Technical Data Compressor

SECOP

Model

Designation			Sales code:
	NL9CN	**220-240V/50Hz 1~**	**105H6780**

Compressor design

Oil type	Polyolester	Refrigerant(s)	**R290**
Oil viscosity	32cST	Displacement	8,35cm³ / 0,51cu.in
Oil quantity	268cm³ / 9,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	150g / 5,3oz		
Free gas volume comp.	2360cm³ / 79,8fl.oz		
Weight	10,5kg / 23,1lbs		
Motor protection	1# internal		
Winding resistance main	8,7Ω (at 25°C)		
Winding resistance aux	13,8Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		

General - Configurations with NL9CN

	Conf. 1	**Conf. 2**	**Conf. 3**
Motorconfiguration	RSIR	RSCR	CSIR
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	LST	LST	HST
Note	- / -		

Applications with NL9CN

	Conf. 1	**Conf. 2**	**Conf. 3**
Refrigerant	R290	R290	R290
Application	LBP+MBP	LBP+MBP	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 NL9CN

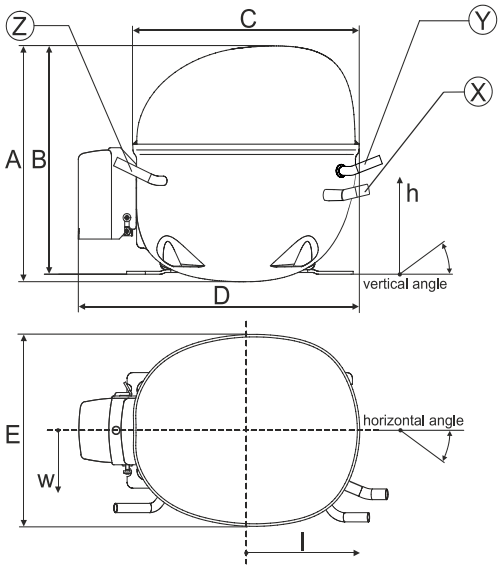
	Conf. 1	**Conf. 2**	**Conf. 3**
Starting device type	PTC	PTC	relay
Run capacitor	-/-	4µF	-/-
Start capacitor	-/-	-/-	80µF
LRA (locked rotor amps / 4s)	11A	11A	11A
RLA (rated load amps / 1s)	1,8A	1,8A	1,8A
Cut in current	14,5A	14,5A	14,5A

Model

Designation **NL9CN** **220-240V/50Hz 1~** Sales code: **105H6780**

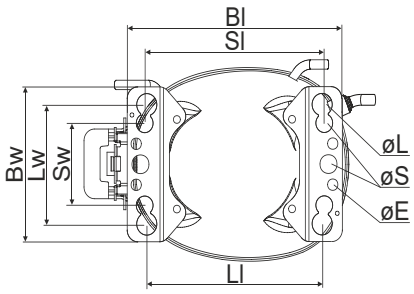
Compressor dimensions

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 9,61-9,79	øi 6,41-6,59	øi 6,41-6,59
(i:inside, o:outside)	[in]	øi 0,38-0,39	øi 0,25-0,26	øi 0,25-0,26
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

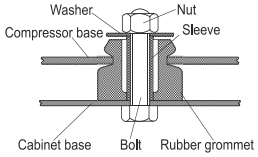


Baseplate	[mm]	[inch]
Bl	204	8.03
Bw	132	5.2
øE	ø 9.7	ø 0.38

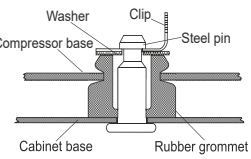
Large holes	[mm]	[inch]
Ll	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75

Small holes	[mm]	[inch]
Sl	170	6.7
Sw	70	2.76
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

Application notes

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

Model

Designation					
	NL9CN	**220-240V/50Hz**	**Conf. 1**	Sales code:	**105H6780**

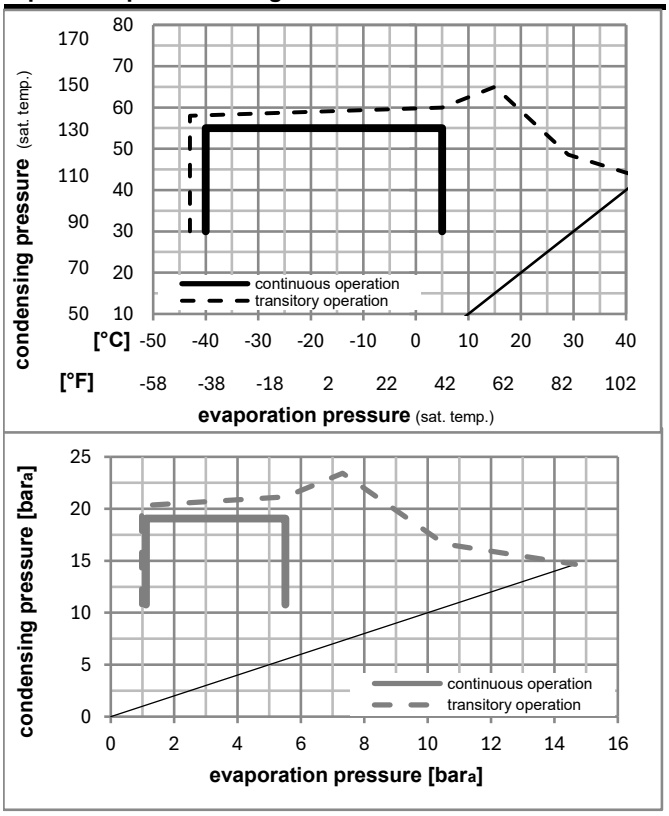
Configuration

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)

Ambient/ machine room temperatures minimum /maximum

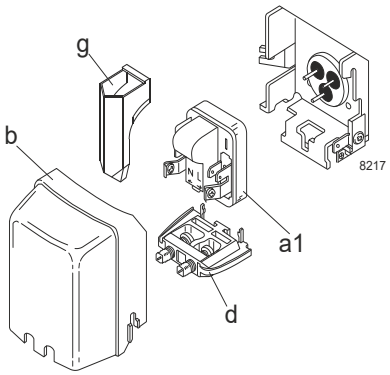
Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 1,5m/s

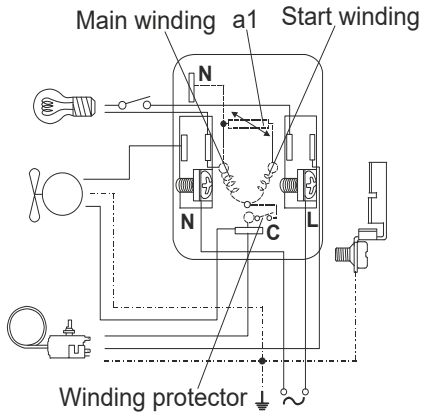
Operation pressure range



Electrical accessories / wiring diagram

RSIR





Components

a1	PTC starter (220V, 25Ohm, 4.8mm)	103N0018
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Alternative components

a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0011
b	plastic cover	103N2011
d	cord relief	103N1010
g	protection screen for PTC	103N0476

Model

Designation **NL9CN** **220-240V/50Hz** **Conf. 1** Sales code: **105H6780**

Optimization + standard conditions R290, 220V/50Hz, RSIR, fan 1,5m/s, VDE, CCC, EAC

	Evaporating pressure (saturation temperature) pe	Condensing pressure (saturation temperature) pc	Return gas temp. RGT	Liquid temp. Tliq	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	Power consumption P1 [W]	Current consumption I [A]	Ref. mass flow ṁ [kg/h]	
[°C]	-23	54	32	32	378,9	1294	326,1	1,39	4,74	1,19	273,3	1,72	3,84	**ASHRAE LBP**
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53	**cecomaf LBP**
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	206,9	707	178,1	1,06	3,63	0,91	194,7	1,51	2,36	**EN12900 LBP**
[°F]	-31	104	68	104										
[°C]	-23	49	4,4	49	308,6	1054	265,5	1,17	3,99	1,01	263,9	1,69	4,27	**ARI540 LBP**
[°F]	-10	120	40	120										
[°C]	-23	41	32	32	419,3	1432	360,8	1,65	5,62	1,42	254,6	1,66	4,25	**AHAM LBP**
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17	**opt**
[°F]	-31	113	90	113										

Performance tables R290, 220V/50Hz, RSIR, fan 1,5m/s, VDE, CCC, EAC

	pe [°C]	pe [°F]	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	P1 [W]	I [A]	m [kg/h]
[°C / °F]	-40	-40	137,6	470	118,4	0,81	2,78	0,70	169,2	1,44	1,54
cond. pressure	-35	-31	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17
pc= 45/113	-30	-22	258,8	884	222,8	1,16	3,97	1,00	223,0	1,56	2,91
return gas temp.	-25	-13	335,0	1144	288,3	1,34	4,58	1,15	250,0	1,64	3,78
RGT= 32/90	-15	5	525,7	1795	452,4	1,72	5,87	1,48	305,6	1,83	5,98
liquid temp	-5	23	777,6	2656	669,2	2,13	7,29	1,84	364,4	2,08	8,95
Tliq= 45/113	5	41	1102,4	3765	948,7	2,58	8,80	2,22	428,0	2,36	12,90
[°C / °F]	-40	-40	121,1	414	104,2	0,68	2,32	0,59	178,0	1,43	1,49
cond. pressure	-35	-31	167,1	571	143,8	0,81	2,77	0,70	206,2	1,50	2,07
pc= 55/131	-30	-22	220,8	754	190,1	0,94	3,21	0,81	234,9	1,59	2,74
return gas temp	-25	-13	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53
RGT= 32/90	-15	5	443,0	1513	381,3	1,36	4,64	1,17	326,3	1,92	5,57
liquid temp	-5	23	656,8	2243	565,3	1,67	5,70	1,44	393,6	2,20	8,37
Tliq= 55/131	5	41	937,0	3200	806,4	2,00	6,84	1,72	467,8	2,53	12,15

Model

Designation					
	NL9CN	**220-240V/50Hz**	**Conf. 2**	Sales code:	**105H6780**

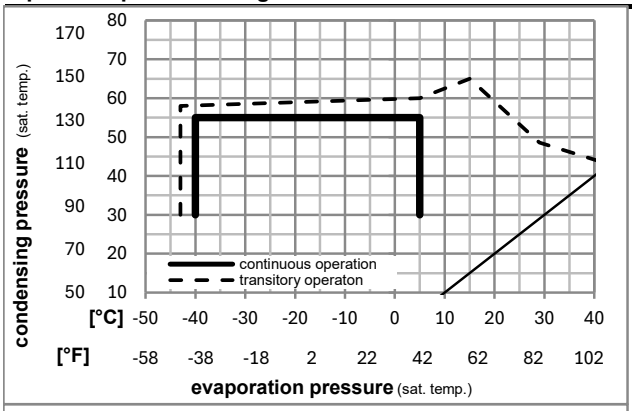
Configuration

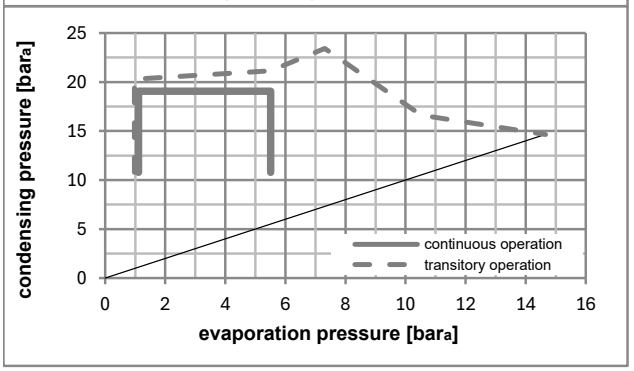
Motorconfiguration	RSCR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R290
Application	LBP+MBP
Voltage range	198-254V
Starting torque	LST
Approvals	VDE (2)
(1): Made in China	CCC (1),(2)
(2): Made in Slovakia	EAC (1),(2)

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 1,5m/s

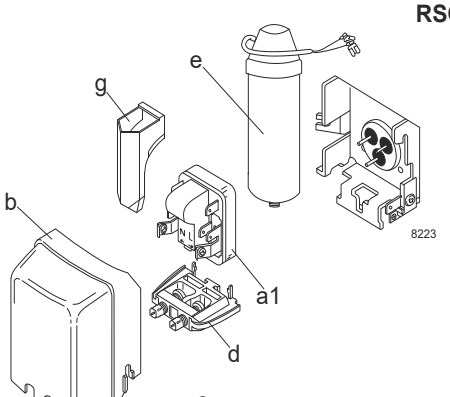
Operation pressure range

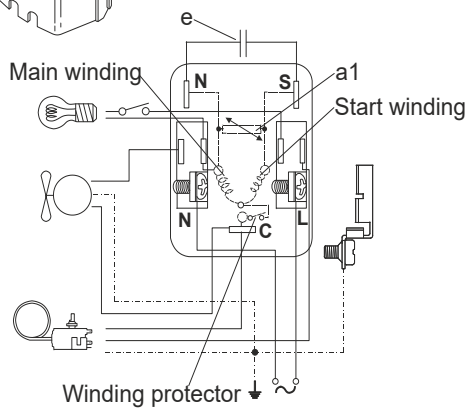




Electrical accessories / wiring diagram

RSCR





Components

a1	PTC starter (220V, 25Ohm, 4.8mm)	103N0021
e	run capacitor (4µF, 4.8mm)	117-7119
b	plastic cover	103N2010
d	cord relief	103N1010
g	protection screen for PTC	103N0476
	bracket for run capacitor	117-0300

Alternative components

a1	PTC starter (220V, 25Ohm, 6.3mm)	103N0016
e	run capacitor (4µF, 6.3mm)	117-7117
b	plastic cover	103N2011
	screw M4x8mm	117-0301

Model

Designation **NL9CN** **220-240V/50Hz** **Conf. 2** Sales code: **105H6780**

Optimization + standard conditions R290, 220V/50Hz, RSCR, fan 1,5m/s, VDE, CCC, EAC

	Evaporating pressure (saturation temperature) pe	Condensing pressure (saturation temperature) pc	Return gas temp. RGT	Liquid temp. Tliq	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	Power consumption P1 [W]	Current consumption I [A]	Ref. mass flow ṁ [kg/h]	
[°C]	-23	54	32	32	382,7	1307	329,3	1,44	4,93	1,24	265,1	1,67	3,88	**ASHRAE LBP**
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	286,6	979	246,6	1,12	3,82	0,96	256,5	1,63	3,57	**cecomaf LBP**
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	209,0	714	179,8	1,11	3,78	0,95	188,9	1,46	2,39	**EN12900 LBP**
[°F]	-31	104	68	104										
[°C]	-23	49	4,4	49	311,6	1064	268,2	1,22	4,16	1,05	256,0	1,64	4,32	**ARI540 LBP**
[°F]	-10	120	40	120										
[°C]	-23	41	32	32	423,4	1446	364,4	1,71	5,86	1,48	246,9	1,61	4,29	**AHAM LBP**
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	195,5	668	168,2	1,03	3,51	0,88	190,2	1,45	2,19	**opt**
[°F]	-31	113	90	113										

Performance tables R290, 220V/50Hz, RSCR, fan 1,5m/s, VDE, CCC, EAC

	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]	-40	-40	139,0	475	119,6	0,85	2,89	0,73	164,1	1,40	1,55
cond. pressure	-35	-31	195,5	668	168,2	1,03	3,51	0,88	190,2	1,45	2,19
pc= 45/113	-30	-22	261,4	893	225,0	1,21	4,13	1,04	216,3	1,52	2,94
return gas temp.	-25	-13	338,3	1155	291,2	1,40	4,76	1,20	242,5	1,59	3,82
RGT= 32/90	-15	5	531,0	1813	457,0	1,79	6,12	1,54	296,4	1,78	6,04
liquid temp	-5	23	785,3	2682	675,9	2,22	7,59	1,91	353,4	2,01	9,04
Tliq= 45/113	5	41	1113,4	3802	958,2	2,68	9,16	2,31	415,1	2,29	13,03
[°C / °F]	-40	-40	122,3	418	105,3	0,71	2,42	0,61	172,7	1,38	1,51
cond. pressure	-35	-31	168,8	576	145,3	0,84	2,88	0,73	200,0	1,46	2,09
pc= 55/131	-30	-22	223,0	762	192,0	0,98	3,34	0,84	227,9	1,54	2,77
return gas temp	-25	-13	286,6	979	246,6	1,12	3,82	0,96	256,5	1,63	3,57
RGT= 32/90	-15	5	447,5	1528	385,1	1,41	4,83	1,22	316,5	1,86	5,63
liquid temp	-5	23	663,4	2266	570,9	1,74	5,93	1,50	381,7	2,13	8,45
Tliq= 55/131	5	41	946,4	3232	814,5	2,09	7,12	1,79	453,7	2,45	12,27

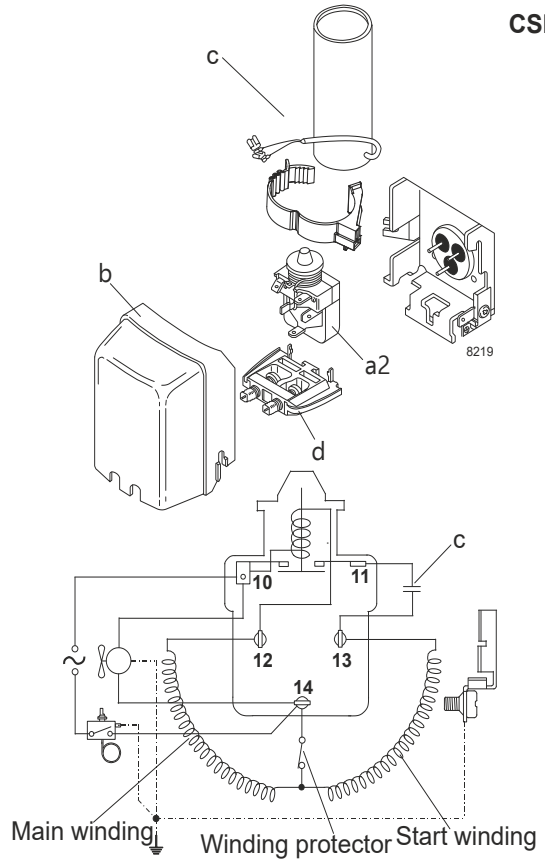
Model

Designation	NL9CN	220-240V/50Hz	Conf. 3	Sales code:	105H6780

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)
	EAC (1),(2)

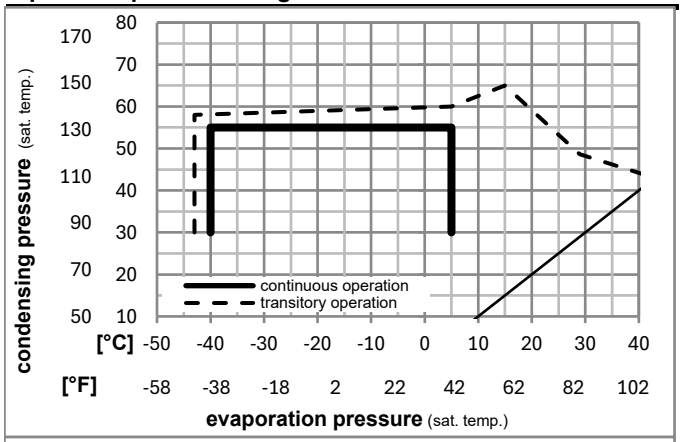
Electrical accessories / wiring diagram

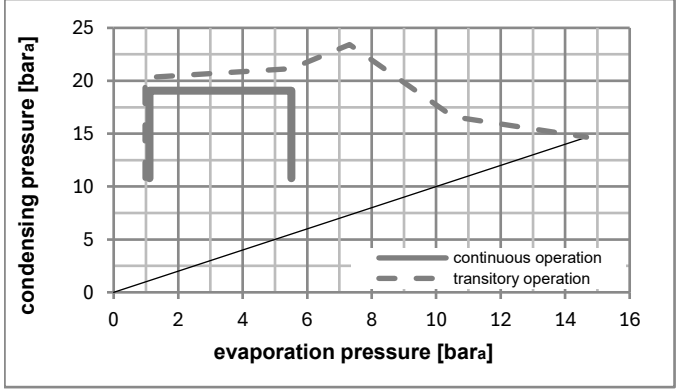


Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 43°C / 50 - 110°F
Machine room temperature range:	10 - 48°C / 50 - 119°F
Compressor cooling:	fan 1,5m/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

Model

Designation **NL9CN** **220-240V/50Hz** **Conf. 3** Sales code: **105H6780**

Optimization + standard conditions R290, 220V/50Hz, CSIR, fan 1,5m/s, VDE, CCC, EAC

	Evaporating pressure (saturation temperature) pe	Condensing pressure (saturation temperature) pc	Return gas temp. RGT	Liquid temp. Tliq	Cooling capacity [W]	[Btu/h]	[kcal/h]	COP [W/W]	EER [Btu/Wh]	[kcal/Wh]	Power consumption P1 [W]	Current consumption I [A]	Ref. mass flow ṁ [kg/h]	
[°C]	-23	54	32	32	378,9	1294	326,1	1,39	4,74	1,19	273,3	1,72	3,84	**ASHRAE LBP**
[°F]	-10	130	90	90										
[°C]	-25	55	32	55	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53	**cecomaf LBP**
[°F]	-13	131	90	131										
[°C]	-35	40	20	40	206,9	707	178,1	1,06	3,63	0,91	194,7	1,51	2,36	**EN12900 LBP**
[°F]	-31	104	68	104										
[°C]	-23	49	4,4	49	308,6	1054	265,5	1,17	3,99	1,01	263,9	1,69	4,27	**ARI540 LBP**
[°F]	-10	120	40	120										
[°C]	-23	41	32	32	419,3	1432	360,8	1,65	5,62	1,42	254,6	1,66	4,25	**AHAM LBP**
[°F]	-10	105	90	90										
[°C]	-35	45	32	45	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17	**opt**
[°F]	-31	113	90	113										

Performance tables R290, 220V/50Hz, CSIR, fan 1,5m/s, VDE, CCC, EAC

	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]	-40	-40	137,6	470	118,4	0,81	2,78	0,70	169,2	1,44	1,54
cond. pressure	-35	-31	193,5	661	166,6	0,99	3,37	0,85	196,1	1,50	2,17
pc= 45/113	-30	-22	258,8	884	222,8	1,16	3,97	1,00	223,0	1,56	2,91
return gas temp.	-25	-13	335,0	1144	288,3	1,34	4,58	1,15	250,0	1,64	3,78
RGT= 32/90	-15	5	525,7	1795	452,4	1,72	5,87	1,48	305,6	1,83	5,98
liquid temp	-5	23	777,6	2656	669,2	2,13	7,29	1,84	364,4	2,08	8,95
Tliq= 45/113	5	41	1102,4	3765	948,7	2,58	8,80	2,22	428,0	2,36	12,90
[°C / °F]	-40	-40	121,1	414	104,2	0,68	2,32	0,59	178,0	1,43	1,49
cond. pressure	-35	-31	167,1	571	143,8	0,81	2,77	0,70	206,2	1,50	2,07
pc= 55/131	-30	-22	220,8	754	190,1	0,94	3,21	0,81	234,9	1,59	2,74
return gas temp	-25	-13	283,7	969	244,2	1,07	3,67	0,92	264,4	1,69	3,53
RGT= 32/90	-15	5	443,0	1513	381,3	1,36	4,64	1,17	326,3	1,92	5,57
liquid temp	-5	23	656,8	2243	565,3	1,67	5,70	1,44	393,6	2,20	8,37
Tliq= 55/131	5	41	937,0	3200	806,4	2,00	6,84	1,72	467,8	2,53	12,15