

Model

Designation	NL7CLX	220-240V/50Hz 1~	Sales code:	105F3710
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R404A, R452A, R507
Oil viscosity	32cSt	Displacement	7,27cm ³ / 0,44cu.in
Oil quantity	294cm ³ / 10fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	2310cm ³ / 78,1fl.oz		
Weight	10,4kg / 22,9lbs		
Motor protection	1# internal		
Winding resistance main	8,2Ω (at 25°C)		
Winding resistance aux	14,7Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with NL7CLX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motorconfiguration	CSIR	RSIR	CSIR	RSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1	1	1
Voltage range	198-254V	198-254V	198-254V	198-254V
Approvals	VDE, UL, CCC	VDE, UL, CCC	VDE, CCC	VDE, CCC
Starting torque	HST	LST	HST	LST
Note	- / -			

Applications with NL7CLX

	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Refrigerant	R404A	R404A	R452A	R452A
Application	LBP+MBP	LBP+MBP	LBP+MBP	LBP+MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	- / -	- / -	- / -	- / -
Long interval pull down	- / -	- / -	- / -	- / -

Electrical data - Configurations with NL7CLX

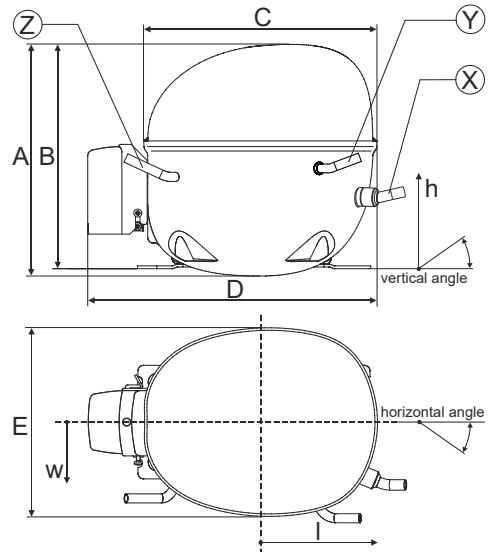
	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Starting device type	relay	PTC	relay	PTC
Run capacitor	- / -	- / -	- / -	- / -
Start capacitor	80μF	- / -	80μF	- / -
LRA (locked rotor amps / 4s)	10,4A	9,2A	10,4A	9,2A
RLA (rated load amps / 1s)	1,8A	1,8A	1,8A	1,8A
Cut in current	10,4A	13,6A	10,4A	13,6A
IP class	21	21	21	21

Model

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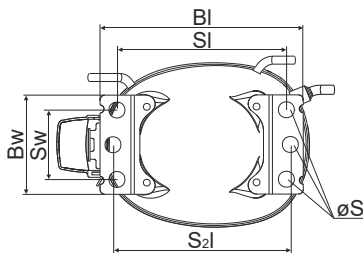
Compressor dimensions

Housing	A Height	203mm / 7,99in
	B Height	197mm / 7,76in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in



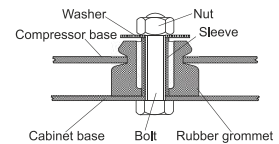
Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	155°
Position l/h/w	[mm]	126/76/78	133/103/54	-107/94/72
	[in]	5/3/3,1	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

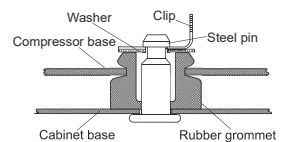


Baseplate	[mm]	[inch]
BI	204	8.03
BW	100	3.94
Small holes	[mm]	[inch]
SI	170	6.7
SW	70	2.76
S2l	178	7
øS	ø 16	ø 0.63

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

Application notes

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

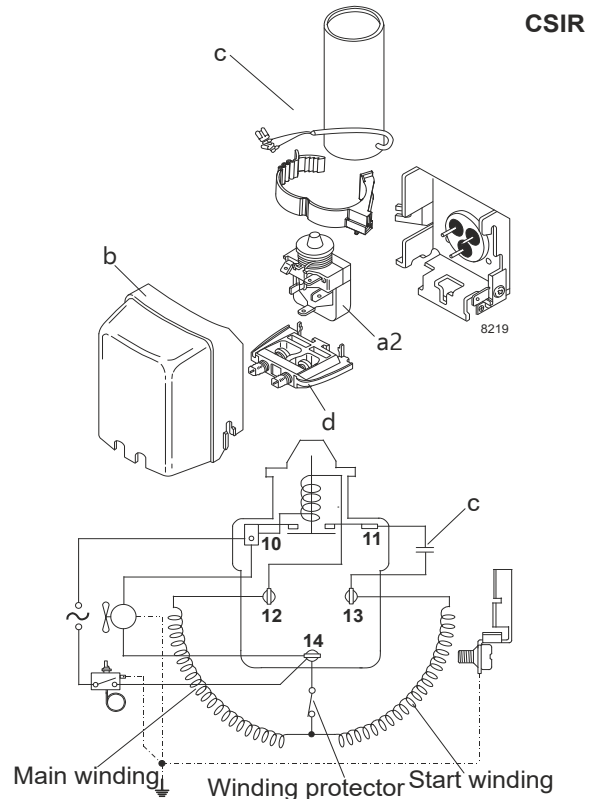
Model

Designation	NL7CLX	220-240V/50Hz	Conf. 1	Sales code:	105F3710
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R404A
Application	LBP+MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE UL CCC

Electrical accessories / wiring diagram

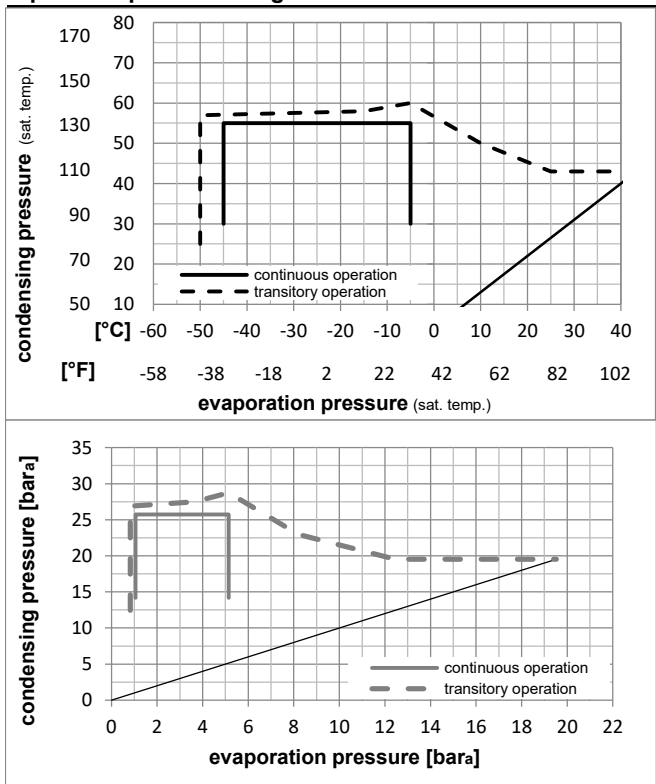


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 3m/s	fan 3m/s	n/a

Operation pressure range



Components

a2	assy. relay	117U6002
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 **NL7CLX 220-240V/50Hz** Conf. 1 Sales code: **105F3710**

Optimization + standard conditions

220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)				Power consumption				ASHRAE LBP		
Return gas temp.				Liquid temp.				Current consumption					Ref. mass flow ṁ	
Cooling capacity				COP		EER		P1		I				
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	387,3	1323	333,3	1,31	4,48	1,13	295,3	1,79	9,02	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	262,5	897	225,9	0,93	3,17	0,80	282,8	1,74	8,20	cecomaf LBP
[°F]	-13	131	89,6	131										
[°C]	-35	40	20	40	210,3	718	181,0	1,01	3,43	0,87	209,1	1,44	5,71	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-23,3	48,9	4,44	48,9	292,1	997	251,3	1,00	3,43	0,86	290,6	1,75	10,34	ARI540 LBP
[°F]	-10	120	40	120										
[°C]	-23,3	40,6	32,2	32,2	440,3	1504	378,9	1,61	5,49	1,38	274,1	1,68	10,26	AHAM LBP
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	198,9	679	171,2	0,93	3,17	0,80	214,5	1,46	5,32	opt
[°F]	-31	113	89,6	113										

Performance tables

220V/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]	-45	-49	102,0	349	87,8	0,65	2,21	0,56	157,8	1,31	2,71	
cond. pressure	-35	-31	198,9	679	171,2	0,93	3,17	0,80	214,5	1,46	5,32	
pc= 45/113	-30	-22	263,3	899	226,6	1,08	3,70	0,93	243,3	1,56	7,07	
return gas temp.	-25	-13	340,1	1161	292,7	1,24	4,25	1,07	273,5	1,68	9,17	
RGT= 32/90	-20	-4	430,4	1470	370,4	1,41	4,80	1,21	306,1	1,81	11,68	
liquid temp	-15	5	535,6	1829	460,9	1,57	5,35	1,35	341,8	1,96	14,63	
Tliq= 45/113	-5	23	795,7	2717	684,8	1,87	6,38	1,61	426,0	2,32	22,12	
[°C / °F]	-45	-49	69,8	238	60,1	0,49	1,66	0,42	143,8	1,28	2,14	
cond. pressure	-35	-31	147,7	504	127,1	0,70	2,38	0,60	211,9	1,48	4,57	
pc= 55/131	-30	-22	199,9	683	172,0	0,81	2,77	0,70	246,5	1,60	6,21	
return gas temp	-25	-13	262,5	897	225,9	0,93	3,17	0,80	282,8	1,74	8,20	
RGT= 32/90	-20	-4	337,0	1151	290,0	1,05	3,58	0,90	321,4	1,90	10,60	
liquid temp	-15	5	424,4	1450	365,3	1,17	3,99	1,01	363,3	2,07	13,46	
Tliq= 55/131	-5	23	643,6	2198	553,9	1,40	4,78	1,20	460,2	2,47	20,83	

Model

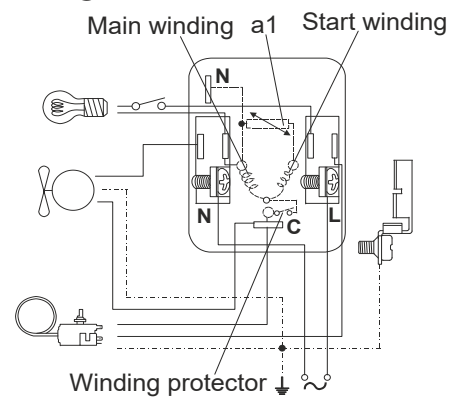
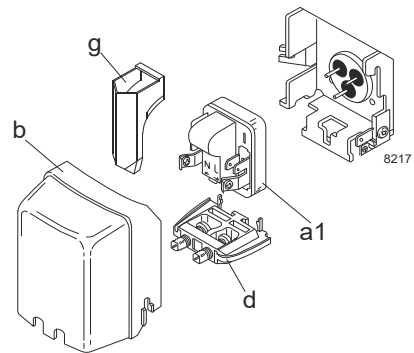
Designation	NL7CLX	220-240V/50Hz	Conf. 2	Sales code:	105F3710
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R404A
Application	LBP+MBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE UL CCC

Electrical accessories / wiring diagram

RSIR

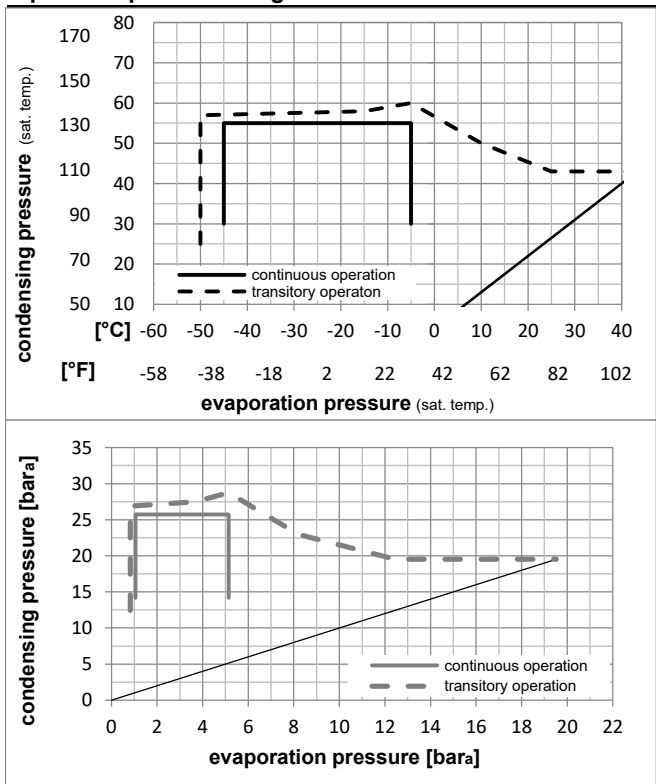


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 3m/s	fan 3m/s	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 **NL7CLX 220-240V/50Hz** Conf. 2 Sales code: **105F3710**

Optimization + standard conditions

220V/50Hz, RSIR, fan 3m/s, VDE, UL, CCC

Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)				Power consumption				ASHRAE LBP		
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]
[°C]	-23,3	54,4	32,2	32,2	387,3	1323	333,3	1,31	4,48	1,13	295,3	1,79	9,02	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	262,5	897	225,9	0,93	3,17	0,80	282,8	1,74	8,20	cecomaf LBP
[°F]	-13	131	89,6	131										
[°C]	-35	40	20	40	210,3	718	181,0	1,01	3,43	0,87	209,1	1,44	5,71	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-23,3	48,9	4,44	48,9	292,1	997	251,3	1,00	3,43	0,86	290,6	1,75	10,34	ARI540 LBP
[°F]	-10	120	40	120										
[°C]	-23,3	40,6	32,2	32,2	440,3	1504	378,9	1,61	5,49	1,38	274,1	1,68	10,26	AHAM LBP
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	198,9	679	171,2	0,93	3,17	0,80	214,5	1,46	5,32	opt
[°F]	-31	113	89,6	113										

Performance tables

220V/50Hz, RSIR, 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]	-45	-49	102,0	349	87,8	0,65	2,21	0,56	157,8	1,31	2,71
cond. pressure	-35	-31	198,9	679	171,2	0,93	3,17	0,80	214,5	1,46	5,32
pc= 45/113	-30	-22	263,3	899	226,6	1,08	3,70	0,93	243,3	1,56	7,07
return gas temp.	-25	-13	340,1	1161	292,7	1,24	4,25	1,07	273,5	1,68	9,17
RGT= 32/90	-20	-4	430,4	1470	370,4	1,41	4,80	1,21	306,1	1,81	11,68
liquid temp	-15	5	535,6	1829	460,9	1,57	5,35	1,35	341,8	1,96	14,63
Tliq= 45/113	-5	23	795,7	2717	684,8	1,87	6,38	1,61	426,0	2,32	22,12
[°C / °F]	-45	-49	69,8	238	60,1	0,49	1,66	0,42	143,8	1,28	2,14
cond. pressure	-35	-31	147,7	504	127,1	0,70	2,38	0,60	211,9	1,48	4,57
pc= 55/131	-30	-22	199,9	683	172,0	0,81	2,77	0,70	246,5	1,60	6,21
return gas temp	-25	-13	262,5	897	225,9	0,93	3,17	0,80	282,8	1,74	8,20
RGT= 32/90	-20	-4	337,0	1151	290,0	1,05	3,58	0,90	321,4	1,90	10,60
liquid temp	-15	5	424,4	1450	365,3	1,17	3,99	1,01	363,3	2,07	13,46
Tliq= 55/131	-5	23	643,6	2198	553,9	1,40	4,78	1,20	460,2	2,47	20,83

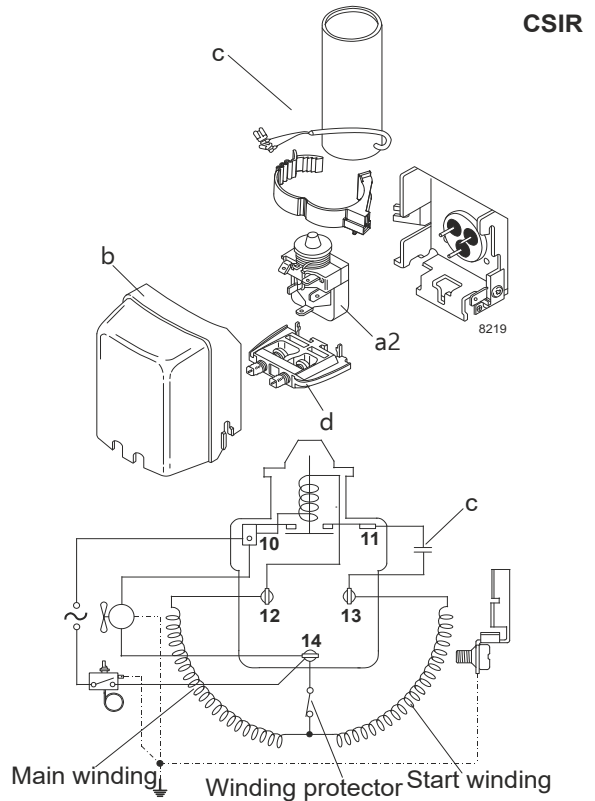
Model

Designation	NL7CLX	220-240V/50Hz	Conf. 3	Sales code:	105F3710
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R452A
Application	LBP+MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE CCC

Electrical accessories / wiring diagram

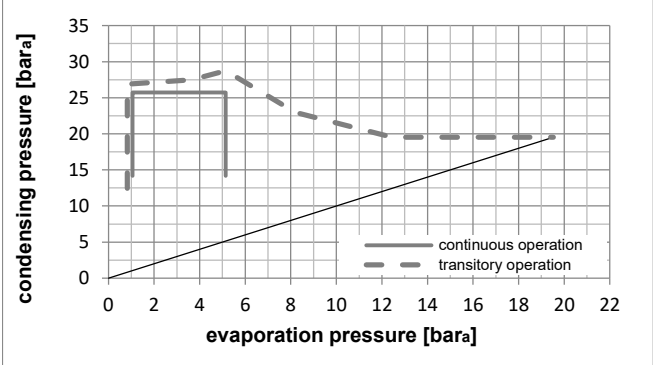
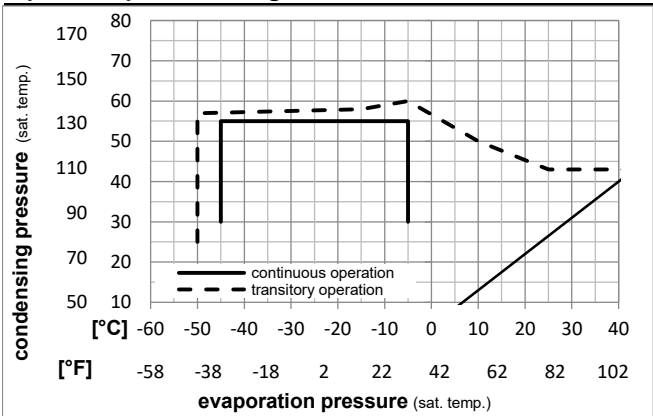


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 3m/s	fan 3m/s	n/a

Operation pressure range



Components

a2	assy. relay	117U6002
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 **NL7CLX 220-240V/50Hz** Conf. **3** Sales code: **105F3710**

Optimization + standard conditions

220V/50Hz, CSIR, fan 3m/s, VDE, CCC

Evaporating pressure (saturation temperature)														
Condensing pressure (saturation temperature)														
Return gas temp.														
Liquid temp.														
Cooling capacity														
COP														
EER														
Power consumption														
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]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
ASHRAE LBP	-23,3	54,4	32,2	32,2	353,5	1207	304,3	1,28	4,37	1,10	276,3	1,72	8,50	
	[°F]													
	-10	130	90	90										
cecomaf LBP	-25	55	32	55	241,5	825	207,9	0,92	3,13	0,79	263,9	1,67	7,69	
	[°F]													
	-13	131	89,6	131										
EN12900 LBP	-35	40	20	40	189,3	646	162,9	0,97	3,33	0,84	194,3	1,39	5,28	
	[°F]													
	-31	104	68	104										
ARI540 LBP	-23,3	48,9	4,44	48,9	270,9	925	233,2	0,99	3,39	0,86	272,6	1,71	9,74	
	[°C]													
	[°F]													
	-10	120	40	120										
AHAM LBP	-23,3	40,6	32,2	32,2	404,7	1382	348,3	1,57	5,36	1,35	257,9	1,65	9,73	
	[°C]													
	[°F]													
	-10	105	90	90										
opt	-35	45	32	45	178,4	609	153,5	0,90	3,07	0,77	198,5	1,40	4,90	
	[°C]													
	[°F]													
	-31	113	89,6	113										

Performance tables

220V/50Hz, CSIR, fan 3m/s, VDE, 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]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]
[°C / °F]	-45	-49	86,7	296	74,6	0,61	2,07	0,52	142,8	1,18	2,37						
cond. pressure	-35	-31	178,4	609	153,5	0,90	3,07	0,77	198,5	1,40	4,90						
pc= 45/113	-30	-22	239,6	818	206,2	1,06	3,61	0,91	226,8	1,52	6,60						
return gas temp.	-25	-13	312,8	1068	269,2	1,22	4,17	1,05	256,5	1,64	8,65						
RGT= 32/90	-20	-4	399,5	1364	343,8	1,38	4,73	1,19	288,6	1,77	11,11						
liquid temp	-15	5	500,9	1711	431,1	1,55	5,28	1,33	323,8	1,92	14,01						
Tliq= 45/113	-5	23	753,7	2574	648,6	1,85	6,32	1,59	407,3	2,26	21,42						
[°C / °F]	-45	-49	57,1	195	49,2	0,45	1,53	0,39	127,5	1,11	1,79						
cond. pressure	-35	-31	131,4	449	113,1	0,68	2,31	0,58	194,3	1,39	4,14						
pc= 55/131	-30	-22	181,3	619	156,0	0,79	2,71	0,68	228,3	1,53	5,74						
return gas temp	-25	-13	241,5	825	207,9	0,92	3,13	0,79	263,9	1,67	7,69						
RGT= 32/90	-20	-4	313,4	1070	269,7	1,04	3,54	0,89	302,0	1,83	10,03						
liquid temp	-15	5	398,4	1361	342,9	1,16	3,96	1,00	343,5	2,00	12,84						
Tliq= 55/131	-5	23	613,1	2094	527,7	1,39	4,76	1,20	439,8	2,39	20,12						

Model

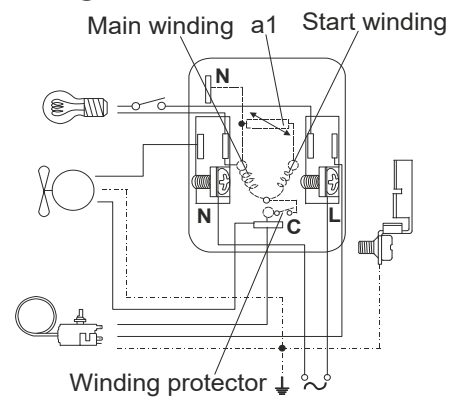
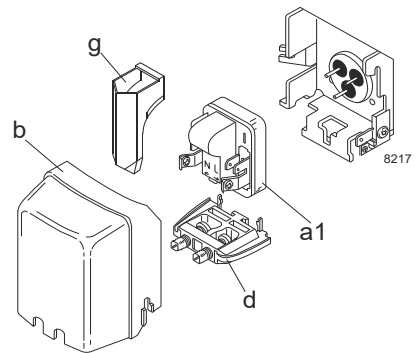
Designation	NL7CLX	220-240V/50Hz	Conf. 4	Sales code:	105F3710
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Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R452A
Application	LBP+MBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE CCC

Electrical accessories / wiring diagram

RSIR

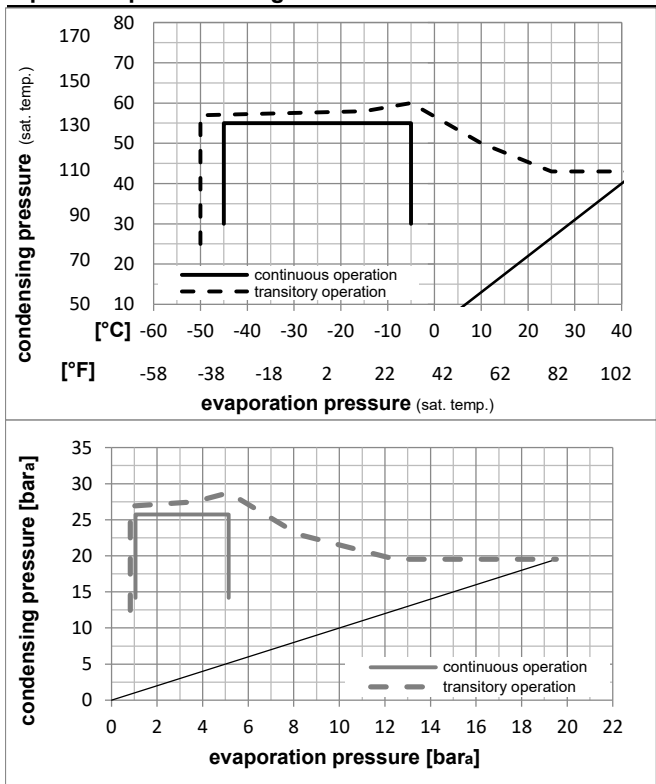


Ambient temperatures / system cooling

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 3m/s	fan 3m/s	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 **NL7CLX 220-240V/50Hz** Conf. 4 Sales code: **105F3710**

Optimization + standard conditions

220V/50Hz, RSIR, fan 3m/s, VDE, CCC

Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)				Power consumption				ASHRAE LBP		
Return gas temp.				Liquid temp.				Current consumption					Ref. mass flow ṁ	
Cooling capacity				COP		EER		P1	I	ṁ				
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]		[W]			[A]
[°C]	-23,3	54,4	32,2	32,2	353,5	1207	304,3	1,28	4,37	1,10	276,3	1,72	8,50	
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	241,5	825	207,9	0,92	3,13	0,79	263,9	1,67	7,69	cecomaf LBP
[°F]	-13	131	89,6	131										
[°C]	-35	40	20	40	189,3	646	162,9	0,97	3,33	0,84	194,3	1,39	5,28	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-23,3	48,9	4,44	48,9	270,9	925	233,2	0,99	3,39	0,86	272,6	1,71	9,74	ARI540 LBP
[°F]	-10	120	40	120										
[°C]	-23,3	40,6	32,2	32,2	404,7	1382	348,3	1,57	5,36	1,35	257,9	1,65	9,73	AHAM LBP
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	178,4	609	153,5	0,90	3,07	0,77	198,5	1,40	4,90	opt
[°F]	-31	113	89,6	113										

Performance tables

220V/50Hz, RSIR, fan 3m/s, VDE, 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]	-45	-49	86,7	296	74,6	0,61	2,07	0,52	142,8	1,18	2,37
cond. pressure	-35	-31	178,4	609	153,5	0,90	3,07	0,77	198,5	1,40	4,90
pc= 45/113	-30	-22	239,6	818	206,2	1,06	3,61	0,91	226,8	1,52	6,60
return gas temp.	-25	-13	312,8	1068	269,2	1,22	4,17	1,05	256,5	1,64	8,65
RGT= 32/90	-20	-4	399,5	1364	343,8	1,38	4,73	1,19	288,6	1,77	11,11
liquid temp	-15	5	500,9	1711	431,1	1,55	5,28	1,33	323,8	1,92	14,01
Tliq= 45/113	-5	23	753,7	2574	648,6	1,85	6,32	1,59	407,3	2,26	21,42
[°C / °F]	-45	-49	57,1	195	49,2	0,45	1,53	0,39	127,5	1,11	1,79
cond. pressure	-35	-31	131,4	449	113,1	0,68	2,31	0,58	194,3	1,39	4,14
pc= 55/131	-30	-22	181,3	619	156,0	0,79	2,71	0,68	228,3	1,53	5,74
return gas temp	-25	-13	241,5	825	207,9	0,92	3,13	0,79	263,9	1,67	7,69
RGT= 32/90	-20	-4	313,4	1070	269,7	1,04	3,54	0,89	302,0	1,83	10,03
liquid temp	-15	5	398,4	1361	342,9	1,16	3,96	1,00	343,5	2,00	12,84
Tliq= 55/131	-5	23	613,1	2094	527,7	1,39	4,76	1,20	439,8	2,39	20,12