

Model

Designation	NL8.4MF	220-240V/50Hz 1~ 208-230V/60Hz 1~	Sales code:	105G7803
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R134a
Oil viscosity	32cST	Displacement	8,35cm ³ / 0,51cu.in
Oil quantity	265cm ³ / 9fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	600g / 21,2oz		
Free gas volume comp.	2360cm ³ / 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
Motorconfiguration	RSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz
Number of phases	1	1	1
Voltage range	187-254V	187-254V	187-254V
Approvals	VDE, CCC, EAC, UL	VDE, CCC, EAC, UL	VDE, CCC, EAC, UL
Starting torque	LST	HST	HST
Note	No RSIR for 60Hz operation		

Applications with NL8.4MF

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

Electrical data - Configurations with NL8.4MF

	Conf. 1	Conf. 2	Conf. 3
Starting device type	PTC	relay	relay
Run capacitor	-/-	-/-	-/-
Start capacitor	-/-	80μF	80μF
LRA (locked rotor amps / 4s)	10,8A	10,6A	10,3A
RLA (rated load amps / 1s)	2,2A	2,2A	1,9A
Cut in current	16,3A	10,6A	10,3A
IP class	21	21	21

Model

Designation

NL8.4MF

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

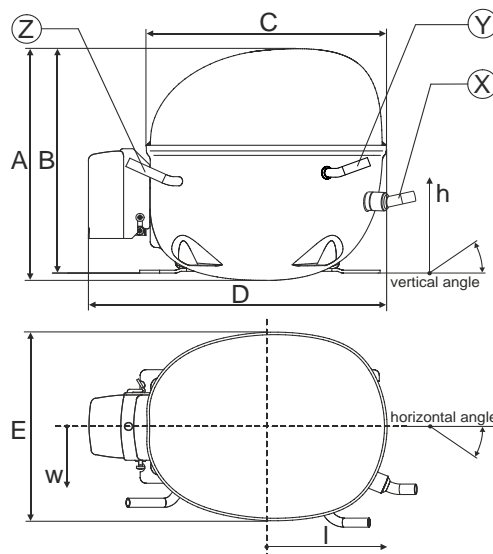
Sales code:

105G7803

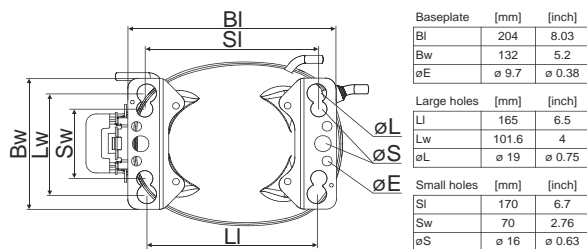
Compressor dimensions

Housing	A Height	197mm / 7,76in
	B Height	190mm / 7,48in
	C Length shell	205mm / 8,07in
	D Length w. cover	254mm / 10in
	E Width	166mm / 6,54in

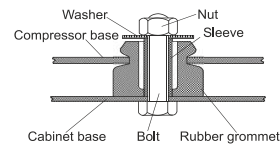
Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 8,11-8,29	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	0°	27°	0°
Vertical angle	±2°	90°	0°	90°
Position l/h/w	[mm]	91/103/79	115/89/61	-91/112/77
	[in]	3,6/4/3,1	4,5/3,5/2,4	-3,6/4,4/3
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5



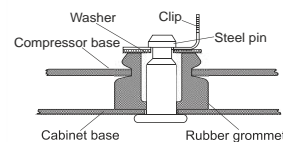
Compressor fixation



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

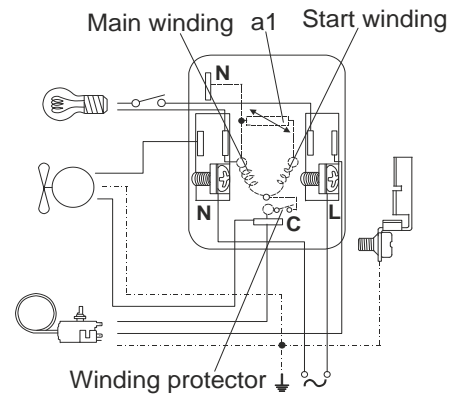
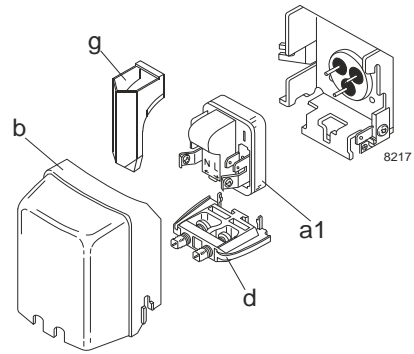
Designation	NL8.4MF	220-240V/50Hz	Conf. 1	Sales code:	105G7803
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Configuration

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

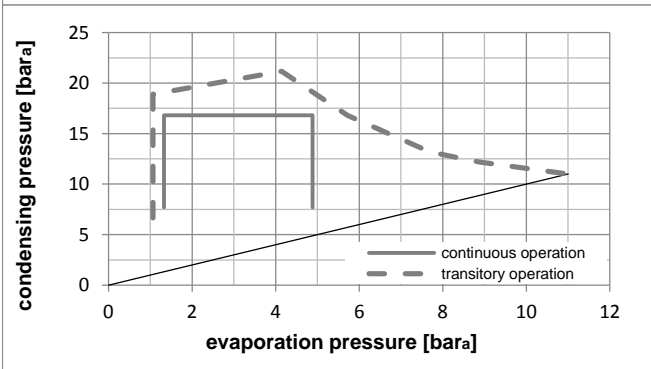
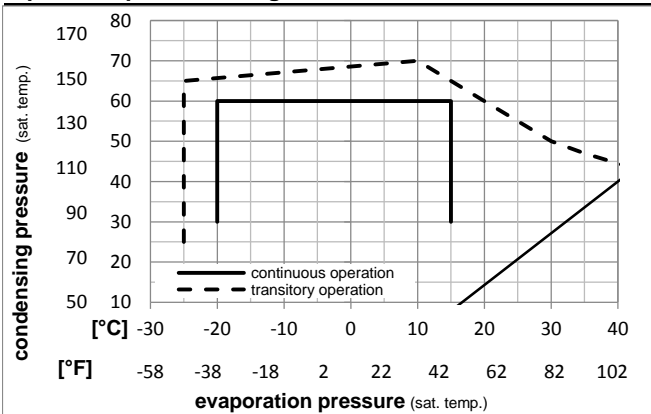


Ambient temperatures / system cooling

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: **105G7803**

Optimization + standard conditions

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

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Power consumption				
					Return gas temp.					Current consumption				
					Liquid temp.					Ref. mass flow				
					Cooling capacity					COP EER				
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m	
[°C]	[°C]	[°C]	[°C]	[°C]							[W]	[A]	[kg/h]	ASHRAE
[°F]	[°F]	[°F]	[°F]	[°F]										MBP
	-6,66	54,4	35	46,1	457,0	1561	393,3	1,64	5,61	1,41	278,3	1,96	9,97	ASHRAE
	20	130	95	115										MBP
	-10	55	32	55	353,4	1207	304,1	1,36	4,63	1,17	260,8	1,92	8,54	cecomaf
	14	131	89,6	131										MBP
	-10	45	20	45	399,9	1366	344,1	1,61	5,51	1,39	247,7	1,91	9,36	EN12900
	14	113	68	113										MBP
	-6,66	48,9	18,3	48,9	435,1	1486	374,5	1,61	5,51	1,39	269,7	1,94	10,75	ARI540
	20	120	65	120										MBP
	-10	45	32	45	414,8	1417	357,0	1,67	5,72	1,44	247,7	1,91	9,08	opt
	14	113	89,6	113										
	-25	45	32	45	190,4	650	163,9	1,05	3,60	0,91	180,7	1,77	4,12	opt
	-13	113	89,6	113										

Performance tables

220V/50Hz, RSIR, 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

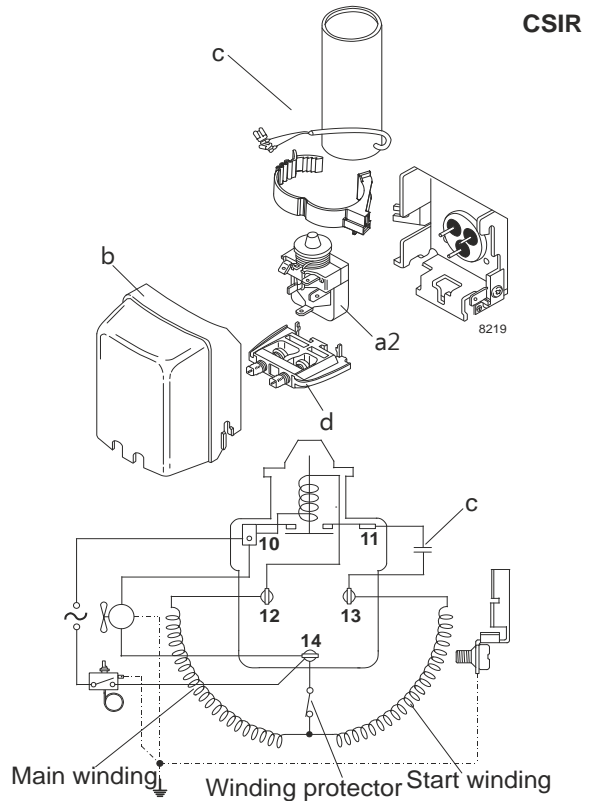
Model

Designation	NL8.4MF	220-240V/50Hz	Conf. 2	Sales code:	105G7803
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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

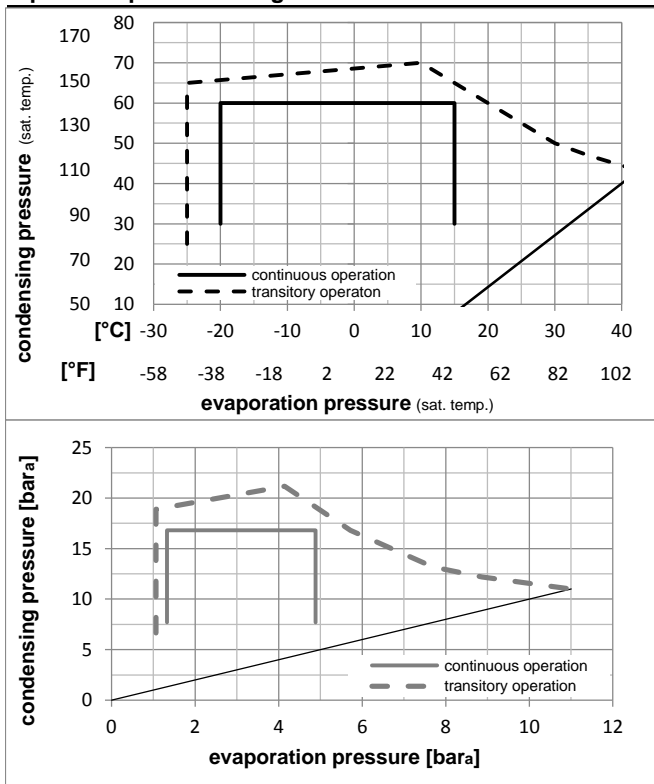


Ambient temperatures / system cooling

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: **105G7803**

Optimization + standard conditions

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]	[°C]	[°C]	[°C]	[°C]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
-6,66	54,4	35	46,1	457,0	1561	393,3	1,64	5,61	1,41	278,3	1,96	9,97	ASHRAE	MBP
[°F]	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
[°F]	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
[°F]	14	113	68	113										
-6,66	48,9	18,3	48,9	435,1	1486	374,5	1,61	5,51	1,39	269,7	1,94	10,75	ARI540	MBP
[°F]	20	120	65	120										
-10	45	32	45	414,8	1417	357,0	1,67	5,72	1,44	247,7	1,91	9,08	opt	
[°F]	14	113	89,6	113										
-25	45	32	45	190,4	650	163,9	1,05	3,60	0,91	180,7	1,77	4,12	opt	
[°F]	-13	113	89,6	113										

Performance tables

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

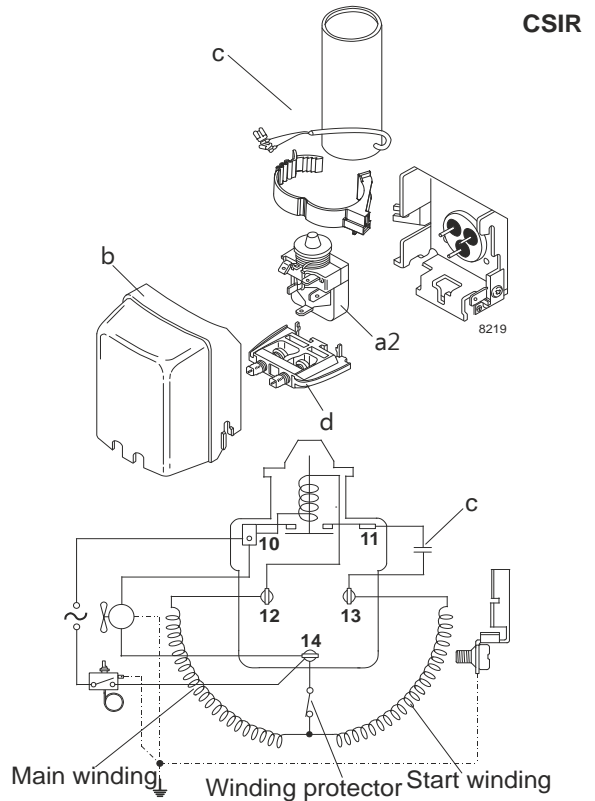
Model

Designation	NL8.4MF	208-230V/60Hz	Conf. 3	Sales code:	105G7803
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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	VDE CCC EAC UL

Electrical accessories / wiring diagram

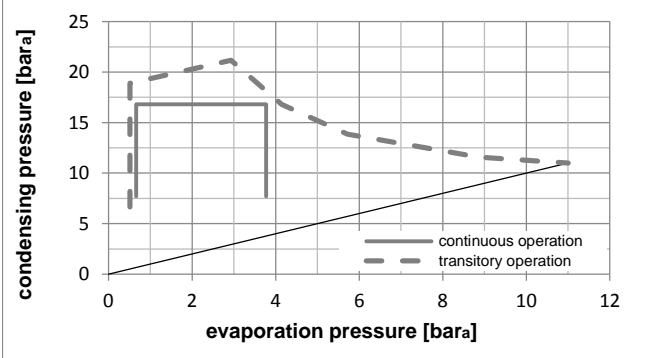
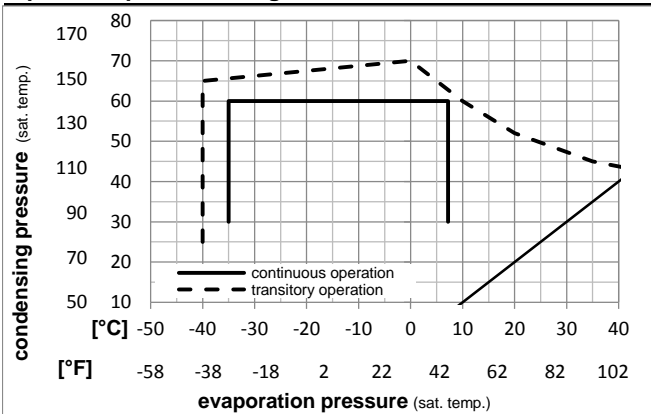


Ambient temperatures / system cooling

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: **105G7803**

Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			ASHRAE MBP				
	pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P1	I	Ref. mass flow ṁ						
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]					
	-6,66	20	54,4	130	35	95	46,1	115	546,8	1867	470,6	1,62	5,53	1,39	337,6	1,96	11,93	ASHRAE MBP
	-10	14	55	131	32	89,6	55	131	419,6	1433	361,1	1,35	4,61	1,16	310,9	1,86	10,15	cecomaf MBP
	-10	14	45	113	20	68	45	113	483,8	1652	416,4	1,65	5,63	1,42	293,4	1,80	11,33	EN12900 MBP
	-6,66	20	48,9	120	18,3	65	48,9	120	527,2	1800	453,7	1,62	5,55	1,40	324,6	1,92	13,02	ARI540 MBP
	-10	14	45	113	32	89,6	45	113	502,0	1714	432,0	1,71	5,84	1,47	293,4	1,80	10,99	opt
	-25	-13	45	113	32	89,6	45	113	227,0	775	195,3	1,19	4,05	1,02	191,2	1,46	4,92	opt

Performance tables

220V/60Hz, 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]	-35	-31	114,7	392	98,7	0,91	3,10	0,78	126,2	1,28	2,47
cond. pressure	-25	-13	227,0	775	195,3	1,19	4,05	1,02	191,2	1,46	4,92
pc= 45/113	-15	5	393,2	1343	338,4	1,52	5,19	1,31	259,0	1,68	8,57
return gas temp.	-10	14	502,0	1714	432,0	1,71	5,84	1,47	293,4	1,80	10,99
RGT= 32/90	-5	23	630,7	2154	542,8	1,92	6,57	1,65	328,0	1,94	13,87
liquid temp	0	32	781,5	2669	672,6	2,16	7,36	1,85	362,6	2,08	17,28
Tliq= 45/113	7,2	45	1041,9	3558	896,7	2,53	8,64	2,18	412,0	2,30	23,27
[°C / °F]	-35	-31	76,5	261	65,9	0,69	2,37	0,60	110,3	1,22	1,82
cond. pressure	-25	-13	178,6	610	153,7	0,95	3,24	0,82	188,0	1,45	4,27
pc= 55/131	-15	5	324,7	1109	279,4	1,21	4,12	1,04	269,3	1,72	7,82
return gas temp	-10	14	419,6	1433	361,1	1,35	4,61	1,16	310,9	1,86	10,15
RGT= 32/90	-5	23	532,0	1817	457,9	1,51	5,15	1,30	352,9	2,02	12,93
liquid temp	0	32	664,0	2268	571,5	1,68	5,74	1,45	395,1	2,19	16,24
Tliq= 55/131	7,2	45	893,0	3050	768,5	1,96	6,69	1,69	455,9	2,45	22,09