

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

### General

Code number	105H6088
Approvals	UL984
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

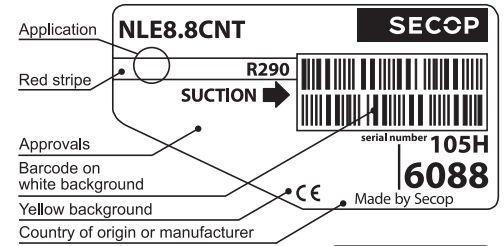
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST   LST	A	15.5	14.1
Cut in Current, HST   LST	A	15.5	19.8
Resistance, main   start winding (25°C)	Ω	6.5	7.5

### Design

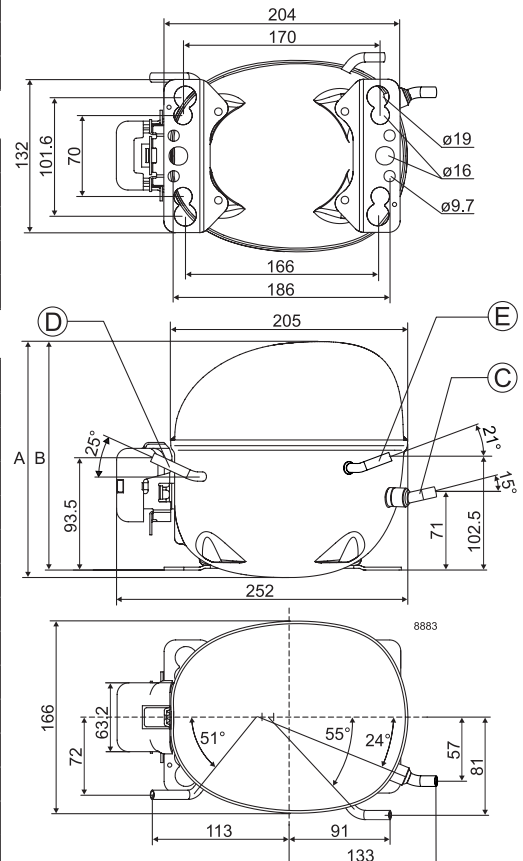
Displacement	cm <sup>3</sup>	8.76
Oil quantity (type)	cm <sup>3</sup>	300 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm <sup>3</sup>	2360
Weight without electrical equipment	kg	11.1

### 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:			



- 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**

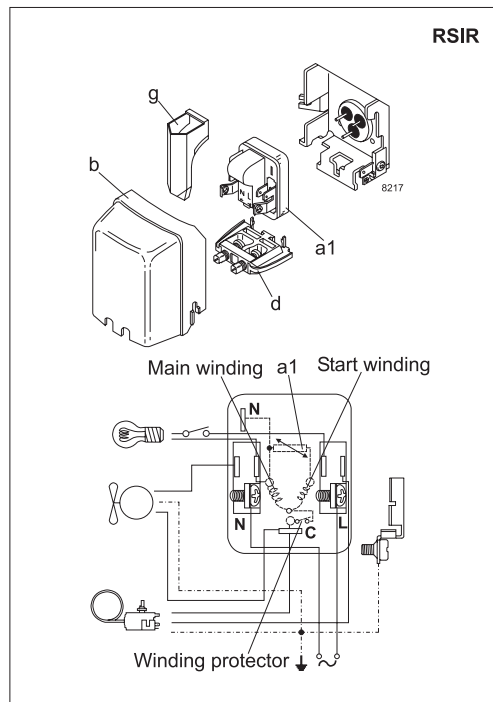
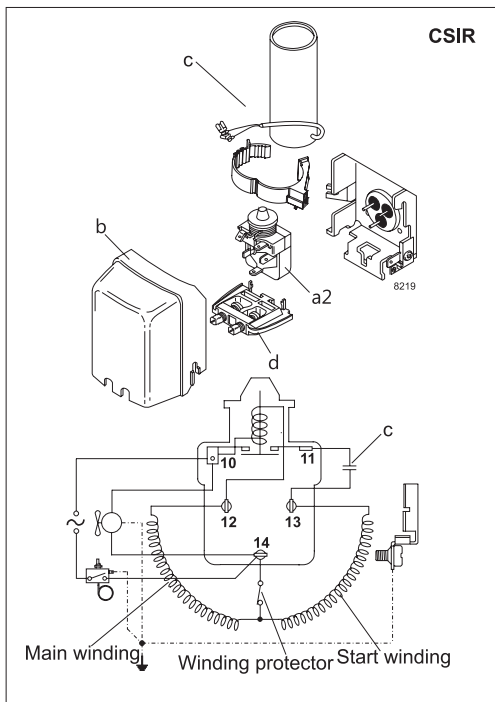
220V, 60Hz, fan cooling F<sub>2</sub>

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**

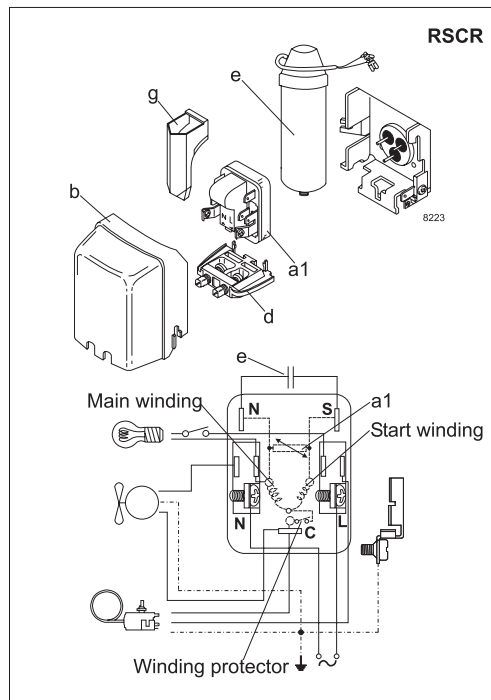
220V, 60Hz, RC 4 µF, ePTC consumption incl., fan cooling F<sub>2</sub>

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

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