Technical Data Compressor

SECOP

Model

Designation	**NL10MF**	**220-240V/50Hz 1~**	**208-230V/60Hz 1~**	Sales code:	**105G6155**

Compressor design

Oil type	Polyolester	Refrigerant(s)	**R134a**
Oil viscosity	32cST	Displacement	10,09cm³ / 0,62cu.in
Oil quantity	298cm³ / 10,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	600g / 21,2oz		
Free gas volume comp.	2360cm³ / 79,8fl.oz		
Weight	10,5kg / 23,1lbs		
Motor protection	1# internal		
Winding resistance main	6,1Ω (at 25°C)		
Winding resistance aux	17,5Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		

General - Configurations with NL10MF

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

Applications with NL10MF

	Conf. 1	**Conf. 2**	**Conf. 3**	**Conf. 4**
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

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

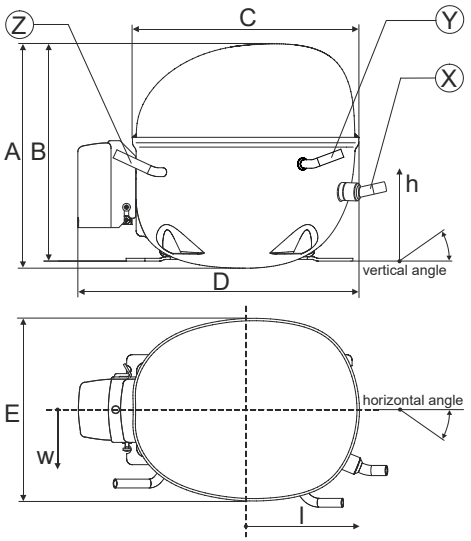
Model

Designation **NL10MF** **220-240V/50Hz 1~ 208-230V/60Hz 1~** Sales code: **105G6155**

Compressor dimensions

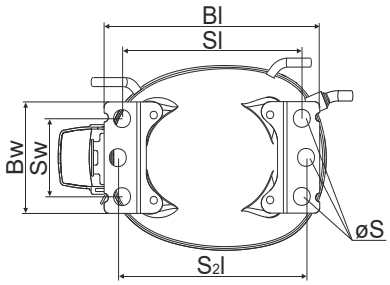
Housing

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 X	Discharge Y	Process 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]	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

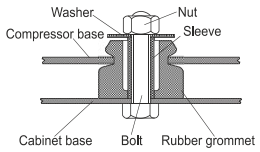
Compressor fixation



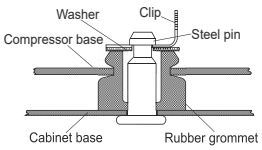
Baseplate	[mm]	[inch]
Bl	204	8.03
Bw	100	3.94

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	
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	NL10MF	220-240V/50Hz	Conf. 1	Sales code:	105G6155

Configuration

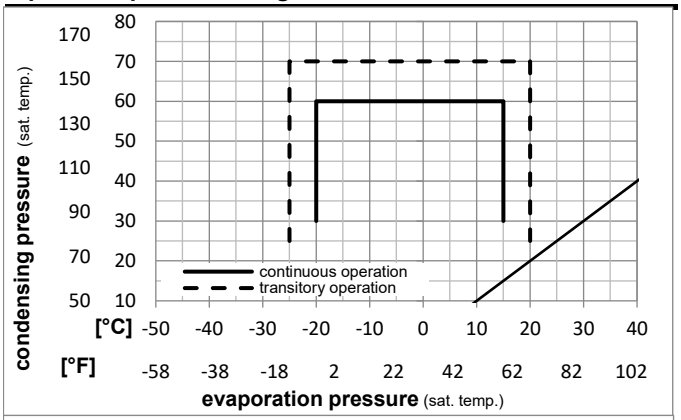
Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	HST
Approvals	CCC
	UL
	VDE
	EAC

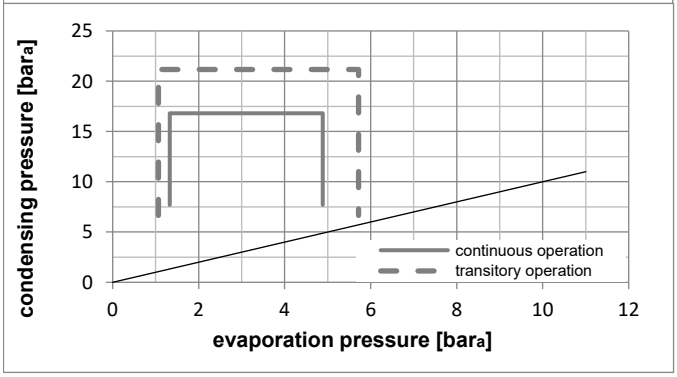
Ambient temperatures / system cooling

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

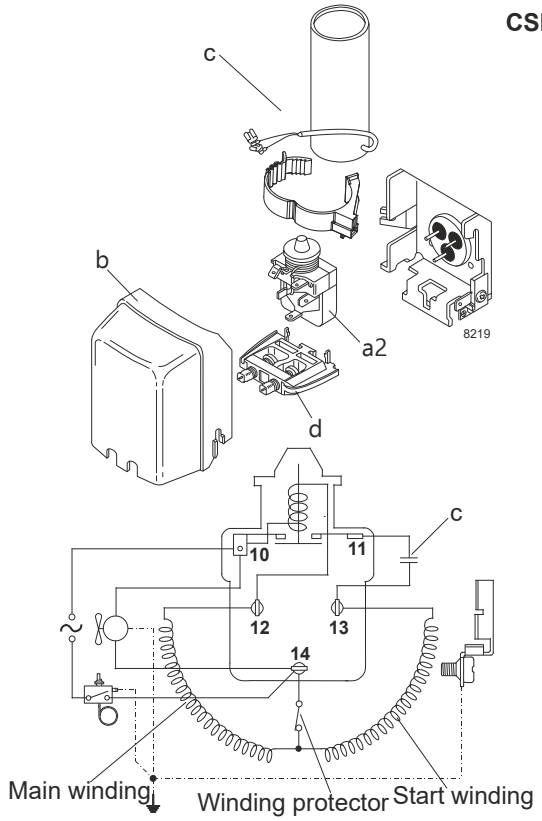
Operation pressure range





Electrical accessories / wiring diagram

CSIR



Components

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

Model

Designation **NL10MF** **220-240V/50Hz** **Conf. 1** Sales code: **105G6155**

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

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

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

	pe [°C]	[°F]	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	P1 [W]	I [A]	m [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	**208-230V/60Hz**	**Conf. 2**	Sales code:	**105G6155**

Configuration

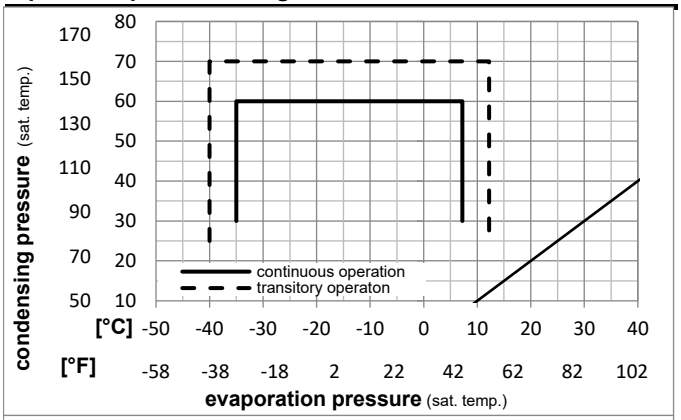
Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	HST
Approvals	CCC
	UL
	VDE
	EAC

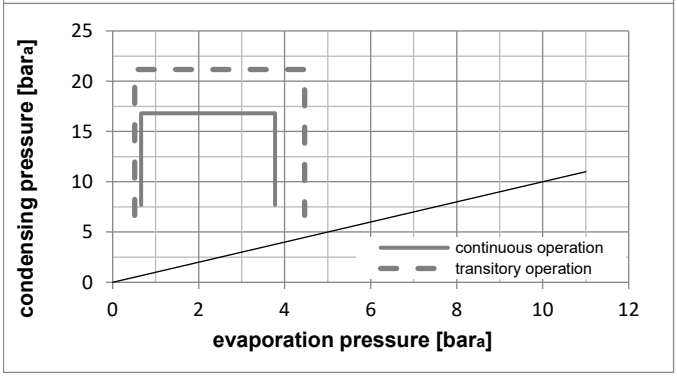
Ambient temperatures / system cooling

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

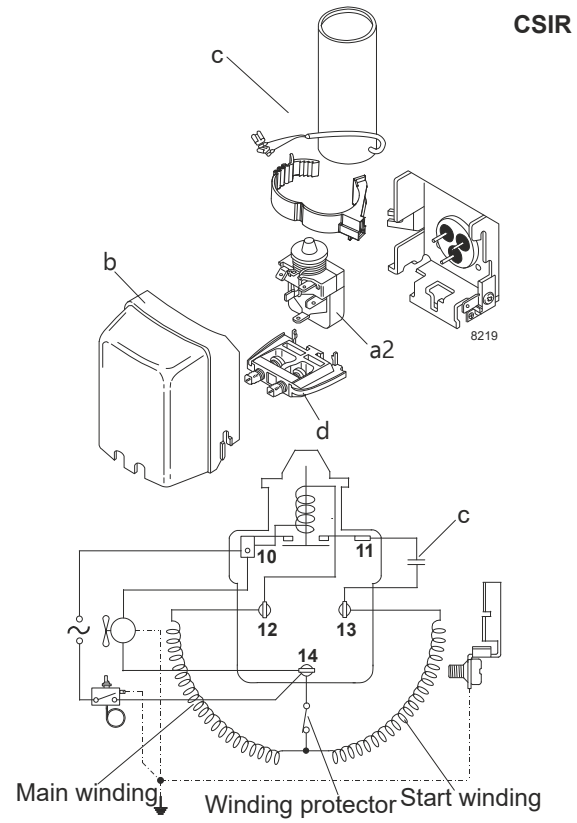
System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	fan 1,5m/s	n/a
38°C / 100°F	n/a	fan 1,5m/s	n/a
43°C / 110°F	n/a	fan 1,5m/s	n/a

Operation pressure range





Electrical accessories / wiring diagram



Components

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

Model

Designation **NL10MF** **208-230V/60Hz** **Conf. 2** Sales code: **105G6155**

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

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

Performance tables R134a, 220V/60Hz, CSIR, fan 1,5m/s, CCC, UL, 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	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	**220-240V/50Hz**	**Conf. 3**	Sales code: **105G6155**

Configuration

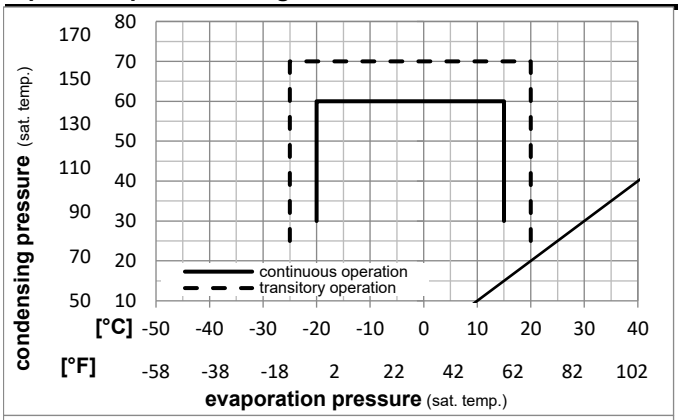
Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	LST
Approvals	CCC
	UL
	VDE
	EAC

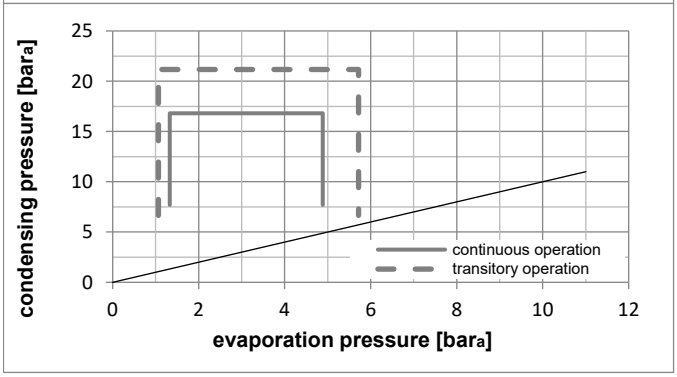
Ambient temperatures / system cooling

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

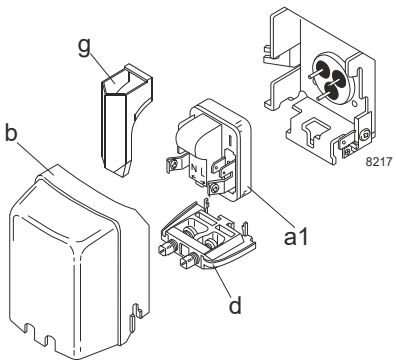
Operation pressure range

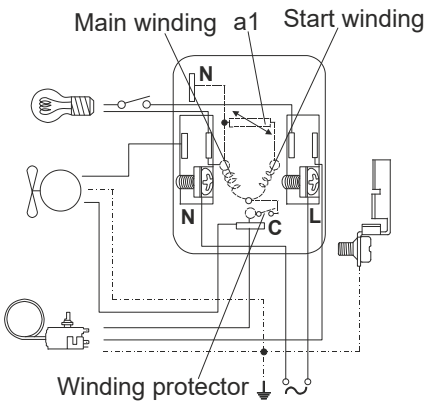




Electrical accessories / wiring diagram

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	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation **NL10MF** **220-240V/50Hz** **Conf. 3** Sales code: **105G6155**

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

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

Performance tables R134a, 220V/50Hz, RSIR, fan 1,5m/s, CCC, UL, 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]	-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	**208-230V/60Hz**	**Conf. 4**	Sales code: **105G6155**

Configuration

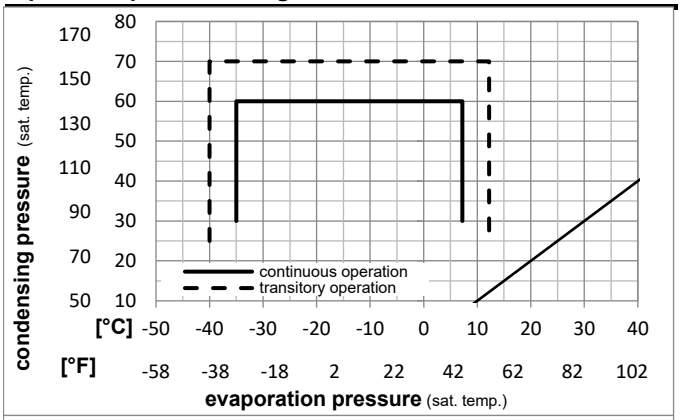
Motorconfiguration	RSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	MBP
Voltage range	187-254V
Starting torque	LST
Approvals	CCC
	UL
	VDE
	EAC

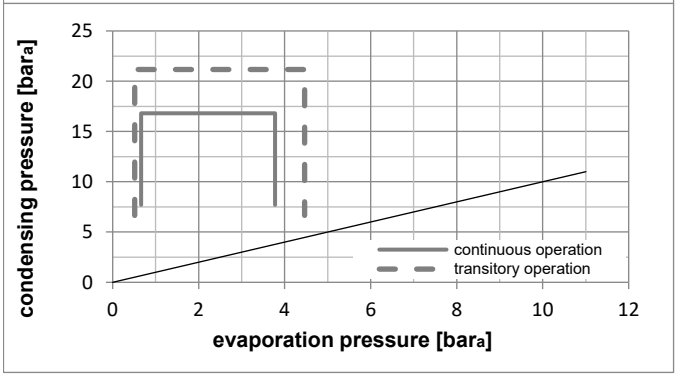
Ambient temperatures / system cooling

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

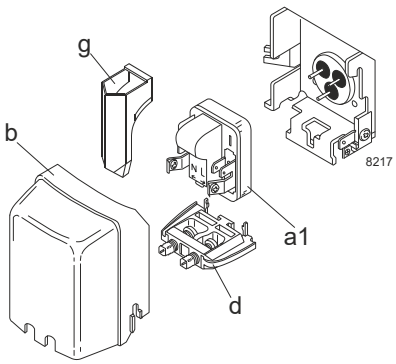
Operation pressure range

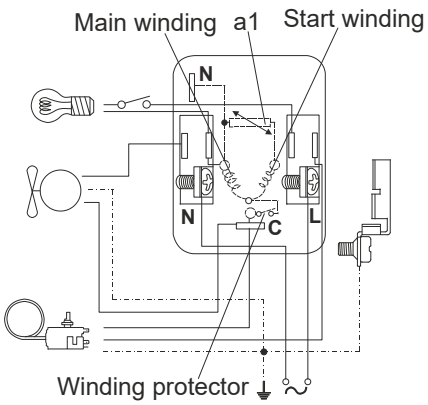




Electrical accessories / wiring diagram

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	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation **NL10MF** **208-230V/60Hz** **Conf. 4** Sales code: **105G6155**

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

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

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

	pe [°C]	pe [°F]	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	P1 [W]	I [A]	m [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