

## Single Pack NLE10CN 220-240V 50Hz CSIR

Single pack code number: **195B4104**

Position	Title	Code	Amount
1	Compressor NLE10CN	105H6175	1
2	Starting relay	117U7002	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>NLE10CN</b>	220-240V/50Hz 1~	Sales code:	<b>105H6175</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R290</b>
Oil viscosity	32cST	Displacement	10,09cm <sup>3</sup> / 0,62cu.in
Oil quantity	268cm <sup>3</sup> / 9,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	400g / 14,1oz		
Free gas volume comp.	2360cm <sup>3</sup> / 79,8fl.oz		
Weight	10,9kg / 24lbs		
Motor protection	1# internal		
Winding resistance main	7,79Ω (at 25°C)		
Winding resistance aux	18,39Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	120°C / 248°F		



## General - Configurations with NLE10CN

	<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	VDE, CCC, EAC	VDE, CCC, EAC	VDE, CCC, EAC
Starting torque	HST	LST	LST
Note	- / -		

## Applications with NLE10CN

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Refrigerant	R290	R290	R290
Application	LBP+MBP	LBP+MBP	LBP+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 NLE10CN

	<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)	12,25A	10,9A	12,25A
RLA (rated load amps / 1s)	2,58A	2,58A	2,27A
Cut in current	12,25A	15,8A	12,25A

## Model

Designation

**NLE10CN**

220-240V/50Hz 1~

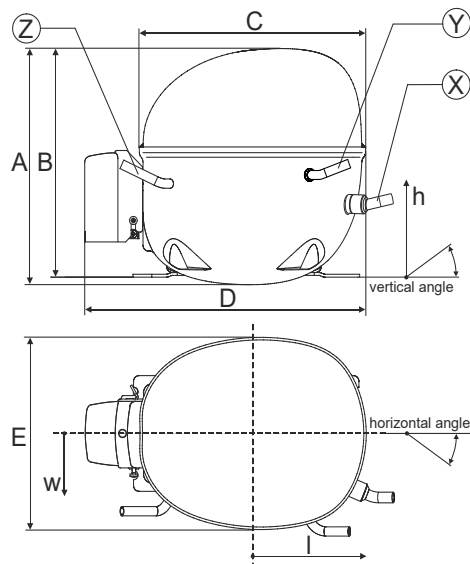
Sales code:

**105H6175**

## 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	[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	
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>NLE10CN</b>	<b>220-240V/50Hz</b>	Conf. 1	Sales code:	<b>105H6175</b>
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### Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	LBP+MBP
Voltage range	198-254V
Starting torque	HST
Approvals	VDE (2)
(1): Made in China	CCC (1),(2)
(2): Made in Slovakia	EAC (1),(2)

### Electrical accessories / wiring diagram



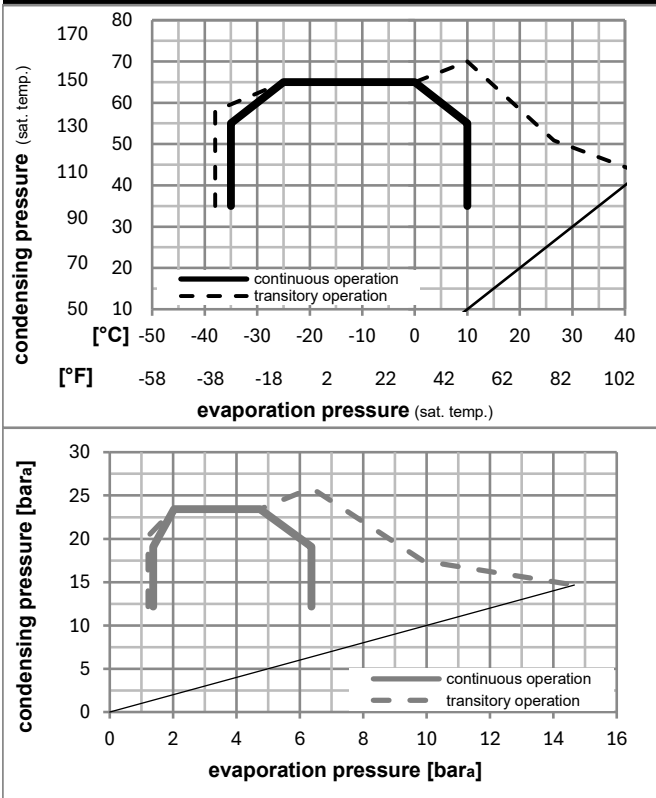
### Ambient/ machine room temperatures minimum /maximum

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	117U7002
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	<b>NLE10CN</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>105H6175</b>
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## Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		ASHRAE LBP					
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m						
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]					
	-23	-10	54	130	32	90	32	90	485,4	1658	417,7	1,47	5,00	1,26	331,3	2,15	4,92	ASHRAE LBP
	-25	-13	55	131	32	90	55	131	362,5	1238	312,0	1,14	3,88	0,98	318,8	2,11	4,51	cecomaf LBP
	-35	-31	40	104	20	68	40	104	285,5	975	245,7	1,23	4,21	1,06	231,7	1,87	3,26	EN12900 LBP
	-7	20	54	130	35	95	46	115	873,2	2982	751,5	1,89	6,44	1,62	462,7	2,62	9,96	ASHRAE MBP
	-10	14	55	131	32	90	55	131	693,0	2367	596,4	1,58	5,39	1,36	439,1	2,53	8,77	cecomaf MBP
	-10	14	45	113	20	68	45	113	781,1	2667	672,2	1,96	6,70	1,69	398,0	2,39	9,59	EN12900 MBP

## Performance tables

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

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]		[Btu/Wh]	[kcal/Wh]			
[°C / °F]	-35	-31	274,0	936	235,8	1,16	3,96	1,00	236,0	1,89	3,07
cond. pressure	-25	-13	436,9	1492	376,0	1,45	4,94	1,25	301,9	2,06	4,93
pc= 45/113	-15	5	668,8	2284	575,6	1,82	6,21	1,57	367,6	2,28	7,61
return gas temp.	-10	14	813,1	2777	699,8	2,04	6,98	1,76	398,0	2,39	9,30
RGT= 32/90	0	32	1163,7	3974	1001,5	2,59	8,85	2,23	449,2	2,58	13,50
liquid temp	5	41	1371,8	4685	1180,6	2,93	10,01	2,52	468,2	2,65	16,05
Tliq= 45/113	10	50	1603,3	5475	1379,8	3,33	11,37	2,87	481,5	2,70	18,95
[°C / °F]	-35	-31	215,5	736	185,4	0,88	3,01	0,76	244,6	1,91	2,66
cond. pressure	-25	-13	362,5	1238	312,0	1,14	3,88	0,98	318,8	2,11	4,51
pc= 55/131	-15	5	566,9	1936	487,9	1,42	4,85	1,22	399,1	2,38	7,13
return gas temp	-10	14	693,0	2367	596,4	1,58	5,39	1,36	439,1	2,53	8,77
RGT= 32/90	0	32	998,3	3409	859,2	1,94	6,63	1,67	514,5	2,82	12,82
liquid temp	5	41	1179,4	4028	1015,0	2,15	7,35	1,85	547,9	2,96	15,29
Tliq= 55/131	10	50	1380,9	4716	1188,4	2,39	8,17	2,06	577,2	3,09	18,11

## Model

Designation	<b>NLE10CN</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105H6175</b>
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## Configuration

Motorconfiguration	RSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	LBP+MBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE (2)
(1): Made in China	CCC (1),(2)
(2): Made in Slovakia	EAC (1),(2)

## Electrical accessories / wiring diagram

RSIR



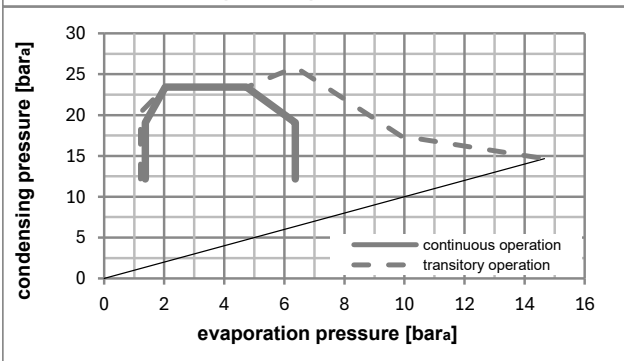
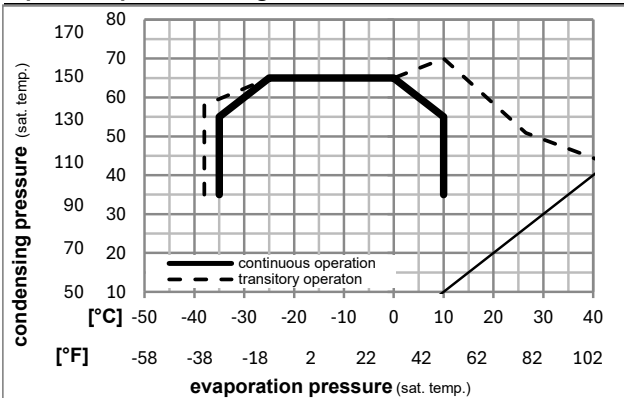
## Ambient/ machine room temperatures minimum /maximum

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	<b>NLE10CN</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105H6175</b>
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### Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		ASHRAE LBP	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				I	m		
	[°C]	[°F]	[°C]	[°C]				[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
	-23	54	32	32	485,4	1658	417,7	1,47	5,00	1,26	331,3	2,15	4,92	ASHRAE LBP
	-10	130	90	90										
	-25	55	32	55	362,5	1238	312,0	1,14	3,88	0,98	318,8	2,11	4,51	cecomaf LBP
	-13	131	90	131										
	-35	40	20	40	285,5	975	245,7	1,23	4,21	1,06	231,7	1,87	3,26	EN12900 LBP
	-31	104	68	104										
	-7	54	35	46	873,2	2982	751,5	1,89	6,44	1,62	462,7	2,62	9,96	ASHRAE MBP
	20	130	95	115										
	-10	55	32	55	693,0	2367	596,4	1,58	5,39	1,36	439,1	2,53	8,77	cecomaf MBP
	14	131	90	131										
	-10	45	20	45	781,1	2667	672,2	1,96	6,70	1,69	398,0	2,39	9,59	EN12900 MBP
	14	113	68	113										

### Performance tables

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

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						
[°C / °F]	-35	-31	274,0	936	235,8	1,16	3,96	1,00	236,0	1,89	3,07
cond. pressure	-25	-13	436,9	1492	376,0	1,45	4,94	1,25	301,9	2,06	4,93
pc= 45/113	-15	5	668,8	2284	575,6	1,82	6,21	1,57	367,6	2,28	7,61
return gas temp.	-10	14	813,1	2777	699,8	2,04	6,98	1,76	398,0	2,39	9,30
RGT= 32/90	0	32	1163,7	3974	1001,5	2,59	8,85	2,23	449,2	2,58	13,50
liquid temp	5	41	1371,8	4685	1180,6	2,93	10,01	2,52	468,2	2,65	16,05
Tliq= 45/113	10	50	1603,3	5475	1379,8	3,33	11,37	2,87	481,5	2,70	18,95
[°C / °F]	-35	-31	215,5	736	185,4	0,88	3,01	0,76	244,6	1,91	2,66
cond. pressure	-25	-13	362,5	1238	312,0	1,14	3,88	0,98	318,8	2,11	4,51
pc= 55/131	-15	5	566,9	1936	487,9	1,42	4,85	1,22	399,1	2,38	7,13
return gas temp	-10	14	693,0	2367	596,4	1,58	5,39	1,36	439,1	2,53	8,77
RGT= 32/90	0	32	998,3	3409	859,2	1,94	6,63	1,67	514,5	2,82	12,82
liquid temp	5	41	1179,4	4028	1015,0	2,15	7,35	1,85	547,9	2,96	15,29
Tliq= 55/131	10	50	1380,9	4716	1188,4	2,39	8,17	2,06	577,2	3,09	18,11

## Model

Designation	<b>NLE10CN</b>	<b>220-240V/50Hz</b>	<b>Conf. 3</b>	Sales code:	<b>105H6175</b>
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## Configuration

Motorconfiguration	RSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	LBP+MBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE (2)
	(1): Made in China
	CCC (1),(2)
	EAC (1),(2)

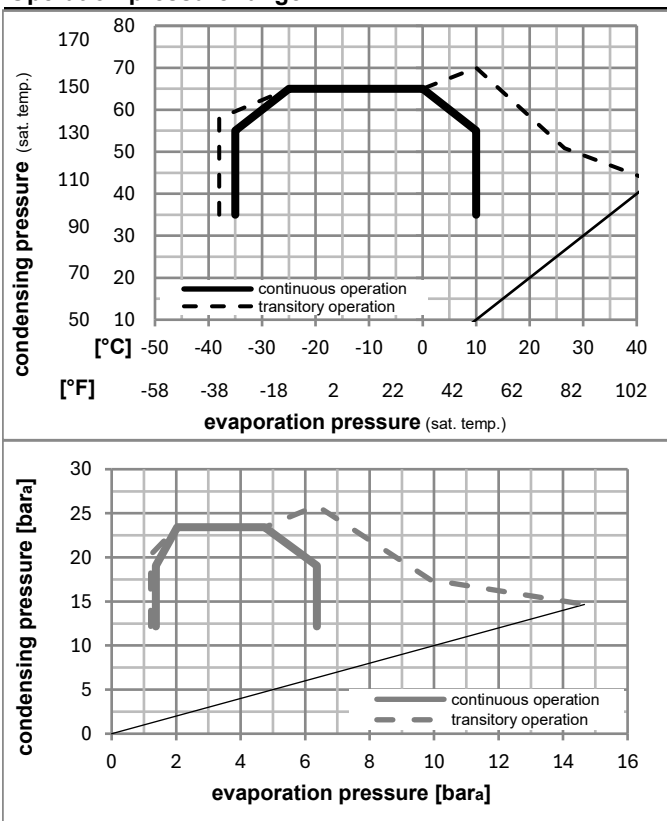
## Electrical accessories / wiring diagram



## 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	<b>NLE10CN</b>	<b>220-240V/50Hz</b>	<b>Conf. 3</b>	Sales code:	<b>105H6175</b>
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## Optimization + standard conditions

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

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	P1	Power consumption		Ref. mass flow	
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				[W]	[A]		
[°C]	-23	54	32	32	490,2	1674	421,9	1,54	5,24	1,32	319,3	1,88	4,96	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	366,2	1251	315,1	1,19	4,07	1,03	307,3	1,84	4,56	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	288,3	985	248,1	1,27	4,33	1,09	227,4	1,43	3,29	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-7	54	35	46	881,9	3012	759,0	1,99	6,79	1,71	443,7	2,30	10,06	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	700,0	2391	602,4	1,66	5,67	1,43	421,4	2,22	8,85	cecomaf MBP
[°F]	14	131	90	131										
[°C]	-10	45	20	45	788,9	2694	678,9	2,06	7,03	1,77	383,5	2,03	9,69	EN12900 MBP
[°F]	14	113	68	113										

## Performance tables

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

	pe		Cooling capacity			COP	EER	P1	I	m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]						[W/W]
[°C / °F]	-35	-31	276,7	945	238,2	1,20	4,08	1,03	231,6	1,46	3,10
cond. pressure	-25	-13	441,2	1507	379,7	1,51	5,14	1,30	293,1	1,72	4,98
pc= 45/113	-15	5	675,5	2307	581,3	1,90	6,50	1,64	354,8	1,94	7,68
return gas temp.	-10	14	821,3	2805	706,8	2,14	7,31	1,84	383,5	2,03	9,40
RGT= 32/90	0	32	1175,3	4014	1011,5	2,72	9,29	2,34	432,2	2,19	13,63
liquid temp	5	41	1385,5	4732	1192,4	3,08	10,51	2,65	450,4	2,24	16,21
Tliq= 45/113	10	50	1619,3	5530	1393,6	3,49	11,94	3,01	463,3	2,29	19,13
[°C / °F]	-35	-31	217,6	743	187,3	0,92	3,15	0,79	236,0	1,59	2,69
cond. pressure	-25	-13	366,2	1251	315,1	1,19	4,07	1,03	307,3	1,84	4,56
pc= 55/131	-15	5	572,6	1955	492,8	1,49	5,10	1,28	383,6	2,10	7,20
return gas temp	-10	14	700,0	2391	602,4	1,66	5,67	1,43	421,4	2,22	8,85
RGT= 32/90	0	32	1008,3	3444	867,7	2,05	7,00	1,76	491,8	2,47	12,95
liquid temp	5	41	1191,2	4068	1025,2	2,28	7,78	1,96	522,6	2,59	15,45
Tliq= 55/131	10	50	1394,7	4763	1200,3	2,54	8,67	2,18	549,4	2,71	18,29

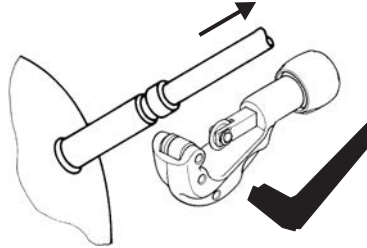


# NL Compressors





## 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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