Technical Data Compressor

SECOP

Model

Designation	**NL7.3MF**	**220-240V/50Hz 1~**	**208-230V/60Hz 1~**	Sales code:	**105G6773**

Compressor design

Oil type	Polyolester	Refrigerant(s)	**R134a**
Oil viscosity	32cST	Displacement	7,27cm³ / 0,44cu.in
Oil quantity	265cm³ / 9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	600g / 21,2oz		
Free gas volume comp.	2360cm³ / 79,8fl.oz		
Weight	10kg / 22lbs		
Motor protection	1# internal		
Winding resistance main	8,3Ω (at 25°C)		
Winding resistance aux	11,8Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		

General - Configurations with NL7.3MF

	Conf. 1	**Conf. 2**	**Conf. 3**
Motorconfiguration	RSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1	1
Voltage range	187-254V	187-254V	187-254V
Approvals	VDE, UL, CCC, EAC	VDE, UL, CCC, EAC	VDE, UL, CCC, EAC
Starting torque	LST	HST	HST
Note	- / -		

Applications with NL7.3MF

	Conf. 1	**Conf. 2**	**Conf. 3**
Refrigerant	R134a	R134a	R134a
Application	MBP	MBP	LBP+MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	-/-	-/-	-/-
Long interval pull down	OK	OK	OK

Electrical data - Configurations with NL7.3MF

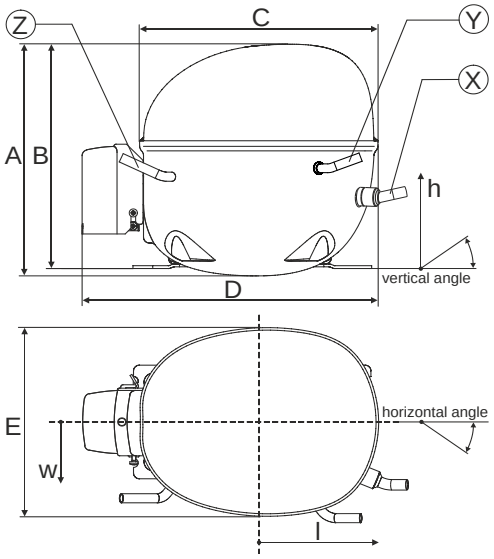
	Conf. 1	**Conf. 2**	**Conf. 3**
Starting device type	PTC	relay	relay
Run capacitor	-/-	-/-	-/-
Start capacitor	-/-	80µF	80µF
LRA (locked rotor amps / 4s)	10,2A	10,7A	10,8A
RLA (rated load amps / 1s)	2,1A	2,1A	1,8A
Cut in current	15,1A	10,7A	10,8A
IP class	21	21	21

Model

Designation **NL7.3MF** **220-240V/50Hz 1~ 208-230V/60Hz 1~** Sales code: **105G6773**

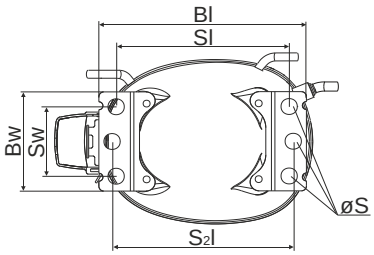
Compressor dimensions

Housing	A Height	197mm / 7,76in
	B Height	190mm / 7,48in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in



Connectors		**Suction** X	**Discharge** Y	**Process** Z
Diameter	[mm]	øi 9,61-9,79	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,38-0,39	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	155°
Position l/h/w	[mm]	126/76/78	127/103/54	-113/94/72
	[in]	5/3/3,1	5/4/2,1	-4,4/3,7/2,8
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5

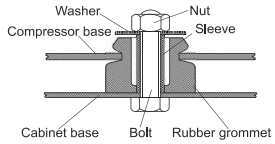
Compressor fixation



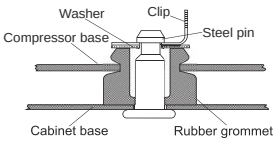
Baseplate	[mm]	[inch]
Bl	204	8.03
Bw	100	3.94

Small holes	[mm]	[inch]
Sl	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					
	NL7.3MF	**220-240V/50Hz**	**Conf. 1**	Sales code:	**105G6773**

Configuration

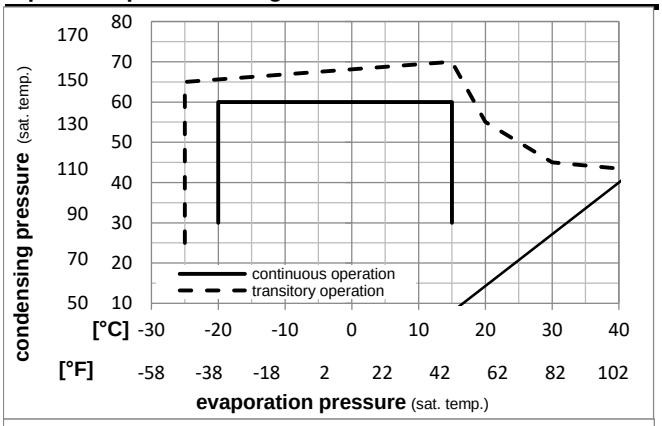
Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	LST
Approvals	VDE
	UL
	CCC
	EAC

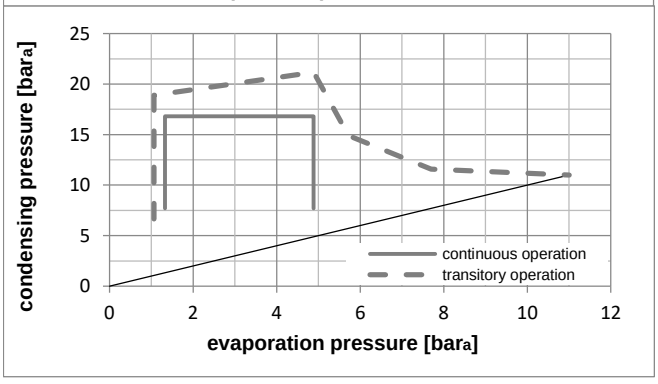
Ambient temperatures / system cooling

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	n/a	fan 1,5m/s	n/a
38°C / 100°F	n/a	fan 1,5m/s	n/a
43°C / 110°F	n/a	fan 1,5m/s	n/a

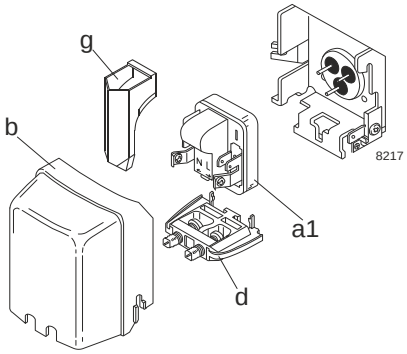
Operation pressure range

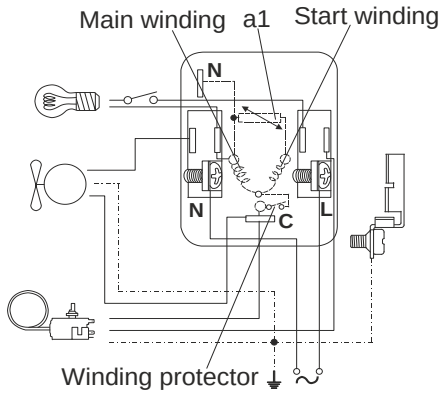




Electrical accessories / wiring diagram

RSIR





Components

a1	PTC starter (220V, 25Ohm, 4.8mm)	103N0018
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation **NL7.3MF** **220-240V/50Hz** **Conf. 1** Sales code: **105G6773**

Optimization + standard conditions 220V/50Hz, RSIR, fan 1,5m/s, VDE, UL, CCC, EAC

	Evaporating pressure (saturation temperature)	Condensing pressure (saturation temperature)	Return gas temp.	Liquid temp.	Cooling capacity			COP	EER		Power consumption P1	Current consumption I	Ref. mass flow ṁ	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-6,66	54,4	35	46,1	395,0	1349	340,0	1,64	5,59	1,41	241,4	1,71	8,62	**ASHRAE MBP**
[°F]	20	130	95	115										
[°C]	-10	55	32	55	304,1	1039	261,7	1,34	4,58	1,15	226,8	1,67	7,35	**cecomaf MBP**
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	347,1	1185	298,7	1,62	5,52	1,39	214,8	1,63	8,12	**EN12900 MBP**
[°F]	14	113	68	113										
[°C]	-6,66	48,9	18,3	48,9	377,8	1290	325,1	1,62	5,53	1,39	233,4	1,69	9,33	**ARI540 MBP**
[°F]	20	120	65	120										
[°C]	-10	45	32	45	360,1	1230	309,9	1,68	5,72	1,44	214,8	1,63	7,88	**opt**
[°F]	14	113	89,6	113										
[°C]	-25	45	32	45	160,7	549	138,3	1,03	3,50	0,88	156,6	1,54	3,48	**opt**
[°F]	-13	113	89,6	113										

Performance tables 220V/50Hz, RSIR, fan 1,5m/s, VDE, UL, CCC, 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]	-20	-4	215,3	735	185,3	1,22	4,18	1,05	176,0	1,56	4,68
cond. pressure	-15	5	281,3	961	242,0	1,44	4,92	1,24	195,3	1,59	6,13
pc= 45/113	-10	14	360,1	1230	309,9	1,68	5,72	1,44	214,8	1,63	7,88
return gas temp.	-5	23	453,4	1549	390,2	1,93	6,60	1,66	234,8	1,69	9,97
RGT= 32/90	0	32	562,9	1923	484,5	2,20	7,52	1,90	255,7	1,76	12,45
liquid temp	5	41	690,2	2357	594,0	2,49	8,49	2,14	277,7	1,84	15,37
Tliq= 45/113	15	59	1004,7	3431	864,7	3,08	10,51	2,65	326,6	2,04	22,76
[°C / °F]	-20	-4	179,3	612	154,3	0,99	3,37	0,85	181,5	1,57	4,30
cond. pressure	-15	5	236,2	807	203,3	1,16	3,95	1,00	204,1	1,61	5,69
pc= 55/131	-10	14	304,1	1039	261,7	1,34	4,58	1,15	226,8	1,67	7,35
return gas temp	-5	23	384,8	1314	331,1	1,54	5,26	1,32	249,9	1,74	9,35
RGT= 32/90	0	32	479,7	1638	412,8	1,75	5,99	1,51	273,7	1,82	11,73
liquid temp	5	41	590,5	2017	508,2	1,98	6,76	1,70	298,5	1,91	14,55
Tliq= 55/131	15	59	866,6	2960	745,8	2,46	8,40	2,12	352,5	2,14	21,77

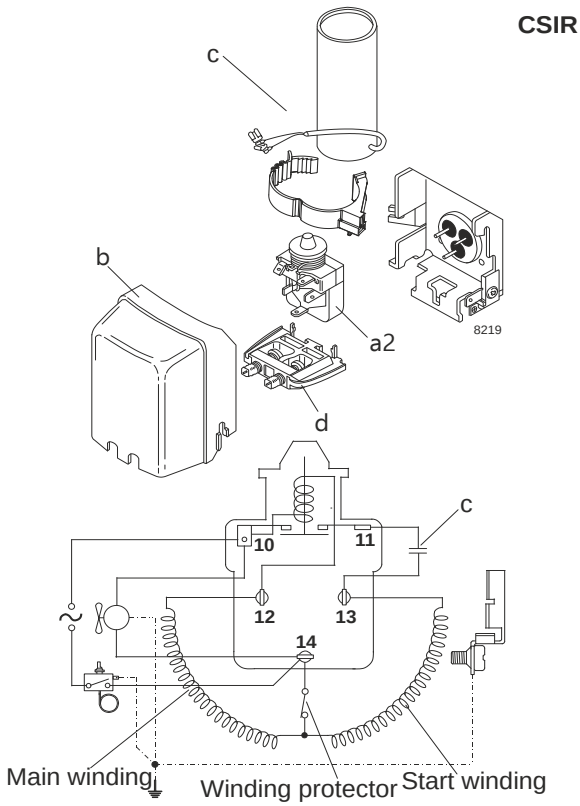
Model

Designation					
	NL7.3MF	**220-240V/50Hz**	**Conf. 2**	Sales code:	**105G6773**

Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE
	UL
	CCC
	EAC

Electrical accessories / wiring diagram

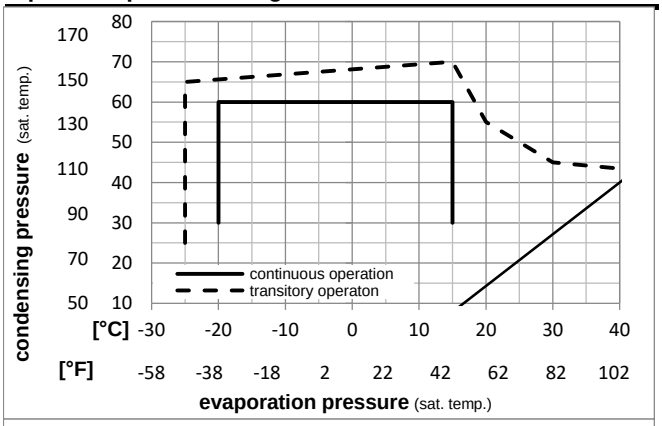


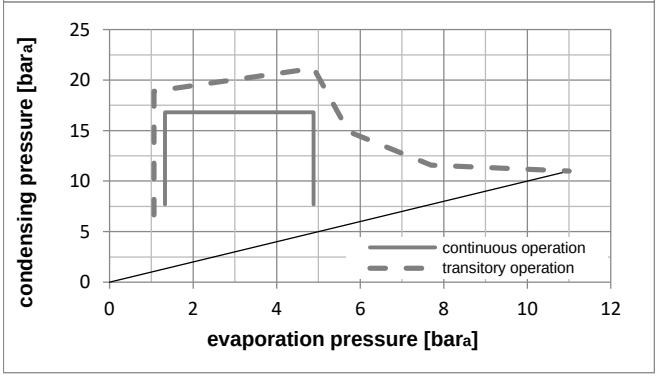
Ambient temperatures / system cooling

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	n/a	fan 1,5m/s	n/a
38°C / 100°F	n/a	fan 1,5m/s	n/a
43°C / 110°F	n/a	fan 1,5m/s	n/a

Operation pressure range





Components

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

Model

Designation **NL7.3MF** **220-240V/50Hz** **Conf. 2** Sales code: **105G6773**

Optimization + standard conditions 220V/50Hz, CSIR, fan 1,5m/s, VDE, UL, CCC, EAC

	Evaporating pressure (saturation temperature)	Condensing pressure (saturation temperature)	Return gas temp.	Liquid temp.	Cooling capacity			COP	EER		Power consumption P1	Current consumption I	Ref. mass flow ṁ	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-6,66	54,4	35	46,1	395,0	1349	340,0	1,64	5,59	1,41	241,4	1,71	8,62	**ASHRAE MBP**
[°F]	20	130	95	115										
[°C]	-10	55	32	55	304,1	1039	261,7	1,34	4,58	1,15	226,8	1,67	7,35	**cecomaf MBP**
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	347,1	1185	298,7	1,62	5,52	1,39	214,8	1,63	8,12	**EN12900 MBP**
[°F]	14	113	68	113										
[°C]	-6,66	48,9	18,3	48,9	377,8	1290	325,1	1,62	5,53	1,39	233,4	1,69	9,33	**ARI540 MBP**
[°F]	20	120	65	120										
[°C]	-10	45	32	45	360,1	1230	309,9	1,68	5,72	1,44	214,8	1,63	7,88	**opt**
[°F]	14	113	89,6	113										
[°C]	-25	45	32	45	160,7	549	138,3	1,03	3,50	0,88	156,6	1,54	3,48	**opt**
[°F]	-13	113	89,6	113										

Performance tables 220V/50Hz, CSIR, fan 1,5m/s, VDE, UL, CCC, 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]	-20	-4	215,3	735	185,3	1,22	4,18	1,05	176,0	1,56	4,68
cond. pressure	-15	5	281,3	961	242,0	1,44	4,92	1,24	195,3	1,59	6,13
pc= 45/113	-10	14	360,1	1230	309,9	1,68	5,72	1,44	214,8	1,63	7,88
return gas temp.	-5	23	453,4	1549	390,2	1,93	6,60	1,66	234,8	1,69	9,97
RGT= 32/90	0	32	562,9	1923	484,5	2,20	7,52	1,90	255,7	1,76	12,45
liquid temp	5	41	690,2	2357	594,0	2,49	8,49	2,14	277,7	1,84	15,37
Tliq= 45/113	15	59	1004,7	3431	864,7	3,08	10,51	2,65	326,6	2,04	22,76
[°C / °F]	-20	-4	179,3	612	154,3	0,99	3,37	0,85	181,5	1,57	4,30
cond. pressure	-15	5	236,2	807	203,3	1,16	3,95	1,00	204,1	1,61	5,69
pc= 55/131	-10	14	304,1	1039	261,7	1,34	4,58	1,15	226,8	1,67	7,35
return gas temp	-5	23	384,8	1314	331,1	1,54	5,26	1,32	249,9	1,74	9,35
RGT= 32/90	0	32	479,7	1638	412,8	1,75	5,99	1,51	273,7	1,82	11,73
liquid temp	5	41	590,5	2017	508,2	1,98	6,76	1,70	298,5	1,91	14,55
Tliq= 55/131	15	59	866,6	2960	745,8	2,46	8,40	2,12	352,5	2,14	21,77

Model

Designation					
	NL7.3MF	**208-230V/60Hz**	**Conf. 3**	Sales code:	**105G6773**

Configuration

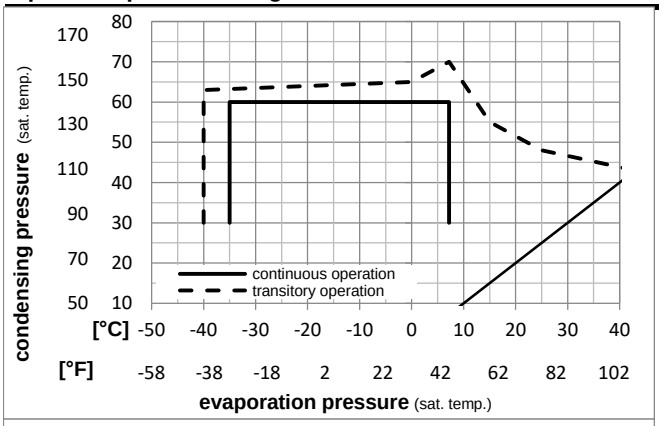
Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	LBP+MBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE
	UL
	CCC
	EAC

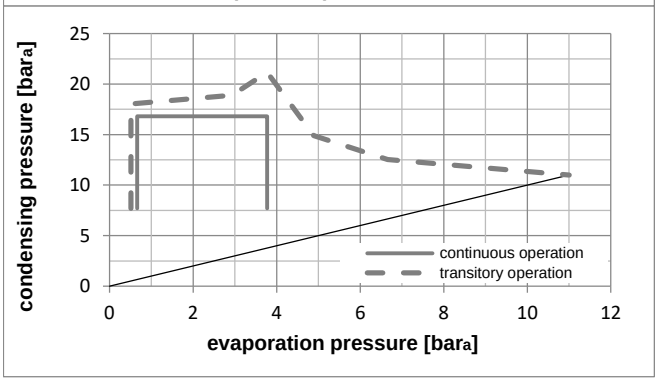
Ambient temperatures / system cooling

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

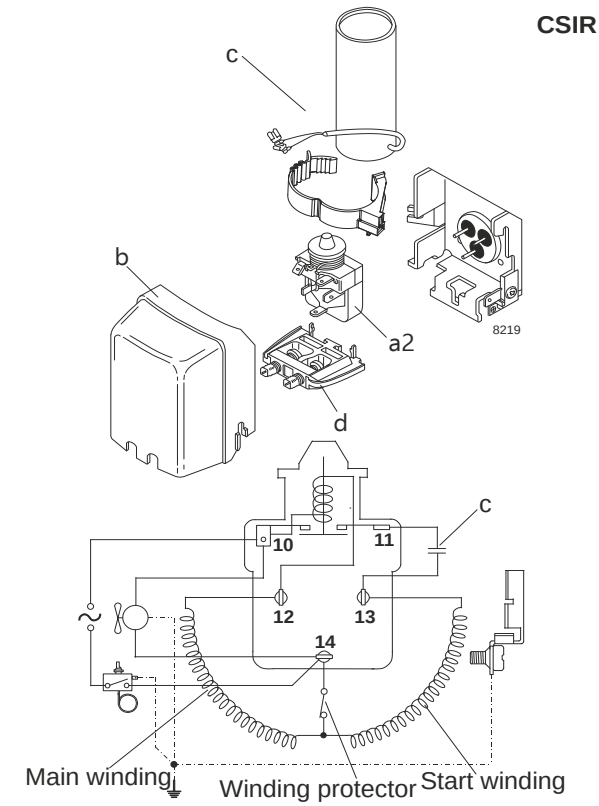
System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 1,5m/s	fan 1,5m/s	n/a

Operation pressure range





Electrical accessories / wiring diagram



Components

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

Model

Designation **NL7.3MF** **208-230V/60Hz** **Conf. 3** Sales code: **105G6773**

Optimization + standard conditions 220V/60Hz, CSIR, fan 1,5m/s, VDE, UL, CCC, EAC

	Evaporating pressure (saturation temperature)	Condensing pressure (saturation temperature)	Return gas temp.	Liquid temp.	Cooling capacity			COP	EER		Power consumption P1	Current consumption I	Ref. mass flow ṁ	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-6,66	54,4	35	46,1	471,3	1610	405,6	1,59	5,42	1,37	297,0	1,75	10,28	**ASHRAE MBP**
[°F]	20	130	95	115										
[°C]	-10	55	32	55	363,0	1240	312,4	1,32	4,51	1,14	275,0	1,66	8,78	**cecomaf MBP**
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	417,0	1424	358,9	1,60	5,47	1,38	260,6	1,61	9,76	**EN12900 MBP**
[°F]	14	113	68	113										
[°C]	-6,66	48,9	18,3	48,9	453,6	1549	390,3	1,58	5,41	1,36	286,3	1,71	11,20	**ARI540 MBP**
[°F]	20	120	65	120										
[°C]	-10	45	32	45	432,6	1478	372,3	1,66	5,67	1,43	260,6	1,61	9,47	**opt**
[°F]	14	113	89,6	113										
[°C]	-25	45	32	45	200,2	684	172,3	1,13	3,88	0,98	176,4	1,32	4,34	**opt**
[°F]	-13	113	89,6	113										

Performance tables 220V/60Hz, CSIR, fan 1,5m/s, VDE, UL, CCC, 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	105,3	360	90,7	0,86	2,93	0,74	122,9	1,16	2,27
cond. pressure	-25	-13	200,2	684	172,3	1,13	3,88	0,98	176,4	1,32	4,34
pc= 45/113	-15	5	340,7	1164	293,2	1,47	5,01	1,26	232,2	1,50	7,43
return gas temp.	-10	14	432,6	1478	372,3	1,66	5,67	1,43	260,6	1,61	9,47
RGT= 32/90	-5	23	541,4	1849	465,9	1,87	6,40	1,61	289,1	1,72	11,91
liquid temp	0	32	668,9	2284	575,6	2,11	7,19	1,81	317,6	1,85	14,79
Tliq= 45/113	7,2	45	888,9	3036	765,0	2,48	8,47	2,14	358,3	2,04	19,86
[°C / °F]	-35	-31	73,1	250	62,9	0,67	2,27	0,57	109,8	1,11	1,74
cond. pressure	-25	-13	159,4	544	137,2	0,92	3,13	0,79	173,8	1,30	3,81
pc= 55/131	-15	5	282,8	966	243,4	1,17	4,01	1,01	240,8	1,53	6,81
return gas temp	-10	14	363,0	1240	312,4	1,32	4,51	1,14	275,0	1,66	8,78
RGT= 32/90	-5	23	458,0	1564	394,2	1,48	5,05	1,27	309,6	1,80	11,13
liquid temp	0	32	569,6	1945	490,2	1,65	5,65	1,42	344,3	1,94	13,93
Tliq= 55/131	7,2	45	763,1	2606	656,7	1,93	6,61	1,67	394,4	2,16	18,87