

## Model

Designation	<b>NL10MF</b>	<b>220-240V/50Hz 1~ 208-230V/60Hz 1~</b>	Sales code:	<b>105G6062</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R134a</b>
Oil viscosity	32cSt	Displacement	10,09cm <sup>3</sup> / 0,62cu.in
Oil quantity	298cm <sup>3</sup> / 10,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	600g / 21,2oz		
Free gas volume comp.	2360cm <sup>3</sup> / 79,8fl.oz		
Weight	10,5kg / 23,1lbs		
Motor protection	1# internal		
Winding resistance main	6,1Ω (at 25°C)		
Winding resistance aux	18,35Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



## General - Configurations with NL10MF

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Motor configuration	RSIR	CSIR	RSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	187-254V	187-254V	187-254V	187-254V
Approvals	VDE, EAC, CCC, UL	VDE, EAC, CCC, UL	VDE, EAC, CCC, UL	VDE, EAC, CCC, UL
Starting torque	LST	HST	LST	HST
Note	- / -			

## Applications with NL10MF

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Refrigerant	R134a	R134a	R134a	R134a
Application	MBP	MBP	MBP	MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

## Electrical data - Configurations with NL10MF

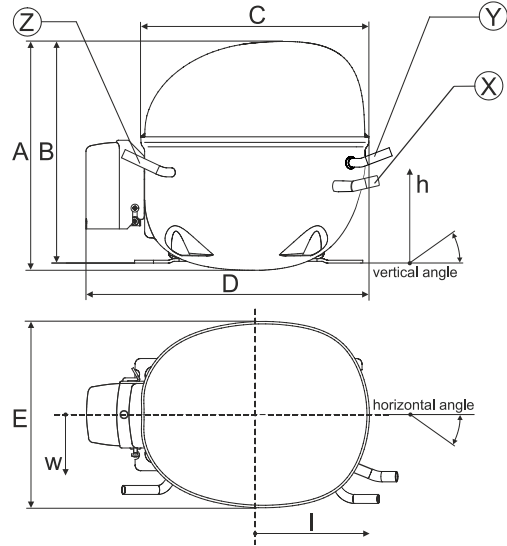
	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Starting device type	PTC	relay	PTC	relay
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	-/-	125μF	-/-	125μF
LRA (locked rotor amps / 4s/ U(N))	13A	16,6A	11,7A	16,1A
RLA (rated load amps / 1s/ U(N))	2,8A	2,8A	2,4A	2,4A
Cut in current (U(N))	17A	17A	15,5A	15,5A

## Model

Designation **NL10MF** 220-240V/50Hz 1~ 208-230V/60Hz 1~ Sales code: **105G6062**

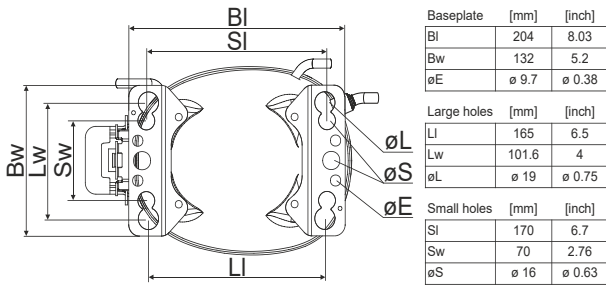
## Compressor dimensions

<b>Housing</b>	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

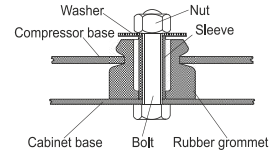


Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 9,61-9,79	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,38-0,39	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	15°	35°	155°
Position l/h/w	[mm]	126/76/78	133/103/54	-107/94/72
	[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

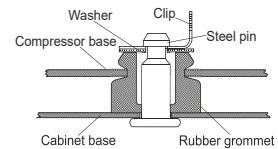
## Compressor fixation



### Bolt joint



### Snap-on



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

Provision for PE Grounding is located at the PE Stamp on the compressor

## Model

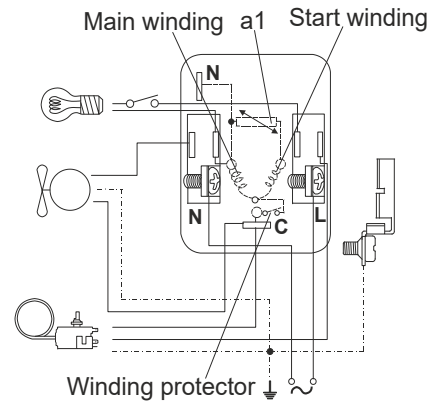
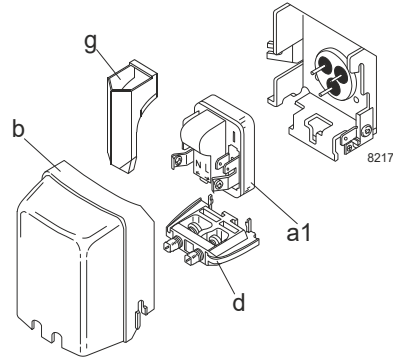
Designation **NL10MF** **220-240V/50Hz** Conf. 1 Sales code: **105G6062**

## Configuration

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

## Electrical accessories / wiring diagram

RSIR



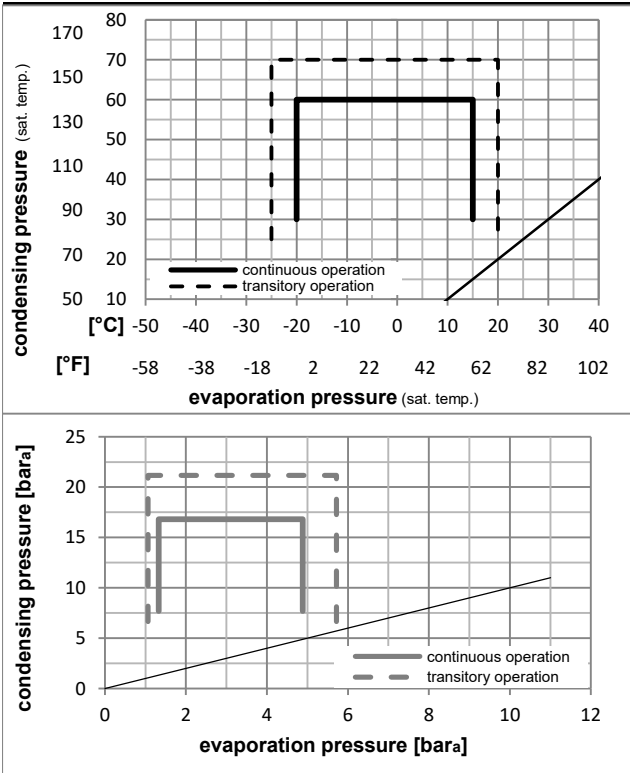
## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

## Operation pressure range



## Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

## Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

## Model

Designation **NL10MF** **220-240V/50Hz** Conf. 1 Sales code: **105G6062**

## Optimization + standard conditions

R134a, 220V/50Hz, RSIR, fan 1,5m/s, VDE, EAC, CCC, UL

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.		Liquid temp.		Cooling capacity		COP	EER		P1	I	Ref. mass flow		
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]										
-23	-10	54	130	32	90	271,9	929	234,0	1,19	4,06	1,02	228,6	2,01	5,28	ASHRAE LBP
-25	-13	55	131	32	90	198,4	678	170,7	0,91	3,11	0,78	217,8	1,98	4,74	cecomaf LBP
-35	-31	40	104	20	68	137,8	471	118,6	0,86	2,92	0,74	161,1	1,95	3,02	EN12900 LBP
-7	20	54	130	35	95	569,6	1945	490,2	1,64	5,62	1,42	346,3	2,33	12,43	ASHRAE MBP
-10	14	55	131	32	90	441,0	1506	379,5	1,37	4,67	1,18	322,7	2,25	10,66	cecomaf MBP
-10	14	45	113	20	68	496,5	1696	427,3	1,61	5,50	1,39	308,3	2,20	11,62	EN12900 MBP

## Performance tables

R134a, 220V/50Hz, RSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	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	316,1	1080	272,1	1,29	4,40	1,11	245,6	2,05	6,87
cond. pressure	-15	5	406,9	1390	350,2	1,47	5,02	1,27	276,6	2,12	8,87
pc= 45/113	-10	14	515,2	1759	443,3	1,67	5,71	1,44	308,3	2,20	11,27
return gas temp.	-5	23	643,4	2197	553,7	1,89	6,46	1,63	340,3	2,29	14,15
RGT= 32/90	0	32	794,0	2712	683,3	2,13	7,28	1,84	372,2	2,40	17,56
liquid temp	5	41	969,3	3310	834,2	2,40	8,20	2,07	403,7	2,53	21,58
Tliq= 45/113	15	59	1403,9	4795	1208,2	3,02	10,33	2,60	464,2	2,81	31,80
[°C / °F]	-20	-4	265,6	907	228,6	1,06	3,61	0,91	251,4	2,06	6,37
cond. pressure	-15	5	345,7	1181	297,5	1,21	4,12	1,04	286,4	2,15	8,32
pc= 55/131	-10	14	441,0	1506	379,5	1,37	4,67	1,18	322,7	2,25	10,66
return gas temp	-5	23	554,0	1892	476,8	1,54	5,26	1,33	359,7	2,37	13,47
RGT= 32/90	0	32	687,1	2347	591,3	1,73	5,91	1,49	397,2	2,50	16,81
liquid temp	5	41	842,7	2878	725,2	1,94	6,62	1,67	434,9	2,65	20,76
Tliq= 55/131	15	59	1230,8	4203	1059,2	2,42	8,26	2,08	509,1	2,98	30,91

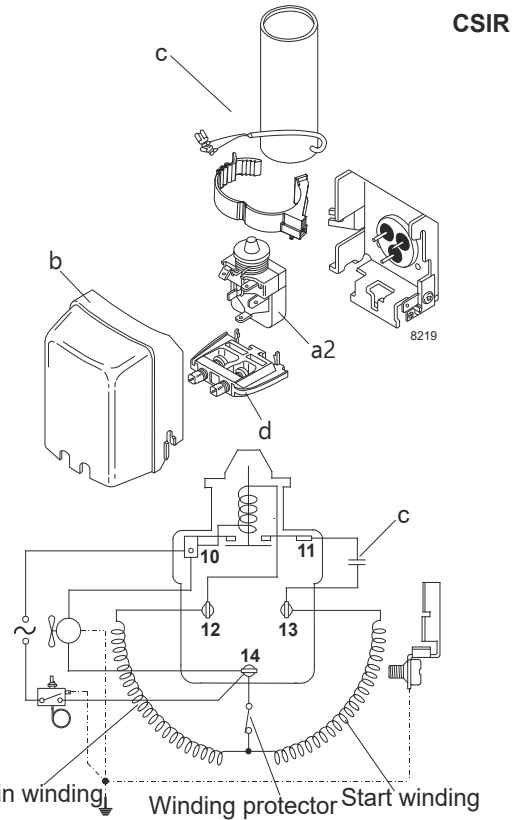
## Model

Designation **NL10MF** **220-240V/50Hz** Conf. 2 Sales code: **105G6062**

## Configuration

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

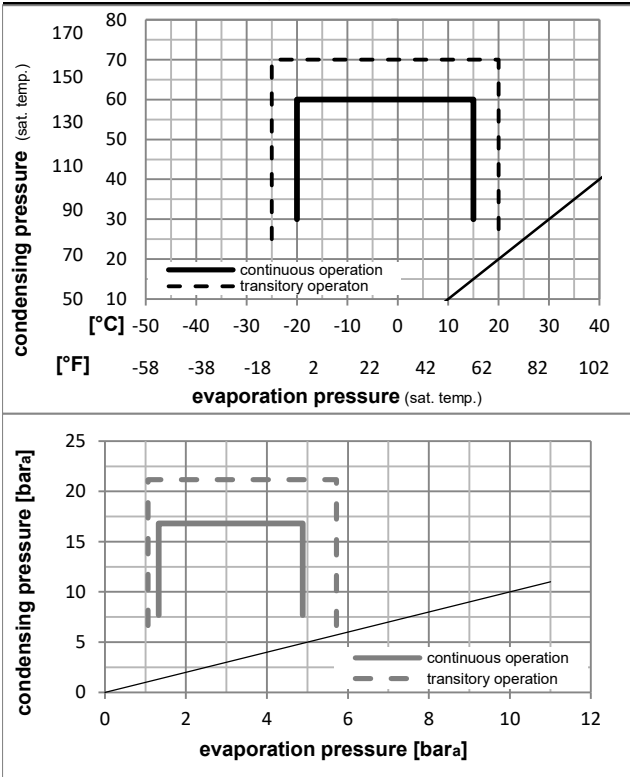
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F  
 Machine room temperature range: 10 - 48°C / 50 - 119°F  
 Compressor cooling: fan 1,5m/s

## Operation pressure range



## Components

a2	relay	117U6022
c	start capacitor	117U5018
b	plastic cover	103N2011
d	cord relief	103N1010

## Model

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## Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			COP	EER	P1	Power consumption		Ref. mass flow				
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m					
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]				
ASHRAE LBP	-23	-10	54	130	32	90	32	90	271,9	929	234,0	1,19	4,06	1,02	228,6	2,01	5,28
cecomaf LBP	-25	-13	55	131	32	90	55	131	198,4	678	170,7	0,91	3,11	0,78	217,8	1,98	4,74
EN12900 LBP	-35	-31	40	104	20	68	40	104	137,8	471	118,6	0,86	2,92	0,74	161,1	1,95	3,02
ASHRAE MBP	-7	20	54	130	35	95	46	115	569,6	1945	490,2	1,64	5,62	1,42	346,3	2,33	12,43
cecomaf MBP	-10	14	55	131	32	90	55	131	441,0	1506	379,5	1,37	4,67	1,18	322,7	2,25	10,66
EN12900 MBP	-10	14	45	113	20	68	45	113	496,5	1696	427,3	1,61	5,50	1,39	308,3	2,20	11,62

## Performance tables

R134a, 220V/50Hz, CSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	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	316,1	1080	272,1	1,29	4,40	1,11	245,6	2,05	6,87
cond. pressure	-15	5	406,9	1390	350,2	1,47	5,02	1,27	276,6	2,12	8,87
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RGT= 32/90	0	32	794,0	2712	683,3	2,13	7,28	1,84	372,2	2,40	17,56
liquid temp	5	41	969,3	3310	834,2	2,40	8,20	2,07	403,7	2,53	21,58
Tliq= 45/113	15	59	1403,9	4795	1208,2	3,02	10,33	2,60	464,2	2,81	31,80
[°C / °F]	-20	-4	265,6	907	228,6	1,06	3,61	0,91	251,4	2,06	6,37
cond. pressure	-15	5	345,7	1181	297,5	1,21	4,12	1,04	286,4	2,15	8,32
pc= 55/131	-10	14	441,0	1506	379,5	1,37	4,67	1,18	322,7	2,25	10,66
return gas temp	-5	23	554,0	1892	476,8	1,54	5,26	1,33	359,7	2,37	13,47
RGT= 32/90	0	32	687,1	2347	591,3	1,73	5,91	1,49	397,2	2,50	16,81
liquid temp	5	41	842,7	2878	725,2	1,94	6,62	1,67	434,9	2,65	20,76
Tliq= 55/131	15	59	1230,8	4203	1059,2	2,42	8,26	2,08	509,1	2,98	30,91

## Model

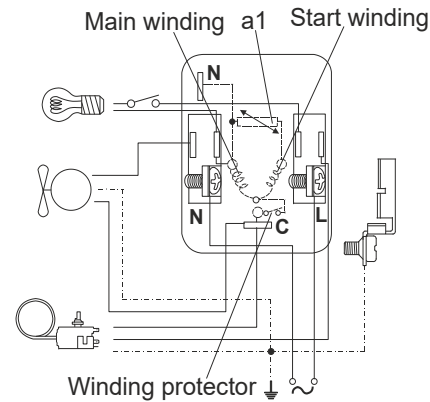
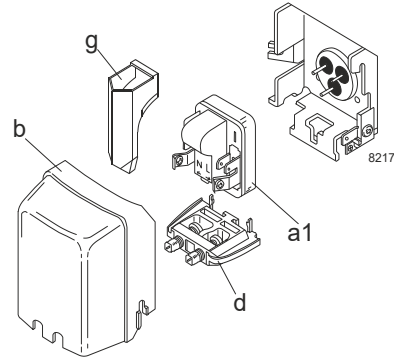
Designation **NL10MF** **208-230V/60Hz** Conf. 3 Sales code: **105G6062**

## Configuration

Motor configuration RSIR  
 Power supply (nominal) 208-230V/60Hz 1~  
 Refrigerant R134a  
 Application MBP  
 Voltage range 187-254V  
 Starting torque LST  
 Approvals VDE  
 EAC  
 CCC  
 UL

## Electrical accessories / wiring diagram

RSIR



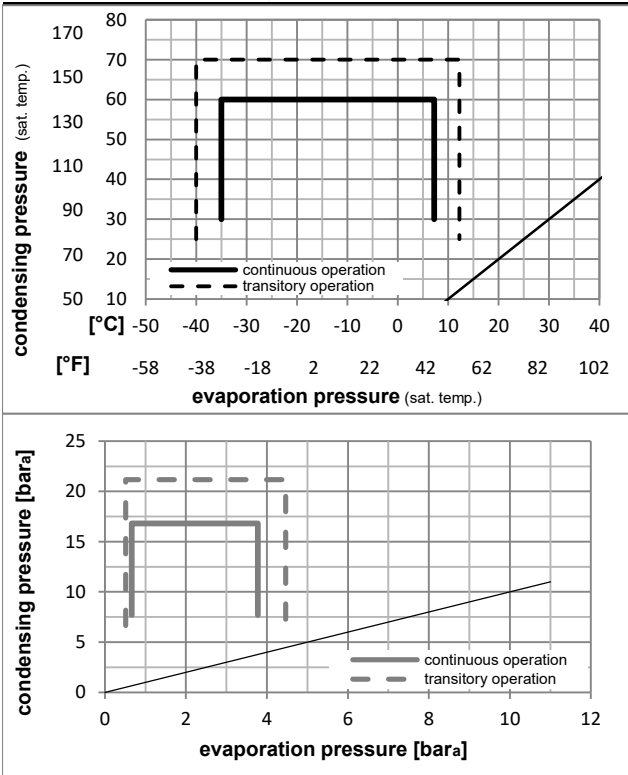
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Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

## Operation pressure range



### Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

### Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

## Model

Designation **NL10MF** **208-230V/60Hz** Conf. 3 Sales code: **105G6062**

## Optimization + standard conditions

R134a, 220V/60Hz, RSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			COP	EER	EER	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				P1	I	m	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	319,2	1090	274,7	1,29	4,40	1,11	247,6	1,76	6,20	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	232,9	795	200,4	1,00	3,43	0,86	232,1	1,71	5,57	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	161,8	553	139,3	0,97	3,31	0,83	167,0	1,56	3,55	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	668,7	2284	575,5	1,66	5,66	1,43	403,8	2,33	14,59	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	517,7	1768	445,6	1,39	4,74	1,19	373,2	2,21	12,52	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	582,9	1991	501,7	1,65	5,64	1,42	353,1	2,14	13,65	EN12900 MBP
	14	113	68	113										

## Performance tables

R134a, 220V/60Hz, RSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	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	147,1	502	126,6	0,91	3,11	0,78	161,3	1,51	3,17
cond. pressure	-25	-13	282,4	964	243,0	1,20	4,09	1,03	235,8	1,73	6,12
pc= 45/113	-15	5	477,7	1631	411,1	1,52	5,20	1,31	313,6	1,99	10,41
return gas temp.	-10	14	604,8	2065	520,5	1,71	5,85	1,47	353,1	2,14	13,24
RGT= 32/90	-5	23	755,3	2580	650,1	1,92	6,57	1,65	392,8	2,30	16,61
liquid temp	0	32	932,1	3183	802,2	2,16	7,36	1,85	432,5	2,47	20,61
Tliq= 45/113	7,2	45	1238,5	4230	1065,9	2,53	8,65	2,18	489,2	2,74	27,66
[°C / °F]	-35	-31	109,2	373	93,9	0,76	2,61	0,66	143,0	1,44	2,60
cond. pressure	-25	-13	232,9	795	200,4	1,00	3,43	0,86	232,1	1,71	5,57
pc= 55/131	-15	5	405,8	1386	349,2	1,25	4,26	1,07	325,5	2,03	9,77
return gas temp	-10	14	517,7	1768	445,6	1,39	4,74	1,19	373,2	2,21	12,52
RGT= 32/90	-5	23	650,4	2221	559,8	1,54	5,27	1,33	421,4	2,40	15,81
liquid temp	0	32	806,7	2755	694,2	1,72	5,86	1,48	469,8	2,60	19,73
Tliq= 55/131	7,2	45	1078,7	3684	928,4	2,00	6,83	1,72	539,5	2,91	26,68

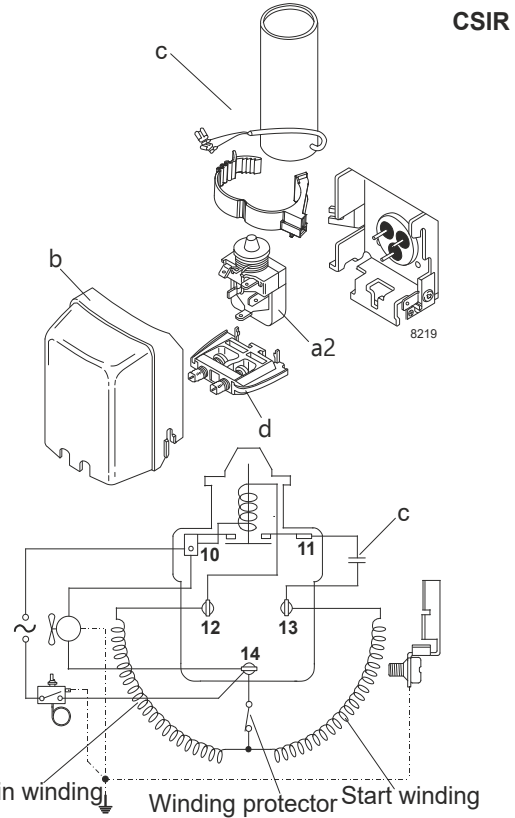
## Model

Designation **NL10MF** **208-230V/60Hz** Conf. 4 Sales code: **105G6062**

## Configuration

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

## Electrical accessories / wiring diagram



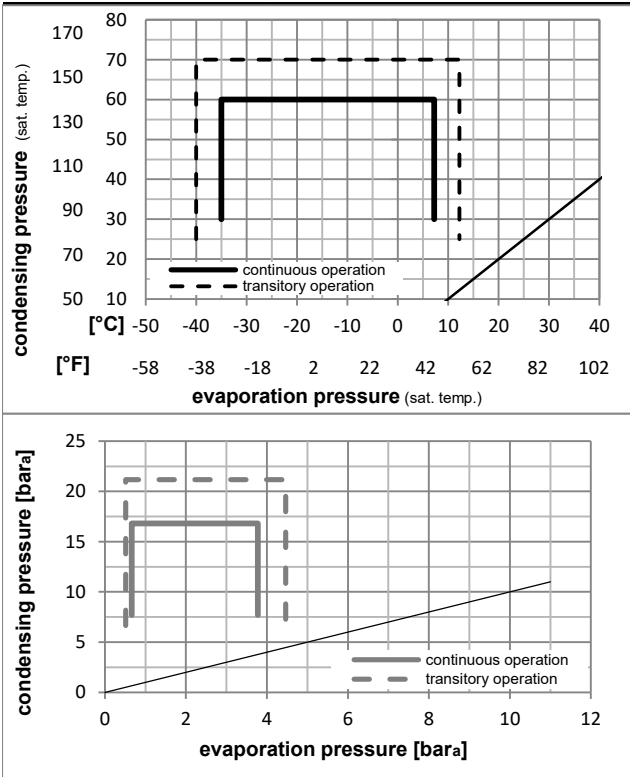
## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

## Operation pressure range



## Components

- |    |                 |          |
|----|-----------------|----------|
| a2 | relay           | 117U6022 |
| c  | start capacitor | 117U5018 |
| b  | plastic cover   | 103N2011 |
| d  | cord relief     | 103N1010 |

## Model

Designation **NL10MF** **208-230V/60Hz** Conf. 4 Sales code: **105G6062**

## Optimization + standard conditions

R134a, 220V/60Hz, CSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			COP	EER	EER	Power consumption			ASHRAE LBP
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				P1	I	m	
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	319,2	1090	274,7	1,29	4,40	1,11	247,6	1,76	6,20	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	232,9	795	200,4	1,00	3,43	0,86	232,1	1,71	5,57	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	161,8	553	139,3	0,97	3,31	0,83	167,0	1,56	3,55	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	668,7	2284	575,5	1,66	5,66	1,43	403,8	2,33	14,59	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	517,7	1768	445,6	1,39	4,74	1,19	373,2	2,21	12,52	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	582,9	1991	501,7	1,65	5,64	1,42	353,1	2,14	13,65	EN12900 MBP
	14	113	68	113										

## Performance tables

R134a, 220V/60Hz, CSIR, fan 1,5m/s, VDE, EAC, CCC, UL

	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	147,1	502	126,6	0,91	3,11	0,78	161,3	1,51	3,17
cond. pressure	-25	-13	282,4	964	243,0	1,20	4,09	1,03	235,8	1,73	6,12
pc= 45/113	-15	5	477,7	1631	411,1	1,52	5,20	1,31	313,6	1,99	10,41
return gas temp.	-10	14	604,8	2065	520,5	1,71	5,85	1,47	353,1	2,14	13,24
RGT= 32/90	-5	23	755,3	2580	650,1	1,92	6,57	1,65	392,8	2,30	16,61
liquid temp	0	32	932,1	3183	802,2	2,16	7,36	1,85	432,5	2,47	20,61
Tliq= 45/113	7,2	45	1238,5	4230	1065,9	2,53	8,65	2,18	489,2	2,74	27,66
[°C / °F]	-35	-31	109,2	373	93,9	0,76	2,61	0,66	143,0	1,44	2,60
cond. pressure	-25	-13	232,9	795	200,4	1,00	3,43	0,86	232,1	1,71	5,57
pc= 55/131	-15	5	405,8	1386	349,2	1,25	4,26	1,07	325,5	2,03	9,77
return gas temp	-10	14	517,7	1768	445,6	1,39	4,74	1,19	373,2	2,21	12,52
RGT= 32/90	-5	23	650,4	2221	559,8	1,54	5,27	1,33	421,4	2,40	15,81
liquid temp	0	32	806,7	2755	694,2	1,72	5,86	1,48	469,8	2,60	19,73
Tliq= 55/131	7,2	45	1078,7	3684	928,4	2,00	6,83	1,72	539,5	2,91	26,68