Model
NLV12.6CN

Sales code:
105H6365

Compressor Data

Refrigerant(s)	**R290**
Refr. charge - tech. limit	**300g / 10.58oz**
Weight	**10.80 kg / 23.81lbs**
Displacement	**12.55 cm3 / 0.77cu.in**
Compressors on pallet	**80**

General – Configurations With NLV12.6CN and Controller

–	**Conf. 1**	**Conf. 2**	**Conf. 3**	**Conf. 4**
Sales code single pack:	105N4910	105N4960	105N4962	105N4866
Power supply (nominal)	220-240 V,50/60 Hz	100-240 V,50/60 Hz	100-240 V,50/60 Hz	100-240 V,50/60 Hz
Number of phases	1~AC	1~AC	1~AC	1~AC
Approvals	VDE, CCC	VDE, UL, CCC, CB	VDE, UL, CCC, CB	CCC, VDE, UL, CB
Starting torque	HST	HST	HST	HST
Refrigerant	R290	R290	R290	R290
Application	L+MBP	L+MBP	L+MBP	L+MBP
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK
Protection	Mechanic	Mechanic	Mechanic	Mechanic

Application Notes

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

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Compressor Design

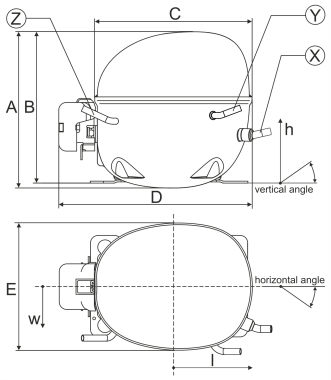
Oil type	**POE**	Motor protection	**internal**
Oil viscosity	**32cSt**	Max. winding temp.	**125 °C**
Oil quantity	**300 / 10.14fl.oz**	Max. discharge temp.	**130°C / 266°F**
Free gas volume comp.	**2,360 cm3 / 79.80fl.oz**		

Compressor Dimensions

Housing

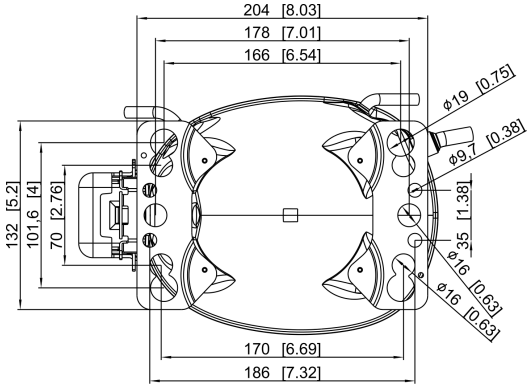
A Height	**203mm / 7.99in**
B Height	**197mm / 7.76in**
C Length shell	**205mm / 8.07in**
D Length w. cover	**252mm / 9.92in**
E Width	**166mm / 6.54in**

Find 3D Model here



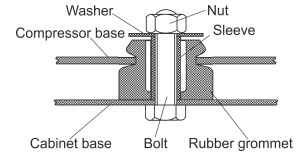
Connectors	Suction X	Discharge Y	Process Z
Diameter [mm]	øi 8.11–8.29 / 0.32–0.33in	øi 6.11–6.29 / 0.24–0.25in	øi 6.11–6.29 / 0.24–0.25in
Material	CU	CU	CU
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	21°	155°
Position l/h/w [mm]	132/68.5/56.7 / 5.20/2.70/2.23in	94/101.7/81 / 3.70/4.00/3.19in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

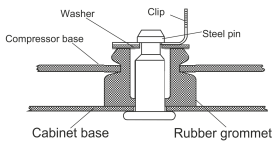


Dimensions in mm [in]

Bolt joint



Snap-on



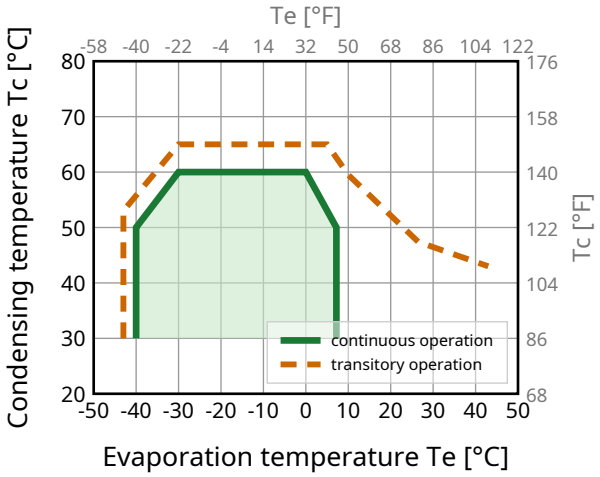
	one comp.	multi pack
Bolt joint | M6 | ø16mm	118-1917	118-1918
Bolt joint | ø1/4" | ø16mm	118-1946	–
Bolt joint | ø1/4" | ø19mm	118-1949	–
Snap-on | ø7,3 | ø16mm	118-1947	118-1919

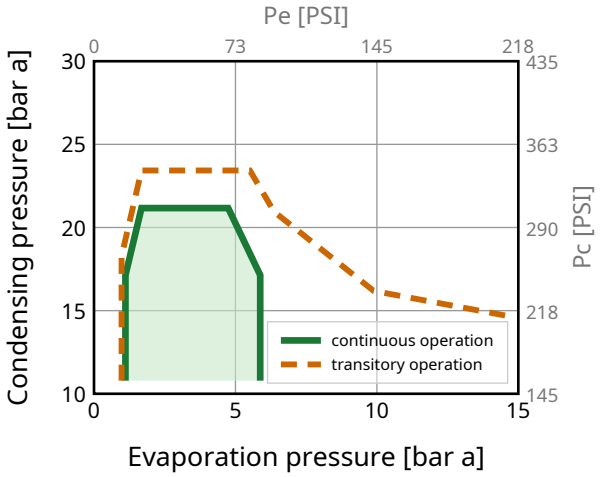
Model
NLV12.6CN System Design

Sales code:
105H6365

System Design

Operation Pressure Range R290



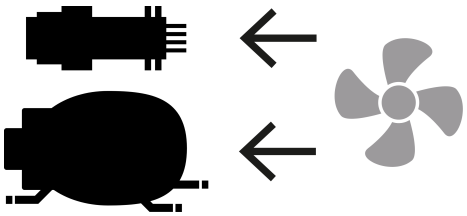


System Cooling

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

Operation Limits

Suctiongas temperature < +20 °C (contininous operation)

Model

NLV12.6CN Controller Overview

Sales code:

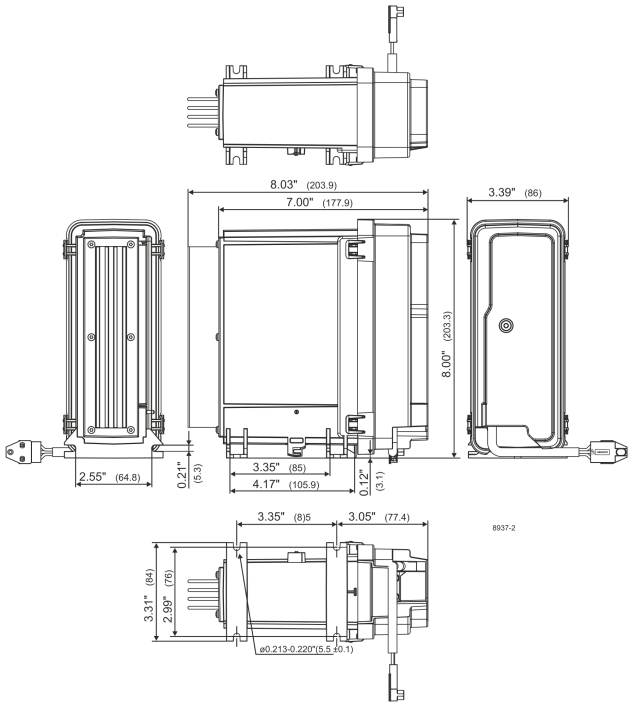
105H6365

Controller Overview

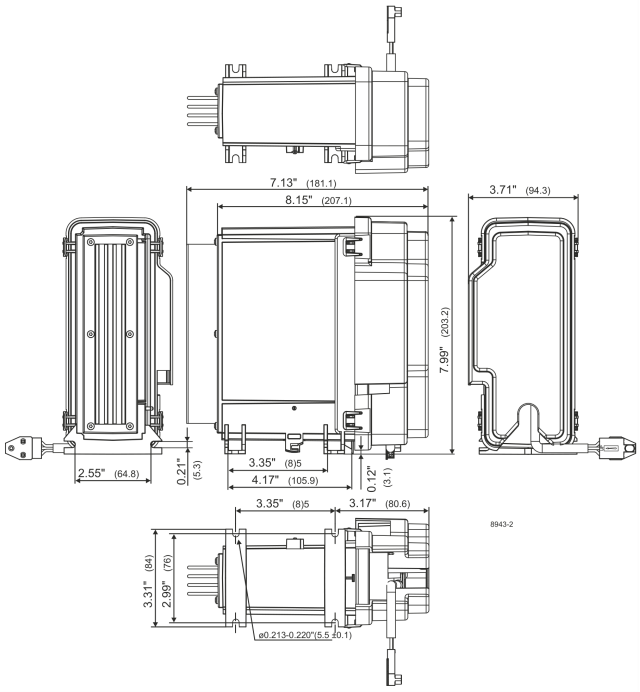
–	**Conf. 1**	**Conf. 2**	**Conf. 3**	**Conf. 4**
Sales code single pack:	105N4910	105N4960	105N4962	105N4866
Sales code industry pack:	105N4911 (8)	105N4961 (8)	105N4963 (8)	105N4867 (8)
Voltage nom.:	220-240 V,50/60 Hz	100-240 V,50/60 Hz	100-240 V,50/60 Hz	100-240 V,50/60 Hz
Voltage range	180-270 V	90-150/180-270 V	90-150/180-270 V	90-150/180-270 V
Max output power	1000 W	1000 W	1000 W	1000 W
Compressor speed range:	2000-4500 rpm	2000-4500 rpm	2000-4500 rpm	2000-4500 rpm
Cable length:	680 mm	680 mm	915 mm	680 mm
Protection class:	IP54	IP54	IP54	IP43
LRA (Locked Rotor Amperage):	1,2 A	1,2 A	1,2 A	1,2 A
AEO and Defrost pin	Yes	Yes	Yes	–
Frequency input	Yes	Yes	Yes	–
Modbus input	SWI	SWI	SWI	RS485
Controller Wiring	» Controller Wiring	» Controller Wiring	» Controller Wiring	» Controller Wiring

Controller Dimensions

Conf. 1, 2, 3



Conf. 4



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
NLV12.6CN

Sales code:
105H6365

Standard Conditions — 2000 rpm

R290, 220 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	**432**	1474	371	**1.75**	5.95	248	1.35	4.39	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**322**	1098	277	**1.36**	4.63	237	1.29	4.04	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**245**	835	211	**1.44**	4.93	170	0.92	2.81	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**769**	2623	661	**2.19**	7.47	351	1.91	8.80	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**610**	2082	525	**1.84**	6.26	332	1.80	7.76	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**688**	2346	591	**2.25**	7.69	305	1.66	8.46	**EN12900 MBP**

Performance Tables — 2000 rpm

R290, 220 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	**177**	605	152	**1.20**	4.08	148	0.79	1.99
-30	-22	**301**	1026	259	**1.51**	5.14	200	1.08	3.40
-20	-4	**476**	1623	409	**1.88**	6.42	253	1.38	5.41
-10	14	**715**	2440	615	**2.34**	7.99	305	1.66	8.21
0	32	**1030**	3515	886	**2.91**	9.94	354	1.92	11.98
7.2	45	**1311**	4473	1128	**3.41**	11.63	385	2.09	15.42

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

-40	-40	**143**	489	123	**0.96**	3.29	148	0.80	1.78
-30	-22	**252**	861	217	**1.22**	4.17	207	1.12	3.15
-20	-4	**404**	1378	347	**1.50**	5.12	269	1.46	5.08
-10	14	**610**	2082	525	**1.84**	6.26	332	1.80	7.76
0	32	**883**	3013	759	**2.24**	7.65	394	2.14	11.39
7.2	45	**1128**	3848	970	**2.59**	8.85	435	2.36	14.73

Model
NLV12.6CN

Sales code:
105H6365

Standard Conditions — 4500 rpm

R290, 220 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	**954**	3254	820	**1.78**	6.09	534	2.90	9.69	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**711**	2427	612	**1.39**	4.73	514	2.79	8.92	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**544**	1855	468	**1.51**	5.16	360	1.96	6.24	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1678**	5724	1443	**2.19**	7.46	767	4.17	19.21	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**1336**	4558	1149	**1.84**	6.30	724	3.94	16.99	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**1504**	5131	1293	**2.30**	7.84	654	3.56	18.51	**EN12900 MBP**

Performance Tables — 4500 rpm

R290, 220 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	**396**	1353	341	**1.25**	4.25	318	1.73	4.46
-30	-22	**666**	2273	573	**1.58**	5.39	421	2.29	7.53
-20	-4	**1048**	3577	902	**1.95**	6.66	537	2.92	11.93
-10	14	**1564**	5335	1345	**2.39**	8.15	654	3.56	17.95
0	32	**2232**	7615	1919	**2.92**	9.98	763	4.15	25.95
7.2	45	**2819**	9618	2424	**3.40**	11.59	830	4.51	33.16

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

-40	-40	**315**	1076	271	**0.94**	3.19	337	1.83	3.92
-30	-22	**557**	1902	479	**1.24**	4.23	449	2.44	6.96
-20	-4	**891**	3039	766	**1.53**	5.22	582	3.16	11.21
-10	14	**1336**	4558	1149	**1.84**	6.30	724	3.94	16.99
0	32	**1913**	6527	1645	**2.21**	7.53	866	4.71	24.67
7.2	45	**2422**	8262	2082	**2.52**	8.58	962	5.23	31.63

Model
NLV12.6CN

Sales code:
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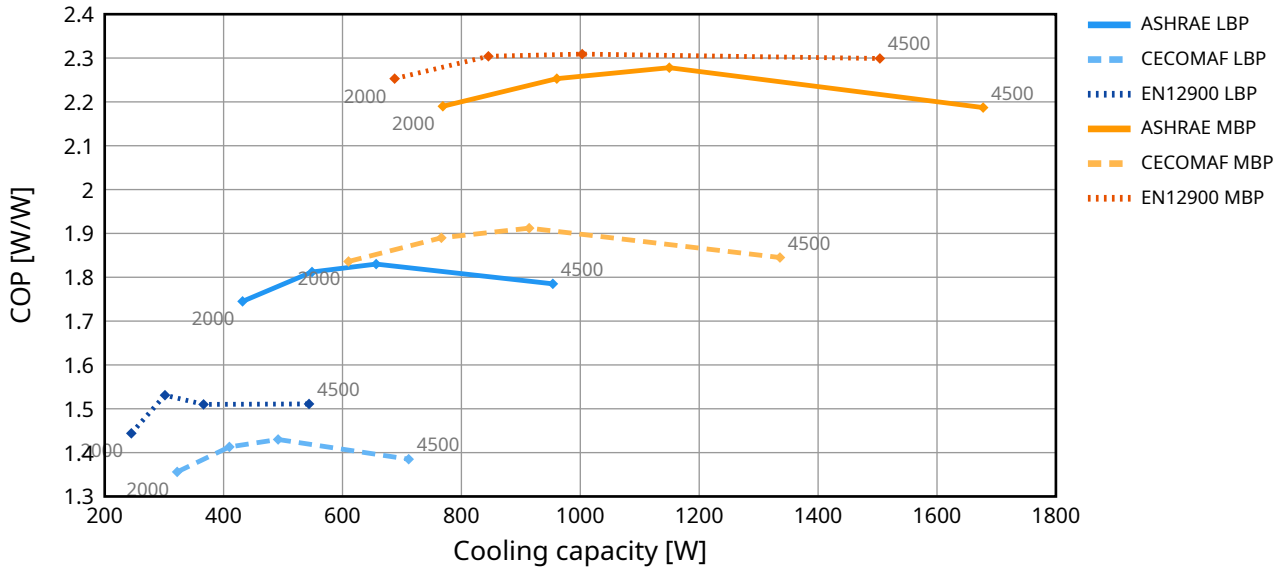
Optimal Performance

R290, 220 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	**657**	2240	565	**1.83**	6.24	359	**3000**	**ASHRAE LBP**
-25 -13	55 131	32 89.6	55 131	**492**	1678	423	**1.43**	4.88	344	**3000**	**CECOMAF LBP**
-35 -31	40 104	20 68	40 104	**301**	1028	259	**1.53**	5.22	197	**2500**	**EN12900 LBP**
-6.7 20	54.4 129.9	35 95	46.1 115	**1150**	3923	989	**2.28**	7.77	505	**3000**	**ASHRAE MBP**
-10 14	55 131	32 89.6	55 131	**914**	3119	786	**1.91**	6.52	478	**3000**	**CECOMAF MBP**
-10 14	45 113	20 68	45 113	**1003**	3423	863	**2.31**	7.88	434	**3000**	**EN12900 MBP**

Cooling Capacity vs. COP

R290, 220 V/50 Hz, fan 3m/s