Single
Packs

Single Pack NL10MF 220-240V 50Hz / 208-230V 60Hz RSIR

Single pack code number: **195B4459**

Position	Title	Code	Amount
1	Compressor NL10MF	105G6885	1
2	PTC starting device (220V, 25Ohm, 6.3mm)	103N0011	1
3	Protection screen for PTC	103N0476	1
4	Cord relief	103N1010	1
5	Cover	103N2010	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
NL10MF

Sales code:
105G6885

Compressor Data

Refrigerant(s)	**R134a**
Refr. charge - tech. limit	**600g / 21.16oz**
Weight	**10.50 kg / 23.15lbs**
Displacement	**10.09 cm3 / 0.62cu.in**
Compressors on pallet	**80**

General – Configurations With NL10MF

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

Application Notes

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

Model
NL10MF

Sales code:
105G6885

Compressor Design

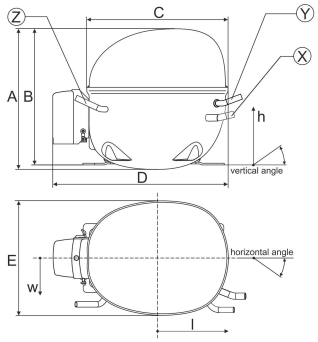
Oil type	**POE**	Winding resistance main	**6.1 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**18.35 Ohm**
Oil quantity	**298 / 10.08fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

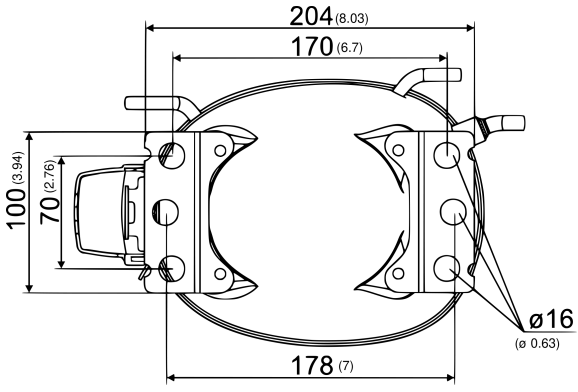
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



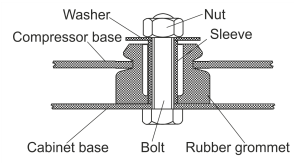
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in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

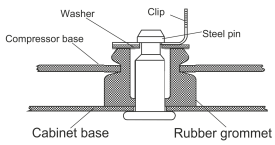


Dimensions in mm [in]

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
NL10MF Configuration 1

Sales code:
105G6885

Configuration

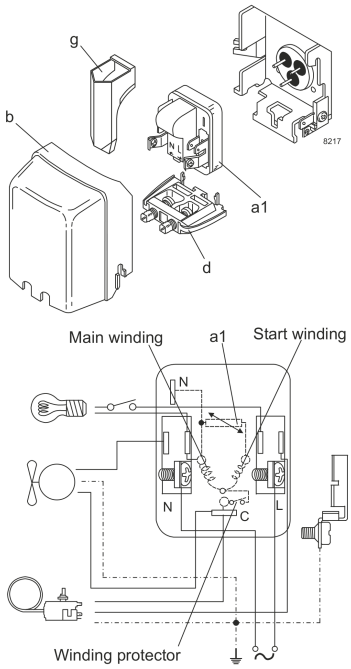
Motor configuration	**RSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**LST**
Approvals	**VDE, EAC, CCC, UL**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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



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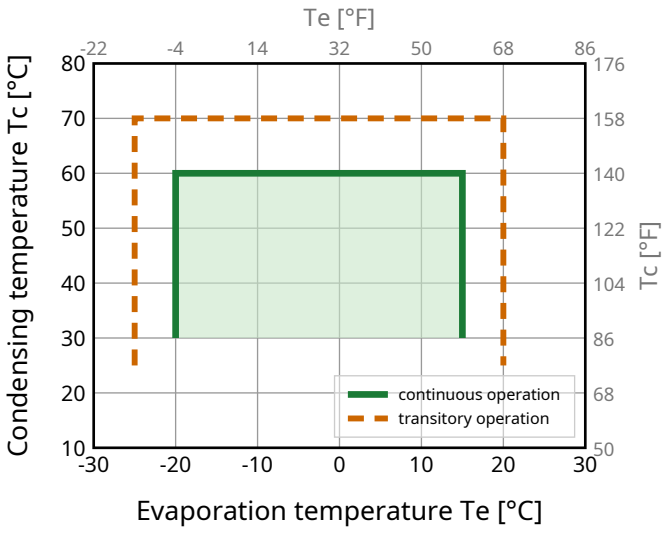
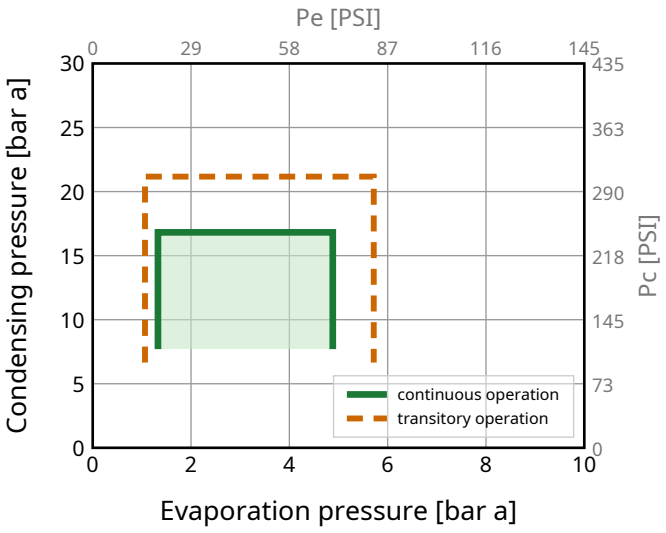
Components
a1 PTC starter (220V, 25Ohm, 4.8mm) 103N0018
b plastic cover 103N2011
d cord relief 103N1010
g protection screen for PTC 103N0476

Alternative components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0011
b plastic cover 103N2010

Operation Pressure Range





Model
NL10MF Configuration 1

Sales code:
105G6885

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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**272**	928	234	**1.19**	4.06	229	2.01	5.28	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**198**	677	171	**0.91**	3.11	218	1.98	4.73	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**138**	471	119	**0.86**	2.92	161	1.95	3.02	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**568**	1939	489	**1.64**	5.60	346	2.33	12.37	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**441**	1505	379	**1.37**	4.66	323	2.25	10.63	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**497**	1697	428	**1.61**	5.50	308	2.20	11.60	**EN12900 MBP**

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	**316**	1079	272	**1.29**	4.39	246	2.05	6.85
-15	5	**407**	1388	350	**1.47**	5.02	277	2.12	8.85
-10	14	**515**	1758	443	**1.67**	5.70	308	2.20	11.25
-5	23	**643**	2195	553	**1.89**	6.45	340	2.29	14.12
0	32	**794**	2709	683	**2.13**	7.28	372	2.40	17.52
5	41	**969**	3307	834	**2.40**	8.19	404	2.53	21.53
10	50	**1172**	3998	1008	**2.70**	9.20	434	2.66	26.23
15	59	**1404**	4790	1207	**3.02**	10.32	464	2.81	31.72

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

-20	-4	**266**	906	228	**1.06**	3.61	251	2.06	6.35
-15	5	**346**	1180	297	**1.21**	4.12	286	2.15	8.30
-10	14	**441**	1505	379	**1.37**	4.66	323	2.25	10.63
-5	23	**554**	1890	476	**1.54**	5.25	360	2.37	13.43
0	32	**687**	2344	591	**1.73**	5.90	397	2.50	16.75
5	41	**843**	2875	725	**1.94**	6.61	435	2.65	20.70
10	50	**1023**	3491	880	**2.17**	7.39	472	2.81	25.35
15	59	**1231**	4199	1058	**2.42**	8.25	509	2.98	30.81

Model
NL10MF Configuration 2

Sales code:
105G6885

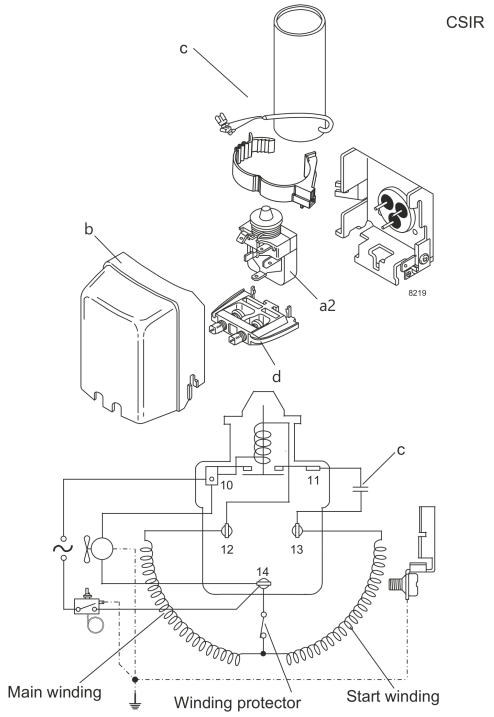
Configuration

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	**VDE, EAC, CCC, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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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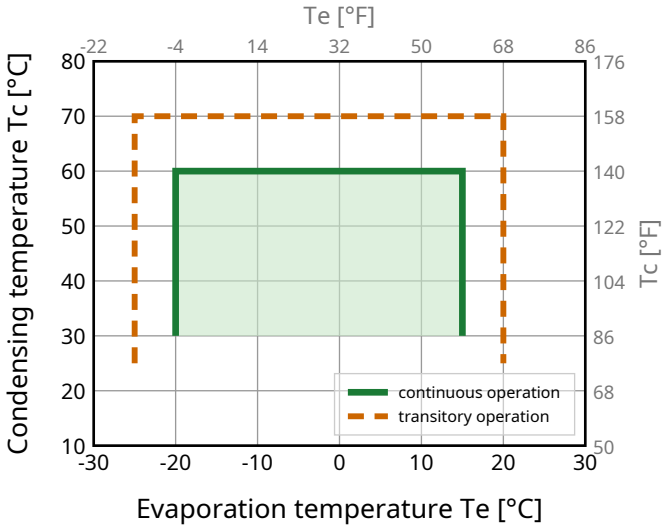
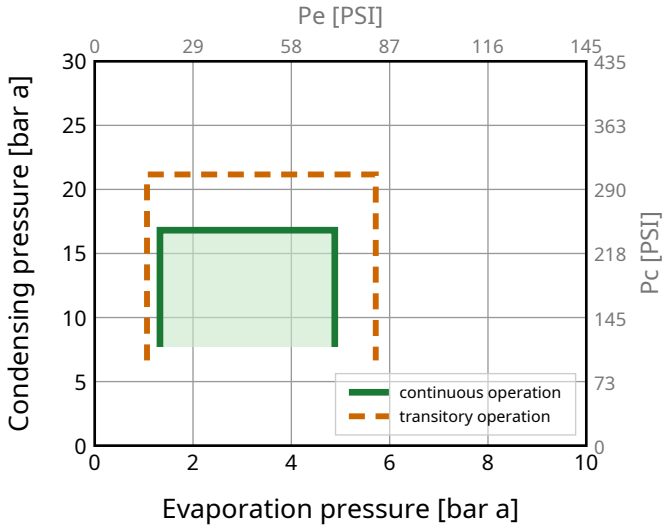
Components
a2 relay 117U6022
c start capacitor 117U5018
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL10MF Configuration 2

Sales code:
105G6885

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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**272**	928	234	**1.19**	4.06	229	2.01	5.28	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**198**	677	171	**0.91**	3.11	218	1.98	4.73	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**138**	471	119	**0.86**	2.92	161	1.95	3.02	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**568**	1939	489	**1.64**	5.60	346	2.33	12.37	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**441**	1505	379	**1.37**	4.66	323	2.25	10.63	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**497**	1697	428	**1.61**	5.50	308	2.20	11.60	**EN12900 MBP**

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	**316**	1079	272	**1.29**	4.39	246	2.05	6.85
-15	5	**407**	1388	350	**1.47**	5.02	277	2.12	8.85
-10	14	**515**	1758	443	**1.67**	5.70	308	2.20	11.25
-5	23	**643**	2195	553	**1.89**	6.45	340	2.29	14.12
0	32	**794**	2709	683	**2.13**	7.28	372	2.40	17.52
5	41	**969**	3307	834	**2.40**	8.19	404	2.53	21.53
10	50	**1172**	3998	1008	**2.70**	9.20	434	2.66	26.23
15	59	**1404**	4790	1207	**3.02**	10.32	464	2.81	31.72

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

-20	-4	**266**	906	228	**1.06**	3.61	251	2.06	6.35
-15	5	**346**	1180	297	**1.21**	4.12	286	2.15	8.30
-10	14	**441**	1505	379	**1.37**	4.66	323	2.25	10.63
-5	23	**554**	1890	476	**1.54**	5.25	360	2.37	13.43
0	32	**687**	2344	591	**1.73**	5.90	397	2.50	16.75
5	41	**843**	2875	725	**1.94**	6.61	435	2.65	20.70
10	50	**1023**	3491	880	**2.17**	7.39	472	2.81	25.35
15	59	**1231**	4199	1058	**2.42**	8.25	509	2.98	30.81

Model
NL10MF Configuration 3

Sales code:
105G6885

Configuration

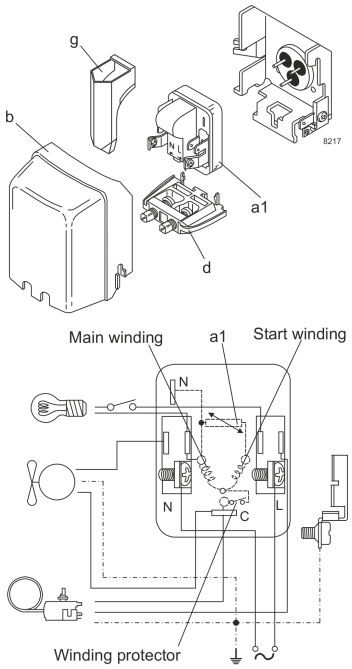
Motor configuration	**RSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**LST**
Approvals	**VDE, EAC, CCC, UL**
Starting device type	**PTC**
Run capacitor	**-/-**
Start capacitor	**-/-**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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



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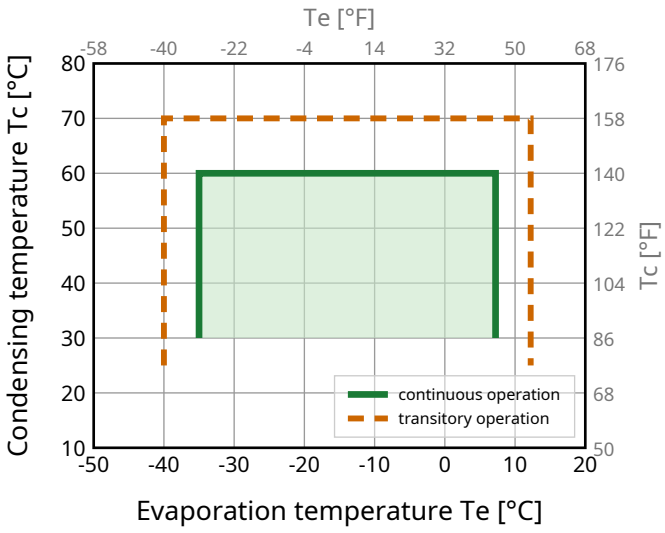
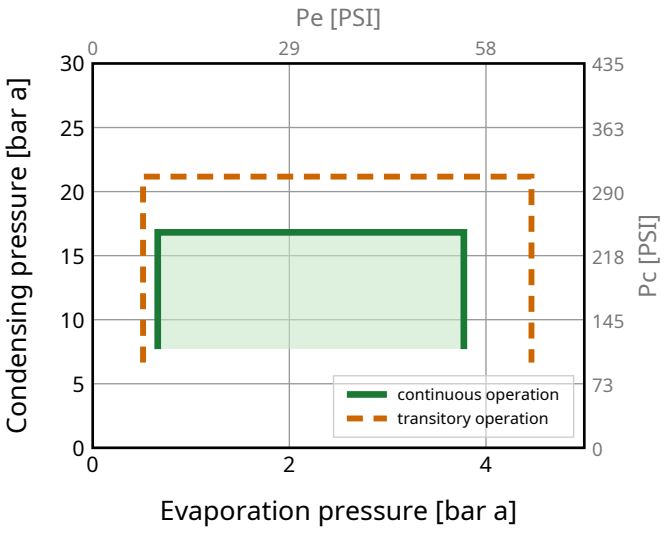
Components
a1 PTC starter (220V, 25Ohm, 4.8mm) 103N0018
b plastic cover 103N2011
d cord relief 103N1010
g protection screen for PTC 103N0476

Alternative components
a1 PTC starter (220V, 25Ohm, 6.3mm) 103N0011
b plastic cover 103N2010

Operation Pressure Range





Model
NL10MF Configuration 3

Sales code:
105G6885

Standard Conditions

R134a, 220 V/60 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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**319**	1089	275	**1.29**	4.39	248	1.76	6.20	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**233**	795	200	**1.00**	3.42	232	1.71	5.55	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**162**	553	139	**0.97**	3.31	167	1.56	3.55	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**667**	2276	574	**1.65**	5.64	403	2.33	14.53	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**518**	1766	445	**1.39**	4.73	373	2.21	12.48	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**584**	1992	502	**1.65**	5.64	353	2.14	13.62	**EN12900 MBP**

Performance Tables

R134a, 220 V/60 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]
-35	-31	**147**	502	127	**0.91**	3.11	161	1.51	3.17
-30	-22	**209**	712	179	**1.05**	3.60	198	1.61	4.50
-20	-4	**371**	1266	319	**1.35**	4.62	274	1.85	8.05
-10	14	**605**	2064	520	**1.71**	5.84	353	2.14	13.21
0	32	**932**	3180	802	**2.15**	7.35	432	2.47	20.57
7.2	45	**1238**	4226	1065	**2.53**	8.64	489	2.74	27.60

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

-35	-31	**109**	373	94	**0.76**	2.60	143	1.44	2.59
-30	-22	**166**	567	143	**0.89**	3.04	187	1.57	3.96
-20	-4	**312**	1064	268	**1.12**	3.82	278	1.87	7.46
-10	14	**518**	1766	445	**1.39**	4.73	373	2.21	12.48
0	32	**807**	2752	694	**1.72**	5.86	470	2.60	19.67
7.2	45	**1079**	3681	928	**2.00**	6.82	540	2.91	26.59

Model
NL10MF Configuration 4

Sales code:
105G6885

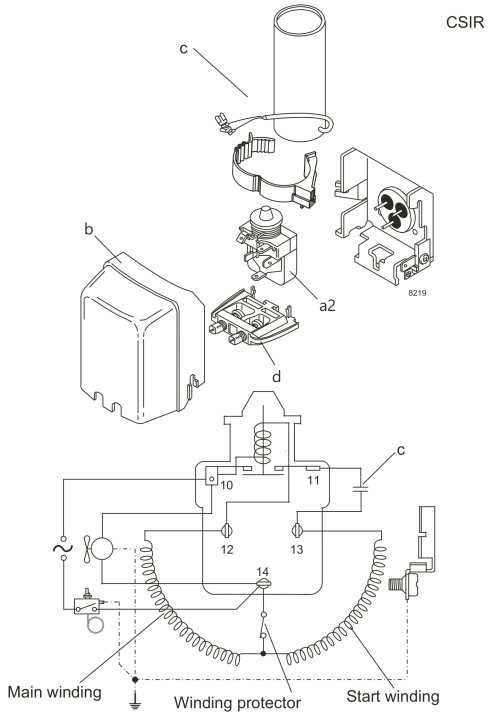
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R134a**
Application	**MBP**
Voltage range	**187-254 V**
Starting torque	**HST**
Approvals	**VDE, EAC, CCC, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**125 µF**
LRA (locked rotor amps / 4s/ U(N))	**16.6 A**
RLA (rated load amps / 1s/ U(N))	**2.8 A**
Cut in current (U(N))	**17 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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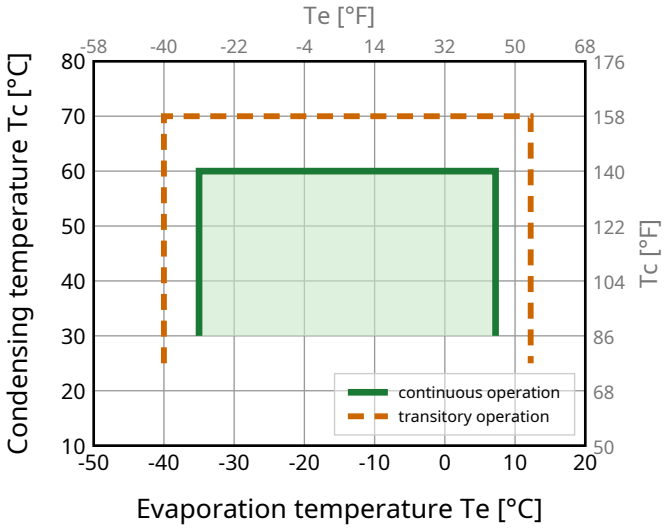
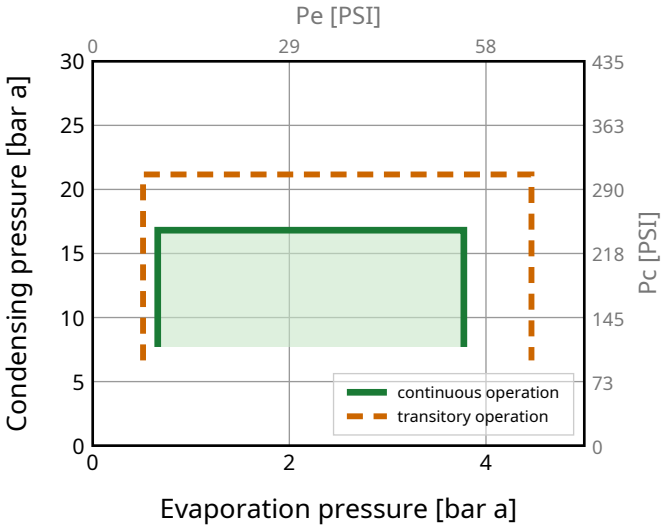
Components
a2 relay 117U6022
c start capacitor 117U5018
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL10MF Configuration 4

Sales code:
105G6885

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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**319**	1089	275	**1.29**	4.39	248	1.76	6.20	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**233**	795	200	**1.00**	3.42	232	1.71	5.55	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**162**	553	139	**0.97**	3.31	167	1.56	3.55	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**667**	2276	574	**1.65**	5.64	403	2.33	14.53	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**518**	1766	445	**1.39**	4.73	373	2.21	12.48	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**584**	1992	502	**1.65**	5.64	353	2.14	13.62	**EN12900 MBP**

Performance Tables

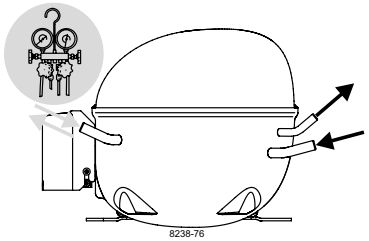
R134a, 220 V/60 Hz, CSIR, fan 1,5m/s

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	**147**	502	127	**0.91**	3.11	161	1.51	3.17
-30	-22	**209**	712	179	**1.05**	3.60	198	1.61	4.50
-20	-4	**371**	1266	319	**1.35**	4.62	274	1.85	8.05
-10	14	**605**	2064	520	**1.71**	5.84	353	2.14	13.21
0	32	**932**	3180	802	**2.15**	7.35	432	2.47	20.57
7.2	45	**1238**	4226	1065	**2.53**	8.64	489	2.74	27.60

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

-35	-31	**109**	373	94	**0.76**	2.60	143	1.44	2.59
-30	-22	**166**	567	143	**0.89**	3.04	187	1.57	3.96
-20	-4	**312**	1064	268	**1.12**	3.82	278	1.87	7.46
-10	14	**518**	1766	445	**1.39**	4.73	373	2.21	12.48
0	32	**807**	2752	694	**1.72**	5.86	470	2.60	19.67
7.2	45	**1079**	3681	928	**2.00**	6.82	540	2.91	26.59



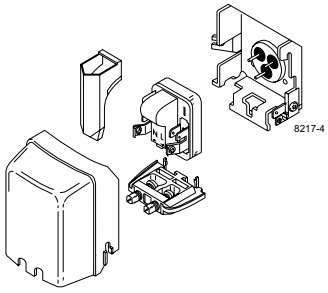
NL Compressors

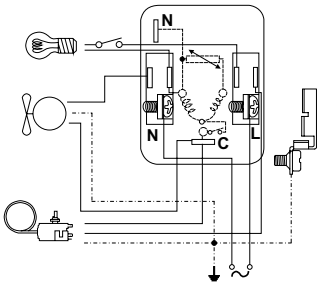
SECOP

Keep electrical equipment clear from oil, chemicals, and water

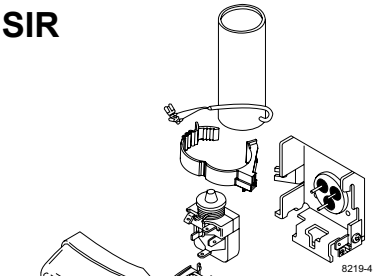
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

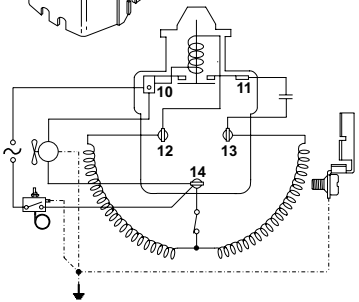
RSIR



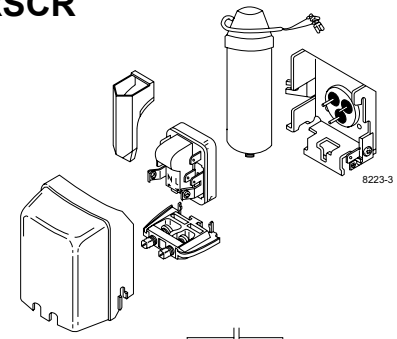


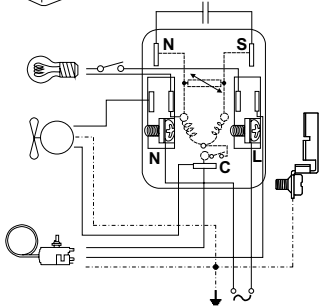
CSIR

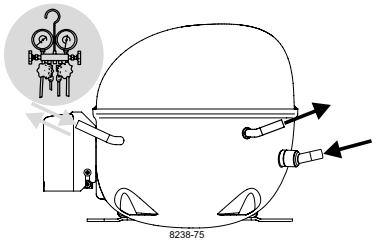




RSCR







NL Compressors

SECOP

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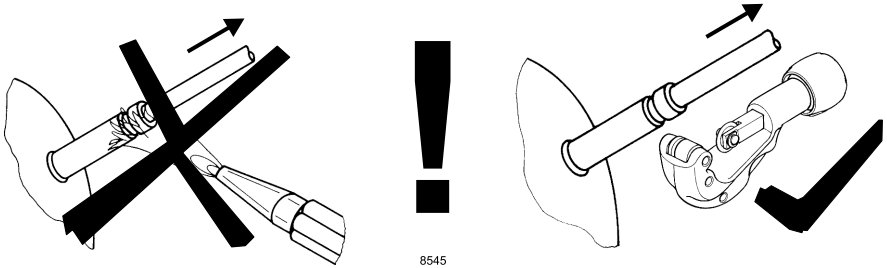
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

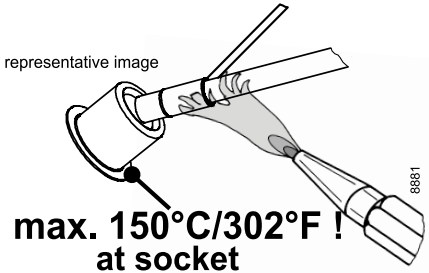
Service/Repair – R290, R600a, R170, R1270, R1234yf

(applies to all flammable refrigerants)



Brazing on Suction Connectors (Direct Intake)

representative image



! max. 150°C/302°F ! at socket

brazing solder: phosphor (LP7) or silver

Refer to Product Bulletin:
Brazing on Suction Connectors (Compressors with Direct Suction Intake)

Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**