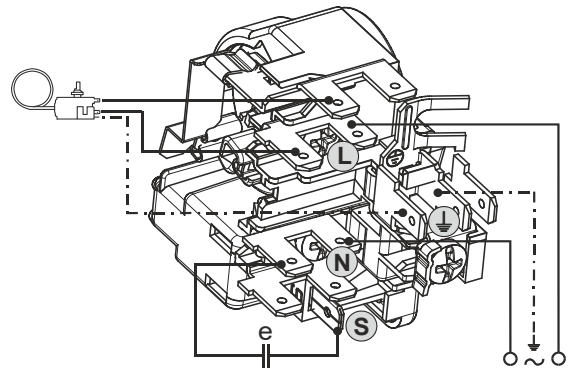
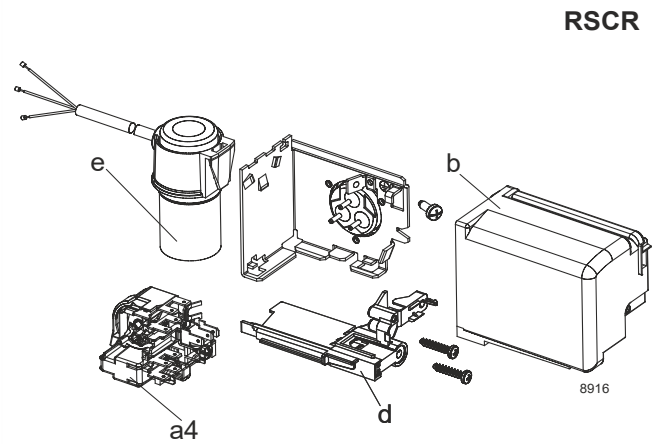
Model

Designation	KLF7.7MFT	208-230V/60Hz	Conf. 4	Sales code:	106G2802
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Configuration

Motorconfiguration	RSCR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	198-253V
Starting torque	LST
Approvals	VDE UL CCC

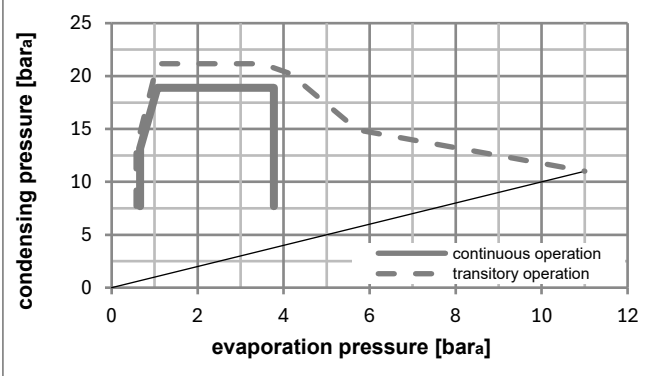
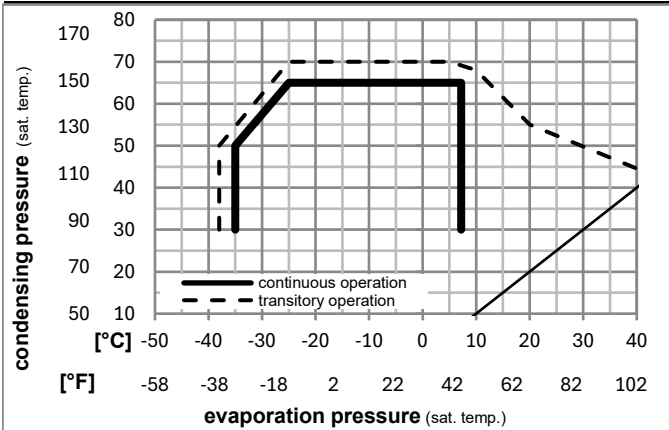
Electrical accessories / wiring diagram



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

a4	DAS1 (PTC,6.3mm, T0377/L6 - S1)	103N0250
e	run capacitor (5µF, 6.3mm)	117-7191
b, d	cover + clamp + screws(5VA) in bag	103N1060

Alternative components

a4	ZAS1 (PTC,4.8mm, T0377/L6 - S1)	103N0252
e	run capacitor (5µF, 4.8mm)	117-7190

b, d	100x cover + clamp + screws(5VA)	103N2060
b, d	cover + clamp + screws(5VA-compl.)	103N0600

Model

Designation **KLF7.7MFT** **208-230V/60Hz** Conf. 4 Sales code: **106G2802**

Optimization + standard conditions

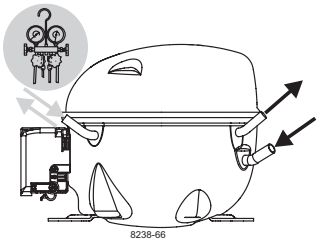
R134a, 208V/60Hz, RSCR, fan 3m/s, VDE, UL, CCC

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		ASHRAE LBP	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m		
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	260,4	889	224,1	1,44	4,92	1,24	180,8	0,90	5,06	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	190,7	651	164,1	1,11	3,78	0,95	172,4	0,87	4,56	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	134,8	460	116,0	1,12	3,81	0,96	120,8	0,67	2,96	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	546,5	1867	470,4	1,98	6,78	1,71	275,4	1,29	11,92	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	423,7	1447	364,7	1,65	5,64	1,42	256,6	1,21	10,25	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	474,8	1621	408,6	1,99	6,80	1,71	238,6	1,13	11,11	EN12900 MBP
	14	113	68	113										

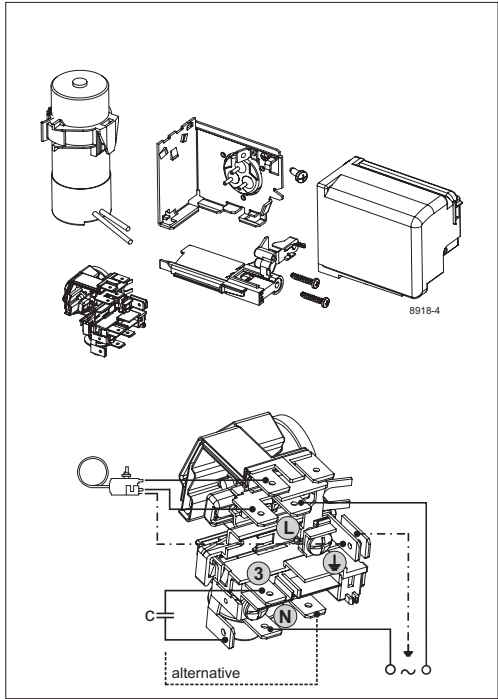
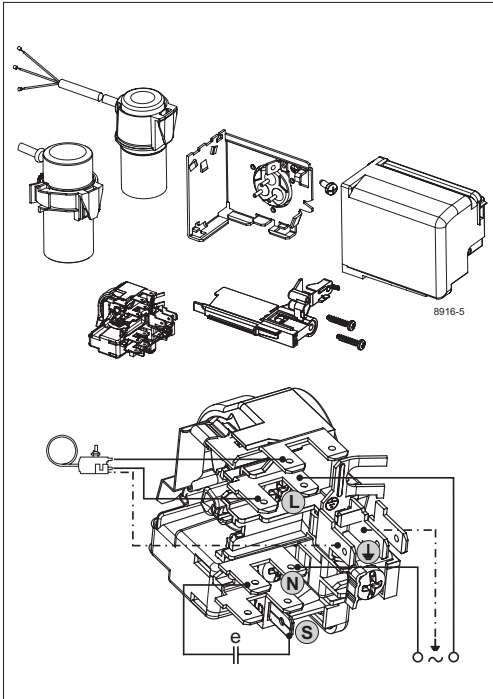
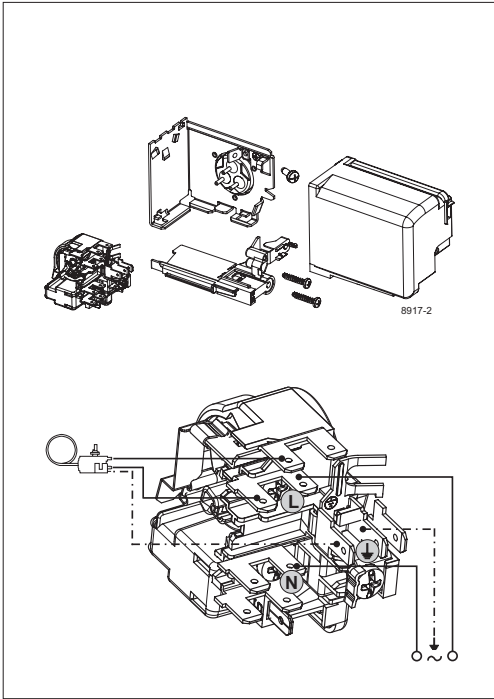
Performance tables

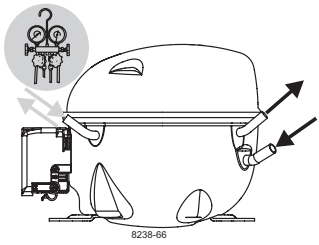
R134a, 208V/60Hz, RSCR, fan 3m/s, VDE, UL, CCC

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-30	-22	169,3	578	145,7	1,18	4,03	1,02	143,4	0,76	3,66
cond. pressure	-25	-13	226,3	773	194,7	1,36	4,64	1,17	166,7	0,85	4,90
pc= 45/113	-15	5	387,0	1322	333,0	1,80	6,16	1,55	214,4	1,04	8,44
return gas temp.	-10	14	492,6	1682	423,9	2,06	7,05	1,78	238,6	1,13	10,78
RGT= 32/90	-5	23	616,2	2105	530,3	2,35	8,01	2,02	262,7	1,24	13,55
liquid temp	0	32	758,9	2592	653,1	2,65	9,04	2,28	286,8	1,34	16,78
Tliq= 45/113	7,2	45	999,6	3414	860,2	3,11	10,63	2,68	321,1	1,48	22,33
[°C / °F]	-30	-22	139,7	477	120,2	0,95	3,25	0,82	146,8	0,77	3,33
cond. pressure	-25	-13	190,7	651	164,1	1,11	3,78	0,95	172,4	0,87	4,56
pc= 55/131	-15	5	331,8	1133	285,5	1,46	4,98	1,26	227,4	1,09	7,99
return gas temp	-10	14	423,7	1447	364,7	1,65	5,64	1,42	256,6	1,21	10,25
RGT= 32/90	-5	23	531,3	1814	457,2	1,85	6,33	1,59	286,7	1,34	12,91
liquid temp	0	32	655,2	2238	563,9	2,06	7,05	1,78	317,6	1,47	16,03
Tliq= 55/131	7,2	45	864,6	2953	744,0	2,38	8,12	2,05	363,4	1,67	21,38



KL Compressors

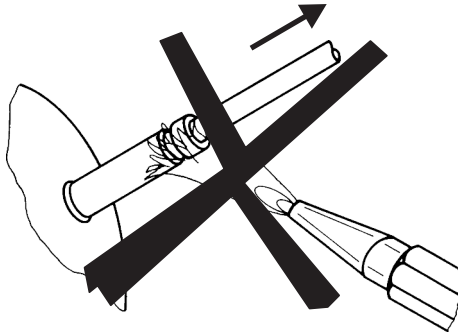




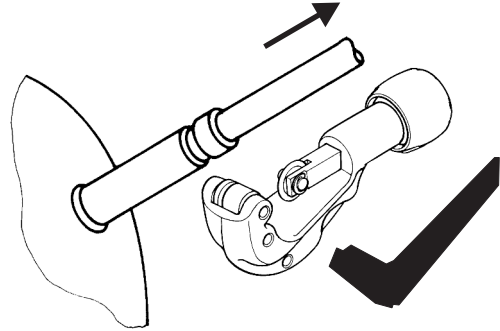
KL Compressors



Service/Repair – R290



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