

Datasheets

# NLE11MN Energy-optimized LBP/MBP R290 220-240V 50Hz

**General**

Code number	105H6177
Approvals	EN 60335-2-34 w. Annex AA
Compressors on pallet	80

**Application**

Application	MBP					
	Hz	50	60			
Frequency	Hz	50	60			
Evaporating temperature	°C	-30 to 10	-			
Voltage range	V	198 to 254	-			
Max. condensing temperature continuous (short)	°C	55 (65)	-			
Max. winding temperature continuous (short)	°C	125 (135)	-			

**Cooling requirements**

Frequency	Hz	50			60		
		LBP	MBP	HBP	LBP	MBP	HBP
32°C		-	F <sub>2</sub>	-	-	-	-
38°C		-	F <sub>2</sub>	-	-	-	-
43°C		-	F <sub>2</sub>	-	-	-	-
Remarks on application:							

**Motor**

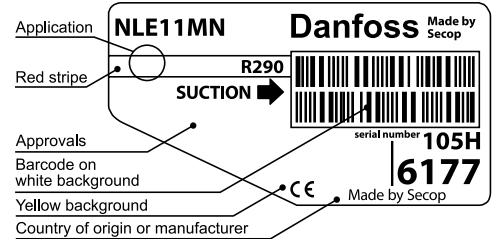
Motor type	CSIR/RSIR/RSCR					
LRA (rated after 4 sec. UL984), HST   LST	A	13.7	14.5			
Cut in Current, HST   LST	A	13.7	19.4			
Resistance, main   start winding (25°C)	Ω	4.9	8.9			

**Design**

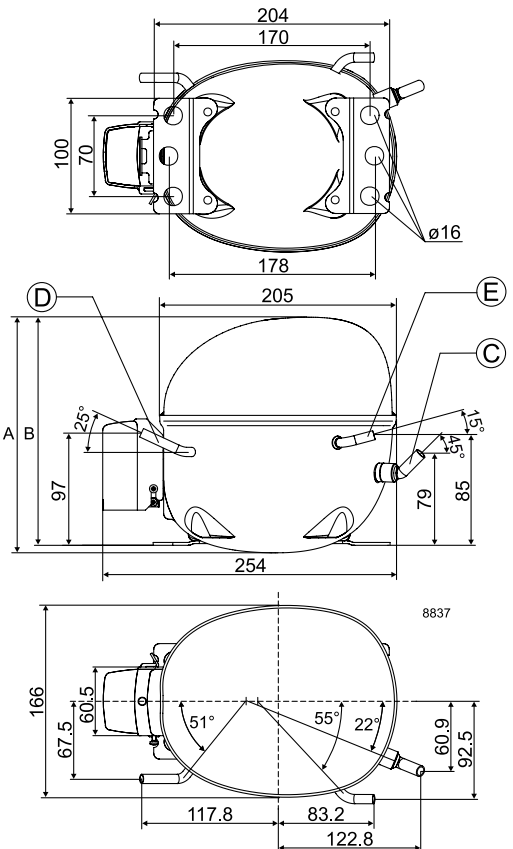
Displacement	cm <sup>3</sup>	11.15
Oil quantity (type)	cm <sup>3</sup>	320 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm <sup>3</sup>	2360
Weight without electrical equipment	kg	11.7

**Dimensions**

Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/I.D. mm   angle	C	8.2   45°
	material   comment	Copper   Rubber plug	
Process connector	location/I.D. mm   angle	D	6.2   25°
	material   comment	Copper   Rubber plug	
Discharge connector	location/I.D. mm   angle	E	6.2   15°
	material   comment	Copper   Rubber plug	
Oil cooler connector	location/I.D. mm   angle	F	-
	material   comment	-	
Connector tolerance	I.D. mm	±0.09	
Remarks:			



- S = Static cooling normally sufficient
- O = Oil cooling
- F<sub>1</sub> = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
- F<sub>2</sub> = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



**EN 12900 LBP**

 220V, 50Hz, fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				410	515	555	639	784	950	1073	1140	1354	1592	1706	1858		
Power cons. in W				297	329	340	362	394	425	444	454	480	501	509	518		
Current cons. in A				2.18	2.26	2.29	2.36	2.46	2.56	2.62	2.65	2.73	2.78	2.79	2.79		
COP in W/W				1.38	1.56	1.63	1.77	1.99	2.24	2.41	2.51	2.82	3.18	3.35	3.59		

**EN 12900 MBP**

 220V, 50Hz, fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				381	478	516	594	730	886	1001	1064	1265	1491	1598	1742		
Power cons. in W				306	340	351	374	410	444	466	476	506	533	543	555		
Current cons. in A				2.20	2.28	2.32	2.39	2.51	2.63	2.71	2.75	2.85	2.93	2.96	2.98		
COP in W/W				1.25	1.41	1.47	1.59	1.78	2.00	2.15	2.23	2.50	2.80	2.94	3.14		

**ASHRAE LBP**

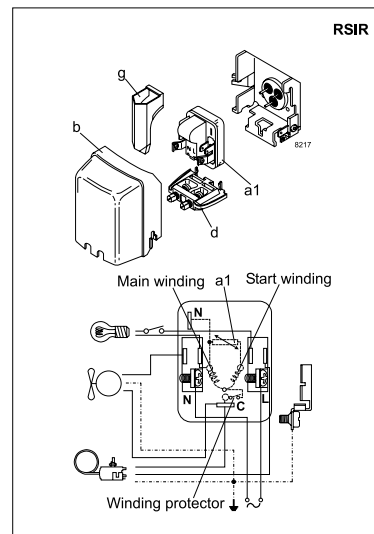
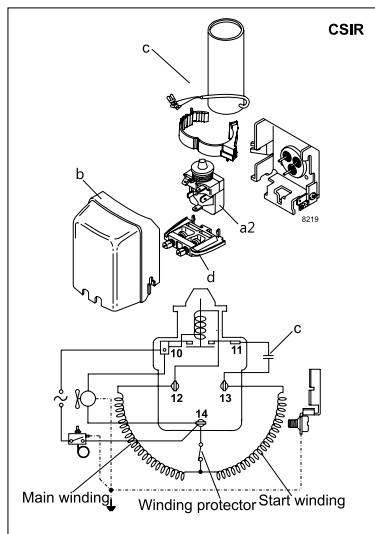
 220V, 50Hz, fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				419	522	562	647	795	967	1095	1165	1390	1644	1765	1928		
Power cons. in W				304	341	355	381	421	461	487	500	537	571	585	601		
Current cons. in A				2.23	2.33	2.37	2.45	2.60	2.75	2.86	2.91	3.06	3.20	3.26	3.32		
COP in W/W				1.38	1.53	1.58	1.70	1.89	2.10	2.25	2.33	2.59	2.88	3.02	3.21		

**ASHRAE MBP/HBP**

 220V, 50Hz, fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				374	466	502	578	710	863	976	1038	1238	1462	1569	1712		
Power cons. in W				301	338	351	377	417	456	482	495	531	564	578	594		
Current cons. in A				2.23	2.33	2.37	2.45	2.60	2.75	2.86	2.91	3.06	3.20	3.26	3.32		
COP in W/W				1.25	1.38	1.43	1.53	1.70	1.89	2.03	2.10	2.33	2.59	2.72	2.88		



Accessories for	NLE11MN	Figure	Code number
ePTC starting device	6.3 mm spade connectors	a1	-
	4.8 mm spade connectors		103N0050
Starting relay	6.3 mm spade connectors	a2	117U7005
Start. capacitor 80 µF	6.3 mm spade connectors	c	117U5015
Cover		b	103N2010
Cord relief		d	103N1010
Protection screen for PTC		g	-

Test conditions	EN 12900		ASHRAE	
	LBP	MBP	LBP	MBP
Condensing temperature	40°C	45°C	54.4°C	54.4°C
Ambient temperature	32°C	32°C	32.2°C	35°C
Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	46.1°C

Mounting accessories	Code number	
Bolt joint for one comp.	Ø: 16 mm	118-1917
Bolt joint in quantities	Ø: 16 mm	118-1918
Snap-on in quantities	Ø: 16 mm	118-1919

**EN 12900 LBP** 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				411	517	557	641	787	955	1078	1146	1362	1605	1720	1875		
Power cons. in W				283	314	325	346	377	407	426	435	459	479	486	494		
Current cons. in A				2.08	2.16	2.19	2.25	2.35	2.45	2.51	2.54	2.61	2.65	2.66	2.66		
COP in W/W				1.45	1.64	1.71	1.85	2.09	2.34	2.53	2.64	2.97	3.35	3.54	3.80		

**EN 12900 MBP** 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

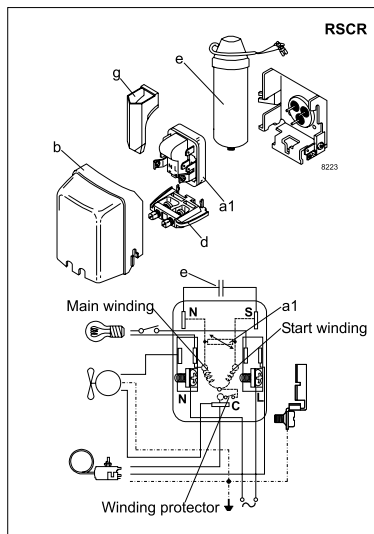
Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				382	480	517	596	732	890	1006	1069	1273	1502	1611	1758		
Power cons. in W				291	324	336	358	392	425	446	456	485	509	518	528		
Current cons. in A				2.10	2.18	2.22	2.29	2.40	2.52	2.59	2.63	2.73	2.80	2.82	2.84		
COP in W/W				1.31	1.48	1.54	1.67	1.87	2.09	2.26	2.34	2.63	2.95	3.11	3.33		

**ASHRAE LBP** 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				420	524	564	650	798	971	1100	1171	1399	1656	1780	1946		
Power cons. in W				290	326	339	364	403	442	467	479	514	546	558	573		
Current cons. in A				2.12	2.22	2.26	2.34	2.49	2.64	2.74	2.79	2.93	3.06	3.11	3.16		
COP in W/W				1.45	1.61	1.67	1.78	1.98	2.20	2.36	2.44	2.72	3.04	3.19	3.40		

**ASHRAE MBP/HBP** 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W				375	468	504	580	712	866	981	1044	1245	1473	1582	1728		
Power cons. in W				287	323	335	360	399	437	461	474	508	539	551	566		
Current cons. in A				2.12	2.22	2.26	2.34	2.49	2.64	2.74	2.79	2.93	3.06	3.11	3.16		
COP in W/W				1.31	1.45	1.5	1.61	1.79	1.98	2.13	2.2	2.45	2.73	2.87	3.06		



Accessories for	NLE11MN	Figure	Code number
ePTC starting device	6.3 mm spade connectors	a1	-
	4.8 mm spade connectors		103N0050
Run capacitor 4 µF (optional)	4.8 mm spade connectors	e	117-7119
Cover		b	103N2010
Cord relief		d	103N1010
Protection screen for PTC		g	-

Test conditions	EN 12900		ASHRAE	
	LBP	MBP	LBP	MBP
Condensing temperature	40°C	45°C	54.4°C	54.4°C
Ambient temperature	32°C	32°C	32.2°C	35°C
Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	46.1°C

Mounting accessories	Code number	
Bolt joint for one comp.	Ø: 16 mm	118-1917
Bolt joint in quantities	Ø: 16 mm	118-1918
Snap-on in quantities	Ø: 16 mm	118-1919