

## NLE10MF.2 Energy-optimized MBP Compressor R134a 220-240V 50Hz

### General

Code number	105G6187
Approvals	EN 60335-2-34 w. Annex AA
Compressors on pallet	80

### Application

Application	LBP/MBP		
Frequency	Hz	50	60
Evaporating temperature	°C	-35 to 10	-
Voltage range	V	198 to 254	-
Max. condensing temperature continuous (short)	°C	65 (70)	-
Max. winding temperature continuous (short)	°C	125 (135)	-

### Cooling requirements

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

### Motor

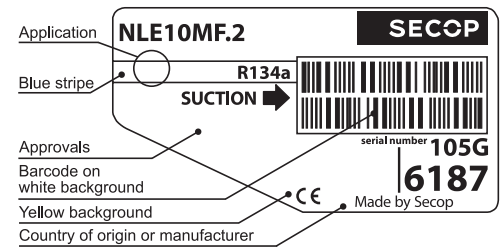
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST   LST	A	11.3	10.7
Cut in Current, HST   LST	A	11.3	15.9
Resistance, main   start winding (25°C)	Ω	9.0	12.0

### Design

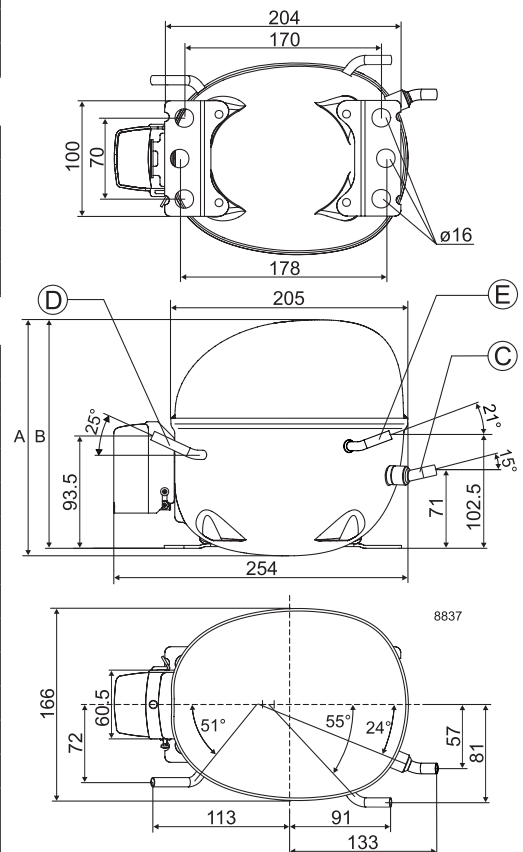
Displacement	cm <sup>3</sup>	10.09
Oil quantity (type)	cm <sup>3</sup>	300 (polyolester)
Maximum refrigerant charge	g	600
Free gas volume in compressor	cm <sup>3</sup>	2360
Weight without electrical equipment	kg	10.9

### Dimensions

Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/I.D. mm   angle	C	8.2   15°
	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   21°
	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			153	212	281	308	364	463	581	671.6	722	888	1083	1178	1309		
Power cons. in W			149	171	195	203	220	246	275	294	305	337	372	387	409		
Current cons. in A			1.43	1.46	1.51	1.53	1.57	1.64	1.72	1.78	1.81	1.91	2.01	2.06	2.12		
COP in W/W			1.03	1.24	1.45	1.52	1.66	1.88	2.12	2.28	2.37	2.64	2.91	3.04	3.20		

**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			131	189	257	282	337	432	545	631	679	838	1024	1115	1240		
Power cons. in W			149	173	198	207	225	253	282	303	314	347	383	399	421		
Current cons. in A			1.43	1.47	1.52	1.54	1.58	1.66	1.75	1.81	1.85	1.96	2.08	2.13	2.20		
COP in W/W			0.88	1.09	1.29	1.36	1.50	1.71	1.93	2.08	2.16	2.41	2.68	2.79	2.95		

**ASHRAE LBP**

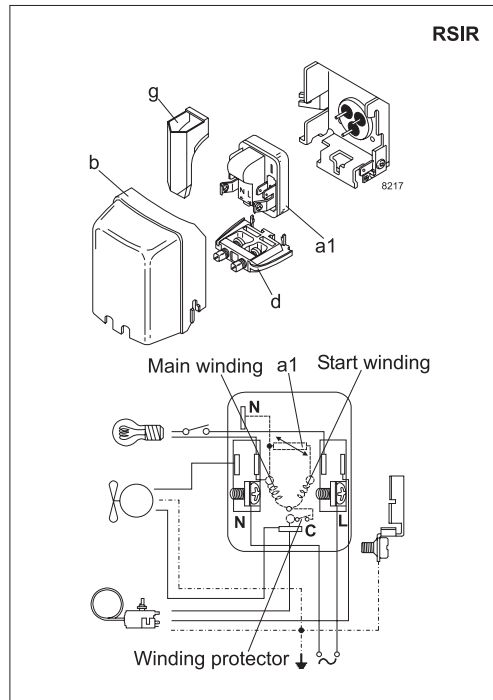
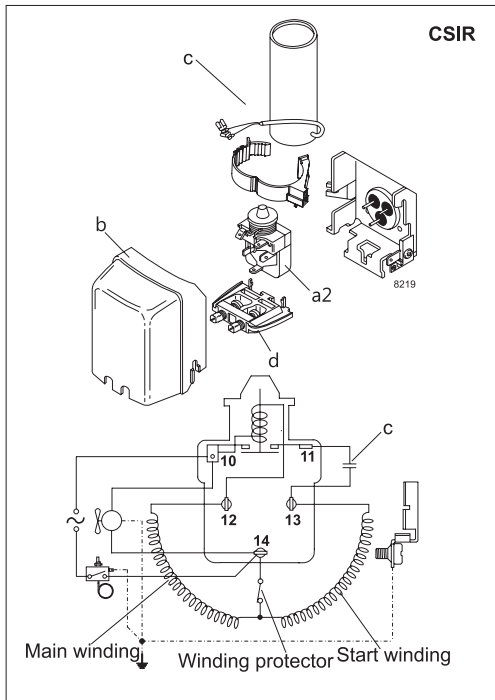
220V, 50Hz, fan cooling F<sub>2</sub>

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			116	184	261	290	351	457	584	681	735	914	1125	1229	1372		
Power cons. in W			127	157	189	200	221	254	289	313	325	363	402	420	443		
Current cons. in A			1.40	1.45	1.51	1.54	1.59	1.69	1.80	1.89	1.93	2.07	2.23	2.30	2.39		
COP in W/W			0.92	1.17	1.38	1.45	1.59	1.80	2.02	2.18	2.26	2.52	2.80	2.93	3.10		

**ASHRAE 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			104	164	233	258	313	407	520	606	654	813	999	1091	1217		
Power cons. in W			126	156	187	198	219	252	286	309	322	359	397	415	437		
Current cons. in A			1.40	1.45	1.51	1.54	1.59	1.69	1.80	1.86	1.93	2.07	2.23	2.30	2.39		
COP in W/W			0.83	1.05	1.24	1.31	1.43	1.62	1.82	1.96	2.03	2.27	2.52	2.63	2.78		



Accessories for	NLE10MF.2	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	117U6002
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			153	212	281	308	364	463	581	671	721	887	1082	1177	1308		
Power cons. in W			141	162	185	193	209	234	261	279	289	320	353	368	388		
Current cons. in A			1.36	1.39	1.43	1.45	1.49	1.56	1.63	1.69	1.72	1.81	1.91	1.95	2.01		
COP in W/W			1.09	1.31	1.52	1.60	1.74	1.98	2.23	2.40	2.49	2.77	3.07	3.20	3.37		

**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			131	189	257	282	336	431	544	630	678	837	1023	1114	1239		
Power cons. in W			142	164	188	197	213	240	268	288	298	329	363	379	399		
Current cons. in A			1.36	1.39	1.44	1.46	1.50	1.57	1.66	1.72	1.75	1.86	1.97	2.02	2.09		
COP in W/W			0.93	1.15	1.36	1.43	1.57	1.80	2.03	2.19	2.28	2.54	2.82	2.94	3.10		

**ASHRAE LBP**

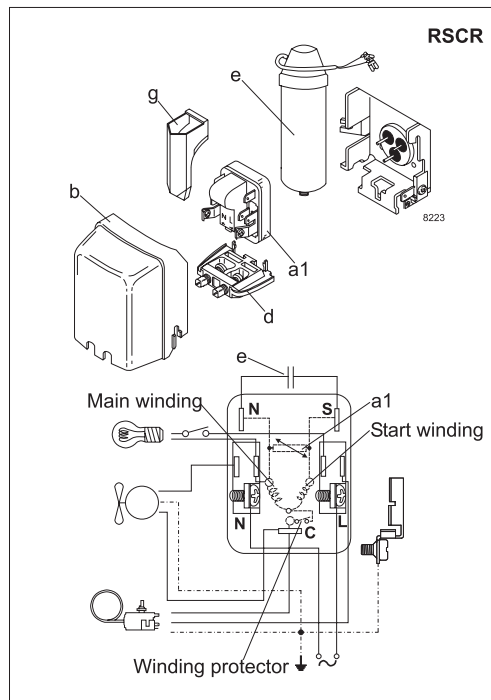
 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

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			116	184	260	289	350	456	583	680	734	913	1124	1228	1370		
Power cons. in W			120	149	179	189	210	242	274	297	309	344	381	398	420		
Current cons. in A			1.33	1.37	1.43	1.46	1.51	1.60	1.71	1.79	1.83	1.97	2.11	2.18	2.27		
COP in W/W			0.97	1.23	1.45	1.53	1.67	1.89	2.12	2.29	2.38	2.65	2.95	3.08	3.26		

**ASHRAE 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			104	164	232	258	312	407	519	605	653	812	998	1090	1216		
Power cons. in W			119	148	177	188	208	239	272	294	305	340	377	394	415		
Current cons. in A			1.33	1.37	1.43	1.46	1.51	1.60	1.71	1.79	1.83	1.97	2.11	2.18	2.27		
COP in W/W			0.87	1.11	1.31	1.38	1.50	1.70	1.91	2.06	2.14	2.38	2.65	2.77	2.93		



Accessories for	NLE10MF.2	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

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