

NLE10CN Energy-optimized LBP/MBP Compressor R290 220-240V 50Hz

General

Code number	105H6175
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 ₂	F ₂	-	-	-	-
38°C		F ₂	F ₂	-	-	-	-
43°C		F ₂	F ₂	-	-	-	-
Remarks on application:							

Motor

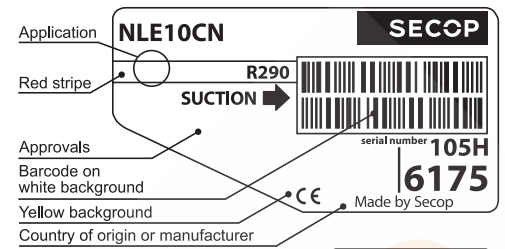
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST LST	A	12.0	10.9
Cut in Current, HST LST	A	12.0	15.8
Resistance, main start winding (25°C)	Ω	8.0	18.0

Design

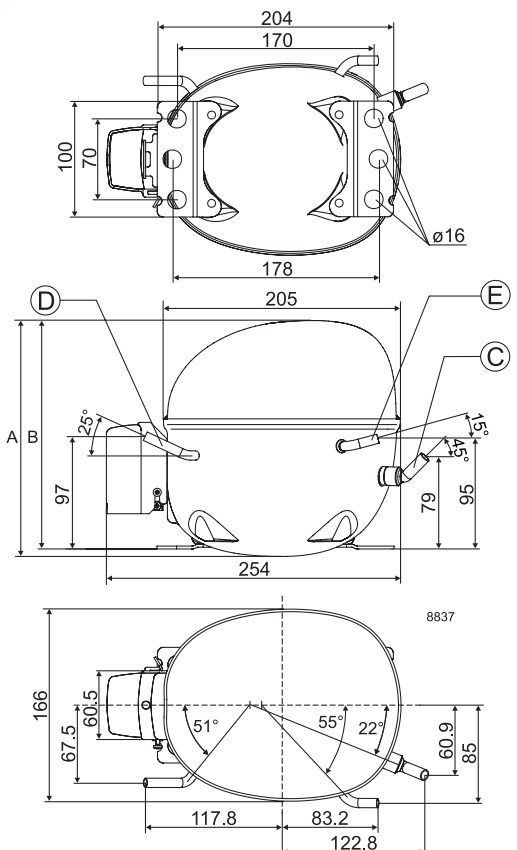
Displacement	cm ³	10.09
Oil quantity (type)	cm ³	300 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm ³	2360
Weight without electrical equipment	kg	12.1

Dimensions

Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/I.D. mm angle	C	8.2 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
- F₁ = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
- F₂ = 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 F₂

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			289	364	455	491	565	695	845	956	1017	1212	1431	1535	1675		
Power cons. in W			242	275	308	320	341	372	400	416	424	444	459	463	467		
Current cons. in A			1.87	1.95	2.04	2.08	2.14	2.24	2.33	2.38	2.41	2.47	2.52	2.53	2.54		
COP in W/W			1.20	1.32	1.48	1.54	1.66	1.87	2.11	2.30	2.40	2.73	3.12	3.31	3.59		

EN 12900 MBP

220V, 50Hz, fan cooling F₂

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			268	339	427	461	532	654	796	900	957	1140	1345	1443	1574		
Power cons. in W			246	281	316	328	351	385	418	438	448	474	495	503	511		
Current cons. in A			1.89	1.97	2.06	2.10	2.17	2.28	2.39	2.45	2.49	2.58	2.65	2.68	2.70		
COP in W/W			1.09	1.21	1.35	1.41	1.51	1.70	1.90	2.06	2.14	2.41	2.72	2.87	3.08		

ASHRAE LBP

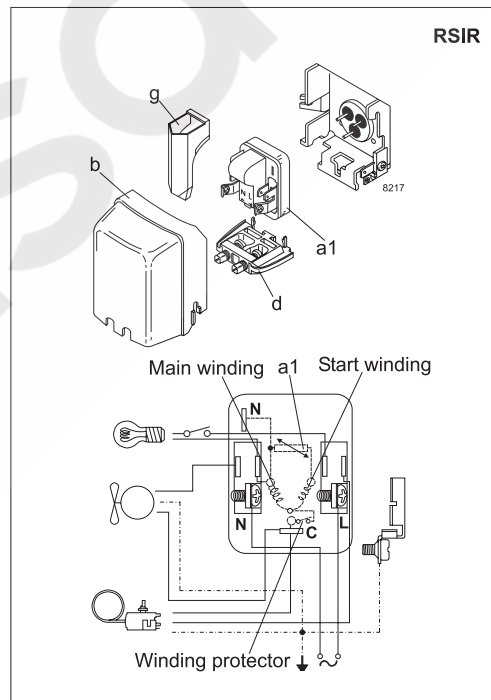
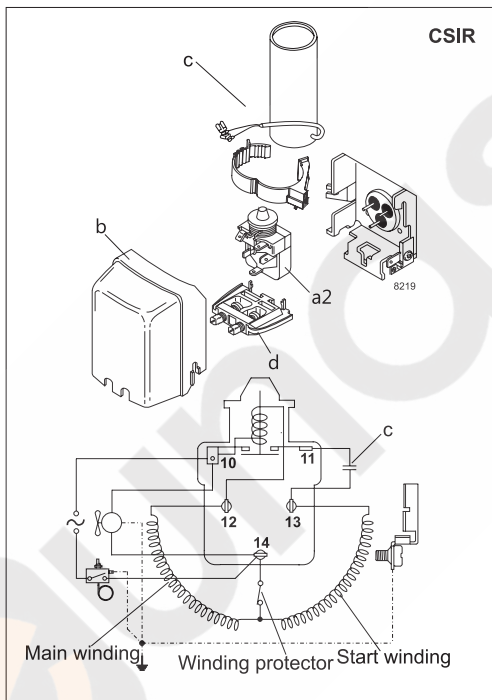
220V, 50Hz, fan cooling F₂

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			267	350	449	486	565	702	859	974	1037	1240	1467	1575	1721		
Power cons. in W			244	280	318	331	357	397	437	462	475	510	543	556	571		
Current cons. in A			1.91	2.00	2.11	2.15	2.24	2.37	2.52	2.62	2.67	2.81	2.94	3.00	3.06		
COP in W/W			1.09	1.25	1.41	1.47	1.58	1.77	1.97	2.11	2.19	2.43	2.70	2.83	3.01		

ASHRAE MBP/HBP

220V, 50Hz, fan cooling F₂

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			239	312	401	434	505	626	766	868	924	1104	1304	1400	1528		
Power cons. in W			242	277	315	328	354	393	432	457	469	504	536	549	564		
Current cons. in A			1.91	2.00	2.11	2.15	2.24	2.37	2.52	2.62	2.67	2.81	2.94	3.00	3.06		
COP in W/W			0.99	1.13	1.27	1.32	1.43	1.59	1.77	1.90	1.97	2.19	2.43	2.55	2.71		



Accessories for	NLE10CN	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 F₂

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			292	367	460	496	571	702	854	966	1028	1224	1445	1550	1691		
Power cons. in W			237	267	298	308	328	356	383	398	406	425	439	443	447		
Current cons. in A			1.43	1.58	1.71	1.75	1.83	1.94	2.03	2.08	2.10	2.16	2.20	2.21	2.22		
COP in W/W			1.23	1.37	1.54	1.61	1.74	1.97	2.23	2.43	2.53	2.88	3.29	3.50	3.78		

EN 12900 MBP

 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			270	343	431	465	537	661	804	909	967	1152	1359	1458	1590		
Power cons. in W			242	274	307	318	340	372	403	422	431	456	477	484	492		
Current cons. in A			1.46	1.60	1.72	1.76	1.83	1.94	2.03	2.09	2.12	2.19	2.24	2.27	2.29		
COP in W/W			1.12	1.25	1.41	1.46	1.58	1.78	2.00	2.16	2.24	2.53	2.85	3.01	3.23		

ASHRAE LBP

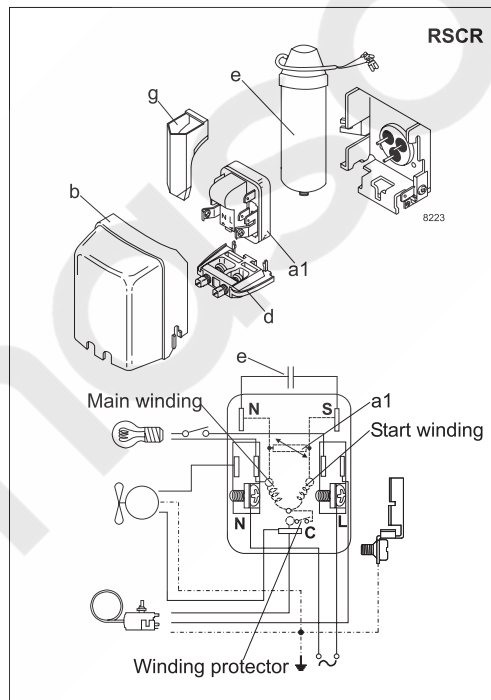
 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			270	353	453	491	571	709	867	984	1048	1252	1482	1591	1738		
Power cons. in W			236	270	307	319	344	382	419	443	455	488	518	530	544		
Current cons. in A			1.59	1.71	1.84	1.88	1.96	2.09	2.21	2.29	2.33	2.45	2.57	2.62	2.68		
COP in W/W			1.14	1.31	1.48	1.54	1.66	1.86	2.07	2.22	2.30	2.57	2.86	3.00	3.20		

ASHRAE MBP/HBP

 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			241	316	405	439	510	633	773	877	934	1115	1318	1414	1543		
Power cons. in W			234	268	304	316	341	378	415	438	450	482	512	523	537		
Current cons. in A			1.59	1.71	1.84	1.88	1.96	2.09	2.21	2.29	2.33	2.45	2.57	2.62	2.68		
COP in W/W			1.03	1.18	1.33	1.39	1.50	1.67	1.87	2.00	2.08	2.31	2.57	2.70	2.88		



Accessories for	NLE10CN	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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