

## NLE8.8CNT Energy-optimized Tropical Compressor R290 208-230V 60Hz

### General

Code number	105H6088
Approvals	UL984, CB IEC 60335-2-34
Compressors on pallet	80

### Application

Application	LBP/MBP		
	Hz	50	60
Frequency	Hz	50	60
Evaporating temperature	°C	-	-35 to 7.2
Voltage range	V	-	187 to 253
Max. condensing temperature continuous (short)	°C	-	65 (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>	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:  
UL984 approval in preparation (first quarter 2018)

### Motor

Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST   LST	A	15.5	14.1
Cut in Current, HST   LST	A	15.5	19.8
Resistance, main   start winding (25°C)	Ω	6.5	7.5

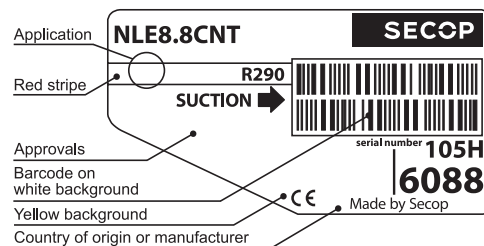
### Design

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	11.1

### Dimensions

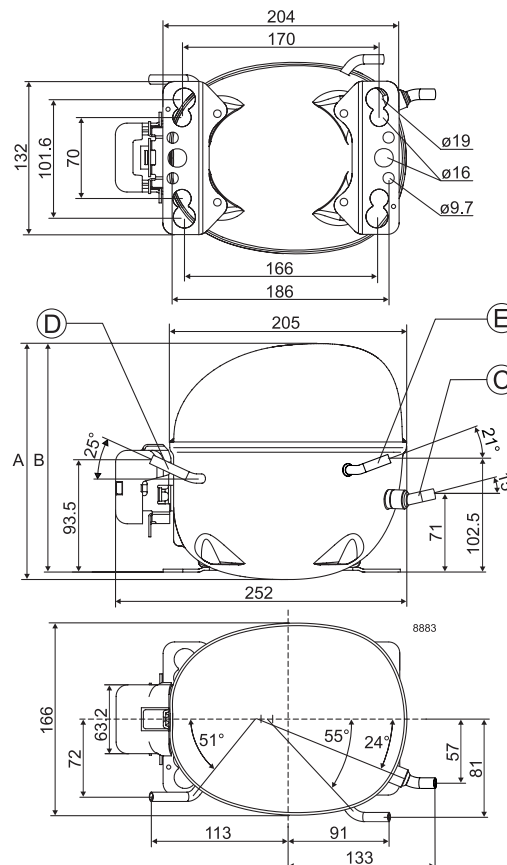
Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/I.D. mm   angle	C	8.2   15°
	material   comment		Copper   Rubber plug
Process connector	location/I.D. mm   angle	D	6.5   25°
	material   comment		Copper   Rubber plug
Discharge connector	location/I.D. mm   angle	E	6.5   21°
	material   comment		Copper   Rubber plug
Oil cooler connector	location/I.D. mm   angle	F	-
	material   comment		-
Connector tolerance	I.D. mm		±0.09

Remarks:



Yellow warning label

- 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, 60Hz, 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			299	372	464	499	575	706	859	972	1034	1233	1455	1561			
Power cons. in W			245	269	296	305	323	349	373	388	395	413	425	429			
Current cons. in A			1.91	1.96	2.03	2.06	2.11	2.19	2.27	2.32	2.34	2.40	2.44	2.45			
COP in W/W			1.22	1.38	1.57	1.64	1.78	2.02	2.30	2.5	2.62	2.99	3.42	3.64			

**EN 12900 MBP**

220V, 60Hz, 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			275	347	435	469	540	664	807	912	970	1154	1361	1458			
Power cons. in W			247	275	304	315	335	365	393	411	419	441	459	465			
Current cons. in A			1.91	1.97	2.05	2.08	2.14	2.24	2.33	2.39	2.42	2.50	2.56	2.59			
COP in W/W			1.11	1.26	1.43	1.49	1.61	1.82	2.05	2.22	2.31	2.62	2.96	3.14			

**ASHRAE LBP**

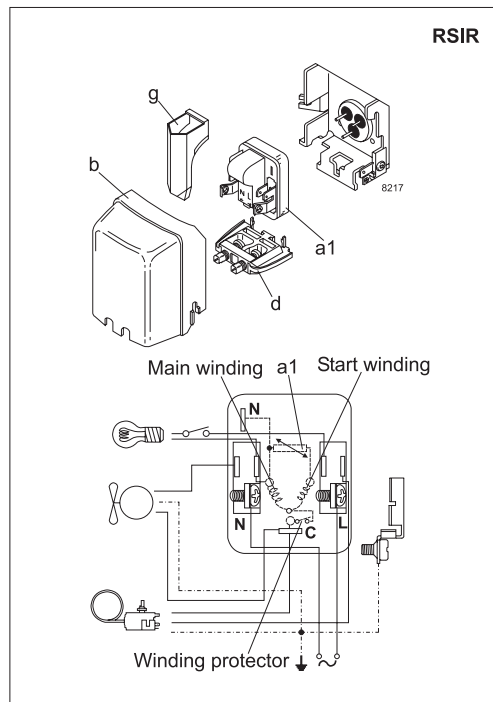
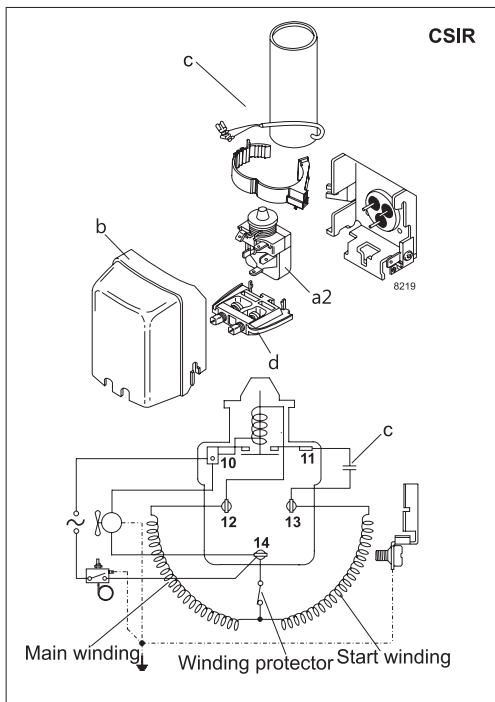
220V, 60Hz, fan cooling F<sub>2</sub>

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			276	366	471	511	595	738	901	1021	1086	1296	1531	1643			
Power cons. in W			249	281	316	328	352	388	424	447	458	489	515	525			
Current cons. in A			1.91	1.99	2.08	2.12	2.19	2.31	2.44	2.52	2.56	2.67	2.77	2.81			
COP in W/W			1.11	1.30	1.49	1.56	1.69	1.90	2.12	2.29	2.37	2.65	2.97	3.13			

**ASHRAE MBP**

220V, 60Hz, 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			247	328	423	458	533	661	807	914	973	1159	1369	1469			
Power cons. in W			249	281	316	328	352	388	424	447	458	489	515	525			
Current cons. in A			1.91	1.99	2.08	2.12	2.19	2.31	2.44	2.52	2.56	2.67	2.77	2.81			
COP in W/W			0.99	1.17	1.34	1.40	1.52	1.70	1.90	2.05	2.12	2.37	2.66	2.80			



Accessories for	NLE8.8CNT	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	117U7022
Start. capacitor 100 µF	6.3 mm spade connectors	c	117U5381
Cover		b	103N2011
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, 60Hz, 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			302	379	471	506	580	709	860	972	1034	1234	1462	1571			
Power cons. in W			234	258	283	291	308	332	355	369	376	395	411	417			
Current cons. in A			1.53	1.59	1.67	1.69	1.75	1.83	1.91	1.97	1.99	2.06	2.12	2.14			
COP in W/W			1.29	1.47	1.66	1.74	1.89	2.14	2.42	2.63	2.75	3.12	3.56	3.77			

**EN 12900 MBP**

 220V, 60Hz, 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			273	350	439	473	544	664	804	908	965	1149	1357	1458			
Power cons. in W			237	264	291	301	319	347	373	389	397	419	437	444			
Current cons. in A			1.53	1.61	1.69	1.72	1.79	1.88	1.98	2.04	2.07	2.15	2.23	2.25			
COP in W/W			1.15	1.33	1.51	1.57	1.70	1.92	2.16	2.33	2.43	2.74	3.10	3.28			

**ASHRAE LBP**

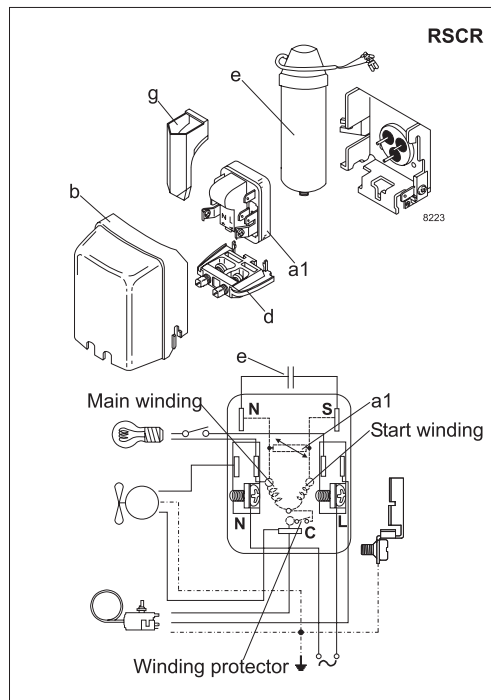
 220V, 60Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

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			249	355	470	512	599	742	905	1023	1089	1298	1535	1650			
Power cons. in W			233	267	302	314	337	371	404	425	435	464	489	499			
Current cons. in A			1.52	1.62	1.73	1.77	1.84	1.97	2.09	2.17	2.21	2.33	2.43	2.47			
COP in W/W			1.07	1.33	1.56	1.63	1.78	2.00	2.24	2.41	2.50	2.80	3.14	3.31			

**ASHRAE MBP**

 220V, 60Hz, 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			223	318	422	459	536	665	810	916	974	1161	1373	1474			
Power cons. in W			233	267	302	314	337	371	404	425	435	464	489	499			
Current cons. in A			1.52	1.62	1.73	1.77	1.84	1.97	2.09	2.17	2.21	2.33	2.43	2.47			
COP in W/W			0.96	1.19	1.40	1.46	1.59	1.79	2.01	2.16	2.24	2.50	2.81	2.95			



Accessories for	NLE8.8CNT	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	103N2011
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

Nidec GA Compressors accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Nidec GA Compressors reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequential changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Nidec Global Appliance Germany GmbH. All rights reserved. [www.secop.com](http://www.secop.com)