

## Single Pack NLE8.8CNT 208-230V 60Hz CSIR

Codice Imballo Singolo: **195B4331**

Posizione	Titolo	Codice	Quantità
1	Compressor NLE8.8CNT	105H6088	1
2	Starting relay	117U7022	1
3	Starting capacitor (100 $\mu$ F 260V, 6.3mm)	117U5381	1
4	Cord relief	103N1010	1
5	Cover	103N2011	1
6	Bolt joint for one compressor   M6   $\varnothing$ 16mm	118-1917	1

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## Model

Designation	<b>NLE8.8CNT</b>	208-230V/60Hz 1~	Sales code:	<b>105H6088</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R290</b>
Oil viscosity	32cST	Displacement	8,76cm <sup>3</sup> / 0,53cu.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	11,1kg / 24,5lbs		
Motor protection	1# internal		
Winding resistance main	6,53Ω (at 25°C)		
Winding resistance aux	7,45Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	120°C / 248°F		



## General - Configurations with NLE8.8CNT

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Motorconfiguration	CSIR	RSIR	RSCR
Power supply (nominal)	208-230V/60Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1
Voltage range	187-253V	187-253V	187-253V
Approvals	UL, CB	UL, CB	UL, CB
Starting torque	HST	LST	LST
Note	- / -		

## Applications with NLE8.8CNT

	<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 NLE8.8CNT

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>
Starting device type	relay	PTC	PTC
Run capacitor	-/-	-/-	4μF
Start capacitor	100μF	-/-	-/-
LRA (locked rotor amps / 4s)	15,5A	14,1A	14,1A
RLA (rated load amps / 1s)	3A	3A	2,7A
Cut in current	15,5A	19,8A	19,8A

## Model

Designation

**NLE8.8CNT**

208-230V/60Hz 1~

Sales code:

**105H6088**

## 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 6,41-6,59	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°	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



### 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

## Application notes

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

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

### Model

Designation	<b>NLE8.8CNT</b>	<b>208-230V/60Hz</b>	Conf. 1	Sales code:	<b>105H6088</b>
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### Configuration

Motorconfiguration	CSIR	
Power supply (nominal)	208-230V/60Hz 1~	
Refrigerant	R290	
Application	LBP+MBP	
Voltage range	187-253V	
Starting torque	HST	
Approvals	UL	SA3693
	CB	

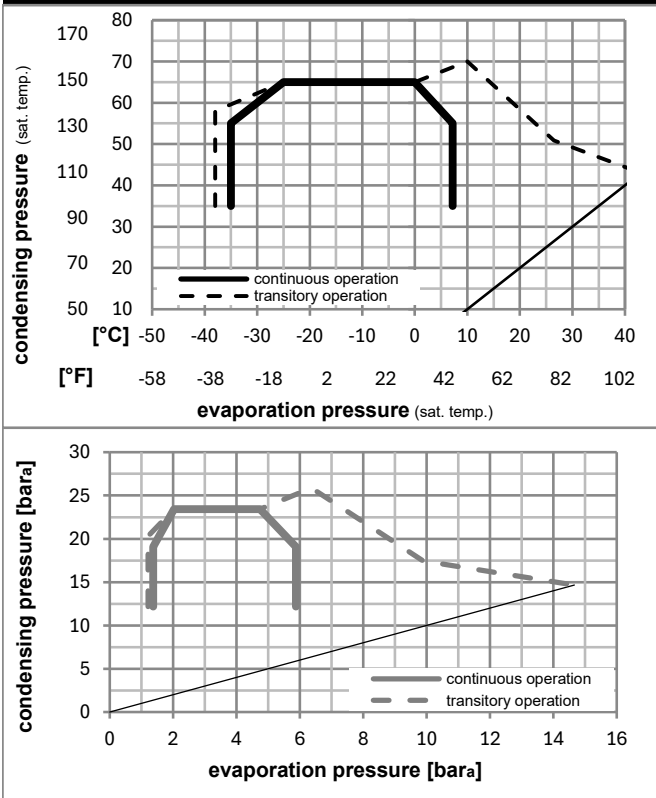
### Electrical accessories / wiring diagram



### 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	117U7022
c	start capacitor (100µF, 82kOhm)	117U5381
b	plastic cover	103N2011
d	cord relief	103N1010

### Model

Designation **NLE8.8CNT** **208-230V/60Hz** Conf. 1 Sales code: **105H6088**

### Optimization + standard conditions

R290, 230V/60Hz, CSIR, fan 3m/s, UL, CB

	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]	-23	54	32	32	510,3	1743	439,1	1,56	5,32	1,34	327,7	2,12	5,17	
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	380,9	1301	327,8	1,20	4,11	1,04	316,3	2,08	4,74	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	299,5	1023	257,7	1,22	4,18	1,05	244,6	1,91	3,42	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-7	54	35	46	914,9	3125	787,4	2,05	6,99	1,76	447,0	2,52	10,44	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	727,7	2485	626,3	1,71	5,84	1,47	425,8	2,44	9,21	cecomaf MBP
[°F]	14	131	90	131										
[°C]	-10	45	20	45	806,8	2755	694,3	2,05	7,01	1,77	393,1	2,33	9,91	EN12900 MBP
[°F]	14	113	68	113										

### Performance tables

R290, 230V/60Hz, CSIR, fan 3m/s, UL, CB

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]		[Btu/Wh]	[kcal/Wh]			
[°C / °F]	-35	-31	285,2	974	245,4	1,15	3,94	0,99	247,4	1,91	3,20
cond. pressure	-23	-10	485,7	1659	418,0	1,55	5,28	1,33	314,3	2,08	5,48
pc= 45/113	-15	5	690,2	2357	594,0	1,89	6,47	1,63	364,5	2,24	7,85
return gas temp.	-9	15	857,8	2930	738,3	2,17	7,40	1,86	396,1	2,34	9,82
RGT= 32/90	-4	25	1052,5	3594	905,7	2,48	8,47	2,13	424,4	2,44	12,14
liquid temp	0	32	1205,5	4117	1037,5	2,73	9,33	2,35	441,4	2,50	13,98
Tliq= 45/113	7,2	45	1528,8	5221	1315,7	3,29	11,23	2,83	464,8	2,59	17,96
[°C / °F]	-35	-31	221,6	757	190,7	0,89	3,04	0,77	248,9	1,91	2,74
cond. pressure	-23	-10	412,7	1409	355,2	1,26	4,29	1,08	328,4	2,12	5,15
pc= 55/131	-15	5	596,2	2036	513,1	1,53	5,22	1,32	389,7	2,32	7,50
return gas temp	-9	15	743,4	2539	639,8	1,73	5,91	1,49	429,8	2,46	9,41
RGT= 32/90	-4	25	912,2	3115	785,1	1,95	6,67	1,68	467,3	2,59	11,64
liquid temp	0	32	1044,2	3566	898,6	2,13	7,26	1,83	491,3	2,68	13,41
Tliq= 55/131	7,2	45	1321,3	4512	1137,1	2,50	8,53	2,15	528,9	2,83	17,21

## Model

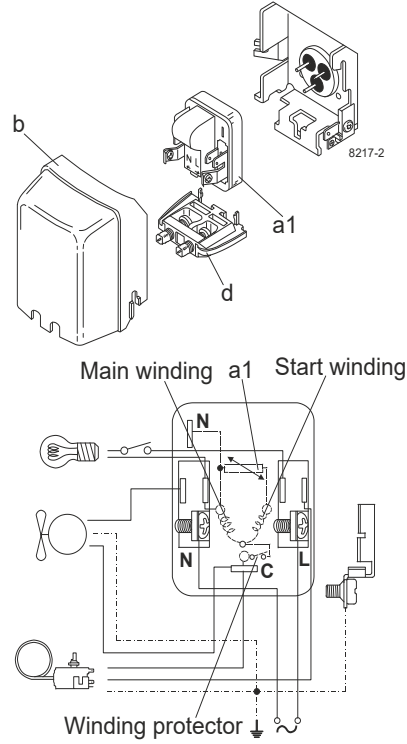
Designation	<b>NLE8.8CNT</b>	<b>208-230V/60Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105H6088</b>
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## Configuration

Motorconfiguration	RSIR	
Power supply (nominal)	208-230V/60Hz 1~	
Refrigerant	R290	
Application	LBP+MBP	
Voltage range	187-253V	
Starting torque	LST	
Approvals	UL	SA3693
	CB	

## Electrical accessories / wiring diagram

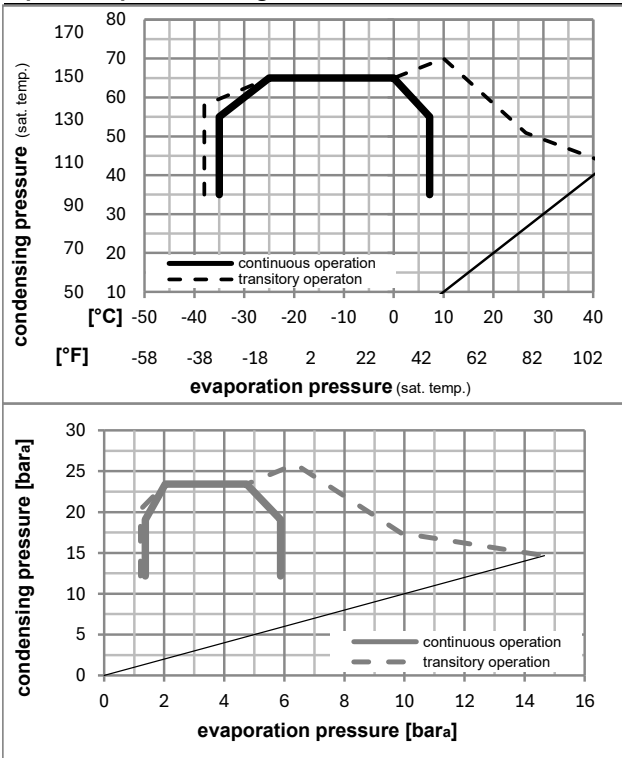
RSIR



## 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	103N2011
d	cord relief	103N1010

### Model

Designation	<b>NLE8.8CNT</b>	<b>208-230V/60Hz</b>	<b>Conf. 2</b>	Sales code:	<b>105H6088</b>
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### Optimization + standard conditions

R290, 230V/60Hz, RSIR, fan 3m/s, UL, CB

	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	Power consumption				
	Condensing pressure (saturation temperature)		Return gas temp.		Liquid temp.	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow
	pe	pc	RGT	Tliq								[W]	[A]	[kg/h]
[°C]	-23	54	32	32	510,3	1743	439,1	1,56	5,32	1,34	327,7	2,12	5,17	ASHRAE LBP
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	380,9	1301	327,8	1,20	4,11	1,04	316,3	2,08	4,74	cecomaf LBP
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	299,5	1023	257,7	1,22	4,18	1,05	244,6	1,91	3,42	EN12900 LBP
[°F]	-31	104	68	104										
[°C]	-7	54	35	46	914,9	3125	787,4	2,05	6,99	1,76	447,0	2,52	10,44	ASHRAE MBP
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[°F]	14	113	68	113										

### Performance tables

R290, 230V/60Hz, RSIR, fan 3m/s, UL, CB

	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	285,2	974	245,4	1,15	3,94	0,99	247,4	1,91	3,20	
cond. pressure	-23	-10	485,7	1659	418,0	1,55	5,28	1,33	314,3	2,08	5,48	
pc= 45/113	-15	5	690,2	2357	594,0	1,89	6,47	1,63	364,5	2,24	7,85	
return gas temp.	-9	15	857,8	2930	738,3	2,17	7,40	1,86	396,1	2,34	9,82	
RGT= 32/90	-4	25	1052,5	3594	905,7	2,48	8,47	2,13	424,4	2,44	12,14	
liquid temp	0	32	1205,5	4117	1037,5	2,73	9,33	2,35	441,4	2,50	13,98	
Tliq= 45/113	7,2	45	1528,8	5221	1315,7	3,29	11,23	2,83	464,8	2,59	17,96	
[°C / °F]	-35	-31	221,6	757	190,7	0,89	3,04	0,77	248,9	1,91	2,74	
cond. pressure	-23	-10	412,7	1409	355,2	1,26	4,29	1,08	328,4	2,12	5,15	
pc= 55/131	-15	5	596,2	2036	513,1	1,53	5,22	1,32	389,7	2,32	7,50	
return gas temp	-9	15	743,4	2539	639,8	1,73	5,91	1,49	429,8	2,46	9,41	
RGT= 32/90	-4	25	912,2	3115	785,1	1,95	6,67	1,68	467,3	2,59	11,64	
liquid temp	0	32	1044,2	3566	898,6	2,13	7,26	1,83	491,3	2,68	13,41	
Tliq= 55/131	7,2	45	1321,3	4512	1137,1	2,50	8,53	2,15	528,9	2,83	17,21	

## Model

Designation	<b>NLE8.8CNT</b>	<b>208-230V/60Hz</b>	<b>Conf. 3</b>	Sales code:	<b>105H6088</b>
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## Configuration

Motorconfiguration	RSCR	
Power supply (nominal)	208-230V/60Hz 1~	
Refrigerant	R290	
Application	LBP+MBP	
Voltage range	187-253V	
Starting torque	LST	
Approvals	UL	SA3693
	CB	

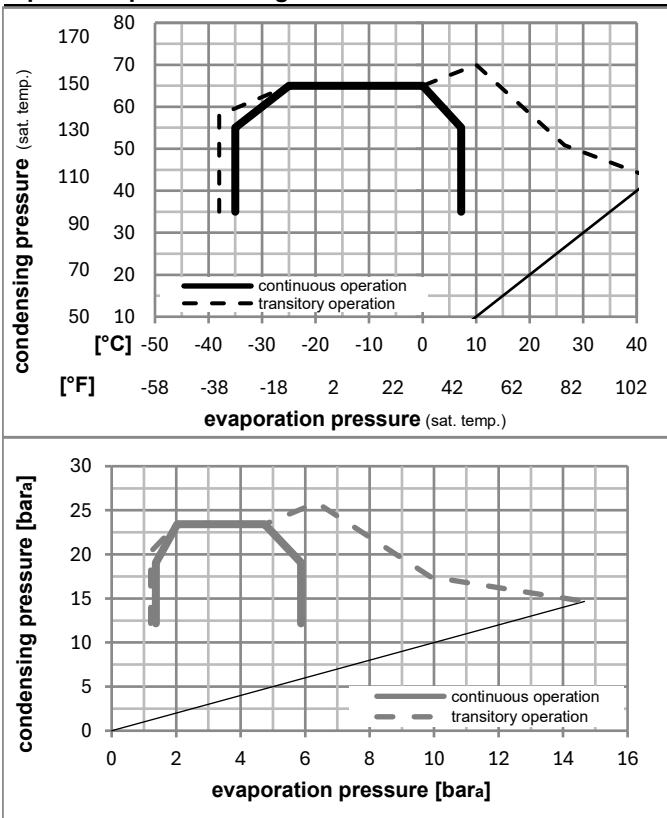
## Electrical accessories / wiring diagram



## 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	103N2011
d	cord relief	103N1010
	bracket for run capacitor	117-0300
	screw M4x8mm	117-0301



## Model

Designation	<b>NLE8.8CNT</b>	<b>208-230V/60Hz</b>	<b>Conf. 3</b>	Sales code:	<b>105H6088</b>
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## Optimization + standard conditions

R290, 230V/60Hz, RSCR, fan 3m/s, UL, CB

		Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	Power consumption				
		Condensing pressure (saturation temperature)		Return gas temp.	Liquid temp.	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow	
[°C]	[°F]	pe	pc	RGT	Tliq							[W]	[A]	[kg/h]	
-23	-10	54	32	32		511,4	1746	440,1	1,63	5,57	1,40	313,4	1,76	5,18	ASHRAE LBP
55	131	32	55			379,6	1296	326,7	1,26	4,29	1,08	302,1	1,73	4,73	cecomaf LBP
40	104	20	40			301,6	1030	259,5	1,29	4,40	1,11	234,3	1,53	3,45	EN12900 LBP
54	130	35	46			917,4	3133	789,5	2,16	7,37	1,86	425,0	2,17	10,46	ASHRAE MBP
55	131	32	55			731,4	2498	629,5	1,80	6,16	1,55	405,6	2,10	9,25	cecomaf MBP
45	113	20	45			804,1	2746	692,0	2,16	7,37	1,86	372,6	1,98	9,87	EN12900 MBP

## Performance tables

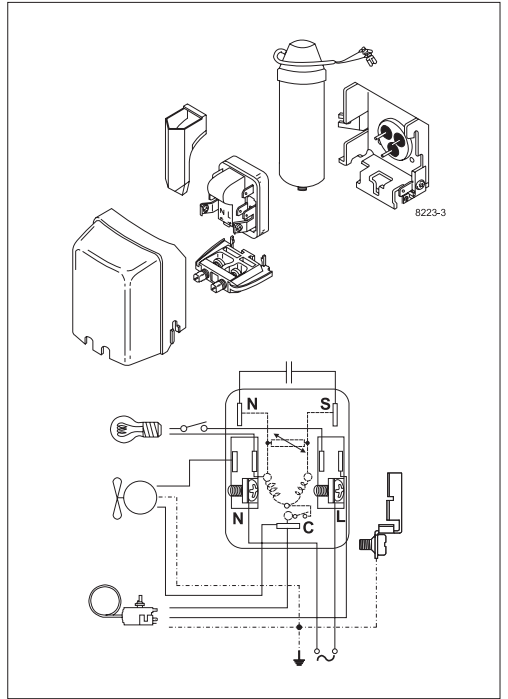
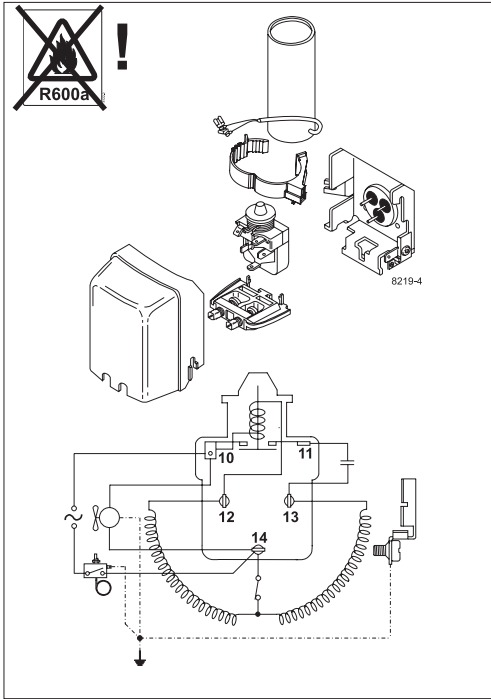
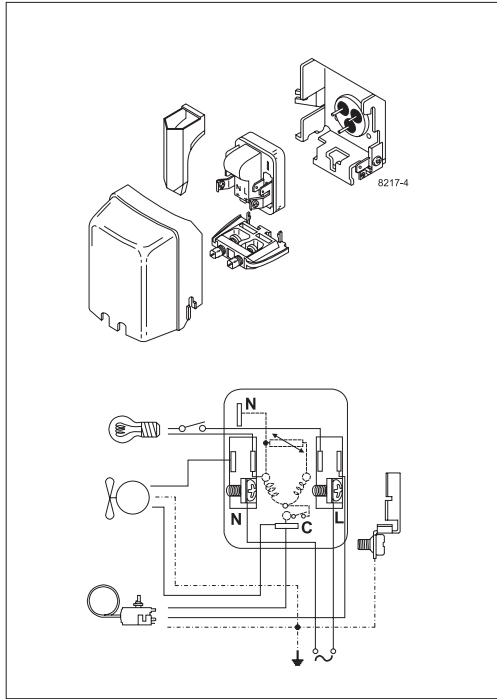
R290, 230V/60Hz, RSCR, fan 3m/s, UL, CB

	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	282,6	965	243,2	1,19	4,08	1,03	236,6	1,53	3,17	
cond. pressure	-23	-10	490,5	1675	422,1	1,63	5,57	1,40	300,7	1,72	5,54	
pc= 45/113	-15	5	690,8	2359	594,5	1,99	6,81	1,72	346,5	1,88	7,86	
return gas temp.	-9	15	854,7	2919	735,6	2,28	7,78	1,96	375,4	1,99	9,78	
RGT= 32/90	-4	25	1046,7	3575	900,8	2,60	8,89	2,24	402,0	2,09	12,07	
liquid temp	0	32	1199,6	4097	1032,4	2,87	9,79	2,47	418,7	2,15	13,91	
Tliq= 45/113	7,2	45	1528,2	5219	1315,2	3,44	11,74	2,96	444,6	2,25	17,96	
[°C / °F]	-35	-31	197,9	676	170,3	0,85	2,91	0,73	232,1	1,52	2,45	
cond. pressure	-23	-10	413,2	1411	355,6	1,32	4,50	1,13	313,9	1,77	5,15	
pc= 55/131	-15	5	600,4	2050	516,7	1,61	5,51	1,39	372,2	1,97	7,55	
return gas temp	-9	15	747,0	2551	642,9	1,83	6,23	1,57	409,3	2,11	9,46	
RGT= 32/90	-4	25	914,9	3125	787,4	2,06	7,04	1,77	444,0	2,25	11,68	
liquid temp	0	32	1046,9	3575	900,9	2,24	7,67	1,93	466,4	2,34	13,45	
Tliq= 55/131	7,2	45	1327,7	4534	1142,6	2,64	9,02	2,27	502,7	2,49	17,30	



8238-20

# 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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