Model
NLV15CN

Sales code:
105H7520

Compressor Data

Refrigerant(s)	**R290**
Refr. charge - tech. limit	**300g / 10.58oz**
Weight	**10.80 kg / 23.81lbs**
Displacement	**14.65 cm3 / 0.89cu.in**
Compressors on pallet	**80**

General – Configurations With NLV15CN and Controller

–	**Conf. 1**	**Conf. 2**
Sales code single pack:	105N4964	105N4966
Power supply (nominal)	100-240 V,50/60 Hz	100-240 V,50/60 Hz
Number of phases	1~AC	1~AC
Approvals	UL, VDE	UL, VDE
Starting torque	HST	HST
Refrigerant	R290	R290
Application	L+MBP	L+MBP
Hot gas defrost	OK	OK
Long interval pull down	OK	OK
Protection	Mechanic	Mechanic

Application Notes

- Provision for PE Grounding is located at the PE Stamp on the compressor
- Semi suction intake without telescope

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NLV15CN

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Compressor Design

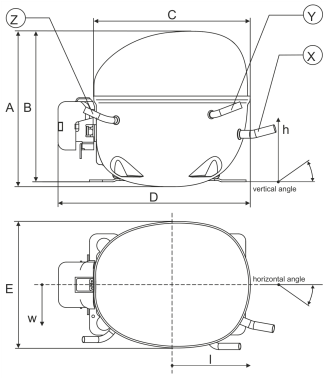
Oil type	**POE**	Motor protection	**internal**
Oil viscosity	**32cSt**	Max. winding temp.	**125 °C**
Oil quantity	**300 / 10.14fl.oz**	Max. discharge temp.	**130°C / 266°F**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**		

Compressor Dimensions

Housing

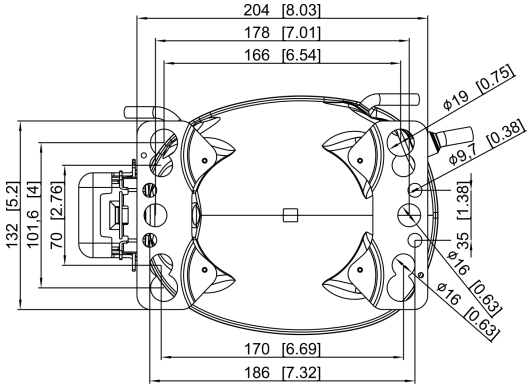
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**252mm / 9.92in**
E Width	**166mm / 6.54in**

Find 3D Model here



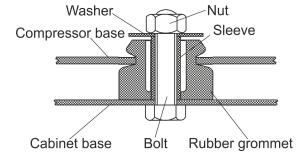
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	21°	155°
Position l/h/w [mm]	132/68.5/56.7 / 5.20/2.70/2.23in	94/101.7/81 / 3.70/4.00/3.19in	-109.3/94.3/72 / -4.30/3.71/2.83in
Straight tube l. [mm]	12 / 0.47in	12 / 0.47in	12 / 0.47in

Mounting Accessories

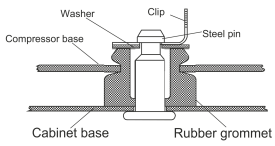


Dimensions in mm [in]

Bolt joint



Snap-on



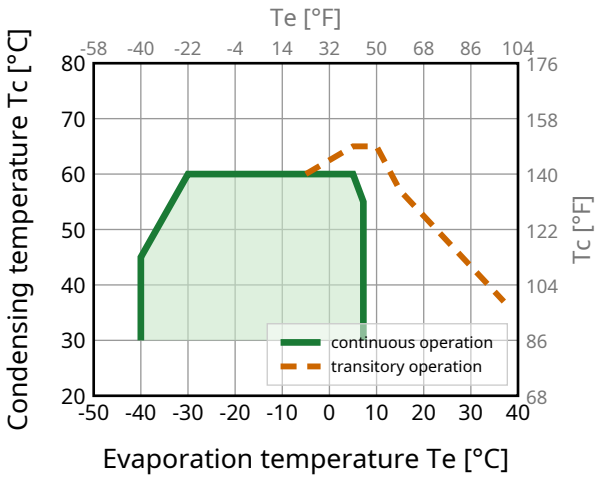
	one comp.	multi pack
Bolt joint | M6 | ø16mm	118-1917	118-1918
Bolt joint | ø1/4" | ø16mm	118-1946	–
Bolt joint | ø1/4" | ø19mm	118-1949	–
Snap-on | ø7,3 | ø16mm	118-1947	118-1919

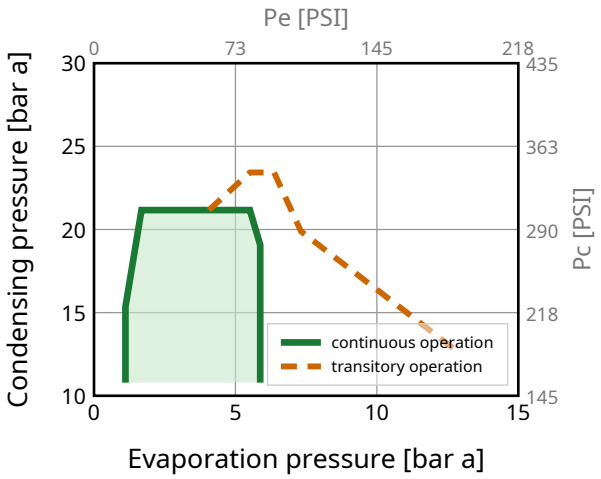
Model
NLV15CN System Design

Sales code:
105H7520

System Design

Operation Pressure Range R290



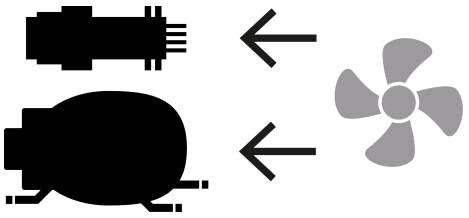


System Cooling

Compressor and Controller Cooling: fan 3m/s

Ensure proper airflow of 3 m/s at both compressor and electronic units.

The airflow for the electronics must be directed to the heat sink.



Accessories (Compressor + Controller)

103N2008	plastic cover	1 pcs

Model Sales code:

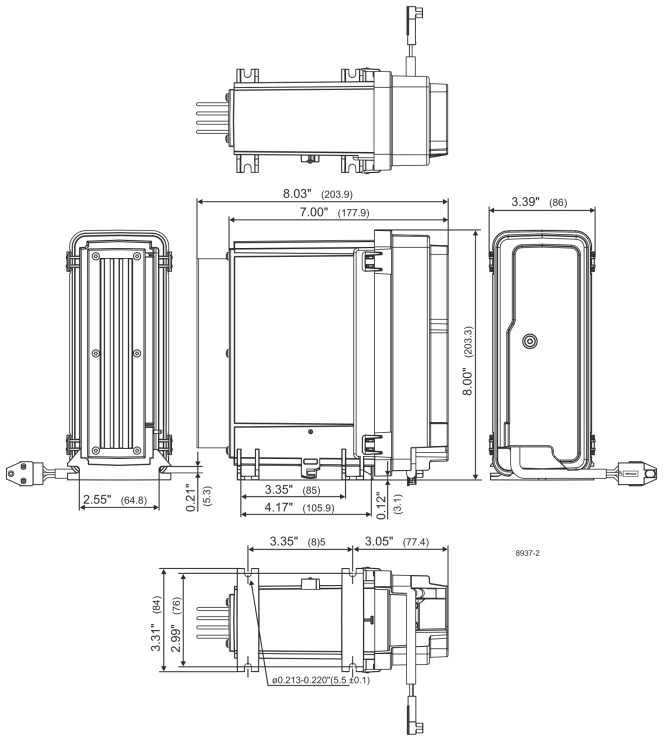
NLV15CN Controller Overview **105H7520**

Controller Overview

–	**Conf. 1**	**Conf. 2**
Sales code single pack:	105N4964	105N4966
Sales code industry pack:	105N4965 (8)	105N4967 (8)
Voltage nom.:	100-240 V,50/60 Hz	100-240 V,50/60 Hz
Voltage range	90-150/180-270 V	90-150/180-270 V
Max output power	1000 W	1000 W
Compressor speed range:	2000-5000 rpm	2000-5000 rpm
Cable length:	680 mm	915 mm
Protection class:	IP54	IP54
LRA (Locked Rotor Amperage):	3,1 A	3,1 A
AEO and Defrost pin	Yes	Yes
Frequency input	Yes	Yes
Modbus input	SWI	SWI
Controller Wiring	» Controller Wiring	» Controller Wiring

Controller Dimensions

Conf. 1, 2



Operating Instructions

For proper installation and operation of variable-speed compressors and controllers, please refer to the Operating Instructions. The document covers electrical installation, speed control, and technical data for the controller.
» Download Operating Instructions

Model
NLV15CN

Sales code:
105H7520

Standard Conditions — 2000 rpm

R290, 240 V/50 Hz, fan 3m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**523**	1785	450	**1.67**	5.71	313	1.36	5.31	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**390**	1332	336	**1.30**	4.44	300	1.31	4.89	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**288**	983	248	**1.40**	4.77	206	0.91	3.31	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**901**	3074	775	**2.04**	6.94	443	1.89	10.31	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**722**	2465	621	**1.71**	5.85	422	1.81	9.19	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**780**	2662	671	**2.10**	7.16	372	1.61	9.60	**EN12900 MBP**

Performance Tables — 2000 rpm

R290, 240 V/50 Hz, fan 3m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-40	-40	**200**	681	172	**1.08**	3.68	185	0.81	2.25
-30	-22	**356**	1216	307	**1.46**	4.99	244	1.07	4.03
-20	-4	**555**	1894	477	**1.79**	6.10	310	1.35	6.31
-10	14	**811**	2767	697	**2.18**	7.44	372	1.61	9.31
0	32	**1140**	3889	980	**2.75**	9.37	415	1.78	13.25
10	50	**1557**	5314	1339	**3.64**	12.43	428	1.83	18.42

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-40	-40	**149**	509	128	**0.77**	2.64	193	0.83	1.85
-30	-22	**302**	1032	260	**1.16**	3.96	261	1.14	3.78
-20	-4	**488**	1666	420	**1.43**	4.88	341	1.48	6.15
-10	14	**722**	2465	621	**1.71**	5.85	422	1.81	9.19
0	32	**1020**	3482	878	**2.09**	7.12	489	2.07	13.16
10	50	**1398**	4770	1202	**2.63**	8.99	531	2.23	18.37

Model
NLV15CN

Sales code:
105H7520

Standard Conditions — 5000 rpm

R290, 240 V/50 Hz, fan 3m/s

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	I	ṁ	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**1270**	4334	1092	**1.64**	5.59	775	3.31	12.90	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**950**	3243	817	**1.27**	4.35	746	3.18	11.91	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**703**	2400	605	**1.37**	4.69	512	2.18	8.07	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**2148**	7327	1847	**1.98**	6.76	1084	4.60	24.59	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**1728**	5897	1486	**1.67**	5.71	1033	4.39	21.98	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**1855**	6329	1595	**2.01**	6.87	921	3.92	22.83	**EN12900 MBP**

Performance Tables — 5000 rpm

R290, 240 V/50 Hz, fan 3m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

pe		Cooling capacity			COP	EER	P	I	ṁ
[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[A]	[kg/h]
-40	-40	**493**	1683	424	**1.08**	3.67	458	1.94	5.55
-30	-22	**867**	2959	746	**1.43**	4.86	609	2.60	9.80
-20	-4	**1333**	4548	1146	**1.73**	5.89	772	3.30	15.16
-10	14	**1928**	6580	1658	**2.09**	7.14	921	3.92	22.14
0	32	**2691**	9182	2314	**2.62**	8.93	1028	4.37	31.29
10	50	**3659**	12483	3146	**3.43**	11.71	1066	4.56	43.27

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

-40	-40	**372**	1269	320	**0.76**	2.61	487	2.06	4.62
-30	-22	**742**	2531	638	**1.14**	3.89	651	2.78	9.27
-20	-4	**1181**	4031	1016	**1.40**	4.78	843	3.59	14.87
-10	14	**1728**	5897	1486	**1.67**	5.71	1033	4.39	21.98
0	32	**2421**	8259	2082	**2.02**	6.91	1196	5.08	31.21
10	50	**3296**	11244	2834	**2.53**	8.63	1304	5.57	43.30

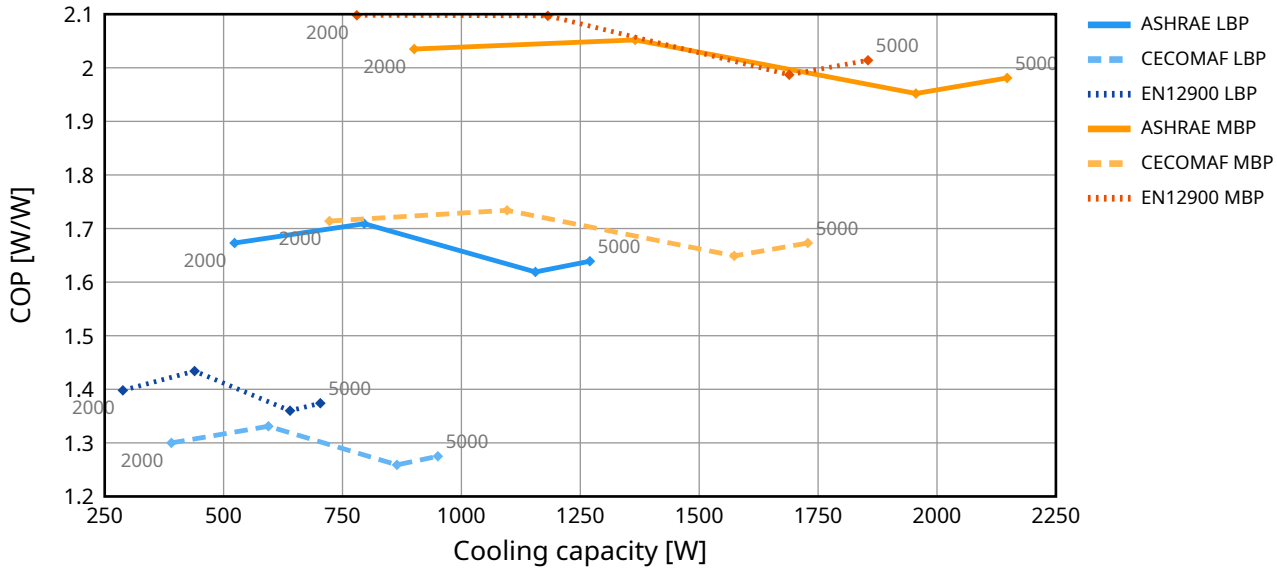
Model
NLV15CN

Sales code:
105H7520

Optimal Performance

R290, 240 V/50 Hz, fan 3m/s
Shows the speed (RPM) that achieves the highest COP at each standard condition.

pe	pc	RGT	Tliq	Cooling capacity			COP	EER	P	RPM	
[°C] [°F]	[°C] [°F]	[°C] [°F]	[°C] [°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[W]	[rpm]	
-23.3 -10	54.4 129.9	32.2 90	32.2 90	**796**	2715	684	**1.71**	5.83	466	**3000**	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**594**	2027	511	**1.33**	4.54	447	**3000**	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**439**	1498	378	**1.43**	4.89	306	**3000**	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1365**	4659	1174	**2.05**	7.00	665	**3000**	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**1096**	3740	943	**1.73**	5.92	632	**3000**	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**780**	2662	671	**2.10**	7.16	372	**2000**	**EN12900 MBP**

Cooling Capacity vs. COP

R290, 240 V/50 Hz, fan 3m/s