

## Single Pack NL7F 220-240V 50Hz CSIR

Single pack code number: **195B4397**

Position	Title	Code	Amount
1	Compressor NL7F	105G6706	1
2	Starting relay	117U6000	1
3	Starting capacitor (80 $\mu$ 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	<b>NL7F</b>	<b>220-240V/50Hz 1~</b>	Sales code:	<b>105G6706</b>
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**Compressor design**

Oil type	Polyolester	Refrigerant(s)	<b>R134a</b>
Oil viscosity	19,2cST	Displacement	7,27cm <sup>3</sup> / 0,44cu.in
Oil quantity	265cm <sup>3</sup> / 9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	2180cm <sup>3</sup> / 73,7fl.oz		
Weight	9,6kg / 21,2lbs		
Motor protection	1# internal		
Winding resistance main	13,3Ω (at 25°C)		
Winding resistance aux	14,1Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



**General - Configurations with NL7F**

	<b>Conf. 1</b>	<b>Conf. 2</b>
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 NL7F**

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

**Electrical data - Configurations with NL7F**

	<b>Conf. 1</b>	<b>Conf. 2</b>
Starting device type	relay	PTC
Run capacitor	- / -	- / -
Start capacitor	80μF	- / -
LRA (locked rotor amps / 4s)	5,9A	5,9A
RLA (rated load amps / 1s)	1,2A	1,2A
Cut in current	10,4A	10,4A

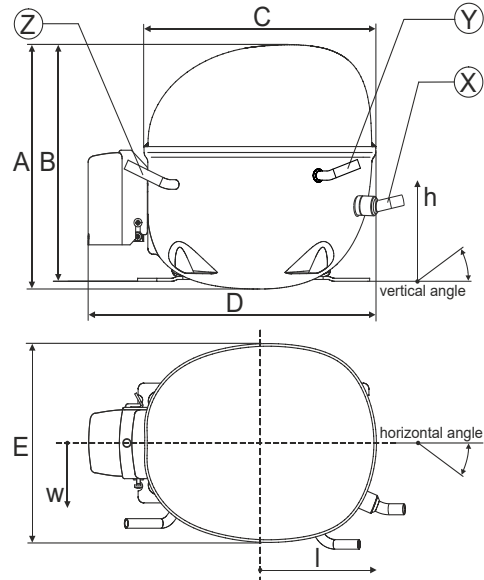
**Model**

Designation	<b>NL7F</b>	<b>220-240V/50Hz 1~</b>	Sales code:	<b>105G6706</b>
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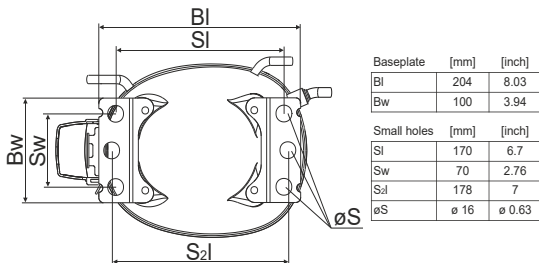
**Compressor dimensions**

<b>Housing</b>	A Height	189,5mm / 7,46in
	B Height	183,5mm / 7,22in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in

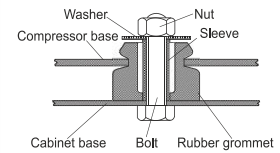
<b>Connectors</b>		<b>Suction</b>	<b>Discharge</b>	<b>Process</b>
		<b>X</b>	<b>Y</b>	<b>Z</b>
Diameter	[mm]	øi 6,11-6,29	øi 5,12-5,22	øi 6,11-6,29
	(i:inside, o:outside) [in]	øi 0,24-0,25	øi 0,2-0,21	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	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



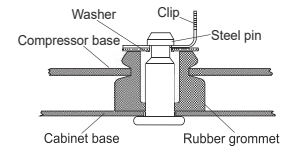
**Compressor fixation**



**Bolt joint**



**Snap-on**



<b>Mounting accessories</b>	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

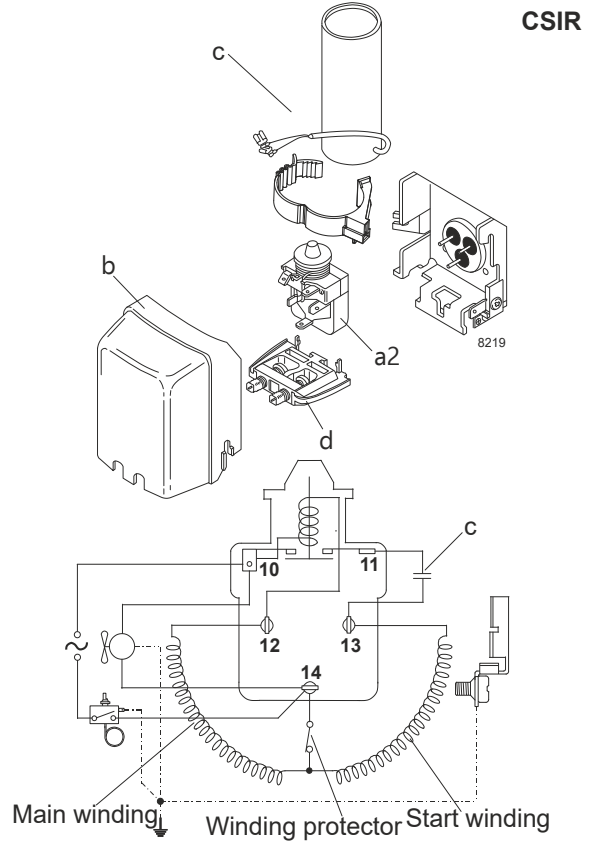
**Model**

Designation	<b>NL7F</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>105G6706</b>
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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**

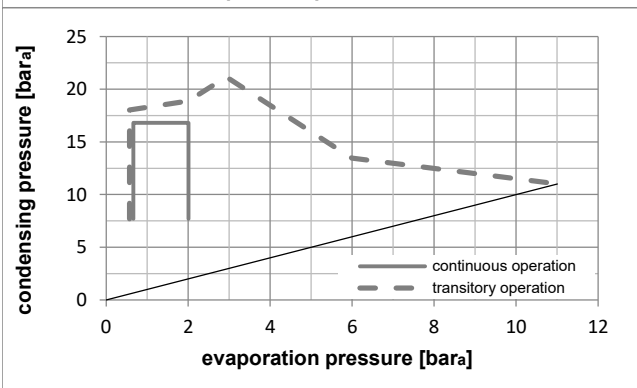
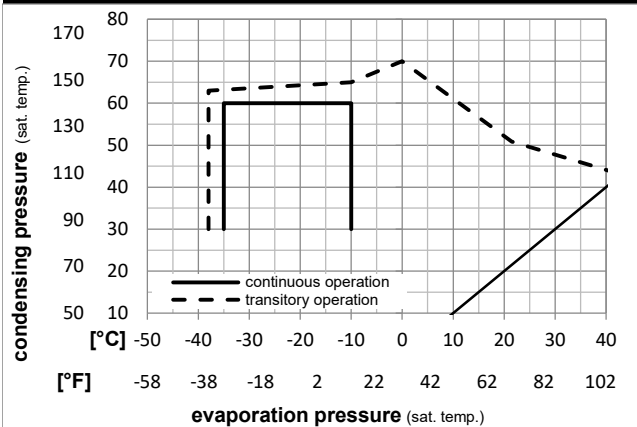


**Ambient temperatures / system cooling**

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	relay	117U6000
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	<b>NL7F</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>105G6706</b>
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**Optimization + standard conditions**

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

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)				Power consumption				ASHRAE LBP	
	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]	
	-23,3	54,4	32,2	32,2	186,1	636	160,2	1,21	4,12	1,04	154,2	1,04	3,61	ASHRAE LBP
	[°F]													
	-10	130	90	90										
	-25	55	32	55	136,1	465	117,1	0,93	3,19	0,80	145,9	1,02	3,25	cecomaf LBP
	[°F]													
	-13	131	89,6	131										
	-35	40	20	40	89,5	306	77,0	0,86	2,94	0,74	104,0	0,97	1,96	EN12900 LBP
	[°F]													
	-31	104	68	104										
	-23,3	48,9	4,44	48,9	153,8	525	132,3	1,02	3,50	0,88	150,1	1,02	4,06	ARI540 LBP
	[°F]													
	-10	120	40	120										
	-23,3	40,6	32,2	32,2	209,5	716	180,3	1,45	4,95	1,25	144,7	1,01	4,07	AHAM LBP
	[°F]													
	-10	105	90	90										
	-35	45	32	45	84,1	287	72,4	0,83	2,84	0,72	100,9	0,95	1,81	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	84,1	287	72,4	0,83	2,84	0,72	100,9	0,95	1,81
cond. pressure	-30	-22	119,5	408	102,8	1,00	3,41	0,86	119,8	0,96	2,58
pc= 45/113	-25	-13	163,9	560	141,0	1,17	3,99	1,01	140,1	1,00	3,55
return gas temp.	-23,3	-10	181,0	618	155,8	1,23	4,19	1,06	147,4	1,01	3,93
RGT= 32/90	-20	-4	217,3	742	187,0	1,34	4,58	1,15	162,1	1,05	4,72
liquid temp	-15	5	280,0	956	241,0	1,51	5,14	1,30	185,9	1,13	6,10
Tliq= 45/113	-10	14	352,1	1202	303,0	1,66	5,67	1,43	212,0	1,24	7,70
[°C / °F]	-35	-31	70,9	242	61,1	0,73	2,50	0,63	97,1	0,92	1,69
cond. pressure	-30	-22	99,0	338	85,2	0,82	2,80	0,71	120,8	0,96	2,36
pc= 55/131	-25	-13	136,1	465	117,1	0,93	3,19	0,80	145,9	1,02	3,25
return gas temp	-23,3	-10	150,8	515	129,8	0,97	3,33	0,84	154,7	1,04	3,61
RGT= 32/90	-20	-4	182,4	623	156,9	1,06	3,61	0,91	172,6	1,10	4,37
liquid temp	-15	5	237,9	813	204,8	1,18	4,04	1,02	201,2	1,20	5,73
Tliq= 55/131	-10	14	303,0	1035	260,8	1,31	4,46	1,12	231,9	1,33	7,33

**Model**

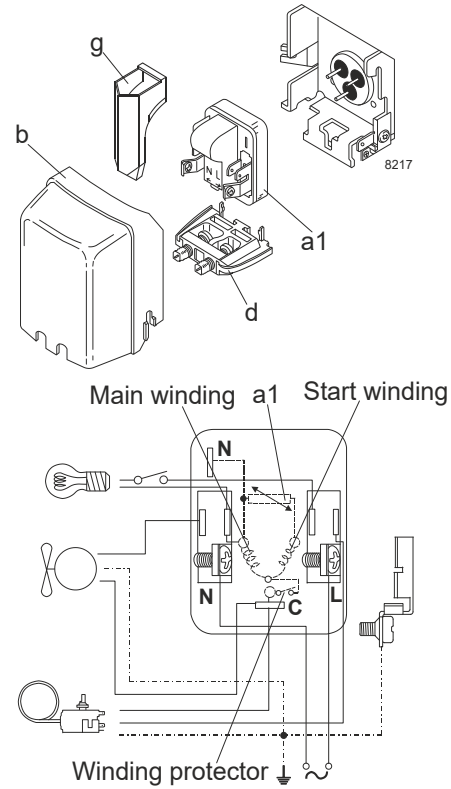
Designation	<b>NL7F</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105G6706</b>
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**Configuration**

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

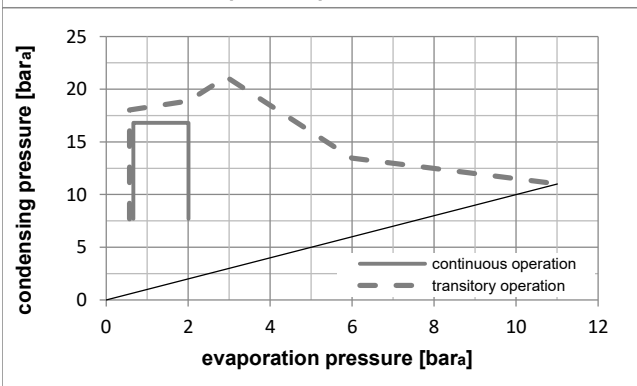
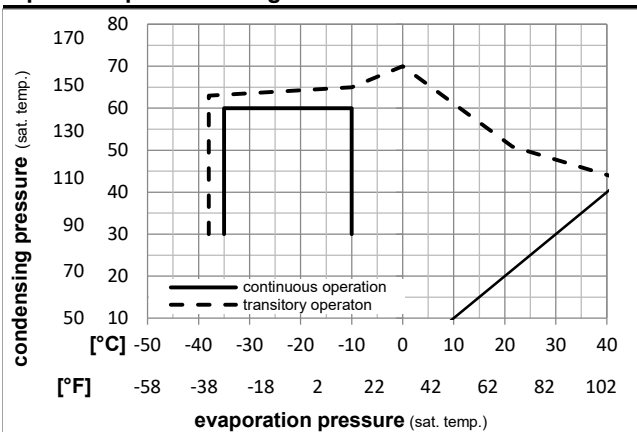


**Ambient temperatures / system cooling**

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**

Designation	<b>NL7F</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105G6706</b>
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**Optimization + standard conditions**

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

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption							
						Return gas temp.						Current consumption							
						Liquid temp.						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	54,4	32,2	32,2	186,1	636	160,2	1,21	4,12	1,04	154,2	1,04	3,61	ASHRAE LBP					
[°F]	-10	130	90	90															
[°C]	-25	55	32	55	136,1	465	117,1	0,93	3,19	0,80	145,9	1,02	3,25	cecomaf LBP					
[°F]	-13	131	89,6	131															
[°C]	-35	40	20	40	89,5	306	77,0	0,86	2,94	0,74	104,0	0,97	1,96	EN12900 LBP					
[°F]	-31	104	68	104															
[°C]	-23	48,9	4,44	48,9	153,8	525	132,3	1,02	3,50	0,88	150,1	1,02	4,06	ARI540 LBP					
[°F]	-10	120	40	120															
[°C]	-23	40,6	32,2	32,2	209,5	716	180,3	1,45	4,95	1,25	144,7	1,01	4,07	AHAM LBP					
[°F]	-10	105	90	90															
[°C]	-35	45	32	45	84,1	287	72,4	0,83	2,84	0,72	100,9	0,95	1,81	opt					
[°F]	-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]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]			
[°C / °F]	-35	-31	84,1	287	72,4	0,83	2,84	0,72	100,9	0,95	1,81			
cond. pressure	-30	-22	119,5	408	102,8	1,00	3,41	0,86	119,8	0,96	2,58			
pc= 45/113	-25	-13	163,9	560	141,0	1,17	3,99	1,01	140,1	1,00	3,55			
return gas temp.	-23	-10	181,0	618	155,8	1,23	4,19	1,06	147,4	1,01	3,93			
RGT= 32/90	-20	-4	217,3	742	187,0	1,34	4,58	1,15	162,1	1,05	4,72			
liquid temp	-15	5	280,0	956	241,0	1,51	5,14	1,30	185,9	1,13	6,10			
Tliq= 45/113	-10	14	352,1	1202	303,0	1,66	5,67	1,43	212,0	1,24	7,70			
[°C / °F]	-35	-31	70,9	242	61,1	0,73	2,50	0,63	97,1	0,92	1,69			
cond. pressure	-30	-22	99,0	338	85,2	0,82	2,80	0,71	120,8	0,96	2,36			
pc= 55/131	-25	-13	136,1	465	117,1	0,93	3,19	0,80	145,9	1,02	3,25			
return gas temp	-23	-10	150,8	515	129,8	0,97	3,33	0,84	154,7	1,04	3,61			
RGT= 32/90	-20	-4	182,4	623	156,9	1,06	3,61	0,91	172,6	1,10	4,37			
liquid temp	-15	5	237,9	813	204,8	1,18	4,04	1,02	201,2	1,20	5,73			
Tliq= 55/131	-10	14	303,0	1035	260,8	1,31	4,46	1,12	231,9	1,33	7,33			



# NL Compressors







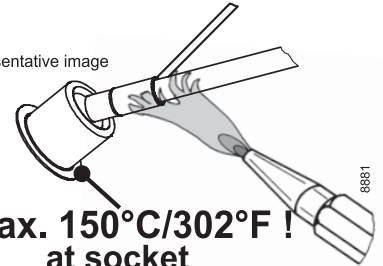
## Service/Repair – R600a, R290



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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