

Single Pack NL8.4MF 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4347**

Position	Title	Code	Amount
1	Compressor NL8.4MF	105G7802	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

Designation	NL8.4MF	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	105G7802
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a, R513A
Oil viscosity	32cST	Displacement	8,35cm³ / 0,51cu.in
Oil quantity	268cm³ / 9,1fl.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	7,1Ω (at 25°C)		
Winding resistance aux	9,6Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



General - Configurations with NL8.4MF

	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Motorconfiguration	RSIR	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1	1	1	1
Voltage range	187-254V	187-254V	187-254V	187-254V	187-253V
Approvals	VDE, CCC, EAC, UL	VDE, CCC, EAC, UL	CCC, EAC, UL	VDE, CCC, UL	CCC, UL
Starting torque	LST	HST	HST	HST	HST
Note	No RSIR for 60Hz operation.				

Applications with NL8.4MF

	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Refrigerant	R134a	R134a	R134a	R513A	R513A
Application	MBP+HBP	MBP+HBP	LBP+MBP	MBP+HBP	LBP+MBP
System cooling	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s	fan 1,5m/s
Hot gas defrost	-/-	-/-	-/-	-/-	-/-
Long interval pull down	OK	OK	OK	OK	OK

Electrical data - Configurations with NL8.4MF

	Conf. 1	Conf. 2	Conf. 3	Conf. 4	Conf. 5
Starting device type	PTC	relay	relay	relay	relay
Run capacitor	-/-	-/-	-/-	-/-	-/-
Start capacitor	-/-	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s)	10,8A	10,6A	10,3A	10,6A	10,3A
RLA (rated load amps / 1s)	2,2A	2,2A	1,9A	2,2A	1,9A
Cut in current	16,3A	10,6A	10,3A	10,6A	10,3A

Model

Designation

NL8.4MF

220-240V/50Hz 1~ 208-230V/60Hz 1~

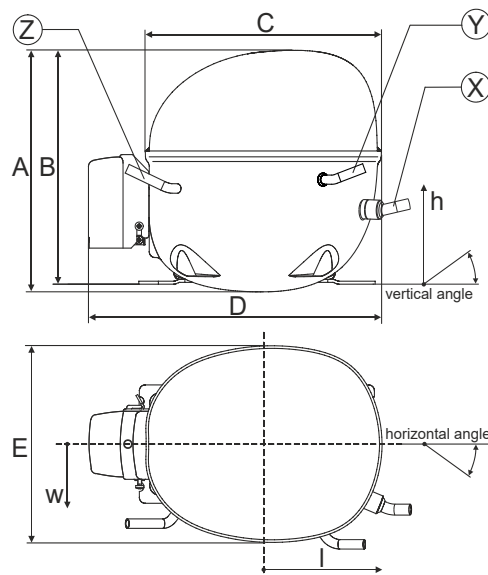
Sales code:

105G7802

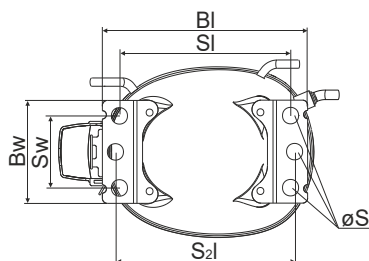
Compressor dimensions

Housing	A Height	197mm / 7,76in
	B Height	191mm / 7,52in
	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

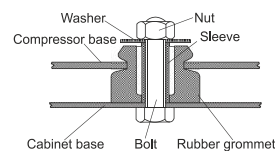


Compressor fixation

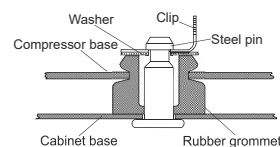


Baseplate	[mm]	[inch]
BI	204	8.03
Bw	100	3.94
Small holes	[mm]	[inch]
SI	170	6.7
Sw	70	2.76
S2l	178	7
øS	ø 16	ø 0.63

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	
Bolt joint ø1/4" ø19mm	118-1949	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Model

Designation

NL8.4MF

220-240V/50Hz

Conf. 1

Sales code:

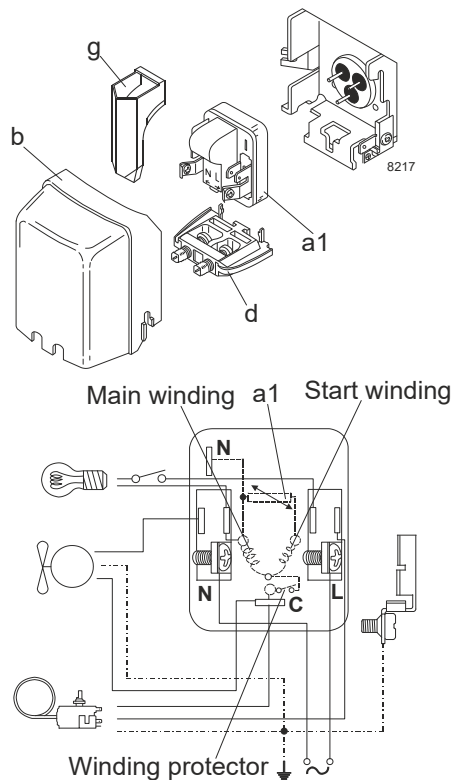
105G7802

Configuration

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

Electrical accessories / wiring diagram

RSIR

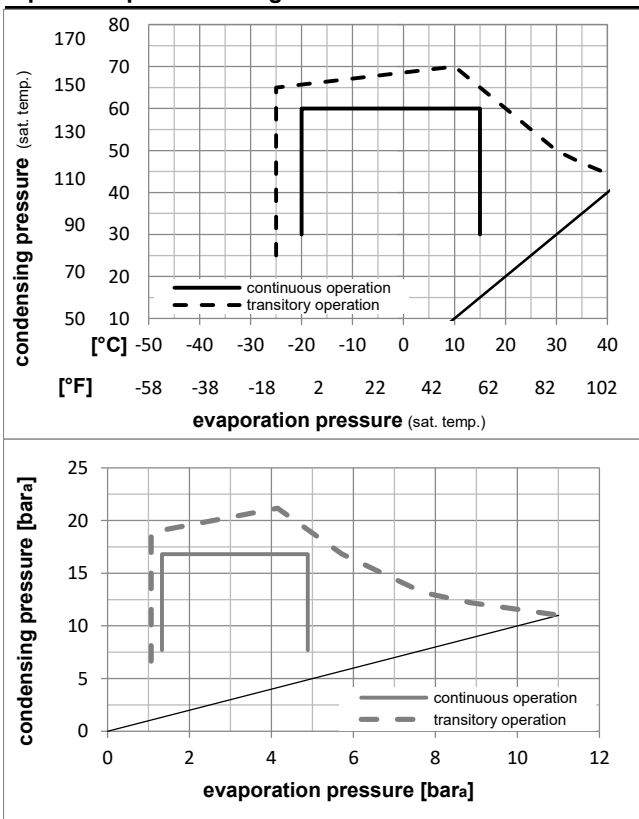


Ambient temperatures / system cooling

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	fan 1,5m/s
38°C / 100°F	n/a	fan 3m/s	fan 3m/s
43°C / 110°F	n/a	fan 3m/s	fan 3m/s

Operation pressure range



Components

a1	PTC starter (220V, 250hm, 4.8mm)	103N0018
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 250hm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation	NL8.4MF	220-240V/50Hz	Conf. 1	Sales code:	105G7802
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Optimization + standard conditions

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

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Power consumption				

Model

Designation

NL8.4MF

220-240V/50Hz

Conf. 2

Sales code:

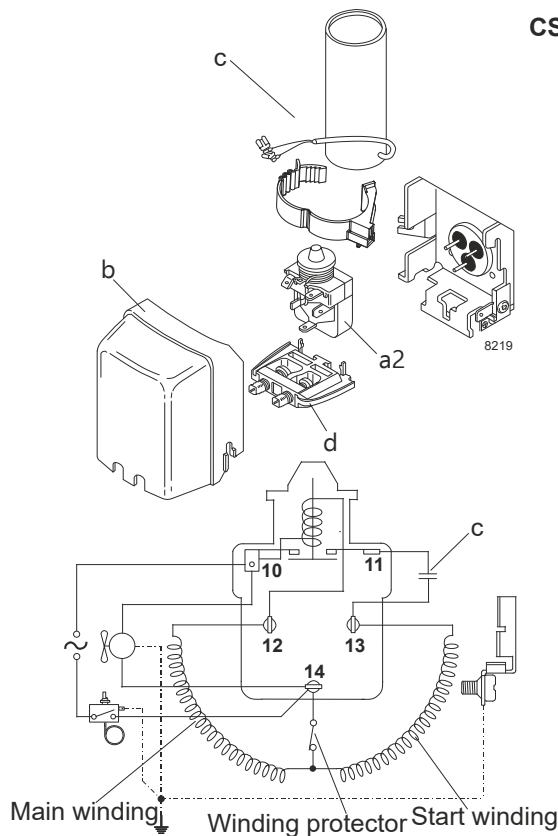
105G7802

Configuration

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

Electrical accessories / wiring diagram

CSIR



Ambient temperatures / system cooling

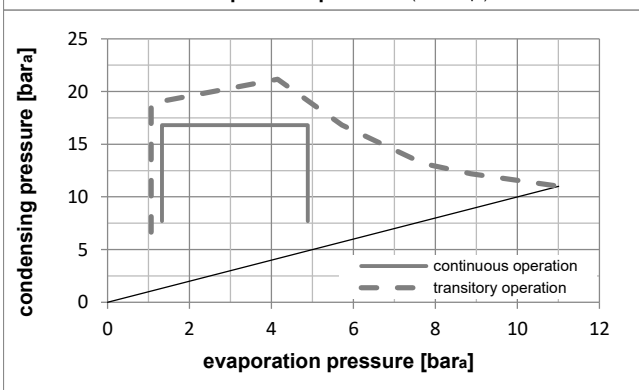
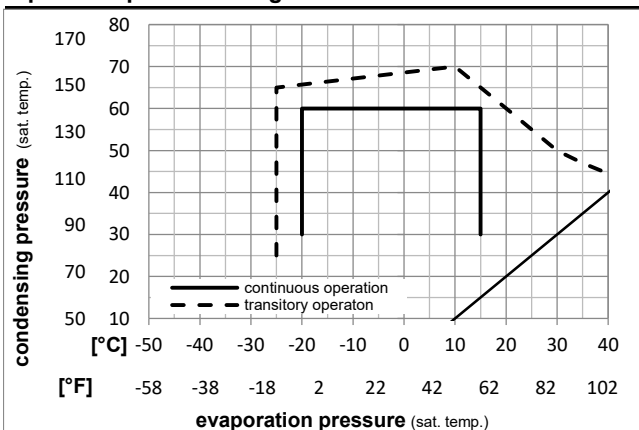
Ambient temperature min.: 10°C / 50°F

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	fan 1,5m/s
38°C / 100°F	n/a	fan 3m/s	fan 3m/s
43°C / 110°F	n/a	fan 3m/s	fan 3m/s

Operation pressure range



Components

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

Model

Designation	NL8.4MF	220-240V/50Hz	Conf. 2	Sales code:	105G7802
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Optimization + standard conditions

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

Evaporating pressure (saturation temperature)													
Condensing pressure (saturation temperature)													
Return gas temp.													
Liquid temp.													
Cooling capacity													
COP													
EER													
Power consumption													
Current consumption													
Ref. mass flow													
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]										[W]	[A]	[kg/h]	
7,22	54,4	35	46,1	822,7	2810	708,0	2,27	7,76	1,95	362,2	2,27	18,25	ASHRAE HBP
45	130	95	115										
5	55	32	55	678,8	2318	584,2	1,94	6,64	1,67	349,2	2,20	16,73	cecomaf HBP
41	131	89,6	131										
5	50	20	50	702,4	2399	604,5	2,09	7,12	1,79	336,7	2,16	17,70	EN12900 HBP
41	122	68	122										
-6,7	54,4	35	46,1	457,0	1561	393,3	1,64	5,61	1,41	278,3	1,96	9,97	ASHRAE MBP
20	130	95	115										
-10	55	32	55	353,4	1207	304,1	1,36	4,63	1,17	260,8	1,92	8,54	cecomaf MBP
14	131	89,6	131										
-10	45	20	45	399,9	1366	344,1	1,61	5,51	1,39	247,7	1,91	9,36	EN12900 MBP
14	113	68	113										

Performance tables

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

	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	251,5	859	216,4	1,24	4,24	1,07	202,5	1,83	5,46		
cond. pressure	-15	5	325,7	1112	280,3	1,45	4,95	1,25	224,8	1,87	7,10		
pc= 45/113	-10	14	414,8	1417	357,0	1,67	5,72	1,44	247,7	1,91	9,08		
return gas temp.	-5	23	520,8	1779	448,2	1,92	6,55	1,65	271,7	1,95	11,45		
RGT= 32/90	0	32	645,5	2205	555,5	2,17	7,42	1,87	297,1	2,02	14,28		
liquid temp	5	41	790,8	2701	680,6	2,44	8,33	2,10	324,3	2,13	17,61		
Tliq= 45/113	15	59	1150,8	3930	990,4	2,99	10,20	2,57	385,2	2,50	26,07		
[°C / °F]	-20	-4	213,0	728	183,3	1,02	3,49	0,88	208,5	1,84	5,11		
cond. pressure	-15	5	276,8	945	238,2	1,18	4,04	1,02	234,2	1,88	6,66		
pc= 55/131	-10	14	353,4	1207	304,1	1,36	4,63	1,17	260,8	1,92	8,54		
return gas temp	-5	23	444,7	1519	382,7	1,54	5,26	1,33	288,6	1,98	10,81		
RGT= 32/90	0	32	552,5	1887	475,5	1,74	5,94	1,50	317,9	2,07	13,51		
liquid temp	5	41	678,8	2318	584,2	1,94	6,64	1,67	349,2	2,20	16,73		
Tliq= 55/131	15	59	994,4	3396	855,8	2,37	8,11	2,04	418,7	2,65	24,98		

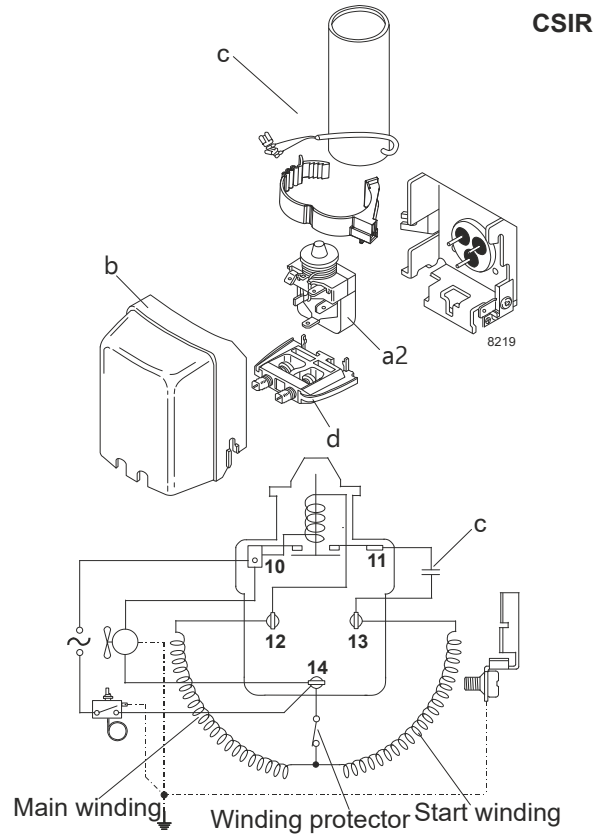
Model

Designation	NL8.4MF	208-230V/60Hz	Conf. 3	Sales code:	105G7802
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Configuration

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

Electrical accessories / wiring diagram



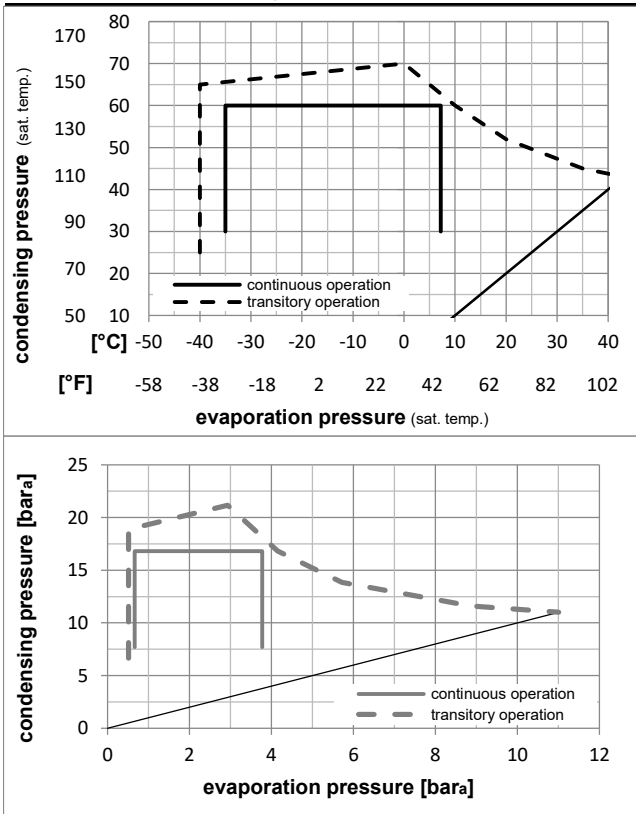
Ambient temperatures / system cooling

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	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 1,5m/s	fan 1,5m/s	n/a

Operation pressure range



Components

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

Model

Designation	NL8.4MF	208-230V/60Hz	Conf. 3	Sales code:	105G7802
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Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)										Power consumption			
	Condensing pressure (saturation temperature)										Current consumption			
	Return gas temp.										Ref. mass flow			
	Liquid temp.													
	Cooling capacity										COP	EER	P1	I
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/W·h]	[kcal/W·h]	[W]	[A]	[kg/h]	
[°C]	7,22	54,4	35	46,1	993,0	3391	854,6	2,19	7,48	1,89	453,3	2,44	22,03	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	5	55	32	55	817,9	2793	703,9	1,87	6,39	1,61	437,3	2,37	20,15	cecomaf HBP
[°F]	41	131	89,6	131										
[°C]	5	50	20	50	852,1	2910	733,3	2,05	7,00	1,76	415,8	2,30	21,47	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-6,66	54,4	35	46,1	546,8	1867	470,6	1,62	5,53	1,39	337,6	1,96	11,93	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	419,6	1433	361,1	1,35	4,61	1,16	310,9	1,86	10,15	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	483,8	1652	416,4	1,65	5,63	1,42	293,4	1,80	11,33	EN12900 MBP
[°F]	14	113	68	113										

Model

Designation

NL8.4MF

220-240V/50Hz

Conf. 4

Sales code:

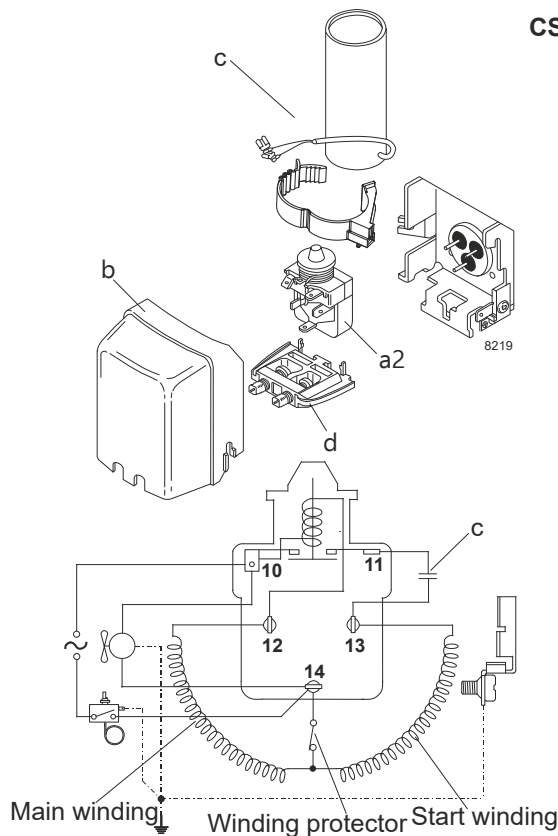
105G7802

Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R513A
Application	MBP+HBP
Voltage range	187-254V
Starting torque	HST
Approvals	VDE
	CCC
	UL

Electrical accessories / wiring diagram

CSIR



Ambient temperatures / system cooling

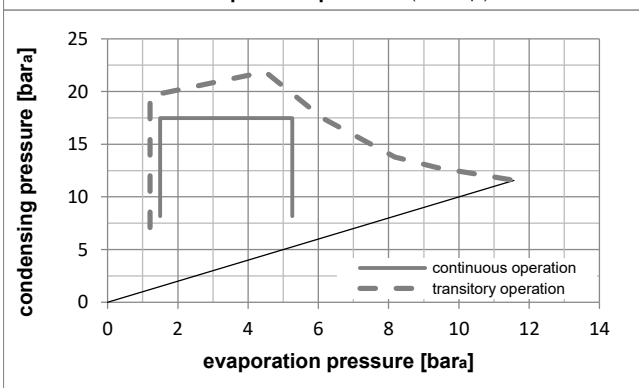
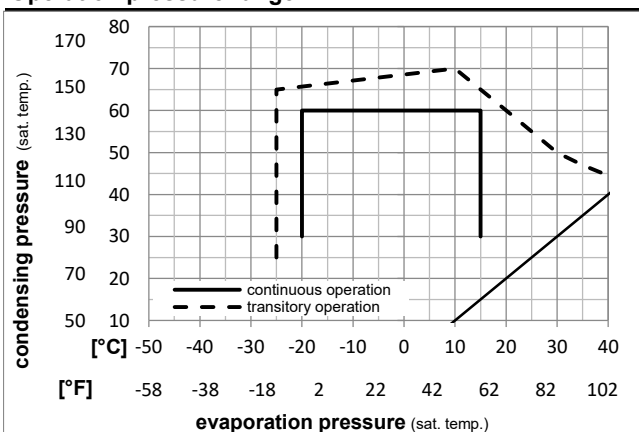
Ambient temperature min.: 10°C / 50°F

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	fan 1,5m/s
38°C / 100°F	n/a	fan 3m/s	fan 3m/s
43°C / 110°F	n/a	fan 3m/s	fan 3m/s

Operation pressure range



Components

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

Model

Designation	NL8.4MF	220-240V/50Hz	Conf. 4	Sales code:	105G7802
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Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)										Condensing pressure (saturation temperature)				Power consumption		
														Current consumption			
														Ref. mass flow			
	pe		pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	COP	EER		P1	I	m			
[°C]	7,22	54,4	35	46,1	846,4	2891	728,4	2,24	7,64	1,93	378,2	2,30	21,03	ASHRAE	HBP		
[°F]	45	130	95	115													
[°C]	5	55	32	55	688,2	2350	592,3	1,88	6,44	1,62	365,2	2,27	19,34	cecomaf	HBP		
[°F]	41	131	89,6	131													
[°C]	5	50	20	50	713,2	2436	613,8	2,03	6,92	1,74	352,0	2,23	20,45	EN12900	HBP		
[°F]	41	122	68	122													
[°C]	-6,66	54,4	35	46,1	480,5	1641	413,6	1,63	5,58	1,41	294,3	2,07	11,77	ASHRAE	MBP		
[°F]	20	130	95	115													
[°C]	-10	55	32	55	367,5	1255	316,3	1,33	4,53	1,14	276,8	2,02	10,16	cecomaf	MBP		
[°F]	14	131	89,6	131													
[°C]	-10	45	20	45	418,6	1430	360,2	1,60	5,45	1,37	262,1	1,98	11,09	EN12900	MBP		
[°F]	14	113	68	113													

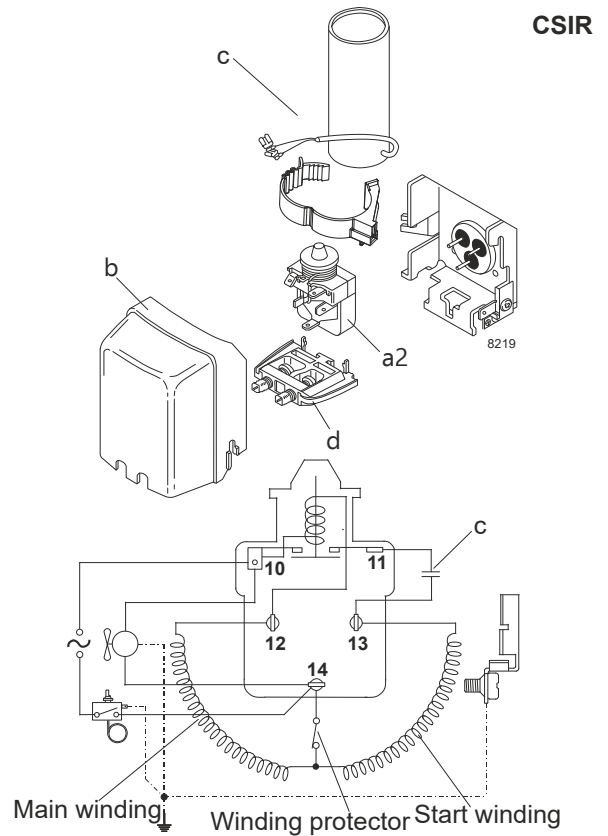
Model

Designation	NL8.4MF	208-230V/60Hz	Conf. 5	Sales code:	105G7802
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R513A
Application	LBP+MBP
Voltage range	187-253V
Starting torque	HST
Approvals	CCC
	UL

Electrical accessories / wiring diagram



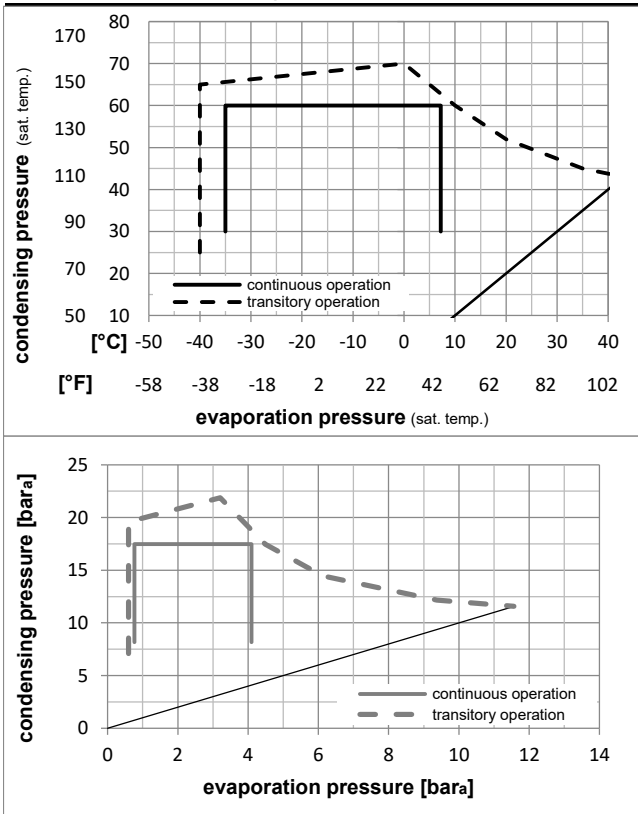
Ambient temperatures / system cooling

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	fan 1,5m/s	fan 1,5m/s	n/a
38°C / 100°F	fan 1,5m/s	fan 1,5m/s	n/a
43°C / 110°F	fan 1,5m/s	fan 1,5m/s	n/a

Operation pressure range



Components

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

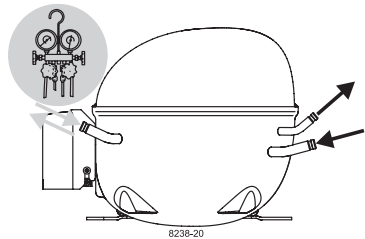
Model

Designation	NL8.4MF	208-230V/60Hz	Conf. 5	Sales code:	105G7802
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Optimization + standard conditions

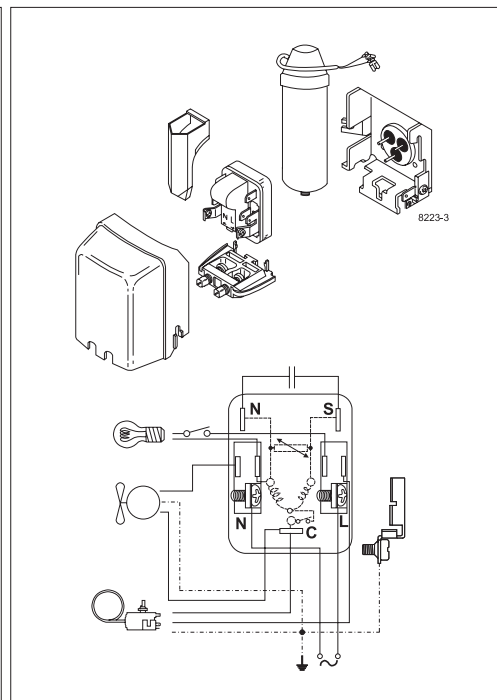
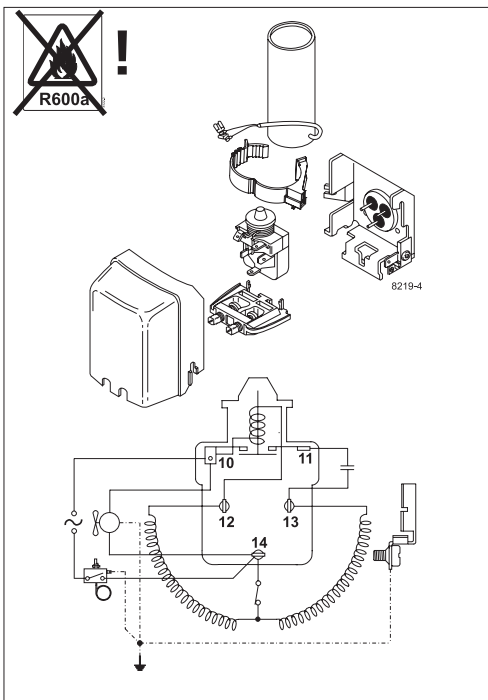
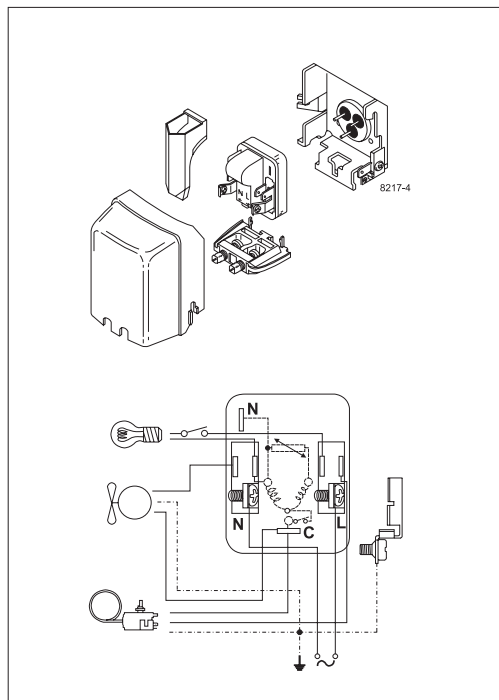
R513A, 220V/60Hz, CSIR, fan 1,5m/s, CCC, UL

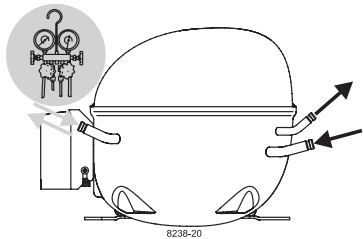
	Evaporating pressure (saturation temperature)										Condensing pressure (saturation temperature)				Power consumption		
														Current consumption			
														Ref. mass flow			
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	COP	EER		P1	I	m				
[°C]	7,22	54,4	35	46,1	1020,3	3484	878,1	2,14	7,29	1,84	477,8	2,54	25,35	ASHRAE HBP			
[°F]	45	130	95	115													
[°C]	5	55	32	55	828,1	2828	712,7	1,79	6,12	1,54	462,1	2,48	23,27	cecomaf HBP			
[°F]	41	131	89,6	131													
[°C]	5	50	20	50	864,3	2952	743,9	1,97	6,73	1,69	438,9	2,39	24,78	EN12900 HBP			
[°F]	41	122	68	122													
[°C]	-6,66	54,4	35	46,1	574,5	1962	494,4	1,59	5,43	1,37	361,0	2,09	14,07	ASHRAE MBP			
[°F]	20	130	95	115													
[°C]	-10	55	32	55	436,0	1489	375,2	1,31	4,46	1,12	334,0	1,99	12,06	cecomaf MBP			
[°F]	14	131	89,6	131													
[°C]	-10	45	20	45	506,1	1729	435,6	1,61	5,50	1,39	314,0	1,92	13,42	EN12900 MBP			
[°F]	14	113	68	113													



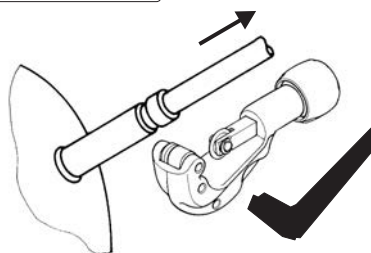
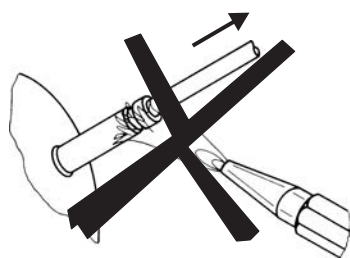
NL Compressors

SECOP

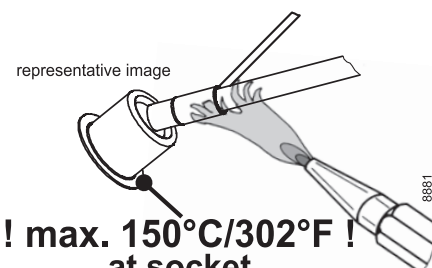




Service/Repair – R600a, R290



Brazing on Suction Connectors (Direct Intake)



**! 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)**

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