

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

Designation

NL7CLX

220-240V/50Hz 1~

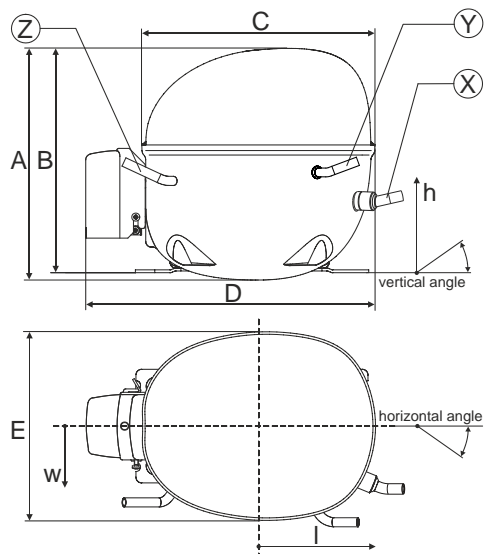
Sales code:

105F3710

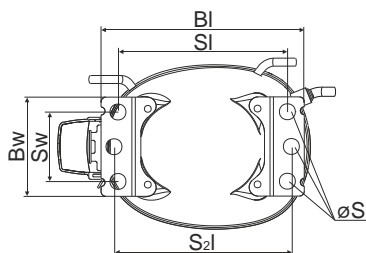
Compressor dimensions

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



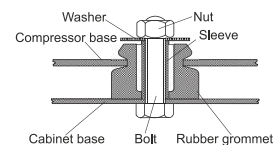
Compressor fixation



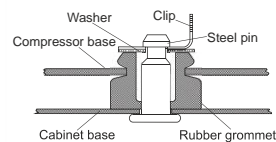
Baseplate	[mm]	[inch]
BI	204	8.03
Bw	100	3.94

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.

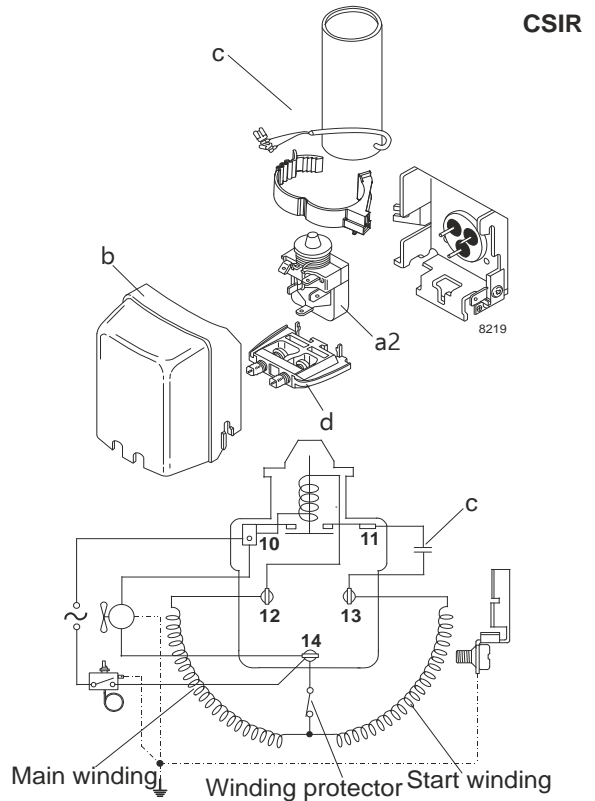
Model

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

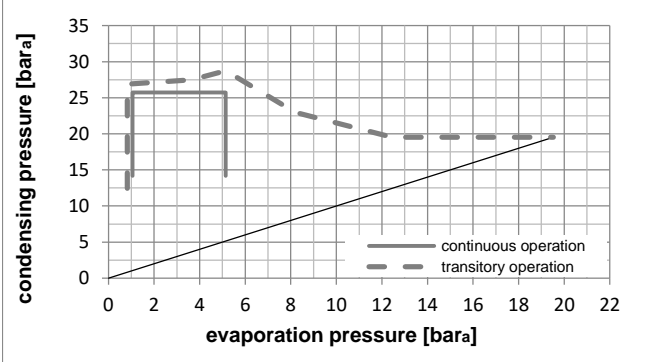
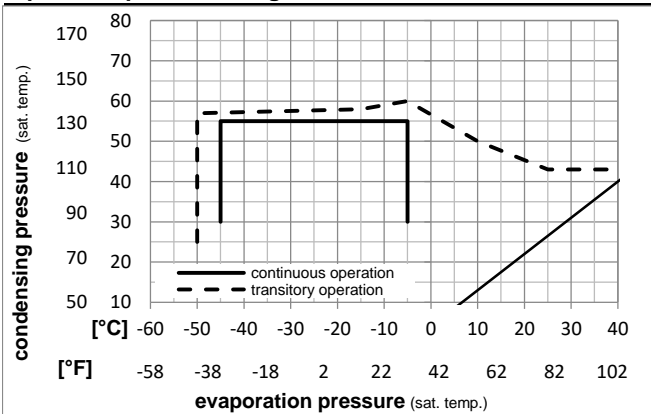


Ambient temperatures / system cooling

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)														
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]	
[°F]	-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]
[°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

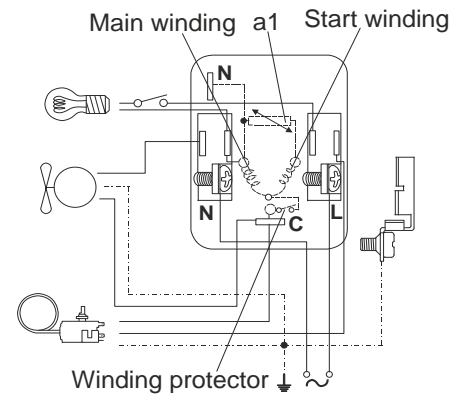
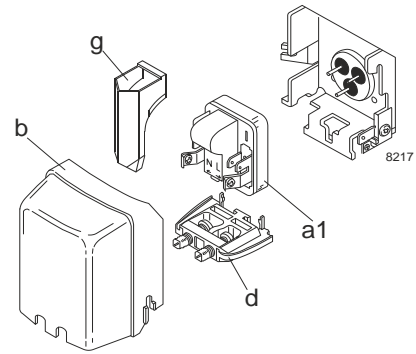
Designation	NL7CLX	220-240V/50Hz	Conf. 2	Sales code:	105F3710
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Configuration

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

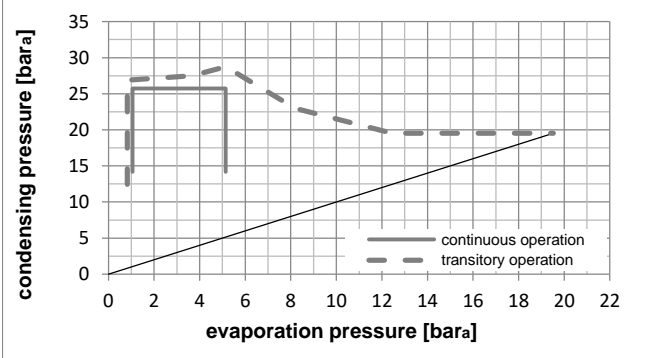
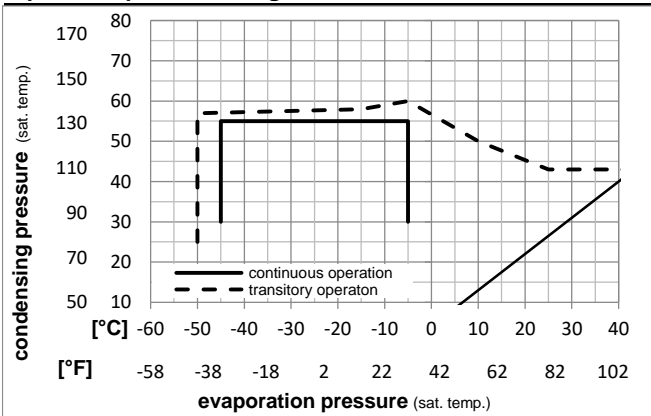


Ambient temperatures / system cooling

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)														
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]	[A]	[kg/h]	
[°F]	-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]
[°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

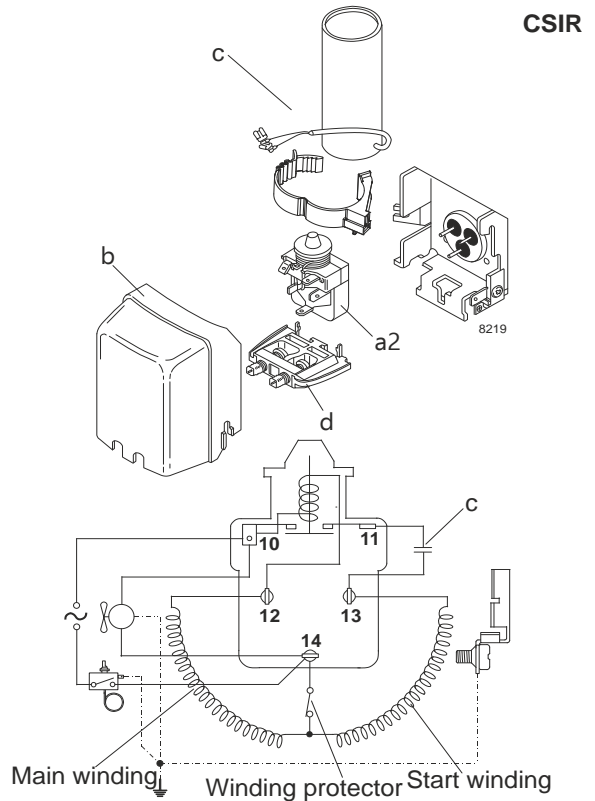
Model

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

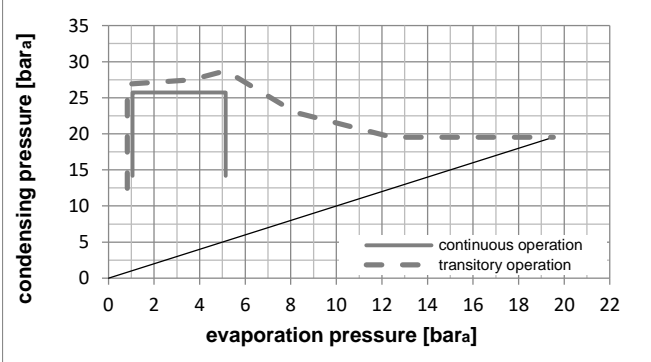
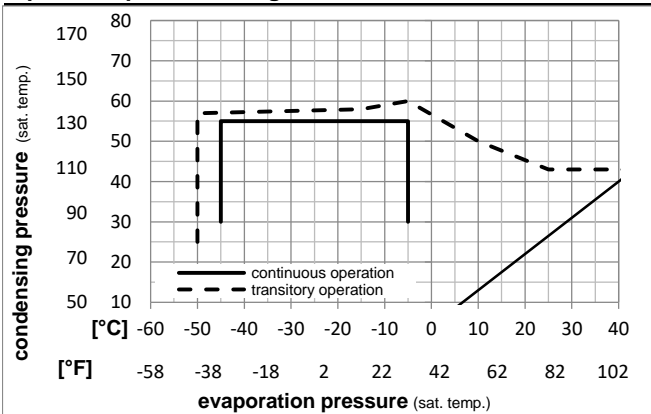


Ambient temperatures / system cooling

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)						Power consumption				ASHRAE LBP
					Return gas temp.						Current consumption				
					Liquid temp.						Ref. mass flow				
					Cooling capacity						COP EER				
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1 [W]	I [A]	m [kg/h]		
[°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, 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]
[°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

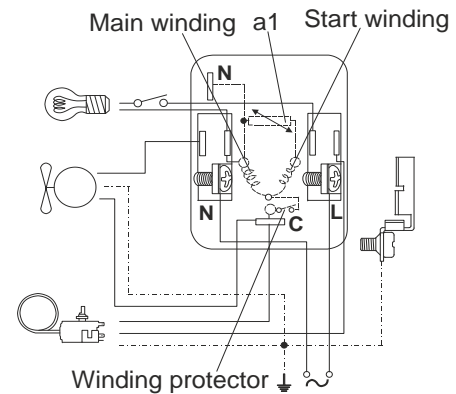
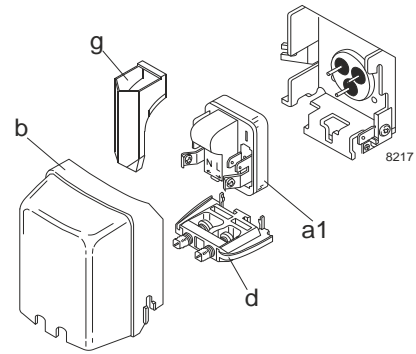
Designation	NL7CLX	220-240V/50Hz	Conf. 4	Sales code:	105F3710
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Configuration

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

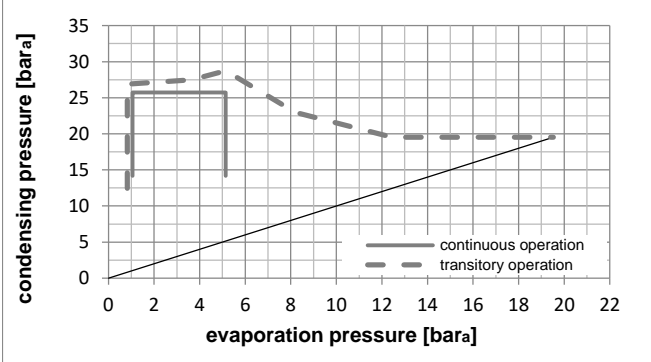
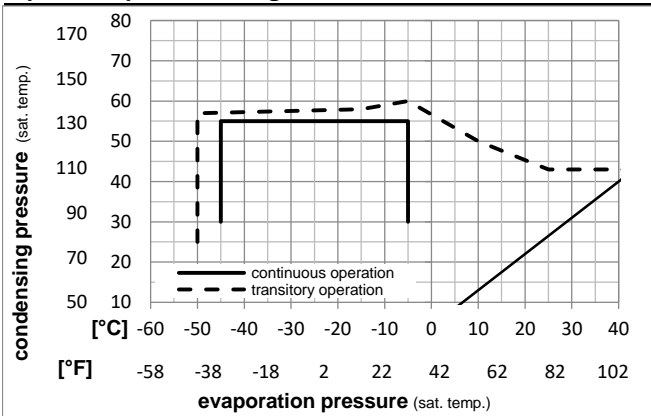


Ambient temperatures / system cooling

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 m
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]	[°F]	[°C]	[°F]										
-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	ASHRAE LBP
-10	130	90	90										
-25	55	32	55	241,5	825	207,9	0,92	3,13	0,79	263,9	1,67	7,69	cecomaf LBP
-13	131	89,6	131										
-35	40	20	40	189,3	646	162,9	0,97	3,33	0,84	194,3	1,39	5,28	EN12900 LBP
-31	104	68	104										
-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
-10	120	40	120										
-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
-10	105	90	90										
-35	45	32	45	178,4	609	153,5	0,90	3,07	0,77	198,5	1,40	4,90	opt
-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