Single
Packs

Single Pack NL7.3MF 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4086**

Position	Title	Code	Amount
1	Compressor NL7.3MF	105G6773	1
2	Starting relay	117U6016	1
3	Starting capacitor (80µF 220V, 6.3mm)	117U5015	1
4	Cord relief	103N1010	1
5	Cover	103N2011	1
6	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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Model
NL7.3MF

Sales code:
105G6773

Compressor Data

Refrigerant(s)	**R134a / R513A**
Refr. charge - tech. limit	**600g / 21.16oz**
Weight	**10.00 kg / 22.05lbs**
Displacement	**7.27 cm3 / 0.44cu.in**
Compressors on pallet	**80**

General – Configurations With NL7.3MF

–	Conf. 1	Conf. 2	Conf. 3	Conf. 4
Motor configuration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	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
Voltage range	187-254 V	187-254 V	187-254 V	187-253 V
Approvals	VDE, UL, CCC, EAC	VDE, UL, CCC, EAC	VDE, UL	VDE, UL
Starting torque	HST	HST	HST	HST
Refrigerant	R134a	R134a	R513A	R513A
Application	MBP	LBP+MBP	MBP	LBP+MBP
Long interval pull down	OK	OK	OK	OK

Application Notes

- Provision for PE Grounding is located at the PE Stamp on the compressor
- CSIR strongly recommended for 60 Hz
- F2 for 230-240 V 50 Hz nominal below -12 °C evaporating temp

Model
NL7.3MF

Sales code:
105G6773

Compressor Design

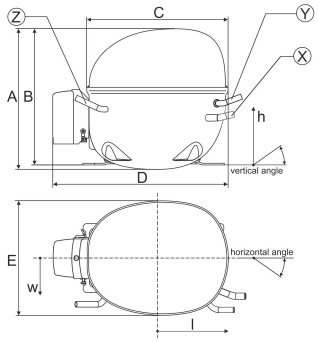
Oil type	**POE**	Winding resistance main	**8.3 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**11.8 Ohm**
Oil quantity	**268 / 9.06fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**	Max. discharge temp.	**130°C / 266°F**
Motor protection	**internal**		

Compressor Dimensions

Housing

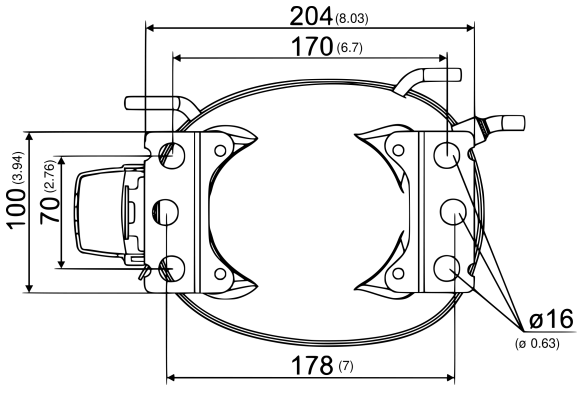
A Height	**197mm / 7.76in**
B Height	**191mm / 7.52in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



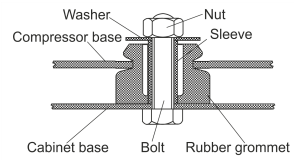
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 9.61–9.79 / 0.38–0.39in	øi 6.41–6.59 / 0.25–0.26in	øi 6.41–6.59 / 0.25–0.26in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in	-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

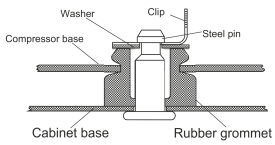


Dimensions in mm [in]

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
NL7.3MF Configuration 1

Sales code:
105G6773

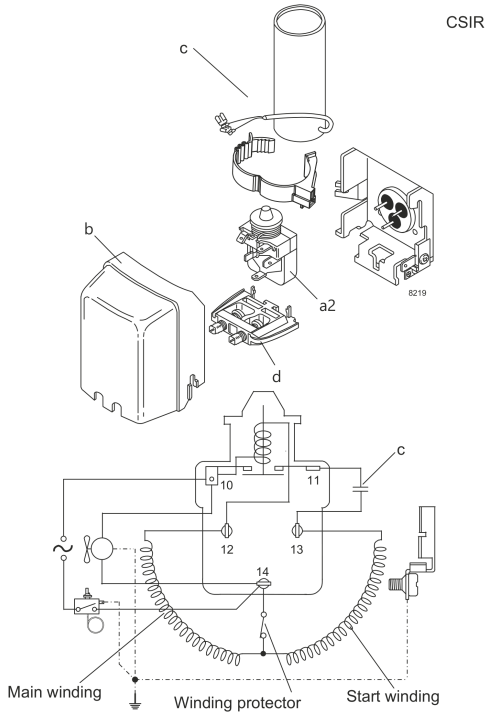
Configuration

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, UL, CCC, EAC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**10.2 A**
RLA (rated load amps / 1s/ U(N))	**2.1 A**
Cut in current (U(N))	**15.1 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 3m/s

Electrical Accessories / Wiring Diagram



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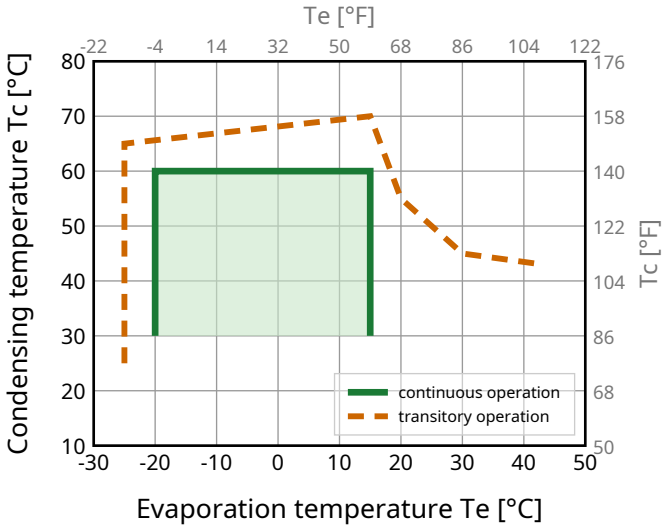
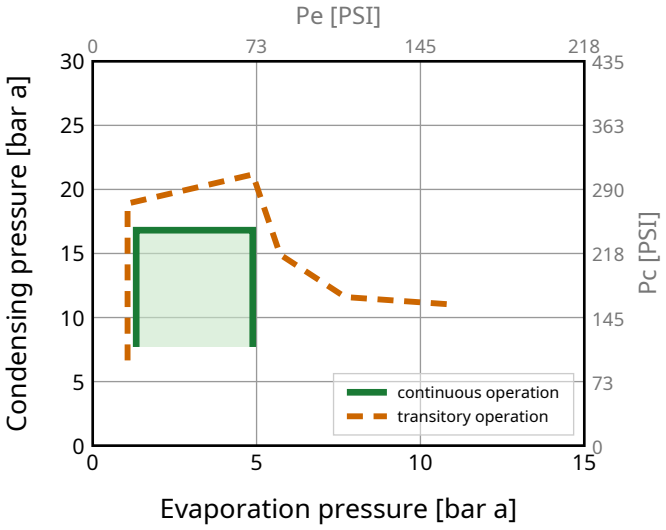
Components
a2 relay 117U6016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL7.3MF Configuration 1

Sales code:
105G6773

Standard Conditions

R134a, 220 V/50 Hz, CSIR, fan 3m/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	**394**	1344	339	**1.63**	5.58	241	1.71	8.58	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**304**	1038	262	**1.34**	4.58	227	1.67	7.33	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**348**	1186	299	**1.62**	5.52	215	1.64	8.11	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**378**	1291	325	**1.62**	5.54	233	1.69	9.30	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**360**	1229	310	**1.68**	5.72	215	1.64	7.86	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**161**	548	138	**1.03**	3.50	157	1.54	3.48	**opt MBP 2**

Performance Tables

R134a, 220 V/50 Hz, CSIR, fan 3m/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	**215**	735	185	**1.22**	4.17	176	1.56	4.67
-15	5	**281**	960	242	**1.44**	4.91	195	1.59	6.12
-10	14	**360**	1229	310	**1.68**	5.72	215	1.64	7.86
-5	23	**453**	1547	390	**1.93**	6.59	235	1.69	9.95
0	32	**563**	1921	484	**2.20**	7.51	256	1.76	12.42
5	41	**690**	2355	594	**2.49**	8.48	278	1.84	15.33
10	50	**837**	2856	720	**2.78**	9.48	301	1.94	18.73
15	59	**1005**	3428	864	**3.08**	10.50	327	2.04	22.70

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

-20	-4	**179**	612	154	**0.99**	3.37	182	1.57	4.29
-15	5	**236**	806	203	**1.16**	3.95	204	1.61	5.67
-10	14	**304**	1038	262	**1.34**	4.58	227	1.67	7.33
-5	23	**385**	1313	331	**1.54**	5.25	250	1.74	9.32
0	32	**480**	1637	413	**1.75**	5.98	274	1.82	11.70
5	41	**590**	2015	508	**1.98**	6.75	298	1.91	14.51
10	50	**719**	2453	618	**2.21**	7.56	325	2.02	17.81
15	59	**867**	2957	745	**2.46**	8.39	352	2.14	21.69

Model
NL7.3MF Configuration 2

Sales code:
105G6773

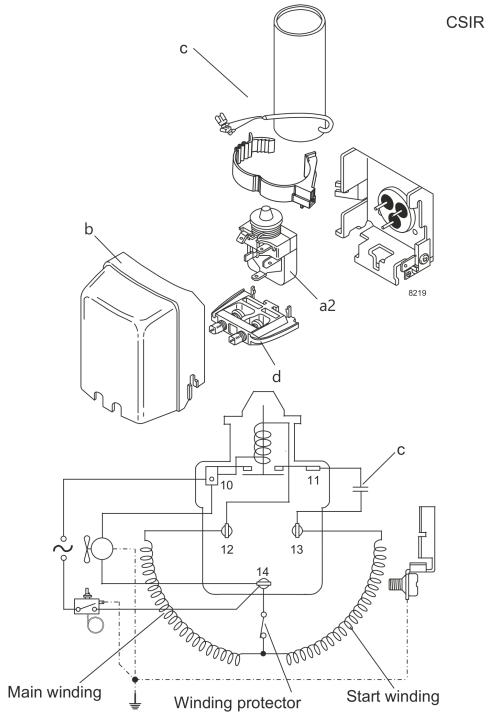
Configuration

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	**VDE, UL, CCC, EAC**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**10.2 A**
RLA (rated load amps / 1s/ U(N))	**2.1 A**
Cut in current (U(N))	**15.1 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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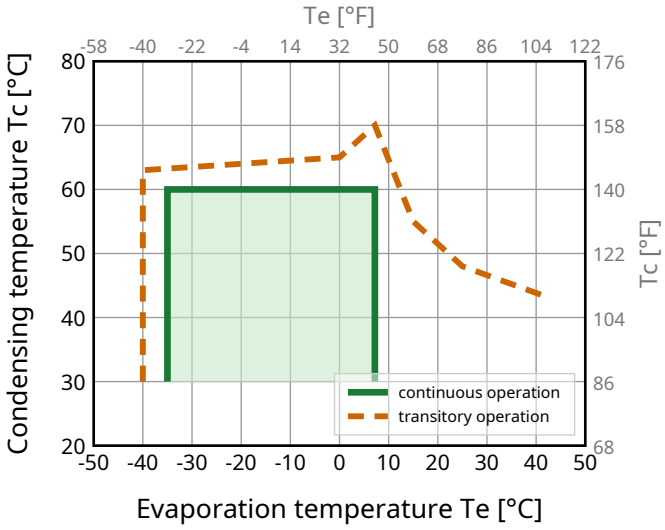
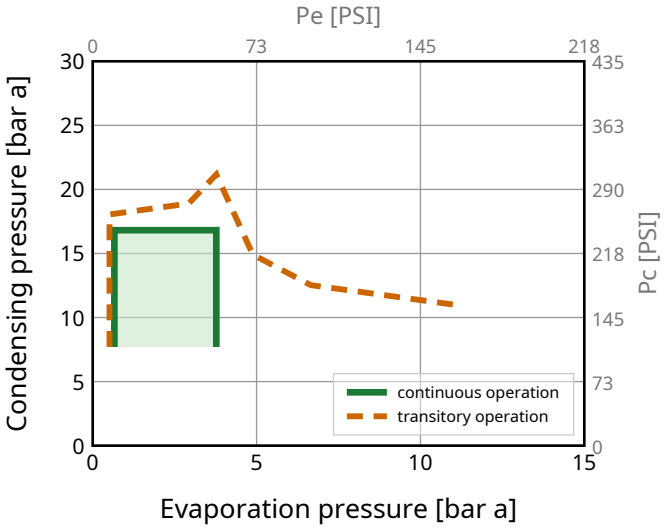
Components
a2 relay 117U6016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model

NL7.3MF Configuration 2

Sales code:

105G6773

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	**470**	1604	404	**1.58**	5.41	297	1.75	10.24	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**363**	1239	312	**1.32**	4.50	275	1.66	8.75	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**418**	1425	359	**1.60**	5.47	261	1.61	9.74	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**454**	1550	391	**1.59**	5.42	286	1.71	11.16	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**433**	1476	372	**1.66**	5.66	261	1.61	9.45	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**200**	683	172	**1.14**	3.87	176	1.31	4.33	**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	**105**	359	91	**0.86**	2.92	123	1.16	2.27
-30	-22	**148**	505	127	**0.99**	3.38	149	1.23	3.19
-20	-4	**264**	900	227	**1.29**	4.41	204	1.40	5.72
-10	14	**433**	1476	372	**1.66**	5.66	261	1.61	9.45
0	32	**669**	2282	575	**2.11**	7.19	318	1.85	14.76
7.2	45	**889**	3033	764	**2.48**	8.47	358	2.04	19.81

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

-35	-31	**73**	249	63	**0.67**	2.27	110	1.11	1.74
-30	-22	**112**	384	97	**0.80**	2.72	141	1.20	2.68
-20	-4	**216**	735	185	**1.04**	3.55	207	1.41	5.16
-10	14	**363**	1239	312	**1.32**	4.50	275	1.66	8.75
0	32	**570**	1943	490	**1.65**	5.64	344	1.94	13.89
7.2	45	**763**	2604	656	**1.94**	6.60	394	2.16	18.81

Model
NL7.3MF Configuration 3

Sales code:
105G6773

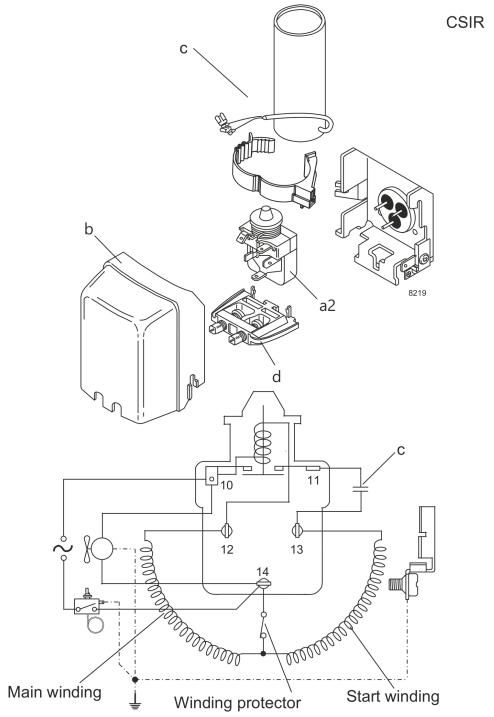
Configuration

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	**VDE, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**10.2 A**
RLA (rated load amps / 1s/ U(N))	**2.1 A**
Cut in current (U(N))	**15.1 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 3m/s

Electrical Accessories / Wiring Diagram



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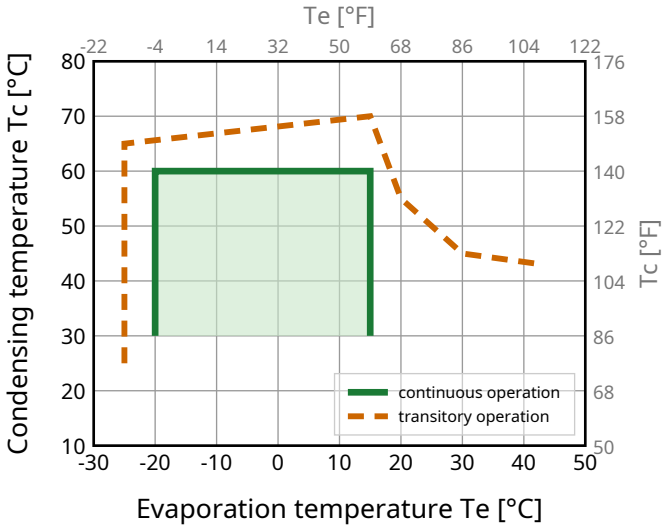
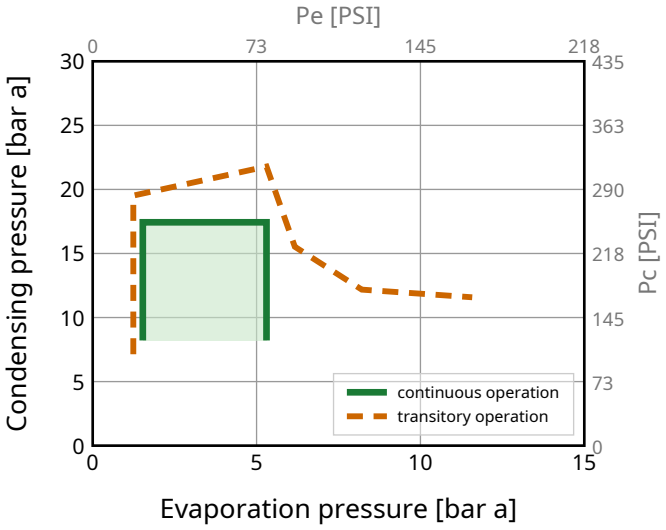
Components
a2 relay 117U6016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL7.3MF Configuration 3

Sales code:
105G6773

Standard Conditions

R513A, 220 V/50 Hz, CSIR, fan 3m/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	**414**	1413	356	**1.63**	5.55	255	1.76	10.32	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**316**	1079	272	**1.31**	4.49	240	1.72	8.88	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**362**	1236	311	**1.60**	5.45	227	1.68	9.81	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**389**	1326	334	**1.58**	5.39	246	1.73	11.19	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**380**	1297	327	**1.67**	5.71	227	1.68	9.51	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**176**	600	151	**1.05**	3.57	168	1.52	4.35	**opt MBP 2**

Performance Tables

R513A, 220 V/50 Hz, CSIR, fan 3m/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	**232**	793	200	**1.24**	4.22	188	1.58	5.76
-15	5	**300**	1023	258	**1.45**	4.93	207	1.63	7.47
-10	14	**380**	1297	327	**1.67**	5.71	227	1.68	9.51
-5	23	**474**	1619	408	**1.92**	6.55	247	1.74	11.94
0	32	**584**	1994	503	**2.18**	7.45	268	1.79	14.80
5	41	**712**	2428	612	**2.46**	8.38	290	1.85	18.17
10	50	**858**	2926	738	**2.74**	9.35	313	1.91	22.09
15	59	**1024**	3494	881	**3.03**	10.32	338	1.98	26.65

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

-20	-4	**191**	653	165	**0.98**	3.35	195	1.59	5.32
-15	5	**248**	848	214	**1.14**	3.89	218	1.66	6.94
-10	14	**316**	1079	272	**1.31**	4.49	240	1.72	8.88
-5	23	**396**	1352	341	**1.50**	5.13	264	1.78	11.19
0	32	**490**	1672	421	**1.71**	5.82	287	1.84	13.93
5	41	**599**	2043	515	**1.92**	6.55	312	1.91	17.18
10	50	**724**	2472	623	**2.15**	7.32	338	1.98	20.99
15	59	**868**	2963	747	**2.38**	8.11	365	2.05	25.46

Model
NL7.3MF Configuration 4

Sales code:
105G6773

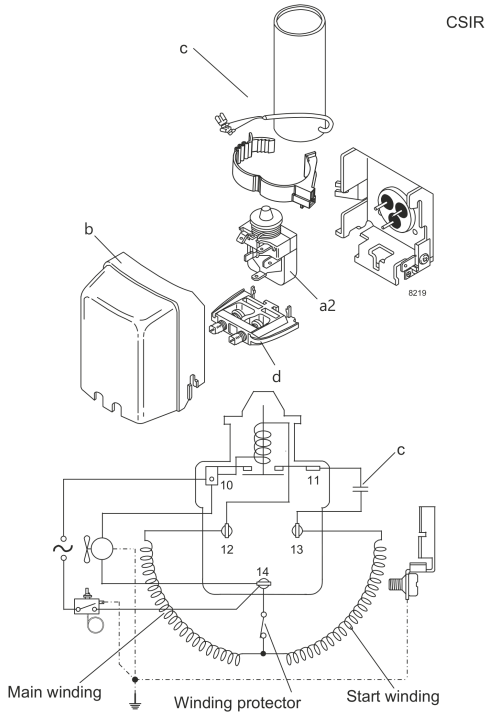
Configuration

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	**VDE, UL**
Starting device type	**relay**
Run capacitor	**-/-**
Start capacitor	**80 µF**
LRA (locked rotor amps / 4s/ U(N))	**10.2 A**
RLA (rated load amps / 1s/ U(N))	**2.1 A**
Cut in current (U(N))	**15.1 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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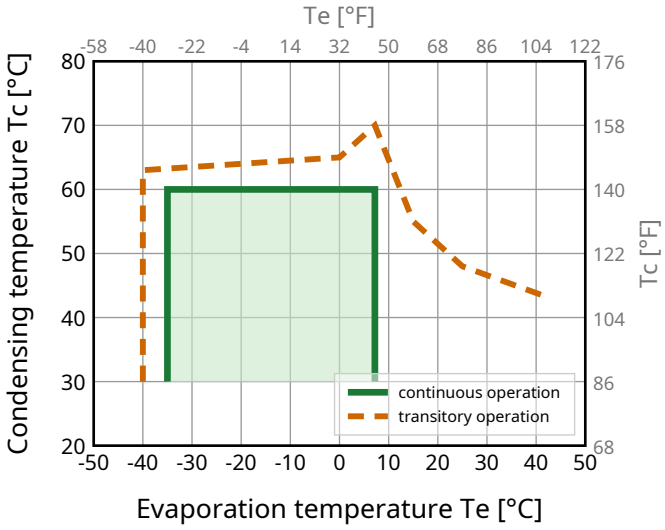
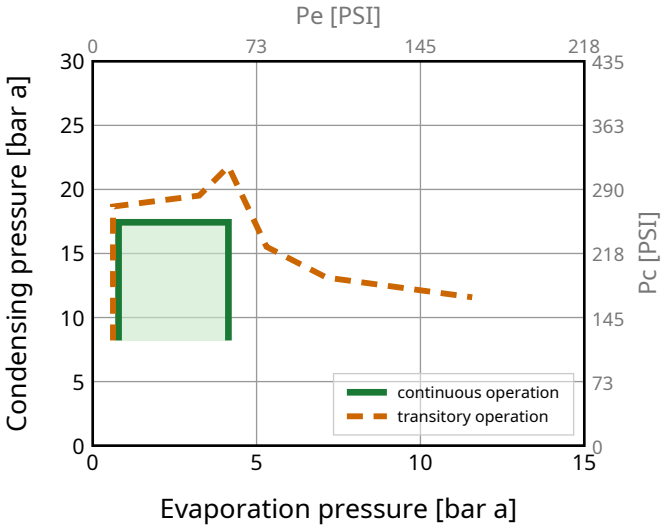
Components
a2 relay 117U6016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL7.3MF Configuration 4

Sales code:
105G6773

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	**494**	1686	425	**1.57**	5.35	315	1.83	12.32	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**378**	1288	325	**1.29**	4.39	294	1.75	10.59	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**435**	1485	374	**1.57**	5.35	277	1.69	11.78	**EN12900 MBP**
-6.7 20	48.8 119.8	18.3 64.9	48.8 119.8	**466**	1591	401	**1.54**	5.24	303	1.79	13.43	**ARI540 MBP**
-10 14	45 113	32 89.6	45 113	**456**	1558	393	**1.65**	5.62	277	1.69	11.43	**opt MBP 1**
-25 -13	45 113	32 89.6	45 113	**219**	748	188	**1.14**	3.90	192	1.35	5.42	**opt MBP 2**

Performance Tables

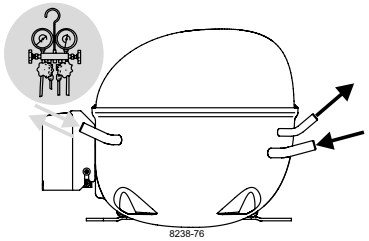
R513A, 220 V/60 Hz, CSIR, fan 1,5m/s

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	**121**	411	104	**0.89**	3.02	136	1.14	2.97
-30	-22	**165**	563	142	**1.01**	3.44	164	1.24	4.07
-20	-4	**285**	971	245	**1.29**	4.41	220	1.46	7.06
-10	14	**456**	1558	393	**1.65**	5.62	277	1.69	11.43
0	32	**694**	2369	597	**2.08**	7.08	334	1.91	17.59
7.2	45	**914**	3118	786	**2.44**	8.32	375	2.07	23.41

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

-35	-31	**85**	290	73	**0.69**	2.34	124	1.09	2.34
-30	-22	**125**	428	108	**0.80**	2.73	157	1.22	3.46
-20	-4	**230**	784	198	**1.02**	3.50	224	1.48	6.39
-10	14	**378**	1288	325	**1.29**	4.39	294	1.75	10.59
0	32	**582**	1985	500	**1.60**	5.46	363	2.02	16.54
7.2	45	**771**	2632	663	**1.87**	6.37	413	2.22	22.22



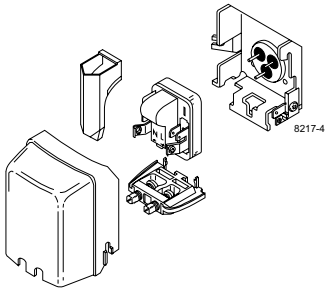
NL Compressors

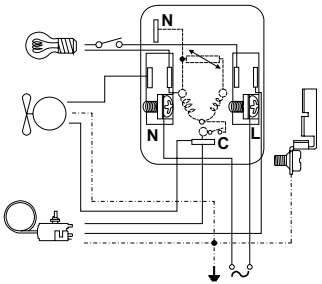
SECOP

Keep electrical equipment clear from oil, chemicals, and water

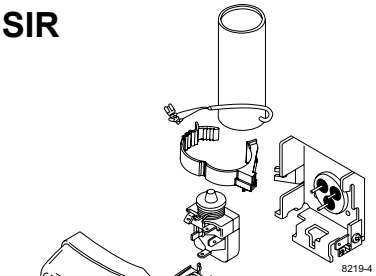
When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

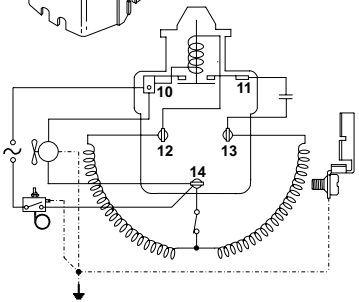
RSIR



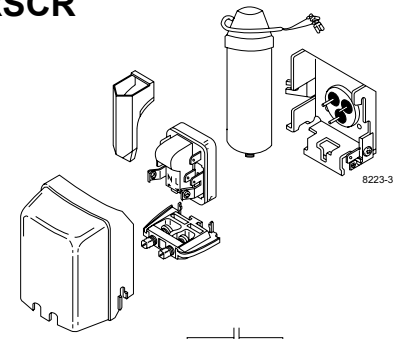


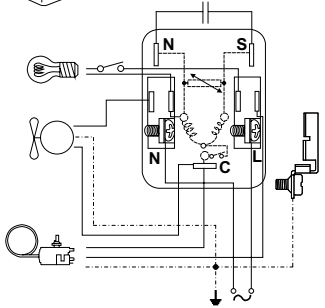
CSIR

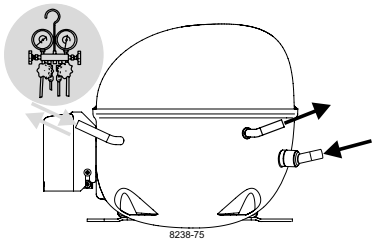




RSCR







NL Compressors

SECOP

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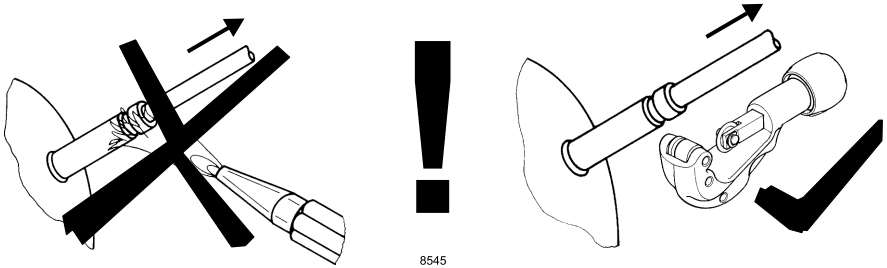
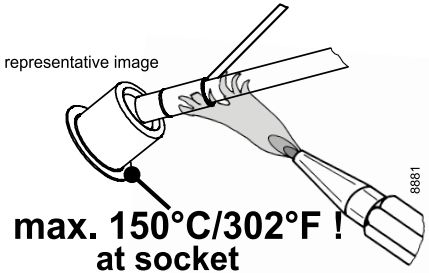
Service/Repair – R290, R600a, R170, R1270, R1234yf

(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**