Model
NL8.4MF

Sales code:
105G7892

Compressor Data

Refrigerant(s)	**R1234yf / R513A**
Refr. charge - tech. limit	**600g / 21.16oz**
Weight	**10.50 kg / 23.15lbs**
Displacement	**8.35 cm3 / 0.51cu.in**
Compressors on pallet	**80**

General – Configurations With NL8.4MF

–	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	VDE, UL	VDE, UL	VDE, UL
Starting torque	HST	HST	HST	HST
Refrigerant	R1234yf	R1234yf	R513A	R513A
Application	MBP+HBP	LBP+MBP	MBP+HBP	LBP+MBP
Long interval pull down	OK	OK	OK	OK

Application Notes

- Electrical equipment is included and pre-assembled to compressor.
- Provision for PE Grounding is located at the PE Stamp on the compressor

Model
NL8.4MF

Sales code:
105G7892

Compressor Design

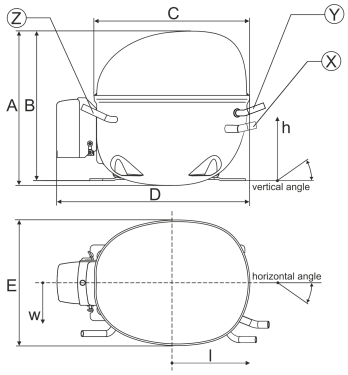
Oil type	**POE**	Winding resistance main	**7.100 Ohm**
Oil viscosity	**32cSt**	Winding resistance aux	**9.60 Ohm**
Oil quantity	**268 cm3 / 9.06fl.oz**	Max. winding temp.	**125 °C**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**	Max. discharge temp.	**130°C / 266°F**

Compressor Dimensions

Housing

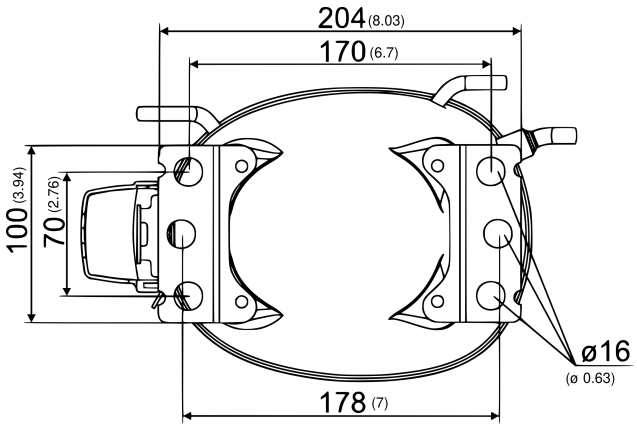
A Height	**197mm / 7.76in**
B Height	**191mm / 7.52in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**254mm / 10.00in**
E Width	**166mm / 6.54in**

Find 3D Model here



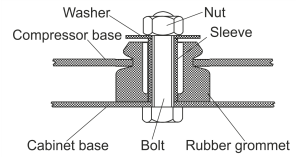
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	35°	155°
Position l/h/w [mm]	125.5/75.5/78 / 4.94/2.97/3.07in	133/102.5/54 / 5.24/4.04/2.13in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

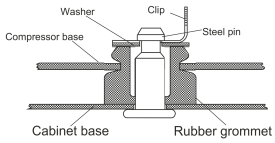


Dimensions in mm [in]

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
NL8.4MF Configuration 1

Sales code:
105G7892

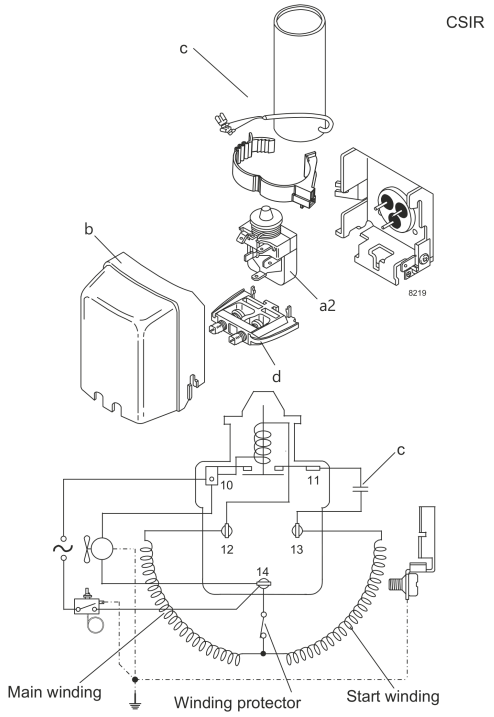
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R1234yf**
Application	**MBP+HBP**
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))	**10.8 A**
RLA (rated load amps / 1s/ U(N))	**2.2 A**
Cut in current (U(N))	**16.3 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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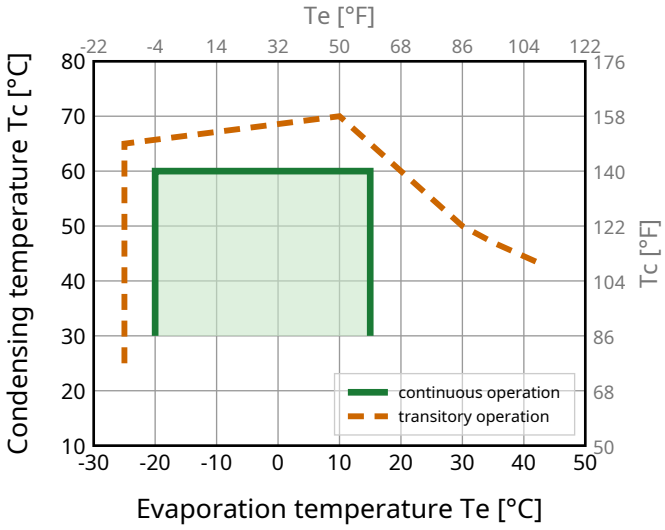
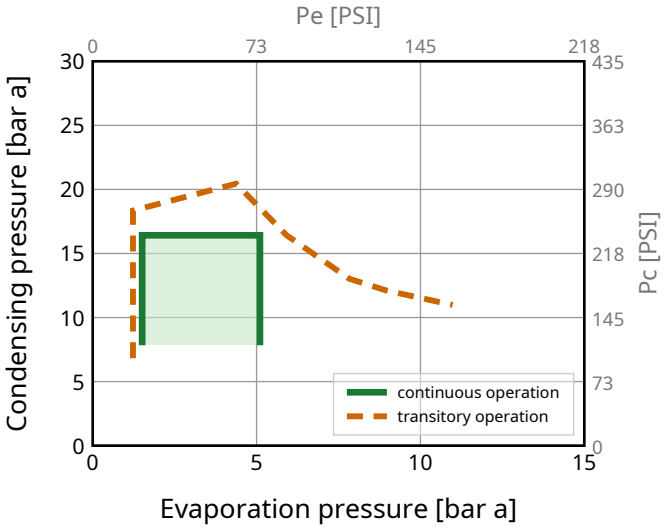
Components (already pre-assembled)
a2 current relay 117U7016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL8.4MF Configuration 1

Sales code:
105G7892

Standard Conditions

R1234yf, 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	**241**	822	207	**1.18**	4.03	204	1.60	5.67	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**170**	581	147	**0.87**	2.96	196	1.58	5.16	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**121**	414	104	**0.80**	2.73	151	1.48	3.32	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**460**	1571	396	**1.64**	5.59	281	1.83	12.44	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**352**	1200	302	**1.32**	4.51	266	1.78	10.79	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**397**	1354	341	**1.57**	5.36	253	1.74	11.77	**EN12900 MBP**

Performance Tables

R1234yf, 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	**264**	901	227	**1.25**	4.25	212	1.62	7.11
-15	5	**336**	1145	289	**1.45**	4.93	232	1.68	9.07
-10	14	**420**	1434	361	**1.66**	5.68	253	1.74	11.41
-5	23	**520**	1774	447	**1.90**	6.48	274	1.81	14.19
0	32	**636**	2169	547	**2.15**	7.32	296	1.89	17.47
5	41	**769**	2625	662	**2.40**	8.20	320	1.97	21.31
10	50	**922**	3147	793	**2.67**	9.10	346	2.07	25.78
15	59	**1096**	3740	943	**2.94**	10.01	374	2.17	30.97

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

-20	-4	**221**	753	190	**1.01**	3.43	219	1.64	6.71
-15	5	**281**	957	241	**1.16**	3.95	242	1.71	8.56
-10	14	**352**	1200	302	**1.32**	4.51	266	1.78	10.79
-5	23	**435**	1485	374	**1.50**	5.11	291	1.87	13.44
0	32	**533**	1819	458	**1.68**	5.75	316	1.96	16.58
5	41	**646**	2206	556	**1.88**	6.42	344	2.06	20.29
10	50	**777**	2651	668	**2.08**	7.11	373	2.17	24.64
15	59	**926**	3160	796	**2.29**	7.82	404	2.29	29.73

Model
NL8.4MF Configuration 2

Sales code:
105G7892

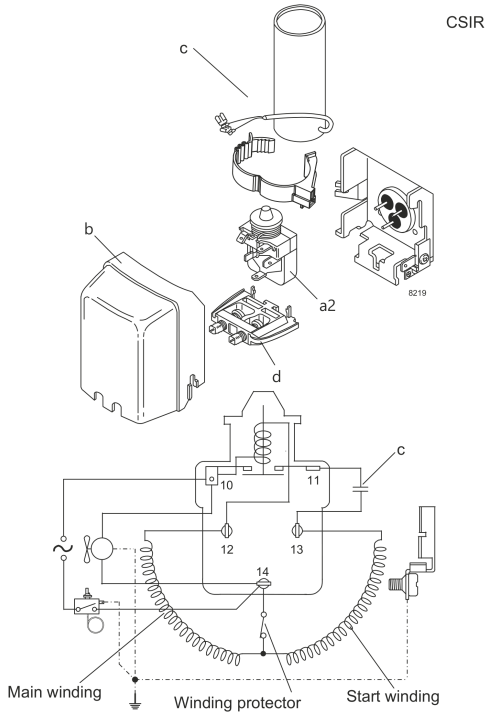
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**208-230 V/60 Hz 1~**
Refrigerant	**R1234yf**
Application	**LBP+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))	**10.8 A**
RLA (rated load amps / 1s/ U(N))	**2.2 A**
Cut in current (U(N))	**16.3 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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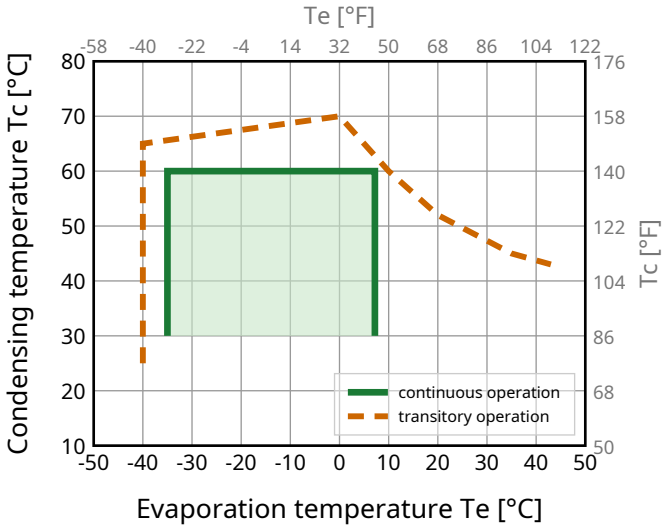
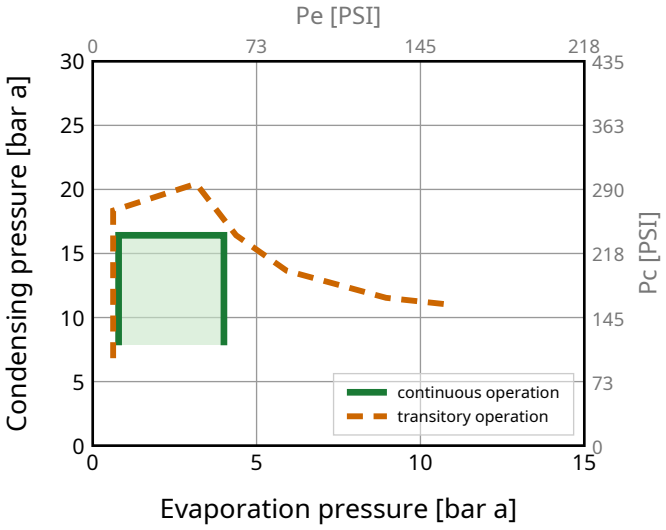
Components (already pre-assembled)
a2 current relay 117U7016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL8.4MF Configuration 2

Sales code:
105G7892

Standard Conditions

R1234yf, 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	**273**	932	235	**1.27**	4.32	216	1.39	6.43	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**190**	648	163	**0.94**	3.20	203	1.35	5.75	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**145**	495	125	**0.99**	3.39	146	1.19	3.98	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**551**	1880	474	**1.61**	5.50	342	1.84	14.88	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**417**	1424	359	**1.31**	4.48	318	1.75	12.81	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**480**	1638	413	**1.60**	5.46	300	1.68	14.23	**EN12900 MBP**

Performance Tables

R1234yf, 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	**132**	451	114	**0.94**	3.19	141	1.18	3.53
-30	-22	**183**	624	157	**1.06**	3.61	173	1.26	4.89
-20	-4	**317**	1083	273	**1.34**	4.58	236	1.46	8.54
-10	14	**508**	1735	437	**1.70**	5.78	300	1.68	13.80
0	32	**770**	2626	662	**2.13**	7.26	362	1.92	21.15
7.2	45	**1009**	3442	868	**2.50**	8.52	404	2.09	28.05

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

-35	-31	**90**	305	77	**0.71**	2.42	126	1.13	2.69
-30	-22	**136**	463	117	**0.83**	2.82	164	1.24	4.10
-20	-4	**254**	866	218	**1.05**	3.59	241	1.48	7.71
-10	14	**417**	1424	359	**1.31**	4.48	318	1.75	12.81
0	32	**641**	2186	551	**1.63**	5.56	393	2.04	19.93
7.2	45	**846**	2888	728	**1.90**	6.49	445	2.26	26.68

Model
NL8.4MF Configuration 3

Sales code:
105G7892

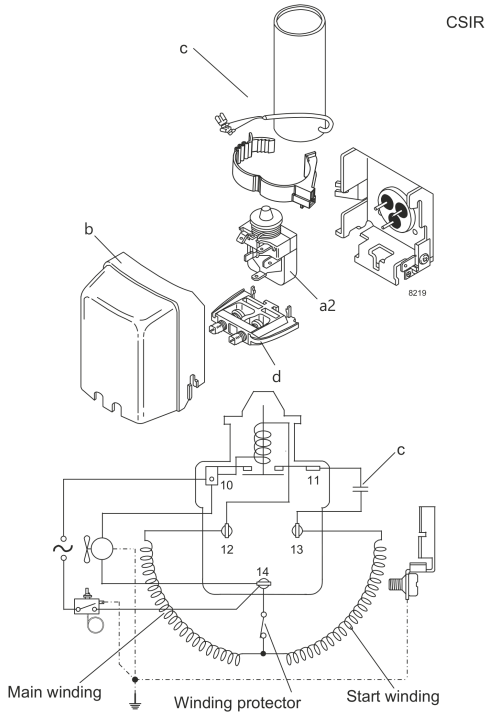
Configuration

Motor configuration	**CSIR**
Power supply (nominal)	**220-240 V/50 Hz 1~**
Refrigerant	**R513A**
Application	**MBP+HBP**
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))	**10.8 A**
RLA (rated load amps / 1s/ U(N))	**2.2 A**
Cut in current (U(N))	**16.3 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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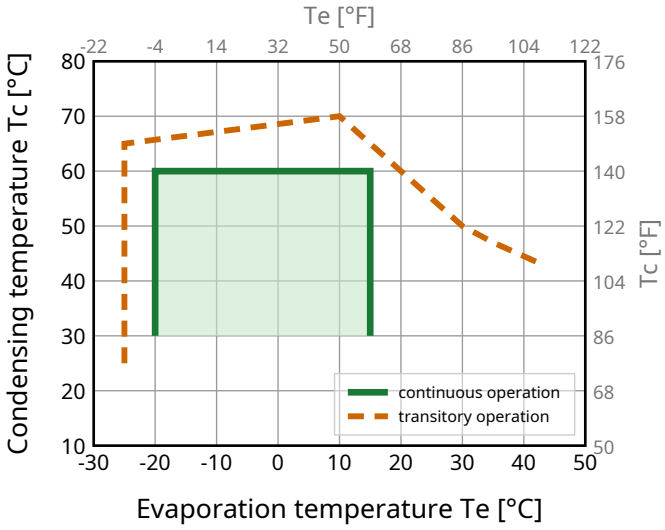
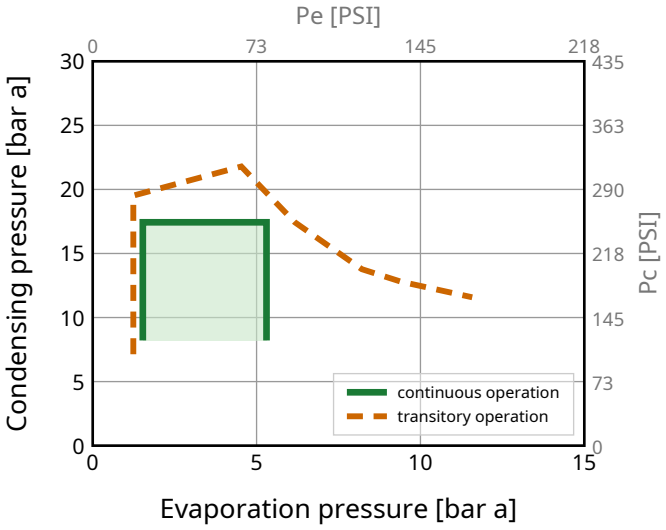
Components (already pre-assembled)
a2 current relay 117U7016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model
NL8.4MF Configuration 3

Sales code:
105G7892

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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**243**	828	209	**1.17**	4.00	207	1.82	5.31	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**174**	594	150	**0.88**	2.99	199	1.80	4.82	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**122**	415	104	**0.81**	2.77	150	1.66	3.06	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**479**	1634	412	**1.63**	5.56	294	2.07	11.94	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**368**	1254	316	**1.33**	4.53	277	2.02	10.31	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**417**	1423	359	**1.59**	5.43	262	1.98	11.30	**EN12900 MBP**

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	**271**	925	233	**1.25**	4.28	216	1.85	6.73
-15	5	**347**	1184	299	**1.45**	4.96	239	1.91	8.65
-10	14	**438**	1493	376	**1.67**	5.70	262	1.98	10.96
-5	23	**545**	1859	469	**1.90**	6.49	286	2.04	13.71
0	32	**670**	2286	576	**2.15**	7.34	312	2.12	16.97
5	41	**815**	2781	701	**2.41**	8.21	339	2.19	20.81
10	50	**982**	3351	845	**2.67**	9.10	368	2.27	25.29
15	59	**1172**	4000	1008	**2.93**	10.01	400	2.36	30.52

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

-20	-4	**227**	775	195	**1.01**	3.46	224	1.87	6.32
-15	5	**291**	994	250	**1.16**	3.97	250	1.94	8.13
-10	14	**368**	1254	316	**1.33**	4.53	277	2.02	10.31
-5	23	**458**	1562	394	**1.50**	5.13	305	2.10	12.93
0	32	**564**	1925	485	**1.69**	5.77	334	2.18	16.05
5	41	**688**	2348	592	**1.88**	6.43	365	2.27	19.74
10	50	**832**	2837	715	**2.09**	7.12	399	2.36	24.09
15	59	**996**	3398	857	**2.29**	7.82	435	2.46	29.20

Model
NL8.4MF Configuration 4

Sales code:
105G7892

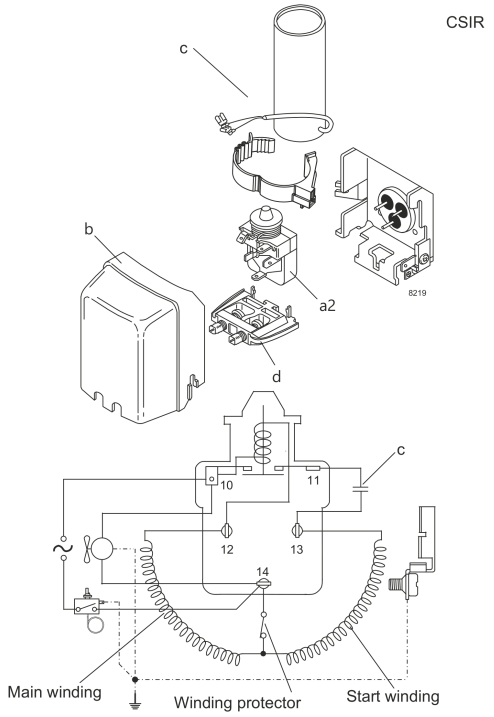
Configuration

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))	**10.8 A**
RLA (rated load amps / 1s/ U(N))	**2.2 A**
Cut in current (U(N))	**16.3 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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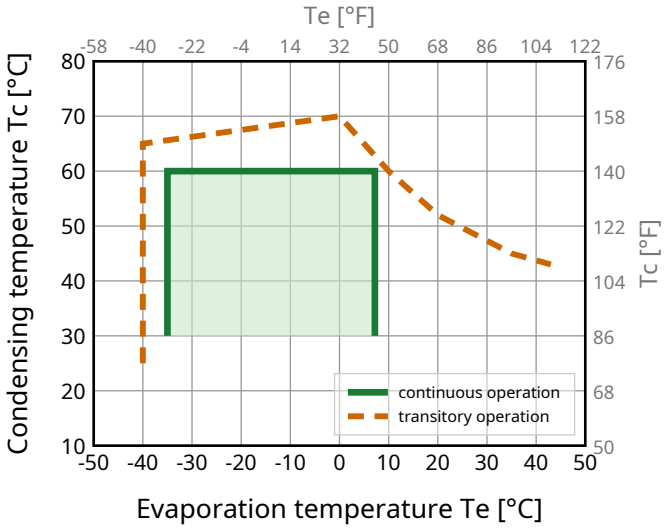
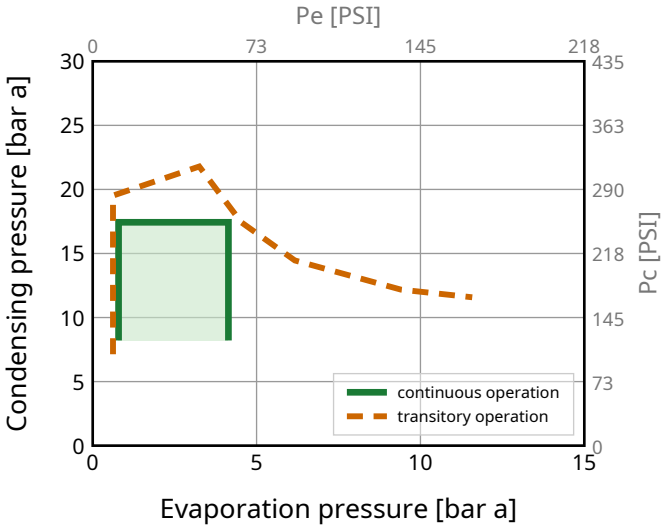
Components (already pre-assembled)
a2 current relay 117U7016
c start capacitor (80µF) 117U5015
b plastic cover 103N2011
d cord relief 103N1010

Operation Pressure Range





Model Sales code:

NL8.4MF Configuration 4 **105G7892**

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]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**275**	940	237	**1.24**	4.24	221	1.56	6.03	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**194**	662	167	**0.94**	3.19	207	1.51	5.37	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**146**	497	125	**1.00**	3.40	146	1.28	3.66	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**573**	1954	492	**1.59**	5.42	361	2.09	14.28	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**436**	1488	375	**1.30**	4.45	334	1.99	12.23	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**504**	1721	434	**1.61**	5.48	314	1.92	13.66	**EN12900 MBP**

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	**131**	448	113	**0.93**	3.17	142	1.26	3.23
-30	-22	**184**	628	158	**1.05**	3.59	175	1.39	4.54
-20	-4	**326**	1112	280	**1.34**	4.56	244	1.65	8.09
-10	14	**529**	1806	455	**1.69**	5.75	314	1.92	13.25
0	32	**810**	2765	697	**2.11**	7.20	384	2.18	20.53
7.2	45	**1070**	3650	920	**2.47**	8.42	434	2.37	27.41

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

-35	-31	**89**	304	77	**0.71**	2.41	126	1.20	2.45
-30	-22	**137**	468	118	**0.82**	2.81	166	1.35	3.79
-20	-4	**261**	891	225	**1.05**	3.58	249	1.67	7.26
-10	14	**436**	1488	375	**1.30**	4.45	334	1.99	12.23
0	32	**677**	2311	583	**1.61**	5.51	420	2.32	19.26
7.2	45	**902**	3076	775	**1.88**	6.40	481	2.55	25.96