

## Single Pack NLE11MN 220-240V 50Hz CSIR

Codice Imballo Singolo: **195B4195**

Posizione	Titolo	Codice	Quantità
1	Compressor NLE11MN	105H6177	1
2	Starting relay	117U7005	1
3	Starting capacitor (80 $\mu$ F 220V, 6.3mm)	117U5015	1
4	Cord relief	103N1010	1
5	Cover	103N2010	1
6	Bolt joint for one compressor   M6   $\varnothing$ 16mm	118-1917	1

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## Model

Designation	<b>NLE11MN</b>	220-240V/50Hz 1~	Sales code:	<b>105H6177</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R290</b>
Oil viscosity	32cST	Displacement	11,15cm <sup>3</sup> / 0,68cu.in
Oil quantity	298cm <sup>3</sup> / 10,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	2360cm <sup>3</sup> / 79,8fl.oz		
Weight	11,8kg / 26lbs		
Motor protection	1# internal		
Winding resistance main	4,94Ω (at 25°C)		
Winding resistance aux	8,89Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



## General - Configurations with NLE11MN

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Motorconfiguration	CSIR	RSIR	RSCR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1	1
Voltage range	198-254V	198-254V	198-254V
Approvals	CCC, EAC, VDE	CCC, EAC, VDE	CCC, EAC, VDE
Starting torque	HST	LST	LST
Note	- / -		

## Applications with NLE11MN

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Refrigerant	R290	R290	R290
Application	MBP	MBP	MBP
System cooling	fan 3m/s	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK	OK
Long interval pull down	OK	OK	OK

## Electrical data - Configurations with NLE11MN

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Starting device type	relay	PTC	PTC
Run capacitor	-/-	-/-	4μF
Start capacitor	80μF	-/-	-/-
LRA (locked rotor amps / 4s)	13,65A	14,45A	14,2A
RLA (rated load amps / 1s)	2,8A	2,8A	2,5A
Cut in current	13,65A	19,4A	19,4A

## Model

Designation

**NLE11MN**

220-240V/50Hz 1~

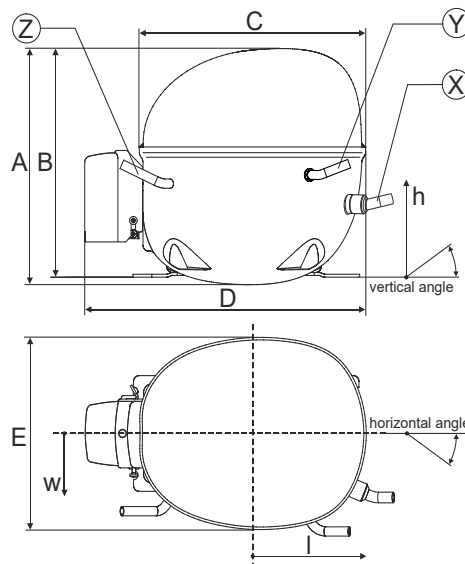
Sales code:

**105H6177**

## Compressor dimensions

Housing	A Height	203mm / 7,99in
	B Height	197mm / 7,76in
	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 6,11-6,29	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°	21°	155°
Position l/h/w	[mm]	132/69/57	94/102/81	-109/94/72
	[in]	5,2/2,7/2,2	3,7/4/3,2	-4,3/3,7/2,8
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		
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	
Snap-on   ø7,3   ø16mm	118-1947	118-1919

## Application notes

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

### Model

Designation	<b>NLE11MN</b>	<b>220-240V/50Hz</b>	Conf. 1	Sales code:	<b>105H6177</b>
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### Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	MBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC
	EAC
	VDE

### Electrical accessories / wiring diagram



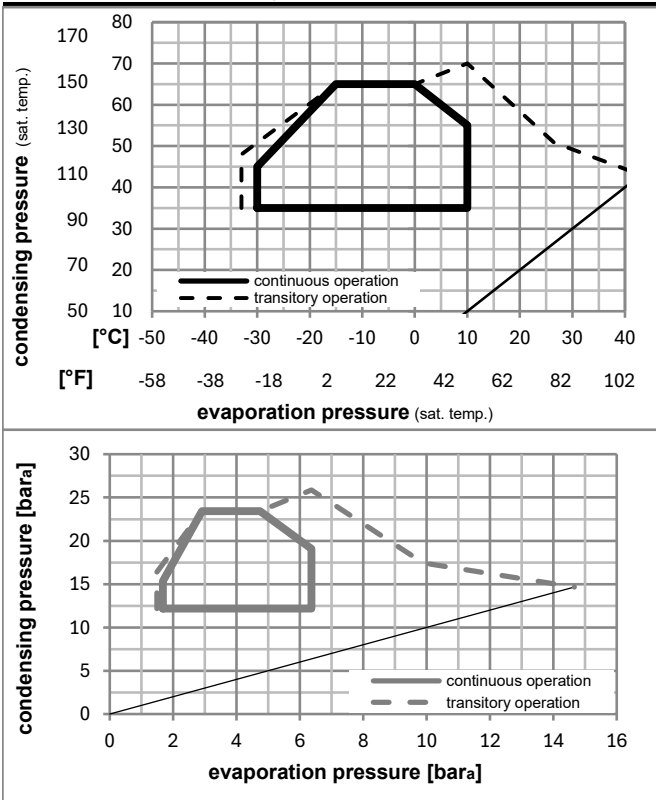
### Ambient/ machine room temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s

### Operation pressure range



### Components

a2	relay	117U7005
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2010
d	cord relief	103N1010

### Alternative components

b	plastic cover	103N2011
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## Model

Designation **NLE11MN** **220-240V/50Hz** Conf. 1 Sales code: **105H6177**

## Optimization + standard conditions

R290, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.		Liquid temp.		Cooling capacity			COP	EER	Power consumption		
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Current consumption		ṁ	Ref. mass flow			
[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[W]	[A]	[kg/h]				
[°C]	-7	54	35	46	981,8	3353	844,9	2,01	6,87	1,73	488,1	2,86	11,20	<b>ASHRAE MBP</b>						
[°F]	20	130	95	115																
[°C]	-10	55	32	55	781,6	2669	672,6	1,68	5,75	1,45	463,9	2,76	9,89	<b>cecomaf MBP</b>						
[°F]	14	131	90	131																
[°C]	-10	45	20	45	869,4	2969	748,2	2,06	7,03	1,77	422,5	2,63	10,67	<b>EN12900 MBP</b>						
[°F]	14	113	68	113																
[°C]	-7	49	18	49	922,9	3152	794,3	2,00	6,83	1,72	461,3	2,77	11,98	<b>ARI540 MBP</b>						
[°F]	20	120	65	120																
[°C]	-10	45	32	45	905,1	3091	778,9	2,14	7,32	1,84	422,5	2,63	10,35	<b>opt</b>						
[°F]	14	113	90	113																
[°C]	-25	45	32	45	489,3	1671	421,1	1,51	5,15	1,30	324,6	2,28	5,52	<b>opt</b>						
[°F]	-13	113	90	113																

## Performance tables

R290, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

	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]	-30	-22	390,2	1333	335,8	1,33	4,56	1,15	292,4	2,20	4,39
cond. pressure	-25	-13	489,3	1671	421,1	1,51	5,15	1,30	324,6	2,28	5,52
pc= 45/113	-15	5	745,7	2547	641,8	1,91	6,52	1,64	390,5	2,51	8,48
return gas temp.	-10	14	905,1	3091	778,9	2,14	7,32	1,84	422,5	2,63	10,35
RGT= 32/90	0	32	1291,2	4410	1111,2	2,69	9,19	2,32	479,9	2,85	14,98
liquid temp	5	41	1519,9	5191	1308,1	3,02	10,31	2,60	503,4	2,93	17,78
Tliq= 45/113	10	50	1773,7	6058	1526,5	3,40	11,60	2,92	522,2	2,98	20,96
[°C / °F]	-30	-22	339,5	1160	292,2	1,12	3,82	0,96	303,8	2,23	4,21
cond. pressure	-25	-13	423,0	1445	364,1	1,24	4,22	1,06	342,1	2,33	5,27
pc= 55/131	-15	5	643,1	2196	553,4	1,52	5,19	1,31	423,1	2,60	8,09
return gas temp	-10	14	781,6	2669	672,6	1,68	5,75	1,45	463,9	2,76	9,89
RGT= 32/90	0	32	1120,6	3827	964,4	2,07	7,07	1,78	541,4	3,08	14,39
liquid temp	5	41	1323,1	4519	1138,7	2,30	7,84	1,98	576,3	3,22	17,16
Tliq= 55/131	10	50	1549,0	5290	1333,1	2,55	8,71	2,20	607,3	3,34	20,31

### Model

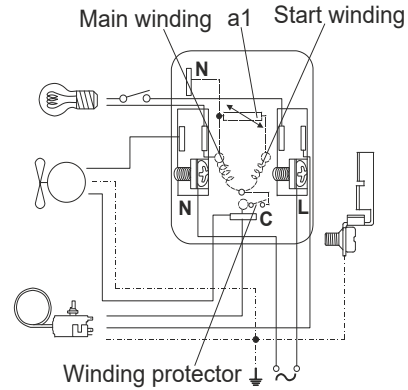
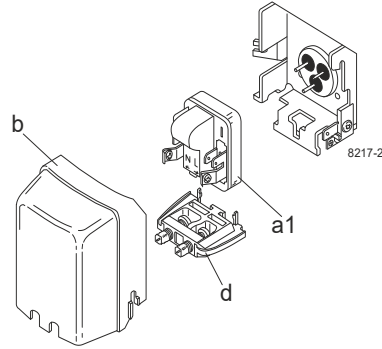
Designation	<b>NLE11MN</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105H6177</b>
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### Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	MBP
Voltage range	198-254V
Starting torque	LST
Approvals	CCC
	EAC
	VDE

### Electrical accessories / wiring diagram

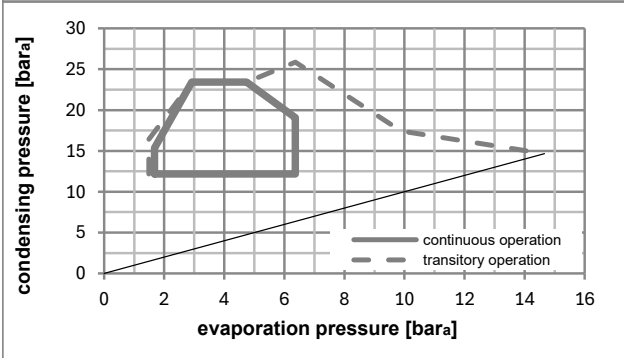
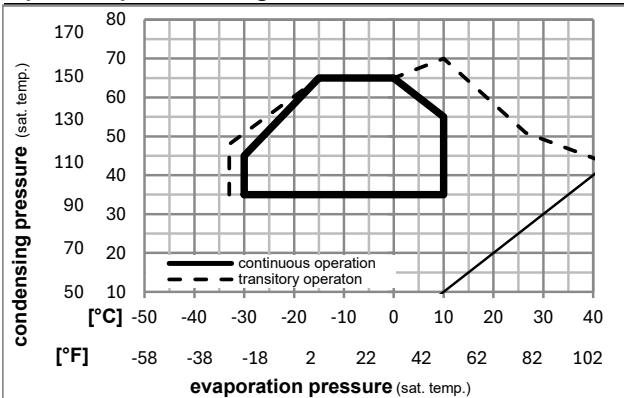
RSIR



### Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 3m/s

### Operation pressure range



### Components

a1	e-PTC starter (220V, 25Ohm, 4.8mm)	103N0050
b	plastic cover	103N2010
d	cord relief	103N1010

### Alternative components

b	plastic cover	103N2011
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### Model

Designation **NLE11MN** **220-240V/50Hz** Conf. 2 Sales code: **105H6177**

### Optimization + standard conditions

R290, 220V/50Hz, RSIR, fan 3m/s, CCC, EAC, VDE

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.				Liquid temp.						Current consumption			Ref. mass flow
		Cooling capacity				COP		EER		P1	I	m			
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-7	54	35	46	981,8	3353	844,9	2,01	6,87	1,73	488,1	2,86	11,20	<b>ASHRAE MBP</b>	
[°F]	20	130	95	115											
[°C]	-10	55	32	55	781,6	2669	672,6	1,68	5,75	1,45	463,9	2,76	9,89	<b>cecomaf MBP</b>	
[°F]	14	131	90	131											
[°C]	-10	45	20	45	869,4	2969	748,2	2,06	7,03	1,77	422,5	2,63	10,67	<b>EN12900 MBP</b>	
[°F]	14	113	68	113											
[°C]	-7	49	18	49	922,9	3152	794,3	2,00	6,83	1,72	461,3	2,77	11,98	<b>ARI540 MBP</b>	
[°F]	20	120	65	120											
[°C]	-10	45	32	45	905,1	3091	778,9	2,14	7,32	1,84	422,5	2,63	10,35	<b>opt</b>	
[°F]	14	113	90	113											
[°C]	-25	45	32	45	489,3	1671	421,1	1,51	5,15	1,30	324,6	2,28	5,52	<b>opt</b>	
[°F]	-13	113	90	113											

### Performance tables

R290, 220V/50Hz, RSIR, fan 3m/s, CCC, EAC, VDE

	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]	-30	-22	390,2	1333	335,8	1,33	4,56	1,15	292,4	2,20	4,39	
cond. pressure	-25	-13	489,3	1671	421,1	1,51	5,15	1,30	324,6	2,28	5,52	
pc= 45/113	-15	5	745,7	2547	641,8	1,91	6,52	1,64	390,5	2,51	8,48	
return gas temp.	-10	14	905,1	3091	778,9	2,14	7,32	1,84	422,5	2,63	10,35	
RGT= 32/90	0	32	1291,2	4410	1111,2	2,69	9,19	2,32	479,9	2,85	14,98	
liquid temp	5	41	1519,9	5191	1308,1	3,02	10,31	2,60	503,4	2,93	17,78	
Tliq= 45/113	10	50	1773,7	6058	1526,5	3,40	11,60	2,92	522,2	2,98	20,96	
[°C / °F]	-30	-22	339,5	1160	292,2	1,12	3,82	0,96	303,8	2,23	4,21	
cond. pressure	-25	-13	423,0	1445	364,1	1,24	4,22	1,06	342,1	2,33	5,27	
pc= 55/131	-15	5	643,1	2196	553,4	1,52	5,19	1,31	423,1	2,60	8,09	
return gas temp	-10	14	781,6	2669	672,6	1,68	5,75	1,45	463,9	2,76	9,89	
RGT= 32/90	0	32	1120,6	3827	964,4	2,07	7,07	1,78	541,4	3,08	14,39	
liquid temp	5	41	1323,1	4519	1138,7	2,30	7,84	1,98	576,3	3,22	17,16	
Tliq= 55/131	10	50	1549,0	5290	1333,1	2,55	8,71	2,20	607,3	3,34	20,31	

## Model

Designation	<b>NLE11MN</b>	<b>220-240V/50Hz</b>	<b>Conf. 3</b>	Sales code:	<b>105H6177</b>
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## Configuration

Motorconfiguration	RSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	MBP
Voltage range	198-254V
Starting torque	LST
Approvals	CCC
	EAC
	VDE

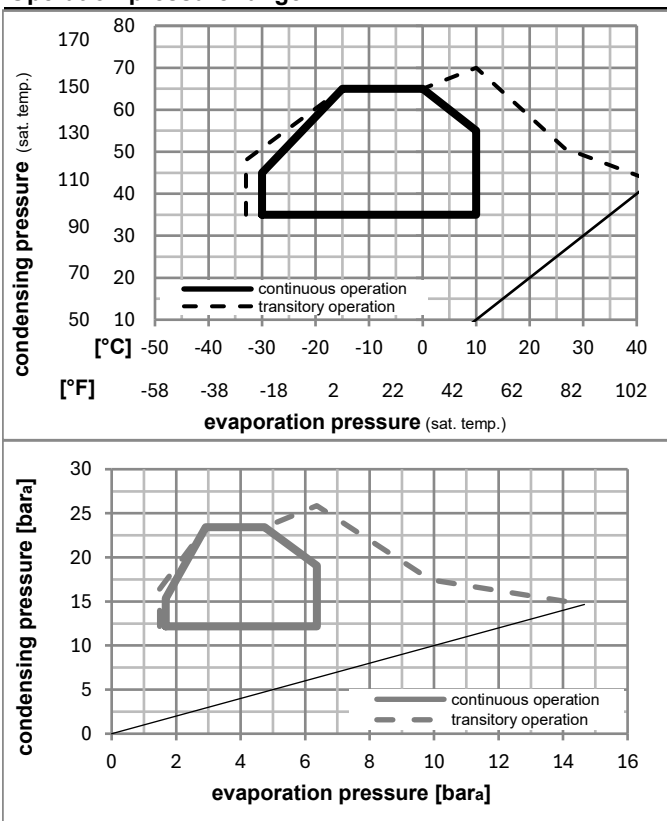
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 3m/s

## Operation pressure range



## Components

a1	e-PTC starter (220V, 250hm, 4.8mm)	103N0050
e	run capacitor (4μF, 4.8mm)	117-7119
b	plastic cover	103N2010
d	cord relief	103N1010
	bracket for run capacitor	117-0300
	screw M4x8mm	117-0301

## Alternative components

b	plastic cover	103N2011
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### Model

Designation **NLE11MN** **220-240V/50Hz** Conf. 3 Sales code: **105H6177**

### Optimization + standard conditions

R290, 220V/50Hz, RSCR, fan 3m/s, CCC, EAC, VDE

		Evaporating pressure (saturation temperature)				Cooling capacity						Power consumption			
		Condensing pressure (saturation temperature)				COP						Current consumption			
		Return gas temp.				EER						Ref. mass flow			
		Liquid temp.				P1						I			
		Cooling capacity				[W]						[A]			
		[W]				[Btu/h]						[kg/h]			
		[kcal/h]				[W/W]									
		[Btu/Wh]				[kcal/Wh]									
pe	pc	RGT	Tliq												
[°C]	[°C]	[°C]	[°C]		[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°F]	[°F]	[°F]	[°F]												
-7	54	35	46		986,3	3368	848,8	2,11	7,21	1,82	467,4	2,74	11,25		ASHRAE MBP
20	130	95	115												
-10	55	32	55		784,8	2680	675,4	1,77	6,03	1,52	444,2	2,64	9,93		cecomaf MBP
14	131	90	131												
-10	45	20	45		873,1	2982	751,4	2,16	7,37	1,86	404,7	2,52	10,72		EN12900 MBP
14	113	68	113												
-7	49	18	49		927,2	3167	798,0	2,10	7,17	1,81	441,8	2,65	12,04		ARI540 MBP
20	120	65	120												
-10	45	32	45		909,0	3104	782,3	2,25	7,67	1,93	404,7	2,52	10,40		opt
14	113	90	113												
-25	45	32	45		491,0	1677	422,5	1,58	5,41	1,36	309,9	2,18	5,54		opt
-13	113	90	113												

### Performance tables

R290, 220V/50Hz, RSCR, fan 3m/s, CCC, EAC, VDE

	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]	[W]	[A]	[kg/h]	[W]	[A]	[kg/h]
[°C / °F]	-30	-22	391,3	1336	336,7	1,40	4,79	1,21	278,9	2,10	4,40	278,9	2,10	4,40	278,9	2,10	4,40
cond. pressure	-25	-13	491,0	1677	422,5	1,58	5,41	1,36	309,9	2,18	5,54	309,9	2,18	5,54	309,9	2,18	5,54
pc= 45/113	-15	5	748,6	2556	644,2	2,00	6,84	1,72	373,8	2,40	8,52	373,8	2,40	8,52	373,8	2,40	8,52
return gas temp.	-10	14	909,0	3104	782,3	2,25	7,67	1,93	404,7	2,52	10,40	404,7	2,52	10,40	404,7	2,52	10,40
RGT= 32/90	0	32	1299,1	4437	1118,0	2,83	9,66	2,43	459,2	2,73	15,07	459,2	2,73	15,07	459,2	2,73	15,07
liquid temp	5	41	1531,4	5230	1317,9	3,18	10,87	2,74	480,9	2,80	17,92	480,9	2,80	17,92	480,9	2,80	17,92
Tliq= 45/113	10	50	1790,1	6113	1540,6	3,60	12,29	3,10	497,6	2,84	21,15	497,6	2,84	21,15	497,6	2,84	21,15
[°C / °F]	-30	-22	340,6	1163	293,1	1,18	4,01	1,01	289,8	2,13	4,22	289,8	2,13	4,22	289,8	2,13	4,22
cond. pressure	-25	-13	424,6	1450	365,4	1,30	4,44	1,12	326,8	2,22	5,29	326,8	2,22	5,29	326,8	2,22	5,29
pc= 55/131	-15	5	645,5	2205	555,5	1,59	5,44	1,37	405,0	2,49	8,12	405,0	2,49	8,12	405,0	2,49	8,12
return gas temp	-10	14	784,8	2680	675,4	1,77	6,03	1,52	444,2	2,64	9,93	444,2	2,64	9,93	444,2	2,64	9,93
RGT= 32/90	0	32	1127,3	3850	970,2	2,18	7,43	1,87	518,0	2,94	14,48	518,0	2,94	14,48	518,0	2,94	14,48
liquid temp	5	41	1333,0	4552	1147,2	2,42	8,27	2,08	550,5	3,07	17,28	550,5	3,07	17,28	550,5	3,07	17,28
Tliq= 55/131	10	50	1563,3	5339	1345,4	2,70	9,23	2,32	578,7	3,18	20,50	578,7	3,18	20,50	578,7	3,18	20,50



# NL Compressors





## Service/Repair – R600a, R290



8545

## 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)**

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