Model
NL6.1MF

Sales code:
105G6660

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**600g / 21.16oz**
Weight	**10.00 kg / 22.05lbs**
Displacement	**6.13 cm3 / 0.37cu.in**
Compressors on pallet	**80**

General – Configurations With NL6.1MF

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Motor configuration	RSIR	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240 V/50 Hz	220-240 V/50 Hz	208-230 V/60 Hz	220-240 V/50 Hz	208-230 V/60 Hz
Number of phases	1	1	1	1	1
Voltage range	187-254 V	187-254 V	187-254 V	187-254 V	187-253 V
Approvals	UL, CCC, EAC, KC	UL, CCC, EAC, KC	UL, CCC, EAC, KC	UL, CCC, EAC, KC	UL, CCC, EAC, KC
Starting torque	LST	HST	HST	HST	HST
Refrigerant	R134a	R134a	R134a	R513A	R513A
Application	MBP	MBP	LBP+MBP	MBP	LBP+MBP
Long interval pull down	OK	OK	OK	OK	OK

Application Notes

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

Model
NL6.1MF

Sales code:
105G6660

Compressor Design

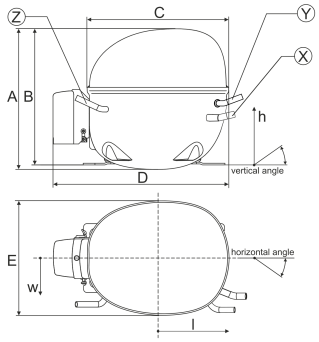
Oil type	**POE**	Winding resistance main	**10.3 Ohm**
Oil viscosity	**19,2cSt**	Winding resistance aux	**16.4 Ohm**
Oil quantity	**270 / 9.13fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

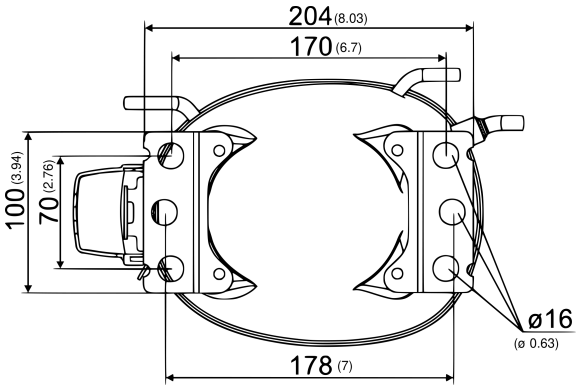
A Height	**190.5mm / 7.50in**
B Height	**184.5mm / 7.26in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



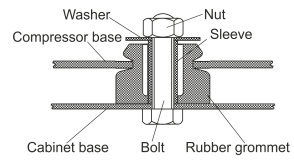
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in	-107/93.5/72 / -4.21/3.68/2.83in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

Mounting Accessories

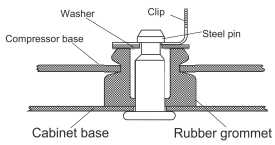


Dimensions in mm [in]

Bolt joint



Snap-on



	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

Model
NL6.1MF Configuration 1

Sales code:
105G6660

Configuration

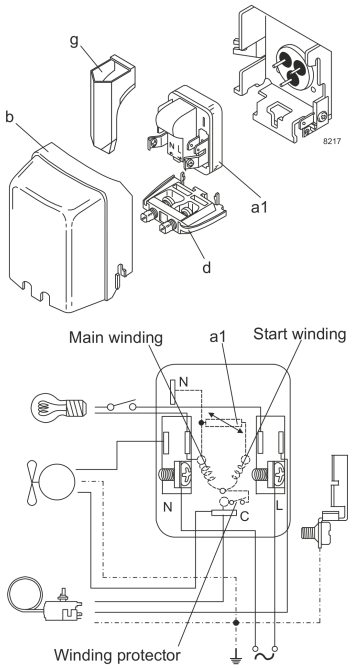
Motor configuration	**RSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**LST**
Approvals	**UL, CCC, EAC, KC**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
LRA (locked rotor amps / 4s/ U(N))	**8 A**
RLA (rated load amps / 1s/ U(N))	**1.7 A**
Cut in current (U(N))	**12.2 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram

RSIR

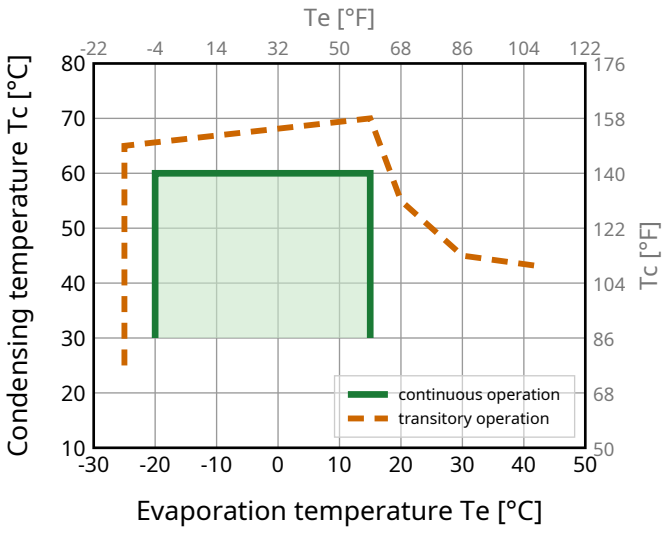


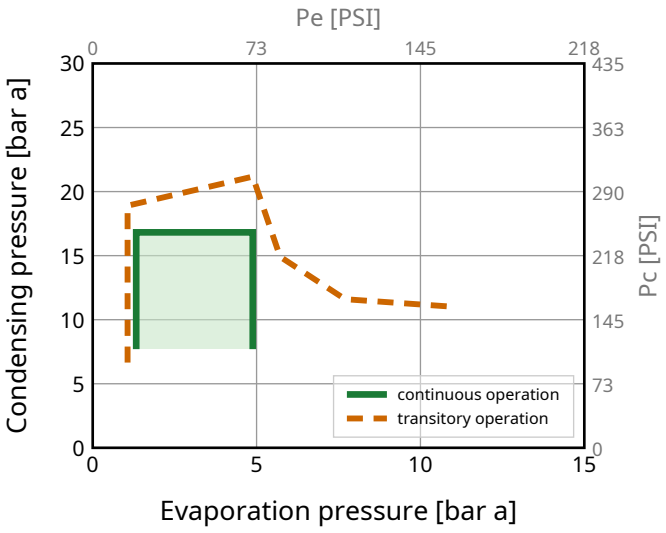
View full size

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

Operation Pressure Range





Model Sales code:

NL6.1MF Configuration 1 **105G6660**

Standard Conditions

R134a, 220 V/50 Hz, RSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-6.7 20	54.4 129.9	35 95	46.1 115	**319**	1089	275	**1.60**	5.47	199	1.46	6.95	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**245**	836	211	**1.31**	4.46	188	1.43	5.91	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**284**	968	244	**1.60**	5.45	178	1.40	6.62	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**309**	1054	266	**1.60**	5.47	193	1.44	7.59	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**294**	1003	253	**1.65**	5.64	178	1.40	6.42	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**127**	434	109	**0.99**	3.36	129	1.32	2.75	**opt MBP 2**

Performance Tables

R134a, 220 V/50 Hz, RSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-20	-4	**173**	591	149	**1.19**	4.05	146	1.34	3.76
-15	5	**228**	779	196	**1.41**	4.81	162	1.37	4.97
-10	14	**294**	1003	253	**1.65**	5.64	178	1.40	6.42
-5	23	**371**	1267	319	**1.92**	6.55	193	1.44	8.15
0	32	**462**	1576	397	**2.21**	7.53	209	1.49	10.19
5	41	**567**	1934	487	**2.52**	8.59	225	1.54	12.59
10	50	**688**	2346	591	**2.84**	9.70	242	1.60	15.39
15	59	**825**	2816	710	**3.19**	10.87	259	1.66	18.65

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-20	-4	**141**	480	121	**0.94**	3.21	150	1.35	3.37
-15	5	**188**	643	162	**1.12**	3.81	169	1.39	4.53
-10	14	**245**	836	211	**1.31**	4.46	188	1.43	5.91
-5	23	**312**	1065	268	**1.51**	5.17	206	1.48	7.56
0	32	**390**	1332	336	**1.74**	5.93	224	1.54	9.52
5	41	**482**	1644	414	**1.98**	6.76	243	1.60	11.84
10	50	**588**	2005	505	**2.24**	7.63	263	1.67	14.56
15	59	**709**	2419	610	**2.51**	8.55	283	1.75	17.75

Model
NL6.1MF Configuration 2

Sales code:
105G6660

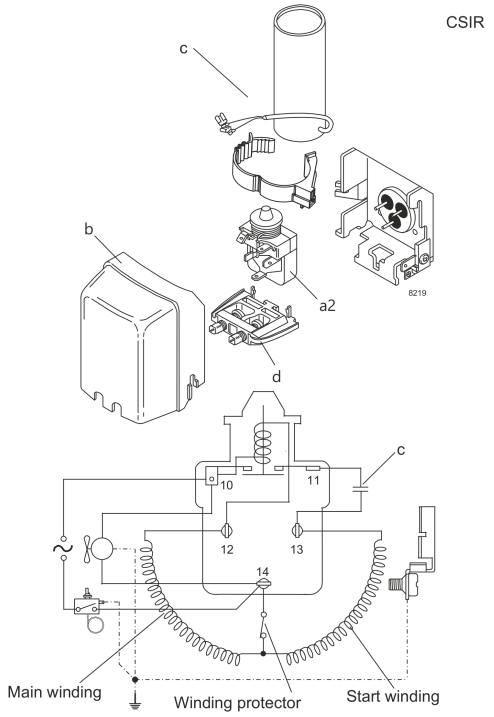
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**UL, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**8 A**
RLA (rated load amps / 1s/ U(N))	**1.7 A**
Cut in current (U(N))	**12.2 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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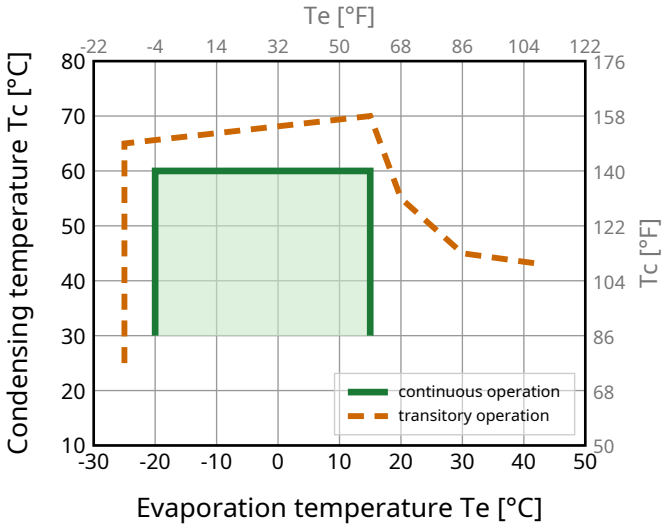
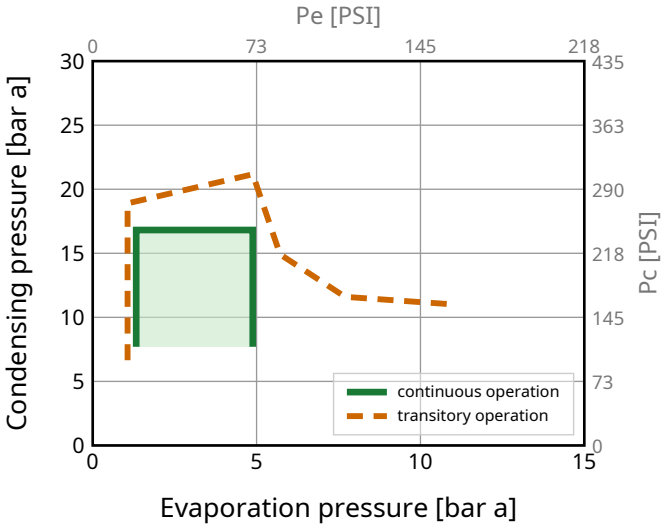
Components
a2 relay 117U6015
c start capacitor (80µF) 117U5015
b plastic cover 103N2010
d cord relief 103N1010

Alternative components
b plastic cover 103N2011

Operation Pressure Range





Model
NL6.1MF Configuration 2

Sales code:
105G6660

Standard Conditions

R134a, 220 V/50 Hz, CSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-6.7 20	54.4 129.9	35 95	46.1 115	**319**	1089	275	**1.60**	5.47	199	1.46	6.95	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**245**	836	211	**1.31**	4.46	188	1.43	5.91	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**284**	968	244	**1.60**	5.45	178	1.40	6.62	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**309**	1054	266	**1.60**	5.47	193	1.44	7.59	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**294**	1003	253	**1.65**	5.64	178	1.40	6.42	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**127**	434	109	**0.99**	3.36	129	1.32	2.75	**opt MBP 2**

Performance Tables

R134a, 220 V/50 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-20	-4	**173**	591	149	**1.19**	4.05	146	1.34	3.76
-15	5	**228**	779	196	**1.41**	4.81	162	1.37	4.97
-10	14	**294**	1003	253	**1.65**	5.64	178	1.40	6.42
-5	23	**371**	1267	319	**1.92**	6.55	193	1.44	8.15
0	32	**462**	1576	397	**2.21**	7.53	209	1.49	10.19
5	41	**567**	1934	487	**2.52**	8.59	225	1.54	12.59
10	50	**688**	2346	591	**2.84**	9.70	242	1.60	15.39
15	59	**825**	2816	710	**3.19**	10.87	259	1.66	18.65

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-20	-4	**141**	480	121	**0.94**	3.21	150	1.35	3.37
-15	5	**188**	643	162	**1.12**	3.81	169	1.39	4.53
-10	14	**245**	836	211	**1.31**	4.46	188	1.43	5.91
-5	23	**312**	1065	268	**1.51**	5.17	206	1.48	7.56
0	32	**390**	1332	336	**1.74**	5.93	224	1.54	9.52
5	41	**482**	1644	414	**1.98**	6.76	243	1.60	11.84
10	50	**588**	2005	505	**2.24**	7.63	263	1.67	14.56
15	59	**709**	2419	610	**2.51**	8.55	283	1.75	17.75

Model
NL6.1MF Configuration 3

Sales code:
105G6660

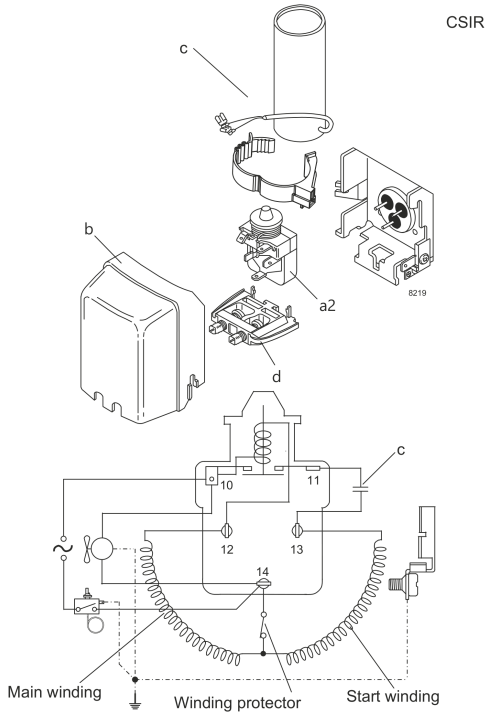
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**LBP+MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**UL, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**8 A**
RLA (rated load amps / 1s/ U(N))	**1.7 A**
Cut in current (U(N))	**12.2 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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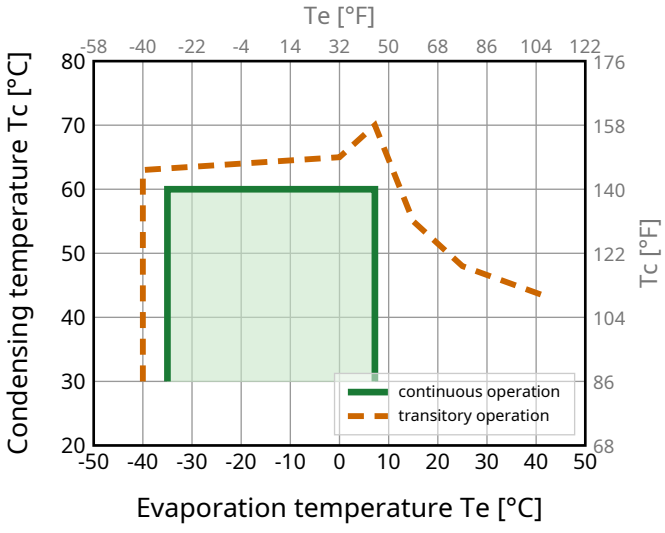
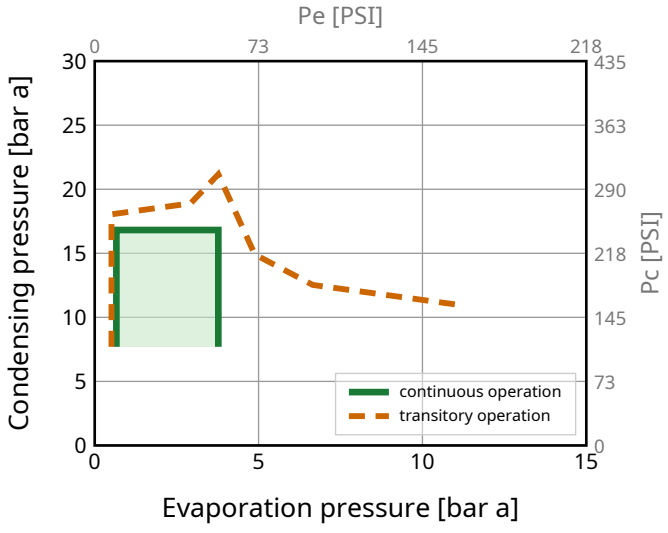
Components
a2 relay 117U6015
c start capacitor (80µF) 117U5015
b plastic cover 103N2010
d cord relief 103N1010

Alternative components
b plastic cover 103N2011

Operation Pressure Range





Model
NL6.1MF Configuration 3

Sales code:
105G6660

Standard Conditions

R134a, 220 V/60 Hz, CSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-6.7 20	54.4 129.9	35 95	46.1 115	**382**	1304	329	**1.62**	5.53	236	1.44	8.32	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**292**	997	251	**1.34**	4.58	218	1.37	7.04	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**340**	1159	292	**1.65**	5.64	205	1.33	7.92	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**371**	1267	319	**1.64**	5.59	227	1.41	9.12	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**352**	1201	303	**1.71**	5.84	205	1.33	7.69	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**152**	519	131	**1.13**	3.87	134	1.08	3.29	**opt MBP 2**

Performance Tables

R134a, 220 V/60 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**71**	241	61	**0.79**	2.71	89	0.96	1.52
-30	-22	**107**	366	92	**0.96**	3.29	111	1.02	2.31
-20	-4	**207**	706	178	**1.31**	4.48	158	1.16	4.49
-10	14	**352**	1201	303	**1.71**	5.84	205	1.33	7.69
0	32	**555**	1894	477	**2.19**	7.47	254	1.52	12.25
7.2	45	**744**	2539	640	**2.58**	8.81	288	1.68	16.58

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**43**	146	37	**0.55**	1.88	78	0.91	1.02
-30	-22	**77**	262	66	**0.73**	2.50	105	0.99	1.82
-20	-4	**165**	564	142	**1.03**	3.52	160	1.17	3.95
-10	14	**292**	997	251	**1.34**	4.58	218	1.37	7.04
0	32	**470**	1603	404	**1.70**	5.80	276	1.60	11.45
7.2	45	**636**	2170	547	**2.00**	6.81	319	1.78	15.68

Model
NL6.1MF Configuration 4

Sales code:
105G6660

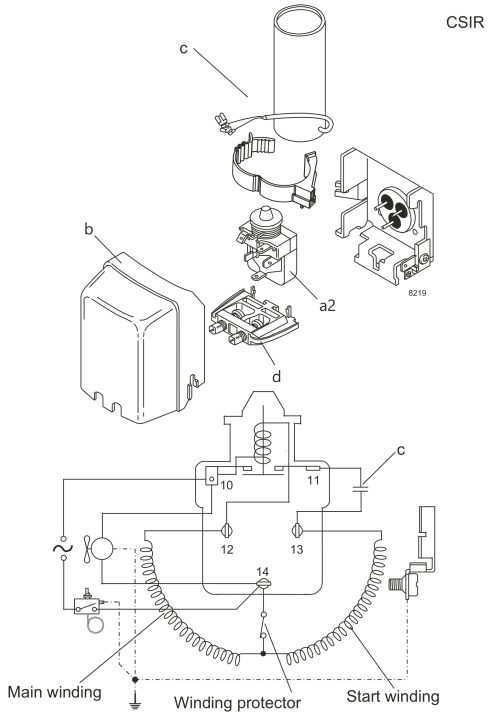
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R513A**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**UL, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**8 A**
RLA (rated load amps / 1s/ U(N))	**1.7 A**
Cut in current (U(N))	**12.2 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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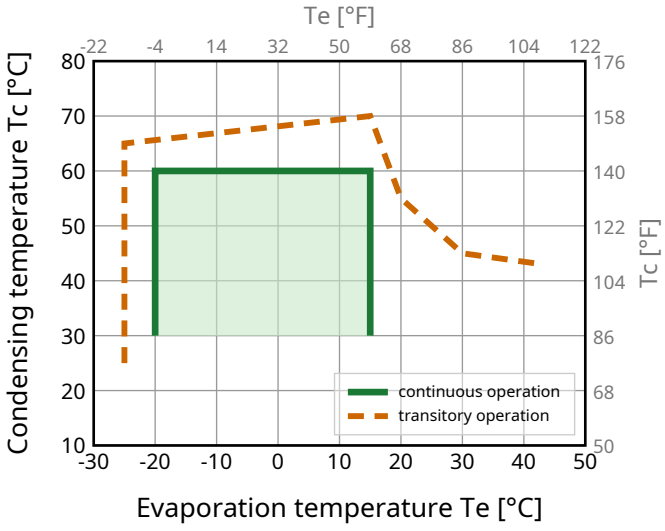
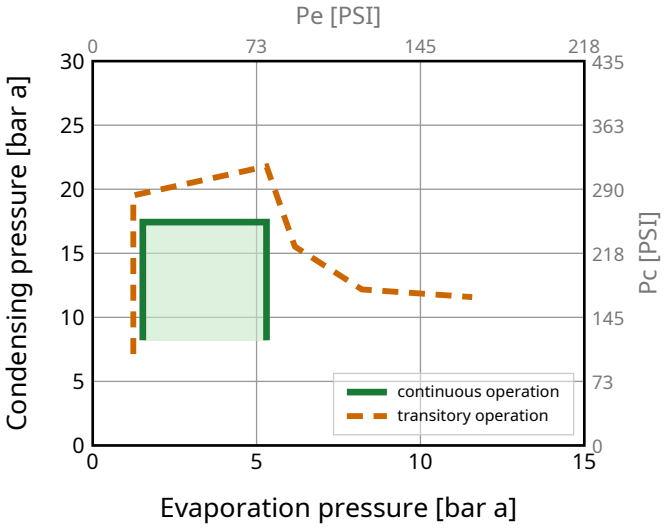
Components
a2 relay 117U6015
c start capacitor (80µF) 117U5015
b plastic cover 103N2010
d cord relief 103N1010

Alternative components
b plastic cover 103N2011

Operation Pressure Range





Model
NL6.1MF Configuration 4

Sales code:
105G6660

Standard Conditions

R513A, 220 V/50 Hz, CSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-6.7 20	54.4 129.9	35 95	46.1 115	**336**	1145	289	**1.59**	5.43	211	1.50	8.37	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**255**	870	219	**1.28**	4.36	200	1.47	7.15	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**296**	1009	254	**1.57**	5.35	189	1.45	8.00	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**317**	1082	273	**1.56**	5.31	204	1.49	9.13	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**310**	1058	267	**1.65**	5.61	189	1.45	7.76	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**139**	475	120	**1.00**	3.41	140	1.32	3.44	**opt MBP 2**

Performance Tables

R513A, 220 V/50 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-20	-4	**187**	638	161	**1.19**	4.07	156	1.37	4.64
-15	5	**243**	830	209	**1.41**	4.81	173	1.41	6.07
-10	14	**310**	1058	267	**1.65**	5.61	189	1.45	7.76
-5	23	**388**	1325	334	**1.90**	6.49	204	1.49	9.78
0	32	**479**	1635	412	**2.18**	7.44	220	1.52	12.14
5	41	**584**	1994	502	**2.48**	8.46	236	1.56	14.91
10	50	**704**	2404	606	**2.80**	9.55	252	1.60	18.14
15	59	**841**	2870	723	**3.13**	10.68	269	1.65	21.90

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-20	-4	**150**	512	129	**0.93**	3.17	162	1.38	4.17
-15	5	**198**	677	171	**1.10**	3.74	181	1.43	5.54
-10	14	**255**	870	219	**1.28**	4.36	200	1.47	7.15
-5	23	**321**	1097	276	**1.48**	5.03	218	1.52	9.07
0	32	**399**	1361	343	**1.69**	5.76	236	1.57	11.34
5	41	**489**	1667	420	**1.92**	6.54	255	1.61	14.02
10	50	**592**	2020	509	**2.16**	7.38	274	1.66	17.15
15	59	**710**	2424	611	**2.42**	8.26	293	1.71	20.83

Model
NL6.1MF Configuration 5

Sales code:
105G6660

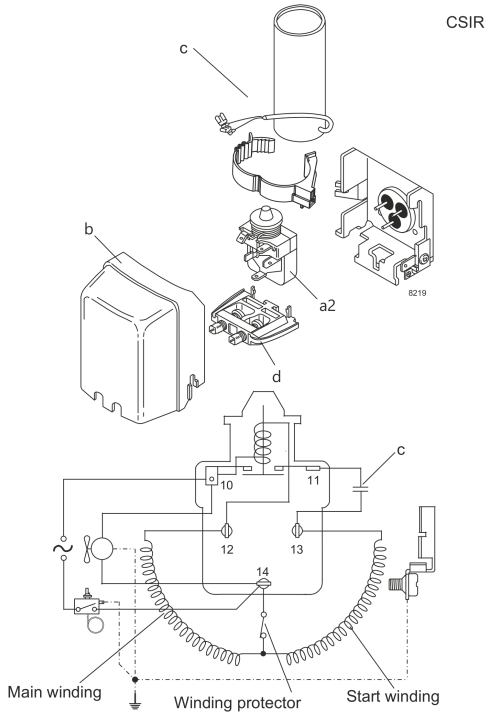
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R513A**
Application	**LBP+MBP**
Voltage range	**187-253 V**
Starting torque	**HST**
Approvals	**UL, CCC, EAC, KC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**8 A**
RLA (rated load amps / 1s/ U(N))	**1.7 A**
Cut in current (U(N))	**12.2 A**

Ambient/ machine room temperatures minimum /maximum
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

System Cooling
fan 1,5m/s

Electrical Accessories / Wiring Diagram



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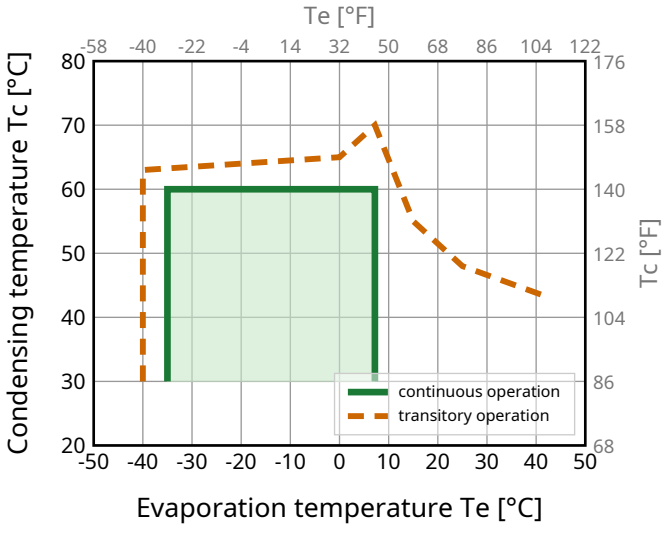
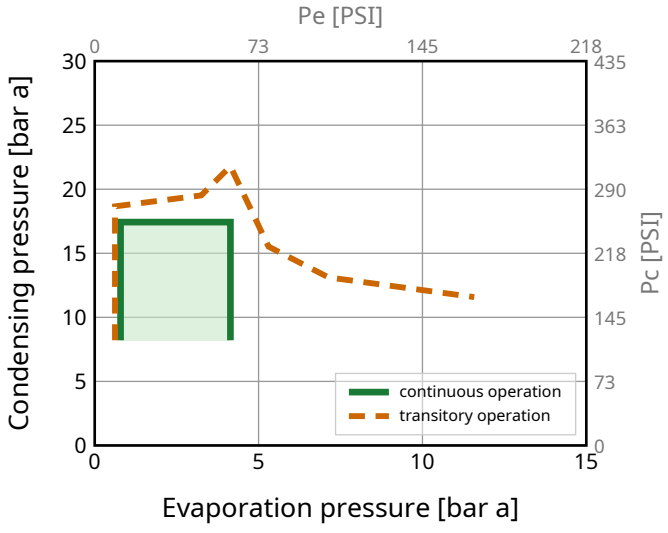
Components
a2 relay 117U6015
c start capacitor (80µF) 117U5015
b plastic cover 103N2010
d cord relief 103N1010

Alternative components
b plastic cover 103N2011

Operation Pressure Range





Model

NL6.1MF Configuration 5

Sales code:

105G6660

Standard Conditions

R513A, 220 V/60 Hz, CSIR, fan 1,5m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-6.7 20	54.4 129.9	35 95	46.1 115	**402**	1371	346	**1.60**	5.48	250	1.51	10.02	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**304**	1037	261	**1.31**	4.47	232	1.44	8.53	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**354**	1208	304	**1.62**	5.53	218	1.39	9.59	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**381**	1301	328	**1.59**	5.41	240	1.47	10.98	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**371**	1267	319	**1.70**	5.81	218	1.39	9.30	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**166**	568	143	**1.15**	3.92	145	1.11	4.12	**opt MBP 2**

Performance Tables

R513A, 220 V/60 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-35	-31	**81**	276	70	**0.84**	2.85	97	0.93	1.99
-30	-22	**120**	408	103	**0.99**	3.38	121	1.02	2.95
-20	-4	**223**	762	192	**1.32**	4.50	169	1.20	5.54
-10	14	**371**	1267	319	**1.70**	5.81	218	1.39	9.30
0	32	**576**	1966	496	**2.16**	7.37	267	1.57	14.60
7.2	45	**765**	2611	658	**2.54**	8.67	301	1.70	19.60

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-35	-31	**50**	172	43	**0.58**	1.99	86	0.89	1.39
-30	-22	**86**	292	74	**0.75**	2.55	115	0.99	2.36
-20	-4	**176**	602	152	**1.02**	3.48	173	1.21	4.90
-10	14	**304**	1037	261	**1.31**	4.47	232	1.44	8.53
0	32	**480**	1637	413	**1.65**	5.62	291	1.66	13.64
7.2	45	**643**	2194	553	**1.93**	6.58	333	1.82	18.52