

## NLE8.8CN Energy-optimized LBP/MBP Compressor R290 220-240V 50Hz

### General

Code number	105H6880
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 (65)	-
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

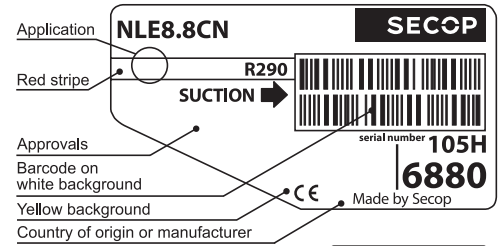
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST   LST	A	11.3	10.7
Cut in Current, HST   LST	A	11.3	15.9
Resistance, main   start winding (25°C)	Ω	9.0	12.0

### Design

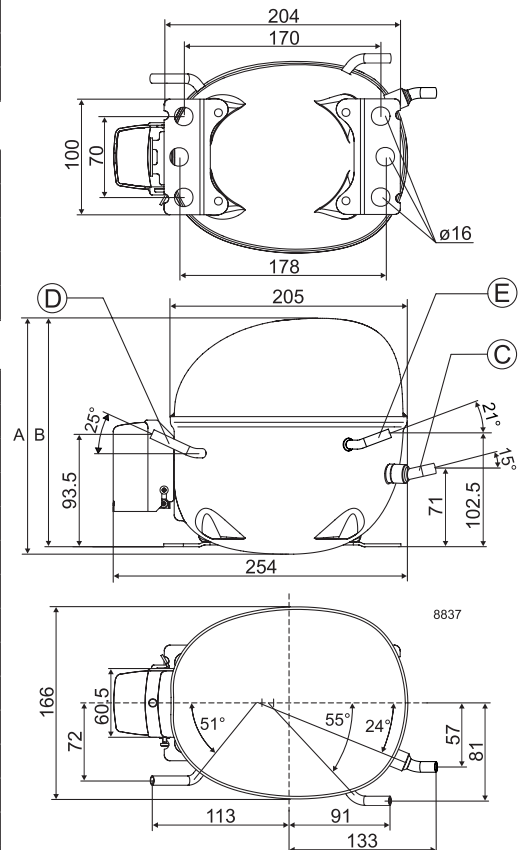
Displacement	cm <sup>3</sup>	8.76
Oil quantity (type)	cm <sup>3</sup>	300 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm <sup>3</sup>	2360
Weight without electrical equipment	kg	12.1

### 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			259	321	397	426	487	596	723	819	873	1046	1244	1341	1472		
Power cons. in W			212	234	257	265	280	302	323	336	342	358	371	375	379		
Current cons. in A			1.55	1.61	1.67	1.69	1.74	1.81	1.88	1.92	1.94	2.00	2.04	2.05	2.07		
COP in W/W			1.22	1.37	1.54	1.61	1.74	1.97	2.24	2.44	2.55	2.92	3.36	3.58	3.88		

**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			242	304	376	404	462	564	683	772	821	981	1165	1254	1375		
Power cons. in W			216	241	267	275	293	318	343	358	366	386	404	411	418		
Current cons. in A			1.56	1.63	1.70	1.73	1.78	1.86	1.95	2.00	2.03	2.10	2.16	2.19	2.21		
COP in W/W			1.12	1.26	1.41	1.47	1.58	1.77	1.99	2.15	2.24	2.54	2.88	3.05	3.29		

**ASHRAE LBP**

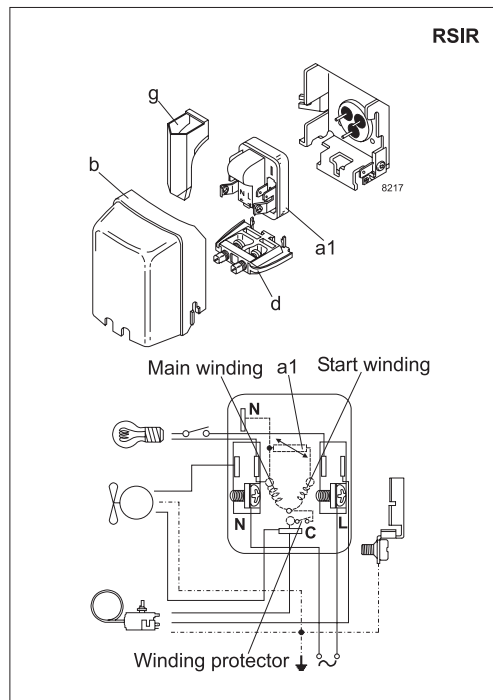
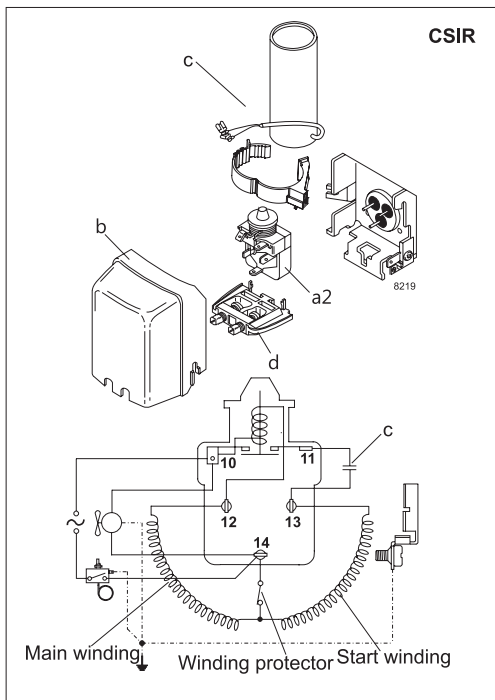
220V, 50Hz, fan cooling F<sub>2</sub>

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			236	312	398	430	497	611	742	839	893	1067	1267	1364	1496		
Power cons. in W			202	232	264	275	296	328	360	380	390	418	444	454	466		
Current cons. in A			1.54	1.63	1.73	1.76	1.84	1.95	2.07	2.15	2.19	2.30	2.41	2.46	2.51		
COP in W/W			1.17	1.34	1.51	1.57	1.68	1.86	2.06	2.21	2.29	2.55	2.85	3.00	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			211	279	356	385	444	545	662	748	796	950	1127	1212	1328		
Power cons. in W			200	230	261	272	293	325	356	376	386	413	439	449	460		
Current cons. in A			1.54	1.63	1.73	1.76	1.84	1.95	2.07	2.15	2.19	2.30	2.41	2.46	2.51		
COP in W/W			1.06	1.21	1.36	1.41	1.51	1.68	1.86	1.99	2.06	2.30	2.57	2.70	2.89		



Accessories for	NLE8.8CN	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	117U7002
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			261	324	401	430	492	602	731	827	881	1056	1257	1354	1486		
Power cons. in W			205	226	248	255	269	291	311	323	329	344	356	360	364		
Current cons. in A			1.30	1.32	1.37	1.39	1.43	1.50	1.58	1.63	1.65	1.72	1.77	1.79	1.80		
COP in W/W			1.28	1.44	1.62	1.69	1.83	2.07	2.35	2.56	2.68	3.07	3.53	3.76	4.08		

**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			245	307	380	408	467	569	689	779	829	991	1177	1267	1389		
Power cons. in W			208	232	257	265	282	307	331	346	353	373	390	396	403		
Current cons. in A			1.31	1.36	1.42	1.45	1.51	1.60	1.70	1.77	1.80	1.89	1.97	2.00	2.02		
COP in W/W			1.18	1.32	1.48	1.54	1.66	1.85	2.08	2.25	2.35	2.66	3.02	3.20	3.44		

**ASHRAE LBP**

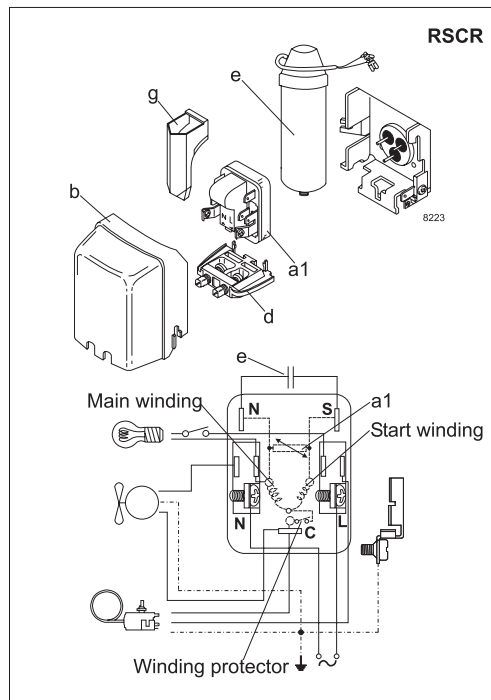
 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

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			238	315	402	435	502	617	749	848	902	1078	1280	1378	1511		
Power cons. in W			194	223	253	264	284	315	346	365	375	401	426	435	446		
Current cons. in A			1.26	1.33	1.43	1.46	1.54	1.67	1.80	1.89	1.93	2.06	2.17	2.22	2.27		
COP in W/W			1.23	1.41	1.59	1.65	1.77	1.96	2.17	2.32	2.41	2.69	3.01	3.17	3.38		

**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			213	282	360	388	448	550	668	756	804	960	1138	1225	1342		
Power cons. in W			192	221	251	261	281	312	342	361	370	397	420	430	441		
Current cons. in A			1.26	1.33	1.43	1.46	1.54	1.67	1.80	1.89	1.93	2.06	2.17	2.22	2.27		
COP in W/W			1.11	1.28	1.43	1.49	1.59	1.76	1.95	2.09	2.17	2.42	2.71	2.85	3.05		



Accessories for	NLE8.8CN	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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