

Single Pack NL8F 220-240V 50Hz CSIR

Single pack code number: **195B4469**

Position	Title	Code	Amount
1	Compressor NL8F	105G6822	1
2	Starting relay	117U6001	1
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5015	1
4	Cord relief	103N1010	1
5	Cover	103N2010	1
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	1

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Model

Designation	NL8F	220-240V/50Hz 1~	Sales code:	105G6822
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	19,2cST	Displacement	7,95cm ³ / 0,49cu.in
Oil quantity	265cm ³ / 9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	2230cm ³ / 75,4fl.oz		
Weight	9,8kg / 21,6lbs		
Motor protection	1# internal		
Winding resistance main	10,7Ω (at 25°C)		
Winding resistance aux	13Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with NL8F

	Conf. 1	Conf. 2
Motorconfiguration	CSIR	RSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1
Voltage range	198-254V	198-254V
Approvals	VDE, EAC	VDE, EAC
Starting torque	HST	LST
Note	- / -	

Applications with NL8F

	Conf. 1	Conf. 2
Refrigerant	R134a	R134a
Application	LBP	LBP
System cooling	static	static
Hot gas defrost	- / -	- / -
Long interval pull down	- / -	- / -

Electrical data - Configurations with NL8F

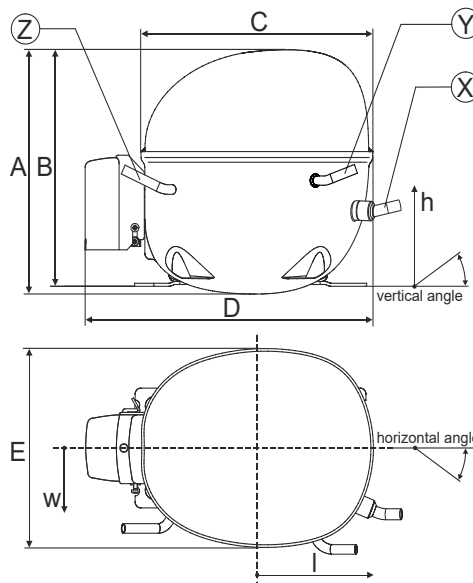
	Conf. 1	Conf. 2
Starting device type	relay	PTC
Run capacitor	- / -	- / -
Start capacitor	80μF	- / -
LRA (locked rotor amps / 4s)	6,6A	7,9A
RLA (rated load amps / 1s)		
Cut in current	10,9A	7,9A

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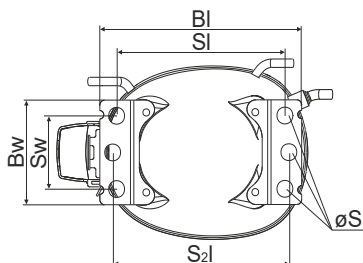
Compressor dimensions

Housing	A Height	197mm / 7,76in
	B Height	191mm / 7,52in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in



Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 6,11-6,29	øi 5,12-5,22	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,24-0,25	øi 0,2-0,21	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	155°
Position l/h/w	[mm]	126/76/78	133/103/54	-107/94/72
	[in]	4,9/3/3,1	5,2/4/2,1	-4,2/3,7/2,8
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5

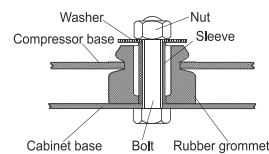
Compressor fixation



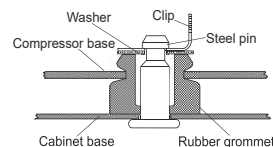
Baseplate	[mm]	[inch]
Bi	204	8.03
Bw	100	3.94

Small holes	[mm]	[inch]
Si	170	6.7
Sw	70	2.76
S2l	178	7
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

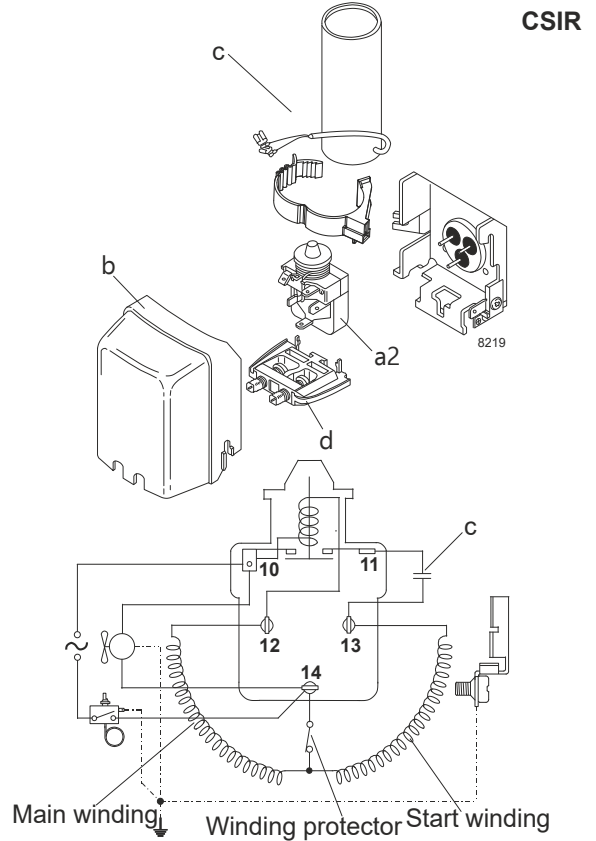
Model

Designation	NL8F	220-240V/50Hz	Conf. 1	Sales code:	105G6822
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE EAC

Electrical accessories / wiring diagram

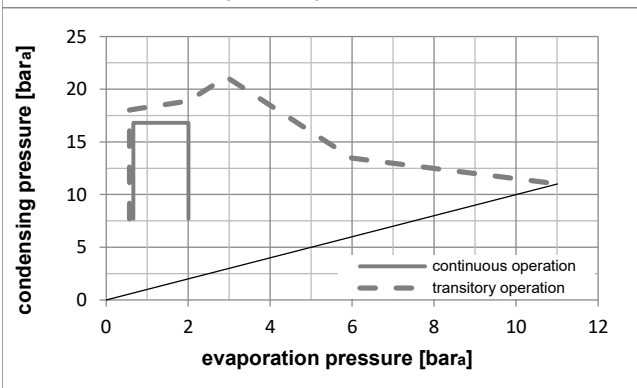
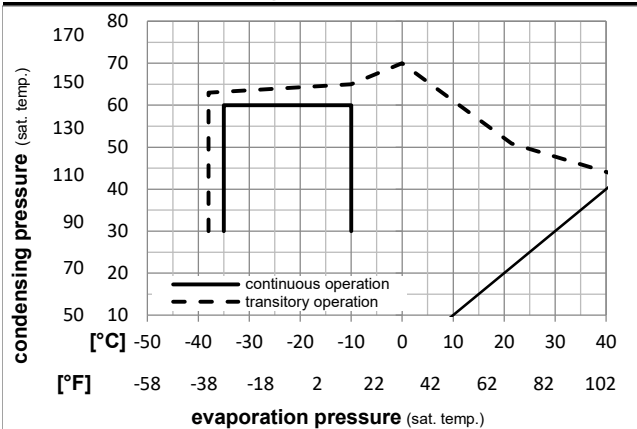


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	static	n/a	n/a
38°C / 100°F	static	n/a	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components

a2	current relay	117U6001
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2010
d	cord relief	103N1010

Alternative components

b	plastic cover	103N2011
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Model

Designation	NL8F	220-240V/50Hz	Conf. 1	Sales code:	105G6822
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Optimization + standard conditions

R134a, 220V/50Hz, CSIR, static, VDE, EAC

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.				Liquid temp.						Current consumption			Ref. mass flow
		Cooling capacity				COP		EER		P1	I	m			
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-23,3	54,4	32,2	32,2	200,2	684	172,3	1,24	4,25	1,07	161,0	1,06	3,89	ASHRAE LBP	
[°F]	-10	130	90	90											
[°C]	-25	55	32	55	149,0	509	128,3	0,97	3,30	0,83	154,1	1,04	3,56	cecomaf LBP	
[°F]	-13	131	89,6	131											
[°C]	-35	40	20	40	109,0	372	93,8	0,95	3,23	0,81	115,1	0,93	2,39	EN12900 LBP	
[°F]	-31	104	68	104											
[°C]	-23,3	48,9	4,44	48,9	161,8	553	139,3	1,03	3,52	0,89	157,2	1,04	4,27	ARI540 LBP	
[°F]	-10	120	40	120											
[°C]	-23,3	40,6	32,2	32,2	223,8	764	192,6	1,45	4,96	1,25	154,1	1,06	4,35	AHAM LBP	
[°F]	-10	105	90	90											
[°C]	-35	45	32	45	99,8	341	85,9	0,87	2,96	0,75	115,0	0,92	2,15	opt	
[°F]	-31	113	89,6	113											

Performance tables

R134a, 220V/50Hz, CSIR, static, VDE, EAC

	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	99,8	341	85,9	0,87	2,96	0,75	115,0	0,92	2,15	
cond. pressure	-30	-22	133,7	457	115,1	1,02	3,49	0,88	131,0	0,97	2,89	
pc= 45/113	-25	-13	175,7	600	151,2	1,18	4,02	1,01	149,1	1,03	3,81	
return gas temp.	-23,3	-10	192,2	656	165,4	1,23	4,21	1,06	155,8	1,05	4,17	
RGT= 32/90	-20	-4	227,8	778	196,0	1,34	4,59	1,16	169,4	1,10	4,95	
liquid temp	-15	5	292,0	997	251,3	1,52	5,20	1,31	191,8	1,18	6,37	
Tliq= 45/113	-10	14	370,6	1266	318,9	1,71	5,86	1,48	216,1	1,28	8,11	
[°C / °F]	-35	-31	81,9	280	70,5	0,70	2,41	0,61	116,2	0,92	1,95	
cond. pressure	-30	-22	112,3	384	96,7	0,84	2,87	0,72	133,8	0,98	2,68	
pc= 55/131	-25	-13	149,0	509	128,3	0,97	3,30	0,83	154,1	1,04	3,56	
return gas temp	-23,3	-10	163,3	558	140,5	1,01	3,45	0,87	161,7	1,07	3,91	
RGT= 32/90	-20	-4	194,0	663	167,0	1,09	3,74	0,94	177,3	1,13	4,65	
liquid temp	-15	5	249,5	852	214,7	1,23	4,19	1,06	203,2	1,22	6,01	
Tliq= 55/131	-10	14	317,4	1084	273,2	1,37	4,68	1,18	231,8	1,34	7,68	

Model

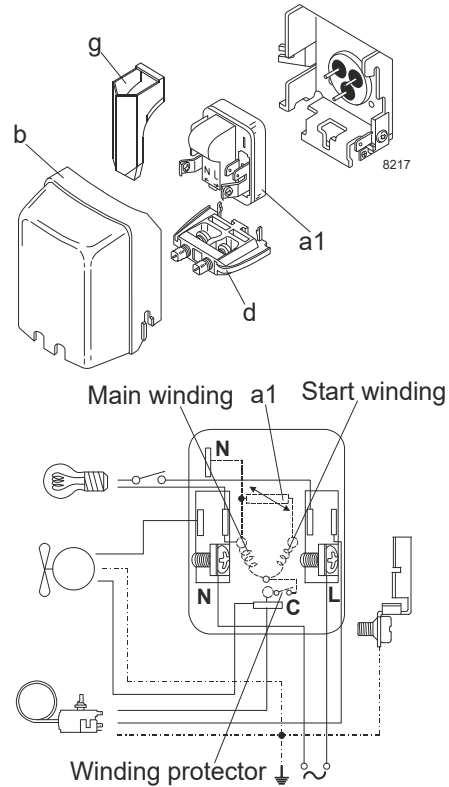
Designation	NL8F	220-240V/50Hz	Conf. 2	Sales code:	105G6822
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	LBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE EAC

Electrical accessories / wiring diagram

RSIR



Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	static	n/a	n/a
38°C / 100°F	static	n/a	n/a
43°C / 110°F	n/a	n/a	n/a

Operation pressure range



Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

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Optimization + standard conditions

R134a, 220V/50Hz, RSIR, static, VDE, EAC

		Evaporating pressure (saturation temperature)			Condensing pressure (saturation temperature)			Return gas temp.		Liquid temp.		Cooling capacity			COP	EER	Power consumption			Ref. mass flow m	
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Current consumption							
[°C]	[°F]											[W]	[A]	[kg/h]							
		-23	54,4	32,2	32,2	200,2	684	172,3	1,24	4,25	1,07	161,0	1,06	3,89						ASHRAE LBP	
		-10	130	90	90																
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		-10	120	40	120																
[°C]	[°F]	-23	40,6	32,2	32,2	223,8	764	192,6	1,45	4,96	1,25	154,1	1,06	4,35						AHAM LBP	
		-10	105	90	90																
[°C]	[°F]	-35	45	32	45	99,8	341	85,9	0,87	2,96	0,75	115,0	0,92	2,15						opt	
		-31	113	89,6	113																

Performance tables

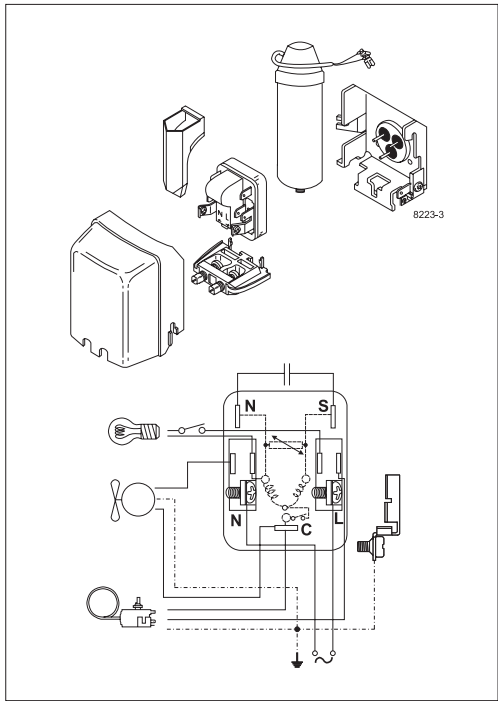
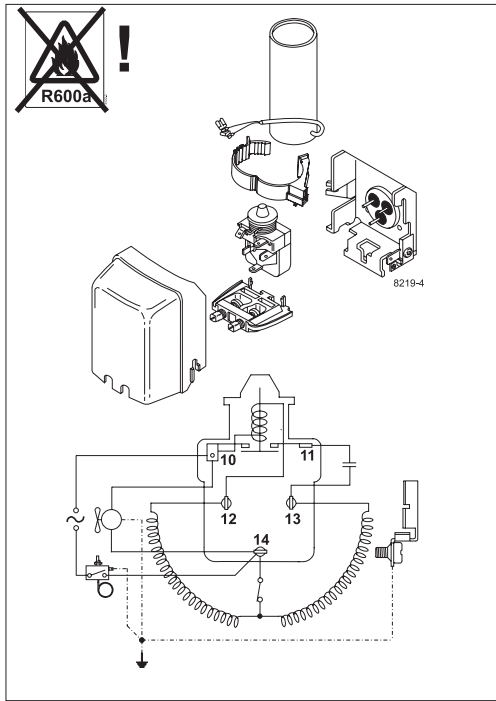
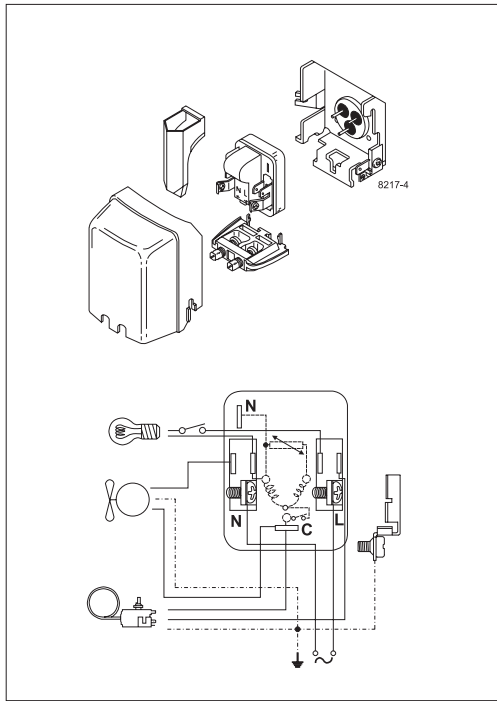
R134a, 220V/50Hz, RSIR, static, VDE, EAC

	pe	Cooling capacity			COP	EER	P1	I	m		
		[°C]	[°F]	[W]						[Btu/h]	[kcal/h]
[°C / °F]	-35	-31	99,8	341	85,9	0,87	2,96	0,75	115,0	0,92	2,15
cond. pressure	-30	-22	133,7	457	115,1	1,02	3,49	0,88	131,0	0,97	2,89
pc= 45/113	-25	-13	175,7	600	151,2	1,18	4,02	1,01	149,1	1,03	3,81
return gas temp.	-23	-10	192,2	656	165,4	1,23	4,21	1,06	155,8	1,05	4,17
RGT= 32/90	-20	-4	227,8	778	196,0	1,34	4,59	1,16	169,4	1,10	4,95
liquid temp	-15	5	292,0	997	251,3	1,52	5,20	1,31	191,8	1,18	6,37
Tliq= 45/113	-10	14	370,6	1266	318,9	1,71	5,86	1,48	216,1	1,28	8,11
[°C / °F]	-35	-31	81,9	280	70,5	0,70	2,41	0,61	116,2	0,92	1,95
cond. pressure	-30	-22	112,3	384	96,7	0,84	2,87	0,72	133,8	0,98	2,68
pc= 55/131	-25	-13	149,0	509	128,3	0,97	3,30	0,83	154,1	1,04	3,56
return gas temp	-23	-10	163,3	558	140,5	1,01	3,45	0,87	161,7	1,07	3,91
RGT= 32/90	-20	-4	194,0	663	167,0	1,09	3,74	0,94	177,3	1,13	4,65
liquid temp	-15	5	249,5	852	214,7	1,23	4,19	1,06	203,2	1,22	6,01
Tliq= 55/131	-10	14	317,4	1084	273,2	1,37	4,68	1,18	231,8	1,34	7,68



8238-20

NL Compressors





Service/Repair – R600a, R290



8545

Brazing on Suction Connectors (Direct Intake)

representative image



! max. 150°C/302°F !
at socket
 brazing solder: phosphor (LP7) or silver

Refer to Product Bulletin:
Brazing on Suction Connectors
(Compressors with Direct Suction Intake)

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