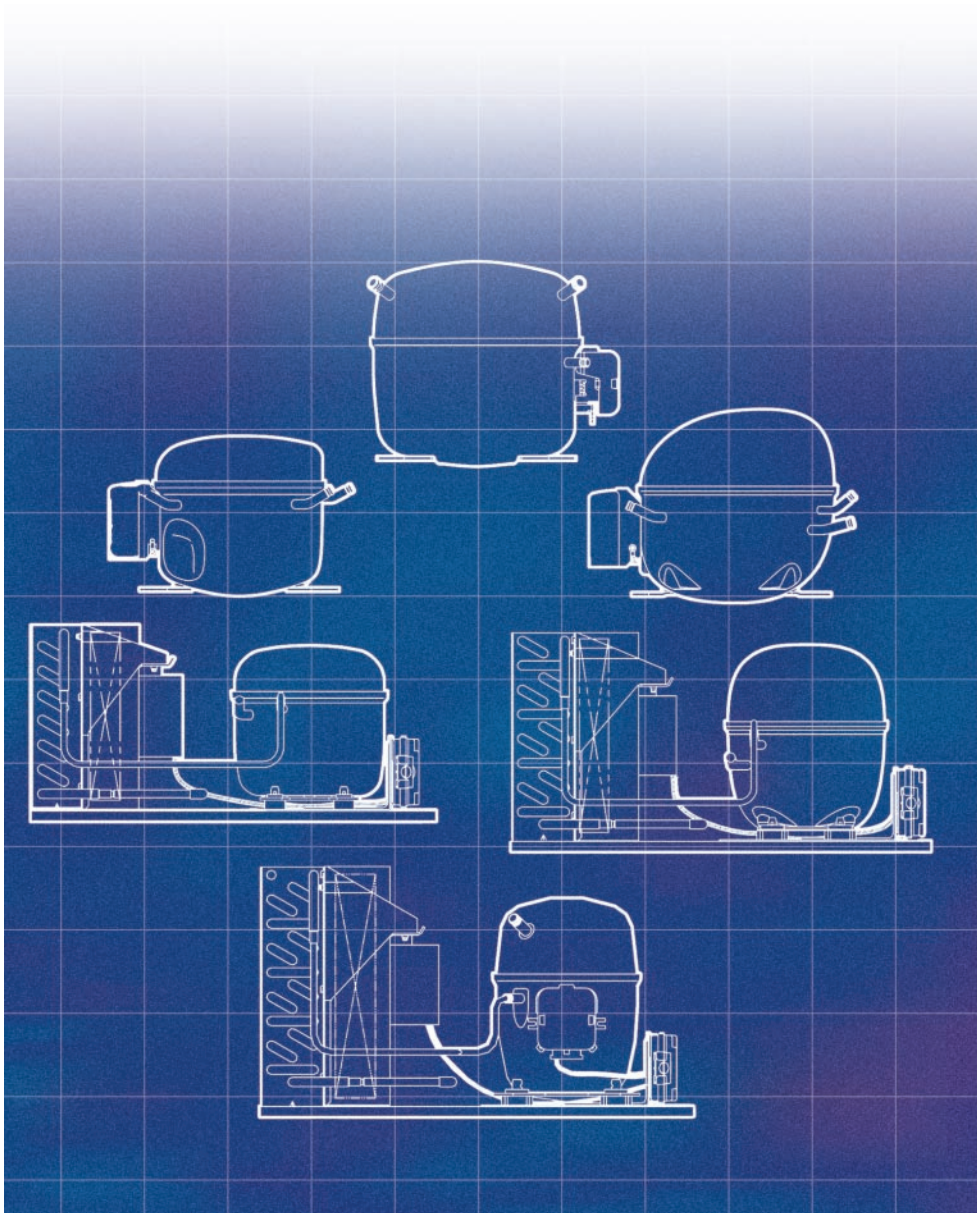


Collection of Datasheets

Compressors and Condensing Units for R290 (Propane) 220-240V 50Hz



LBP/MBP Compressors

T-Series

TL5CNK (50Hz) Page 10

N-Series

NL7CNK (50Hz) Page 12

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S-Series

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LBP/MBP Condensing units

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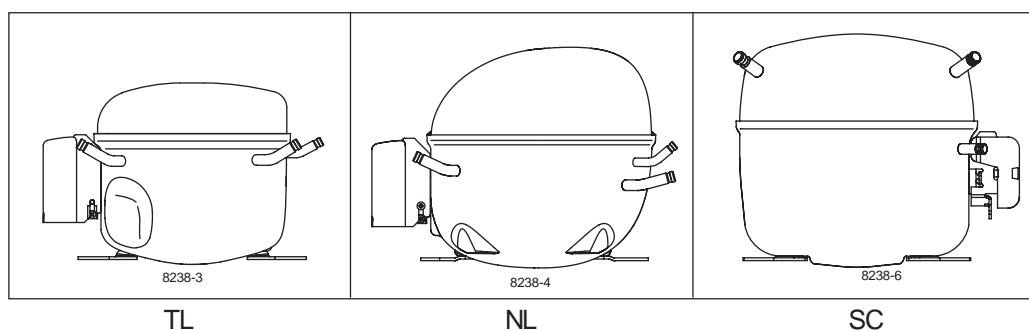
1. General

This collection of datasheets contains information on Danfoss hermetic refrigeration compressors and condensing units for 220-240V especially designed for refrigeration systems using propane, refrigerant R290 (C₃H₈).

R290 is classified as a flammable refrigerant of class A3 according to ANSI/ASHRAE 34. Accordingly, special safety regulations must be complied with. For domestic appliances a special Test Schedule has been integrated in the European Standard EN 60335-2-24 and IEC 60335-2-24. For commercial refrigerators IEC 60335-2-89 will include flammable refrigerants.

Danfoss compressors and condensing units for R290 must only and exclusively be used in appliances certified for R290 according to these or later regulations. This means that the compressors must not be used in appliances which are not originally designed and certified for R290.

The programme consists of the basic types TL, NL and SC. The fan cooled condensing units for R290 are based on the TL, NL and SC compressors.



1.1 Designations

The compressor designations are built up according to the following system:

Design	Optimization level	Compressor size	Application range	Start characteristics
TL	Blank Standard energy level	Nominal displacement in cm ³	CN R290 LBP/MBP	K = LST characteristics (capillary tube) X = HST characteristics (expansion valve)
NL				
SC				

Examples

TL		5	CN	K
NL		7	CN	K
SC		12	CN	X

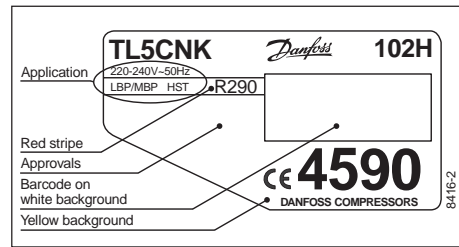
The condensing units designations are based on the compressor designations, extended by a version designation. For the time being, only N0 with solder connection, for capillary tube systems, is available.

Example: SC12CNXN0

1.2 Design

All compressors featured in this collection for R290 from the TL, NL and SC range are standard efficiency types.

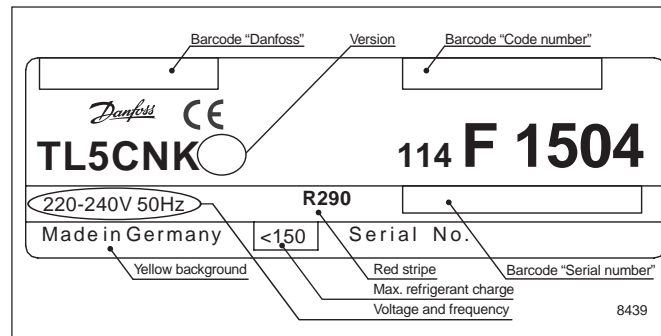
1.3 Type label



Compressors

All compressors have a yellow label with the type designation. This label has a red stripe and the text "R290".

The country of origin indicated on the compressor paper label and on the compressor cover varies depending on the manufacturing place. Information can be found on our technical information sheet "Country of Origin".



Condensing units

All condensing units have a yellow type label located on the condenser and the packing. It gives the code number, model designation, rated voltage, frequency, refrigerant and a serial number.

1.4 Data stamping

The compressor type and production date are stamped on the side of the compressor. The information may be as follows,

L-5CN-4590
F-201E2207

The first line states the model designation and the code no.

L = last letter (or last two letters) of the compressor type
-5CN- = nominal displacement and application
4590 = 4 last digits in the code no.
(- = position mark)

The second line states the date of manufacture and internal Danfoss codes.

F = manufacturing place (F = Germany, AL = Slovenia, AM = Mexico)
20 = week 20
1 = 2001
E = Friday (A = Monday etc.)
220 = nominal voltage
7 = internal Danfoss code

1.5 Dimensions

The build-in conditions (total height, weight, tube dimensions etc.) are specified in the individual datasheets including dimensioned sketches.

2. Application range CN

Compressors with denominations ending with **CN** are designed for low evaporating temperatures (LBP Low **B**ack **P**ressure) and medium evaporating temperatures (MBP **M**edium **B**ack **P**ressure) for use in commercial refrigerators, freezers and similar applications in regions with normal supply voltage.

The following table shows the normally recommended applications as regards voltage/frequency, ambient temperature, evaporating temperature and necessary compressor cooling. The recommendations must be regarded as a guideline only as they presuppose a proper dimensioning of the refrigeration system.

Compressor		Mains [V/Hz]	Ambient temperature					
			32°C		38°C		43°C	
			LBP	MBP	LBP	MBP	LBP	MBP
CN	TL5NCK	198 - 254 /50	F ₁	F ₁	F ₁	F ₁	F ₁	F ₁ *
	NL7CNK	198 - 254 /50	F ₁	F ₁	F ₁	F ₁	F ₁	F ₂
	NL9CNK	198 - 254 /50	F ₁	F ₁	F ₁	F ₁	F ₂	F ₂ *
	SC10-12-15-18CNK	198 - 254 /50	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂

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

☐ = Outside application range, not recommended

* = Run capacitor compulsory

The application limits regarding evaporating temperatures and motor systems are specified in the individual datasheets.

2.1 Design limits

In order to secure a satisfying lifetime of the compressor, and to protect the compressor against overload, some design criteria for the appliances must be fulfilled.

Both the condensing temperature and the compressor temperature should be kept as low as possible. This can be done by using well-dimensioned condenser surfaces and by ensuring good ventilation around the compressor under all operating conditions.

In order to protect the compressor against overload, the compressor has to start and work properly through pressure peaks obtained in the highest ambient temperature and lowest working voltage. At peak load the condensing temperature must not exceed 65°C. The winding temperature must not exceed 135°C.

Condensing temperature
Winding temperature

At stable operation conditions the condensing temperature must not exceed 55°C. The winding temperature must not exceed 125°C.

These limitations ensure a protection of valves, gaskets, oil, and motor insulation.

The condensing units are designed for 32°C ambient temperature, but can also be used in 43°C ambient. On some models 2 different condenser sizes are available, allowing for different application limits. Detailed information can be found in the individual datasheets.

3. Electrical equipment

The compressors are equipped with a single-phase AC motor. All compressors for R290 are designed for use with **Low Starting Torque (LST)** or **High Starting Torque (HST)**.

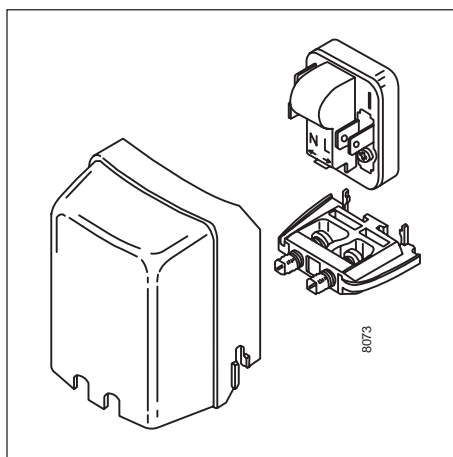
The electrical equipments are classified as "normal tight" (IP20)

The motor protector is built into the motor (winding protector).

Earth connections are located on the bracket around the current lead-in of the compressor.
No attempt must be made to start the compressor without a complete starting device.

The compressors can be supplied with the following motor systems:

3.1 LST (RSIR)

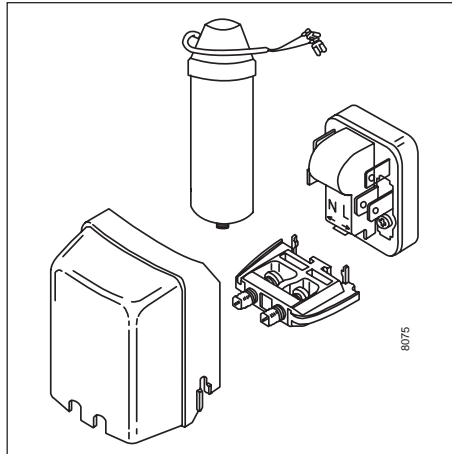


TL, NL

Compressors with the motor type **Resistant Start Induction Run (RSIR)** have a starting device for **Low Starting Torque (LST)**. This starting device consists of a PTC, a cord relief, and a cover and is used for compressors with the denominations TL and NL. The PTC starting device requires a pressure-equalization before each start. This starting device is normally used in well-designed refrigerating systems with capillary tube as throttling device.

The PTC needs a compressor standstill period of 5 minutes to cool down before each start.

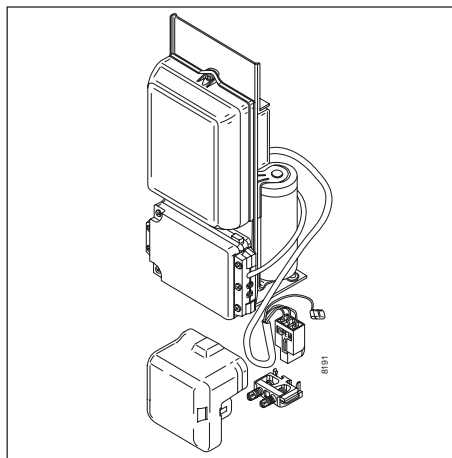
3.2 LST (RSCR)



TL, NL

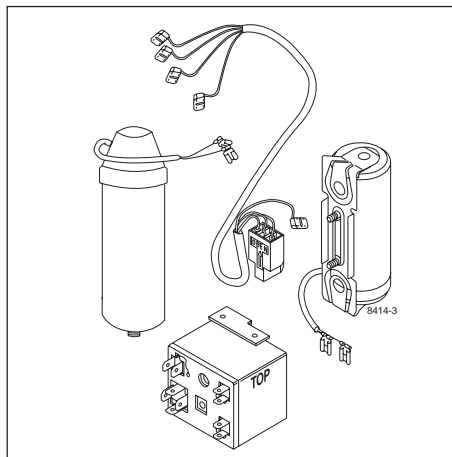
Compressors with the motor type **Resistant Start Capacitor Run (RSCR)** have a starting device for **Low Starting Torque (LST)**. This starting device consists of a PTC and a run capacitor and is mandatory for compressors with the denominations TL and NL under certain conditions. The PTC starting device requires a pressure-equalization before each start. This starting device is normally used in well-designed refrigerating systems with capillary tube as throttling device.

3.3 HST (CSR)



SC

Compressors with the motor type **Capacitor Start Run (CSR)** have a starting device for **High Starting Torque (HST)**. This starting device consists of a starting relay, a starting capacitor, a run capacitor, a terminal board, a cord relief, and a cover. The starting device is mandatory for the SC compressors for R290. The starting capacitor is designed for short time cut-in. "1.7% ED", which is stamped on the starting capacitor, means for instance max. 10 cut-ins per hour each with a duration of 6 seconds. The starting device has to be placed where flammable concentrations of R290 in the air can not be reached, acc. to EN/IEC 60335-2-24, as it is to be considered as a possible ignition source.



SC Kit-version

Delivery as a kit is possible also, see datasheets.

For further information on which starting device to use on individual compressors, please refer to the actual datasheets.

3.4 Connections

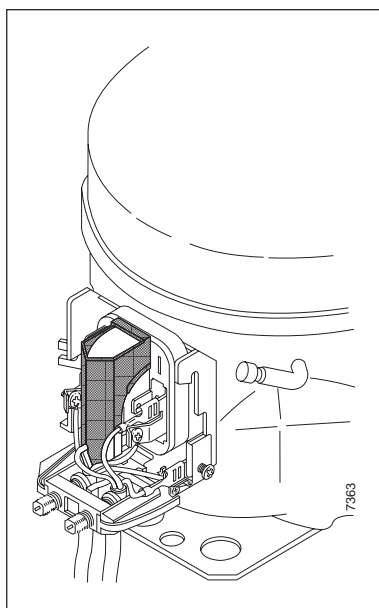
The electrical equipments are equipped with connectors depending on the ordered code number,

PTCs: 6.3 or 4.8 mm spade connectors and screws

Connection boxes: 6.3 mm spade connectors and screws

The power supply must be connected as shown in the wiring diagrams for the chosen electrical equipment given in the actual datasheets. Condensing units are equipped with connection boxes.

3.5 Approvals



Protection screen

The compressors have been approved in respect of safety by testing authorities in the majority of Western European countries. Actual standards to which the compressors have been approved are specified in the individual datasheets. Approval markings appear on the compressor labels.

To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.

3.6 Condensing units

Fans are fitted with self-lubricating bearings and a large oil reservoir which ensures several years of operation without inspection. Except for the 5W and 10W fan, all motors have a built-in winding protector. The protectors are approved for the use with R290.

4. Moisture and Impurities

The compressors are dried to a maximum moisture content of 60 to 75 mg depending on the compressor size. The maximum impurity content is 40 to 50 mg depending on the compressor size.

5. Max. refrigerant charge

According to the European Standard EN 60335-2-24 or draft IEC 60335-2-89, which standard has to be complied with, the refrigerant charge must not exceed 150 g.

Commercially available R290 must not be used because the fuel grades of these products are of a variable composition. These products may also contain impurities which could significantly reduce the reliability and performance of the system and lead to premature failure. All Danfoss compressors for R290 are released for a base purity of 99.5% or better. Impurities limits shall comply with DIN 8960 of 1998 (extended Version of ISO 916). For details see also separate documentation CN.60.F .

All users of refrigerant R290 should refer to the chemical data safety sheets for full information on the safe handling of R290.

In general the R290 charge is approximately 40 - 50% by weight than that for HFC.

The refrigerant charge must never be too large to be contained on the condenser side of the refrigeration system. Only the refrigerant amount which is necessary for the system to function must be charged.

6. Oil charge

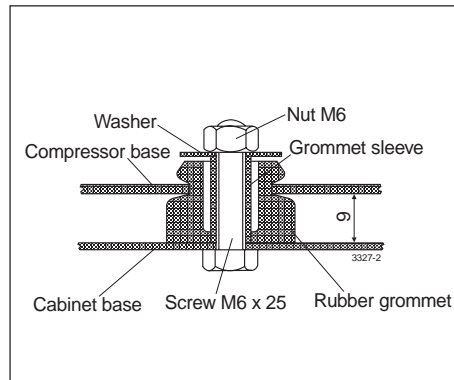
The compressors are supplied charged with dried and degassed oil, which is normally sufficient for the lifetime of the compressor. The refrigeration systems and the system components must be dimensioned in such a way that the oil can be lead back continuously to the compressor housing without accumulating in the system, e.g. without oil pockets and with sufficient gas velocity. The compressors use polyolester oils and are approved only for these oils and R290.

The oil charge is specified in the individual datasheets.

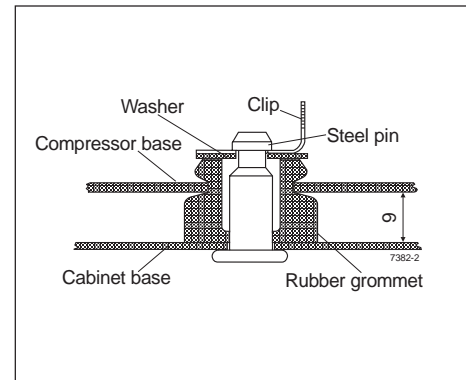
7. Mounting

Soldering problems caused by oil in the connectors can be avoided by placing the compressor on its baseplate some time before soldering it into the system. The compressor must never be placed upside down when mounting the rubber grommets in the baseplate. Instead place the compressor on its side with the connectors upwards.

7.1 Mounting accessories



Bolt joint



Snap-on joint

The mounting accessories for the compressors are available in two versions, with bolt joint or snap-on joint.

The rubber grommets are designed for the 16 mm holes of the baseplate.

Bolt joint for one compressor in a bag 118-1917

Bolt joint in quantities 118-1918

Snap-on in quantities 118-1919

8. Condition at delivery

The compressors are delivered without mounted starting devices on pallets with the dimensions 1144 x 800 mm. Quantities per pallets are specified in the individual datasheets. Electrical equipment is packed in separate boxes.

The most important performance controls carried out during manufacturing are,

- A high potential insulation test with 1650V for 1 second
- Pumping capacity
- Tightness of discharge side and discharge valve
- Tightness of compressor housing
- Check of the right oil charge
- Noise test

The compressors are supplied with sealed connectors and the sealing should not be removed before the system assembly takes place (max 15 minutes with open connectors).

9. Conversion from R502/R22 or R404A/R507 to R290

Normally, the same system components can be used as were used with R22. However, an adjustment of the charge has to be made.

Especially the system design has to follow safety standards as EN/IEC 60335-2-24 or IEC 60335-2-89, EN 378 or national standards.

A drier with 3Å desiccant of Molecular Sieves or a hard core drier compatible with R290 must always be used.

Rules for dryness and cleanliness of system components (DIN 8964) are transferred to R290 systems.

The compressors must be soldered into the system no later than 15 minutes after the connector seals have been removed.

The same evacuation procedure as for R22/R502/R404A systems must be used.

Max. 1% non-condensable gases.

The system must not contain any chlorine.

10. Warnings



R290 is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for a combustion to occur.

No high potential test nor start tests must be carried out while the compressor is under vacuum.

No attempt must be made to start the compressor without a complete starting device.

Allow the compressor to assume a temperature above 10°C before starting the first time in order to avoid starting problems.

Anti-freeze agents must not be used in the compressors as such agents are damaging to several of the materials used. In particular, the ethyl or methyl alcohol contents of such anti-freeze agents have a destructive effect on the synthetic motor insulation.

TL5CNK LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

Data Sheet (Replaces CH.52.A1.02)

General

Compressor	TL5CNK
Code number	102H4590

Application

Application	LBP/MBP
Evaporating temperature range	°C LBP: -40 to -5 MBP: -20 to 5
Voltage range	V/Hz LBP: 198 - 254 /50 MBP: 207 - 254 /50
Motor type	RSIR/RSCR*
Max. ambient temperature	°C 43
Comp. cooling at ambient temp.	32°C F ₁ 38°C F ₁ 43°C F ₁ *

* run capacitor 4 µF compulsory in 43°C ambient temperature at MBP conditions

Design

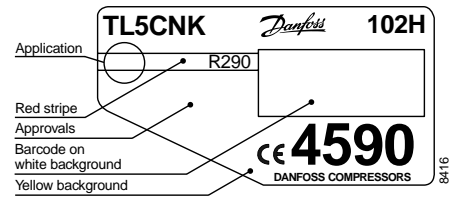
Displacement	cm ³	5.08
Oil quantity	cm ³	280
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	1690
Weight without electrical equipment	kg	7.5

Motor

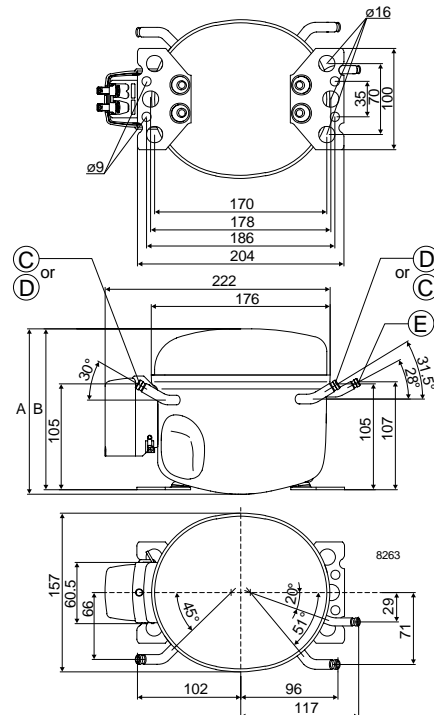
Motor size	watt	140
LRA (rated after 4 sec. UL984) LST	A	5.4
Cut-in current LST	A	9.7
Resistance, main and start winding (25°C)	Ω	14.5/14.8
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	173
		B	169
Suction connector	location/l.D. mm	C	6.2 ±0.09
Process connector	location/l.D. mm	D	6.2 ±0.09
Discharge connector	location/l.D. mm	E	5.0 +0.12/+0.20
Compressors on a pallet	pcs.		125



- 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



Capacity (EN 12900/CECOMAF)

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	81	109	143	183	198	230	283	345	416	496	586

watt
Capacity (ASHRAE)

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	90	122	160	204	221	256	316	386	465	555	657

watt
Power consumption

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	113	130	146	162	167	178	194	211	228	247	266

watt
Current consumption

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	1.00	1.04	1.09	1.14	1.16	1.19	1.25	1.32	1.39	1.46	1.54

A
COP (EN 12900/CECOMAF)

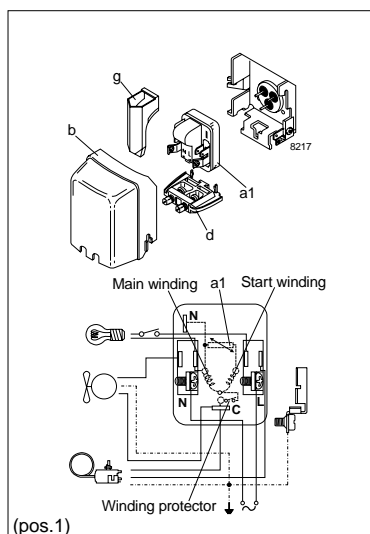
Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	0.71	0.84	0.98	1.13	1.18	1.29	1.46	1.64	1.82	2.01	2.21

W/W
COP (ASHRAE)

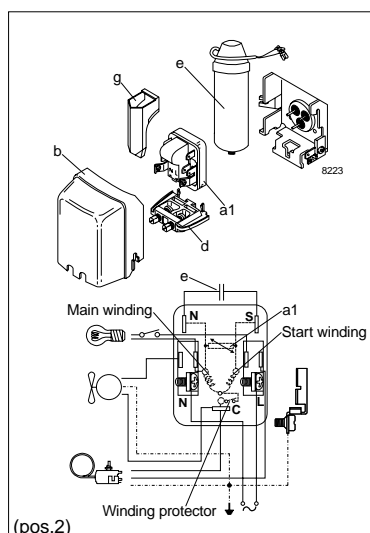
Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
TL5CNK	0.79	0.94	1.09	1.26	1.32	1.44	1.63	1.83	2.04	2.25	2.47

W/W

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₁ , 220V 50Hz		



(pos.1)



(pos.2)

Accessories

Devices	Fig.	TL5CNK
PTC starting device	6.3 mm spades	103N0011
	4.8 mm spades	103N0018
PTC starting device	6.3 mm spades	103N0016*
	4.8 mm spades	103N0021*
Cover	b	103N2010
Cord relief	d	103N1010
Run capacitor 4 µF	6.3 mm spades	117-7117*
	4.8 mm spades	117-7119*
Protection screen for PTC	g	103N0476
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

* run capacitor 4 µF compulsory in 43°C ambient temperature at MBP conditions

NL7CNK LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

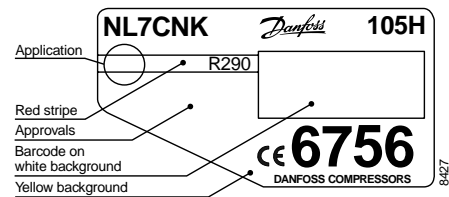
Data Sheet

General

Compressor	NL7CNK
Code number	105H6756

Application

Application	LBP/MBP	
Evaporating temperature range	°C -40 to 5	
Voltage range	V/Hz LBP: 198 - 254 /50	
Motor type	RSIR/RSCR	
Max. ambient temperature	°C 43	
Comp. cooling at ambient temp.	32°C	LBP: F ₁ MBP: F ₁
	38°C	LBP: F ₁ MBP: F ₁
	43°C	LBP: F ₁
		MBP: F ₂



- 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



Design

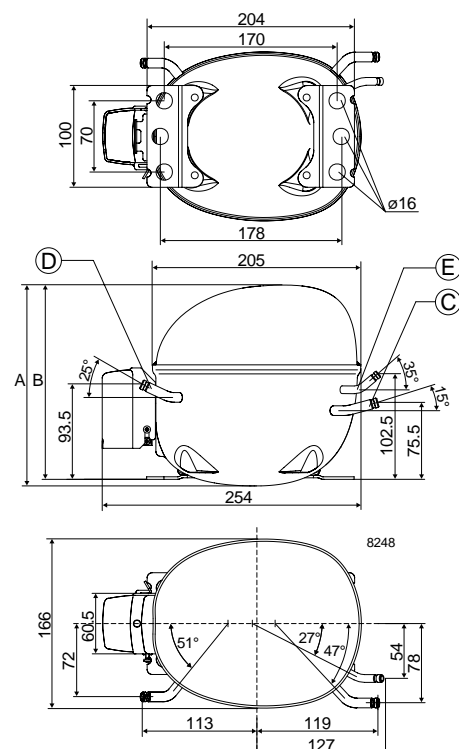
Displacement	cm ³	7.27
Oil quantity	cm ³	320
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	2360
Weight without electrical equipment	kg	10.5

Motor

Motor size	watt	235
LRA (rated after 4 sec. UL984) LST	A	9.2
Cut-in current LST	A	13.6
Resistance, main and start winding (25°C)	Ω	8.2/14.7
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	203
		B	197
Suction connector	location/I.D. mm	C	6.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	5.0 +0.12/+0.20
Compressors on a pallet	pcs.		80



Capacity (EN 12900/CECOMAF)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	118	166	223	290	315	368	458	561	679	814	965

watt
Capacity (ASHRAE)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	131	186	249	324	352	410	511	627	760	910	1081

watt
Power consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	149	174	198	221	229	244	267	291	316	343	372

watt
Current consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	1.40	1.43	1.48	1.54	1.56	1.61	1.69	1.78	1.89	2.00	2.13

A
COP (EN 12900/CECOMAF)

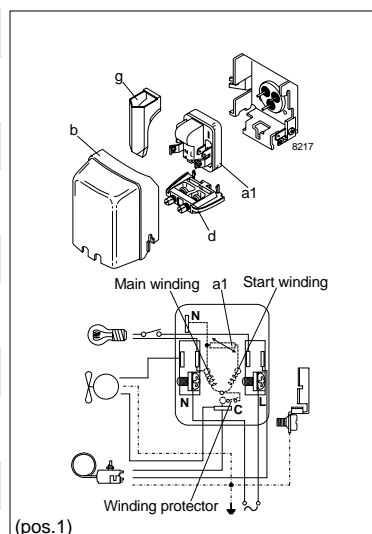
Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	0.79	0.96	1.13	1.31	1.38	1.51	1.71	1.93	2.15	2.37	2.59

W/W
COP (ASHRAE)

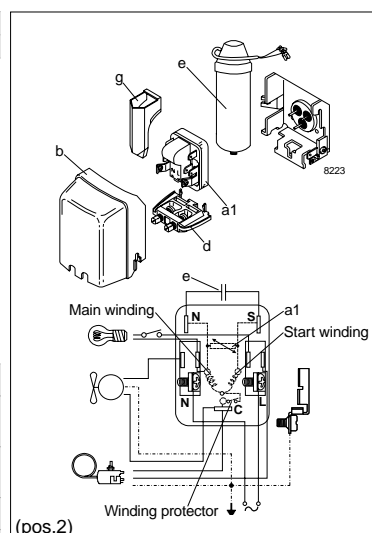
Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL7CNK	0.88	1.07	1.26	1.46	1.54	1.68	1.91	2.16	2.40	2.65	2.90

W/W

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₁ , 220V 50Hz,		
PTC consumption incl., preliminary data		



(pos.1)



(pos.2)

Accessories

Devices		Fig.	NL7CNK
PTC starting device	6.3 mm spades	a1	103N0011
	4.8 mm spades	(pos.1)	103N0018
PTC starting device	6.3 mm spades	a1	103N0016
	4.8 mm spades	(pos.2)	103N0021
Cover		b	103N2010
Cord relief		d	103N1010
Run capacitor 4 µF (optional)	6.3 mm spades	e	117-7117
	4.8 mm spades		117-7119
Protection screen for PTC		g	103N0476
Mounting accessories	Bolt joint for one compressor		118-1917
	Bolt joint in quantities		118-1918
	Snap-on in quantities		118-1919

NL9CNK LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

Data Sheet

General

Compressor	NL9CNK
Code number	105H6856

Application

Application		LBP/MBP
Evaporating temperature range	°C	LBP: -40 to -5 MBP: -20 to 5
Voltage range	V/Hz	LBP: 198 - 254 /50 MBP: 207 - 254 /50
Motor type		RSIR/RSCR*
Max. ambient temperature	°C	43
Comp. cooling at ambient temp.	32°C	LBP: F ₁ MBP: F ₁
	38°C	LBP: F ₁ MBP: F ₁
	43°C	LBP: F ₂ MBP: F ₂ *

* run capacitor 4 µF compulsory in 43°C ambient temperature at MBP conditions

Design

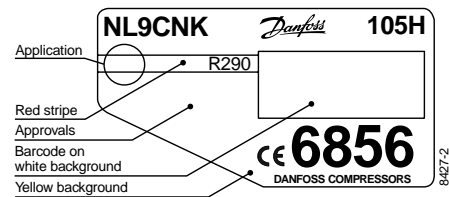
Displacement	cm ³	8.35
Oil quantity	cm ³	320
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	2360
Weight without electrical equipment	kg	10.5

Motor

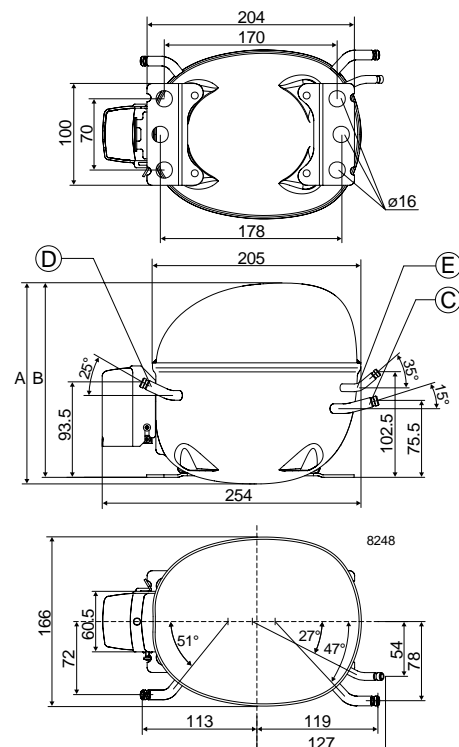
Motor size	watt	235
LRA (rated after 4 sec. UL984) LST	A	9.2
Cut-in current LST	A	13.6
Resistance, main and start winding (25°C)	Ω	8.2/14.7
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	203
		B	197
Suction connector	location/I.D. mm	C	6.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	5.0 +0.12/+0.20
Compressors on a pallet	pcs.		80



- 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



Capacity (EN 12900/CECOMAF)

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	138	194	259	335	364	423	526	643	778	930	1102

watt
Capacity (ASHRAE)

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	153	216	289	374	406	473	587	719	869	1041	1235

watt
Power consumption

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	169	196	223	250	259	278	306	334	364	395	428

watt
Current consumption

Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	1.44	1.50	1.56	1.64	1.67	1.73	1.83	1.95	2.08	2.21	2.36

A
COP (EN 12900/CECOMAF)

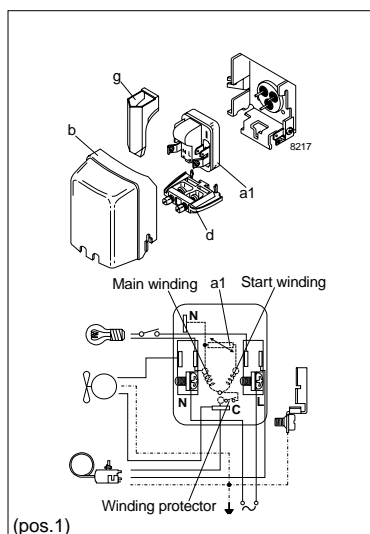
Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	0.81	0.99	1.16	1.34	1.40	1.53	1.72	1.92	2.13	2.35	2.58

W/W
COP (ASHRAE)

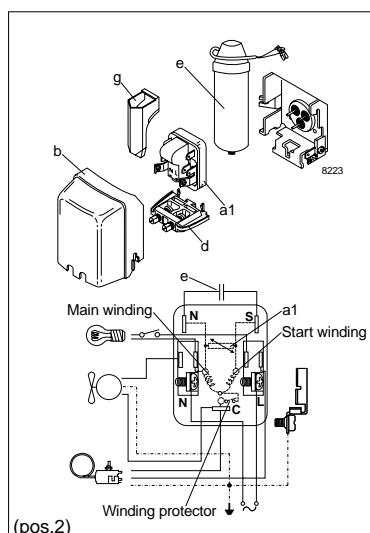
Comp. °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
NL9CNK	0.91	1.10	1.29	1.49	1.56	1.70	1.92	2.15	2.39	2.63	2.89

W/W

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₁ , 220V 50Hz,		
PTC consumption incl., preliminary data		



(pos.1)



(pos.2)

Accessories

Devices	Fig.	NL9CNK
PTC starting device	6.3 mm spades	103N0011
	4.8 mm spades	103N0018
PTC starting device	6.3 mm spades	103N0016*
	4.8 mm spades	103N0021*
Cover	b	103N2010
Cord relief	d	103N1010
Run capacitor 4 μF	6.3 mm spades	117-7117*
	4.8 mm spades	117-7119*
Protection screen for PTC	g	103N0476
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

* run capacitor 4 μF compulsory in 43°C ambient temperature at MBP conditions

SC10CNX LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

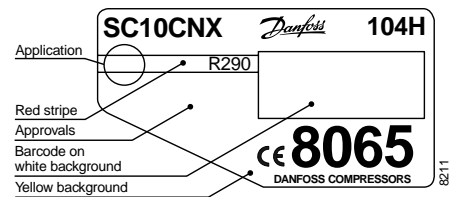
Data Sheet (Replaces CH.54.A2.02)

General

Compressor	SC10CNX
Code number	104H8065

Application

Application		LBP/MBP
Evaporating temperature range	°C	-40 to 5
Voltage range	V/Hz	198 - 254 / 50
Motor type		CSR
Max. ambient temperature	°C	43
Comp. cooling at ambient temp.	32°C	F ₂
	38°C	F ₂
	43°C	F ₂



- 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

Design

Displacement	cm ³	10.29
Oil quantity	cm ³	600
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	1410
Weight without electrical equipment	kg	13.1

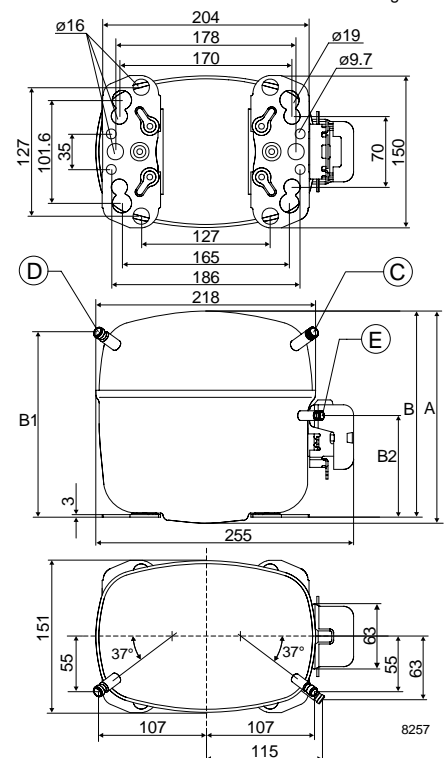


Motor

Motor size	watt	350
LRA (rated after 4 sec. UL984) HST	A	13.2
Cut-in current HST	A	13.2
Resistance, main and start winding (25°C)	Ω	7.3/28.8
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	110
Suction connector	location/I.D. mm	C	8.2 ± 0.09
Process connector	location/I.D. mm	D	6.2 ± 0.09
Discharge connector	location/I.D. mm	E	6.2 ± 0.09
Compressors on a pallet	pcs.		80



Capacity (EN 12900/CECOMAF)
watt

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	126	179	245	325	355	420	531	660	809	979	1172

Capacity (ASHRAE)
watt

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	141	200	273	362	396	468	593	738	905	1096	1312

Power consumption
watt

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	174	208	242	274	285	306	335	362	386	406	422

Current consumption
A

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	1.12	1.22	1.33	1.44	1.48	1.55	1.66	1.78	1.89	2.00	2.12

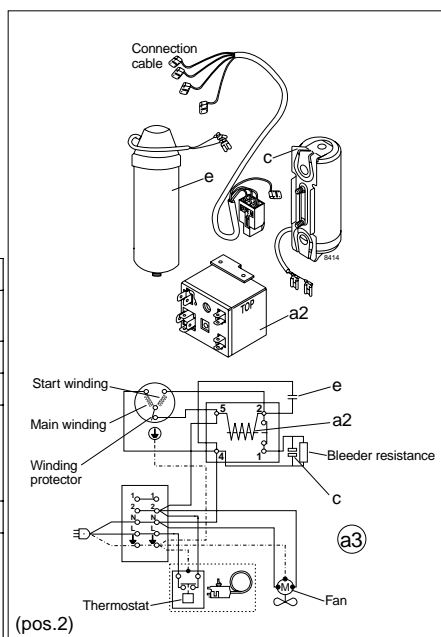
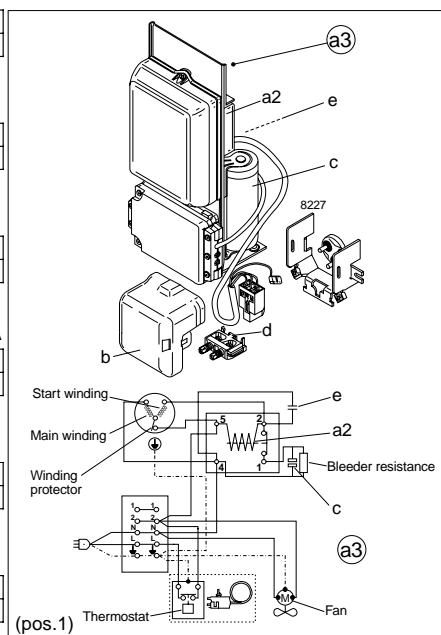
COP (EN 12900/CECOMAF)
W/W

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	0.72	0.86	1.01	1.18	1.25	1.37	1.58	1.82	2.10	2.41	2.77

COP (ASHRAE)
W/W

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC10CNX	0.81	0.96	1.13	1.32	1.39	1.53	1.77	2.04	2.35	2.70	3.11

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₂ , 220V 50Hz		


Accessories

Devices	Fig.	SC10CNX
Starting device	a3	117-7011 (470 mm cable length)
	(pos.1)	117-7014 (1000 mm cable length)
Starting device (kit)	(pos.2)	117-9719 (1520 mm cable length)
Cover	b	103N2009
Starting relay	a2	Components of starting device
Starting capacitor	c	
Run capacitor	e	
Cord relief	d	
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC12CNX LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

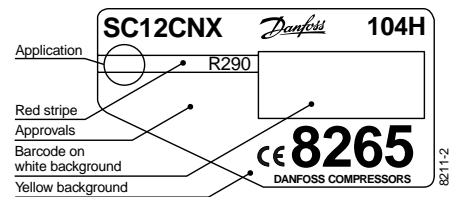
Data Sheet (Replaces CH.54.B2.02)

General

Compressor	SC12CNX
Code number	104H8265

Application

Application		LBP/MBP
Evaporating temperature range	°C	-40 to 5
Voltage range	V/Hz	198 - 254 / 50
Motor type		CSR
Max. ambient temperature	°C	43
Comp. cooling at ambient temp.	32°C	F ₂
	38°C	F ₂
	43°C	F ₂



- 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

Design

Displacement	cm ³	12.87
Oil quantity	cm ³	600
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	1410
Weight without electrical equipment	kg	13.1

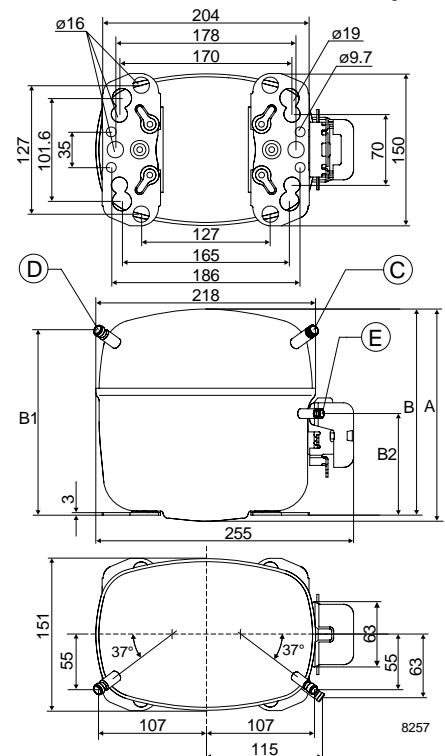


Motor

Motor size	watt	350
LRA (rated after 4 sec. UL984) HST	A	13.2
Cut-in current HST	A	13.2
Resistance, main and start winding (25°C)	Ω	7.3/28.8
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	110
Suction connector	location/I.D. mm	C	8.2 ± 0.09
Process connector	location/I.D. mm	D	6.2 ± 0.09
Discharge connector	location/I.D. mm	E	6.2 ± 0.09
Compressors on a pallet	pcs.		80



Capacity (EN 12900/CECOMAF)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	178	250	331	426	462	540	678	846	1050	1293	1582

Capacity (ASHRAE)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	199	279	369	475	516	603	757	946	1174	1447	1772

Power consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	230	269	307	344	356	381	418	456	494	535	576

Current consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	1.28	1.44	1.60	1.76	1.81	1.92	2.09	2.27	2.45	2.63	2.81

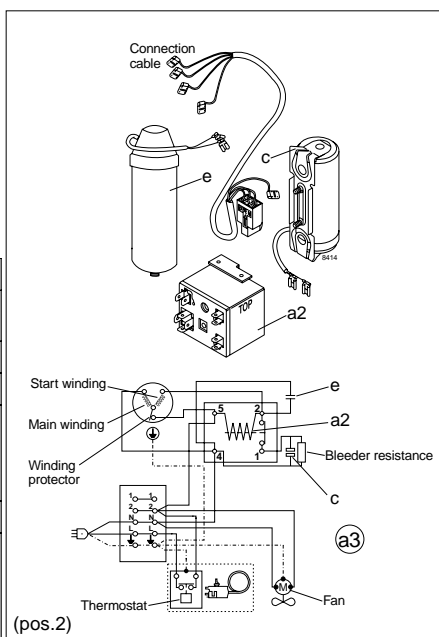
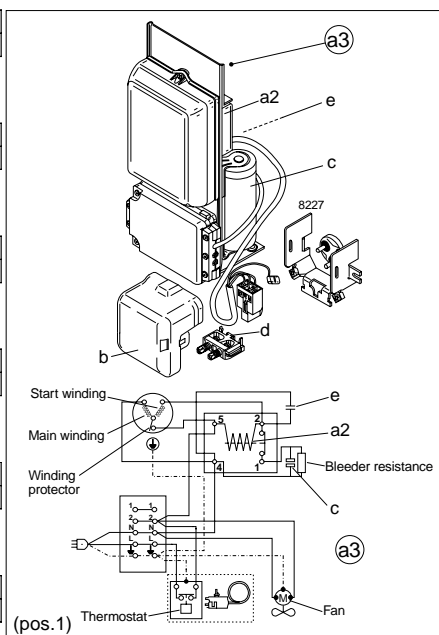
COP (EN 12900/CECOMAF)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	0.77	0.93	1.08	1.24	1.30	1.42	1.62	1.86	2.12	2.42	2.74

COP (ASHRAE)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC12CNX	0.86	1.04	1.21	1.38	1.45	1.58	1.81	2.08	2.37	2.71	3.07

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₂ , 220V 50Hz		


Accessories

Devices	Fig.	SC12CNX
Starting device	a3	117-7011 (470 mm cable length)
	(pos.1)	117-7014 (1000 mm cable length)
Starting device (kit)	(pos.2)	117-9719 (1520 mm cable length)
Cover	b	103N2009
Starting relay	a2	Components of starting device
Starting capacitor	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

SC15CNX LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

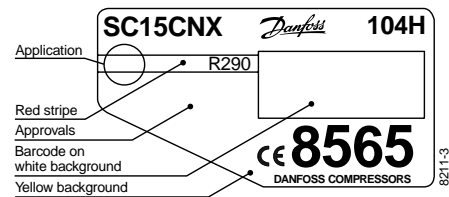
Data Sheet (Replaces CH.54.C2.02)

General

Compressor	SC15CNX
Code number	104H8565

Application

Application		LBP/MBP
Evaporating temperature range	°C	-40 to 5
Voltage range	V/Hz	198 - 254 / 50
Motor type		CSR
Max. ambient temperature	°C	43
Comp. cooling at ambient temp.	32°C	F ₂
	38°C	F ₂
	43°C	F ₂



- 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

Design

Displacement	cm ³	15.28
Oil quantity	cm ³	600
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	1410
Weight without electrical equipment	kg	13.1

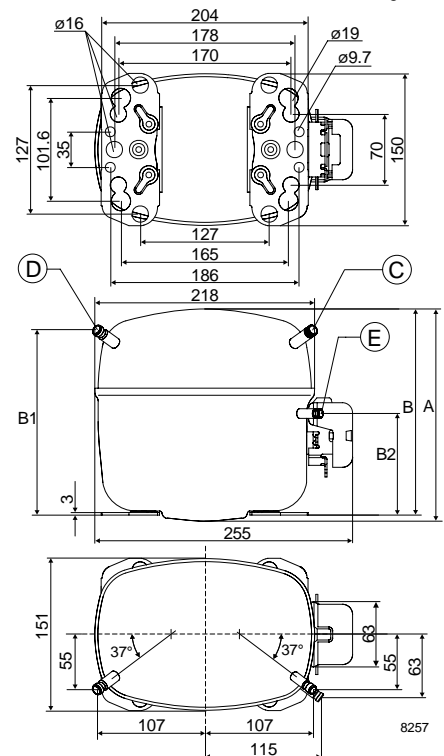


Motor

Motor size	watt	385
LRA (rated after 4 sec. UL984) HST	A	14.8
Cut-in current HST	A	14.8
Resistance, main and start winding (25°C)	Ω	5.0/13.7
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	209
		B	203
		B1	183
		B2	110
Suction connector	location/I.D. mm	C	8.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (EN 12900/CECOMAF)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	195	297	415	550	601	707	887	1093	1328	1594	1894

watt
Capacity (ASHRAE)

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	217	331	462	614	671	789	991	1221	1485	1784	2122

watt
Power consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	256	315	370	420	436	467	514	560	608	659	715

watt
Current consumption

Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	1.28	1.55	1.82	2.08	2.17	2.33	2.58	2.82	3.05	3.27	3.49

A
COP (EN 12900/CECOMAF)

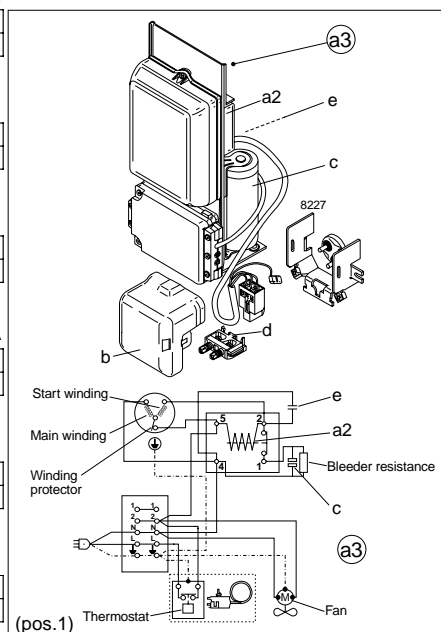
Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	0.76	0.94	1.12	1.31	1.38	1.51	1.73	1.95	2.18	2.42	2.65

W/W
COP (ASHRAE)

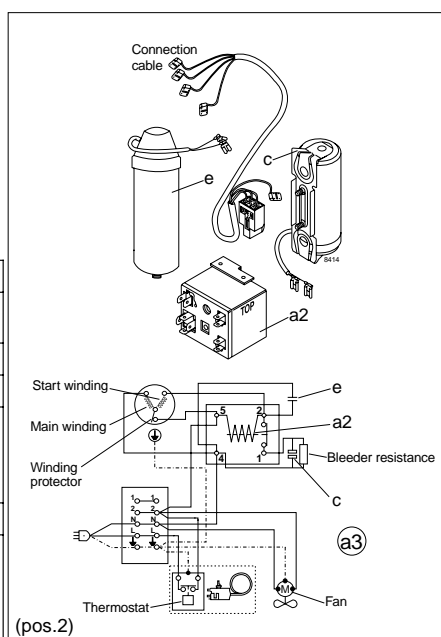
Comp.\°C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC15CNX	0.85	1.05	1.25	1.46	1.54	1.69	1.93	2.18	2.44	2.71	2.97

W/W

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₂ , 220V 50Hz		


Accessories

Devices	Fig.	SC15CNX
Starting device	a3 (pos.1)	117-7012 (470 mm cable length)
Starting device (kit)	(pos.2)	117-9711 (1020 mm cable length)
Cover	b	103N2009
Starting relay	a2	Components of starting device
Starting capacitor	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919



SC18CNX LBP/MBP Compressor R290 (Propane) 220-240V 50Hz

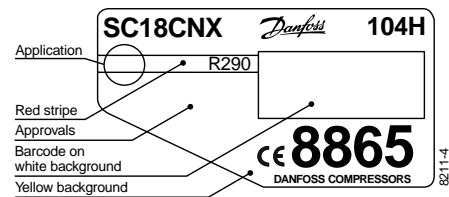
Data Sheet (Replaces CH.54.D2.02)

General

Compressor	SC18CNX
Code number	104H8865

Application

Application		LBP/MBP
Evaporating temperature range	°C	-40 to 5
Voltage range	V/Hz	198 - 254 / 50
Motor type		CSR
Max. ambient temperature	°C	43
Comp. cooling at ambient temp.	32°C	F ₂
	38°C	F ₂
	43°C	F ₂



- 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

Design

Displacement	cm ³	17.69
Oil quantity	cm ³	600
Maximum refrigerant charge	g	150
Free gas vol. in compressor	cm ³	1460
Weight without electrical equipment	kg	13.5

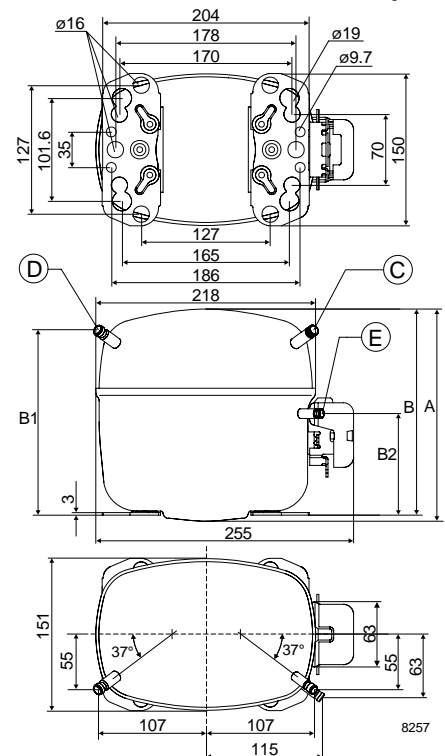


Motor

Motor size	watt	540
LRA (rated after 4 sec. UL984) HST	A	19.5
Cut-in current HST	A	19.5
Resistance, main and start winding (25°C)	Ω	4.6/17.8
Approvals		EN 60335-2-34

Dimensions

Height	mm	A	219
		B	213
		B1	193
		B2	100
Suction connector	location/I.D. mm	C	10.2 ±0.09
Process connector	location/I.D. mm	D	6.2 ±0.09
Discharge connector	location/I.D. mm	E	6.2 ±0.09
Compressors on a pallet	pcs.		80



Capacity (EN 12900/CECOMAF)

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	219	341	480	640	700	824	1033	1272	1543	1849	2193

Capacity (ASHRAE)

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	244	380	535	714	781	919	1154	1422	1726	2070	2456

Power consumption

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	304	370	435	500	522	566	635	707	783	864	952

Current consumption

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	1.80	2.08	2.34	2.60	2.68	2.85	3.09	3.32	3.54	3.76	3.97

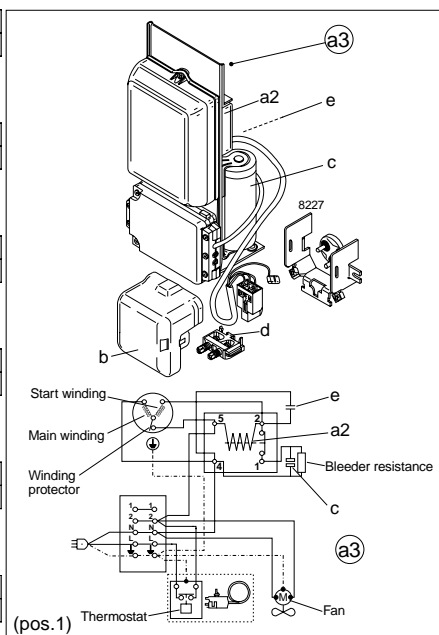
COP (EN 12900/CECOMAF)

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	0.72	0.92	1.10	1.28	1.34	1.45	1.63	1.80	1.97	2.14	2.30

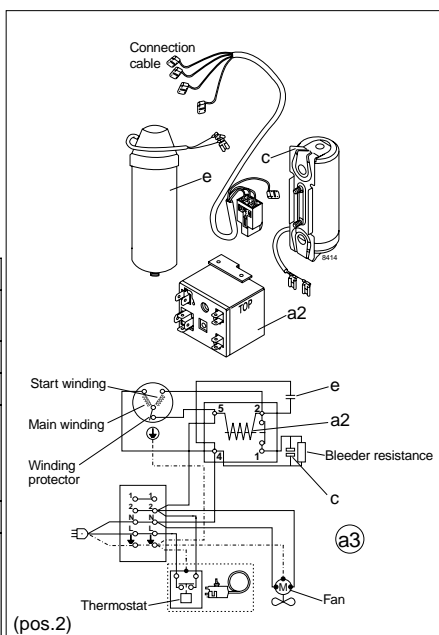
COP (ASHRAE)

Comp. \ °C	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5
SC18CNX	0.80	1.03	1.23	1.43	1.49	1.62	1.82	2.01	2.20	2.39	2.58

Test conditions	EN 12900/CECOMAF	ASHRAE
Condensing temperature	45°C	45°C
Ambient and suction gas temp.	32°C	32°C
Liquid temperature	45°C	32°C
Fan cooling F ₂ , 220V 50Hz		


Accessories

Devices	Fig.	SC18CNX
Starting device	a3 (pos.1)	117-7034 (470 mm cable length)
Starting device (kit)	(pos.2)	117-9718 (1020 mm cable length)
Cover	b	103N2009
Starting relay	a2	Components of starting device
Starting capacitor	c	
Run capacitor	e	
Cord relief	d	103N1004
Mounting accessories		
Bolt joint for one compressor		118-1917
Bolt joint in quantities		118-1918
Snap-on in quantities		118-1919

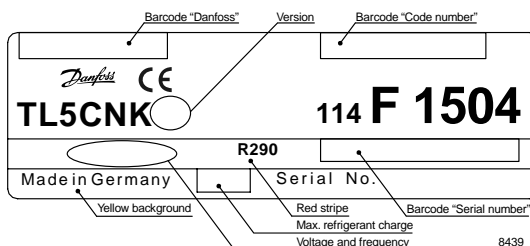


TL5CNK LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet

General

Condensing unit		TL5CNK
Version	Size	Code number
N0 - for capillary tube	BG1	114F1504



Application

Application		LBP/MBP
Evaporating temperature range at 32°C	°C	-40 to 5
	at 43°C	°C -40 to -20
Voltage range	V/Hz	198 - 254 /50
Maximum refrigerant charge R290	g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", C1.34.C).



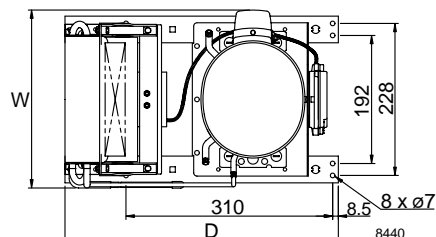
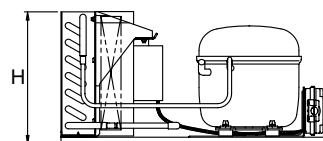
Yellow warning label

Packing data

Net weight	kg	11.3
Gross weight	kg	13.5
Package height	mm	245
Package width	mm	400
Package depth	mm	530

Dimensions

Height (H)	mm	198
Width (W)	mm	267
Depth (D)	mm	410
Distance (a)	mm	310
Suction connecton	I.D. mm	6.2
Liquid connection	I.D. mm	6.5
Process connecton	I.D. mm	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
TL5CNK -BG1		93	120	152	188	199	229	273	320	370	421	474		

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
TL5CNK -BG1		141	156	171	188	194	205	225	246	269	295	323		

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
TL5CNK -BG1		1.20	1.23	1.27	1.32	1.35	1.39	1.46	1.54	1.63	1.73	1.85		

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
TL5CNK -BG1		90	116	147	182	192	221	263	309	357	406	457		

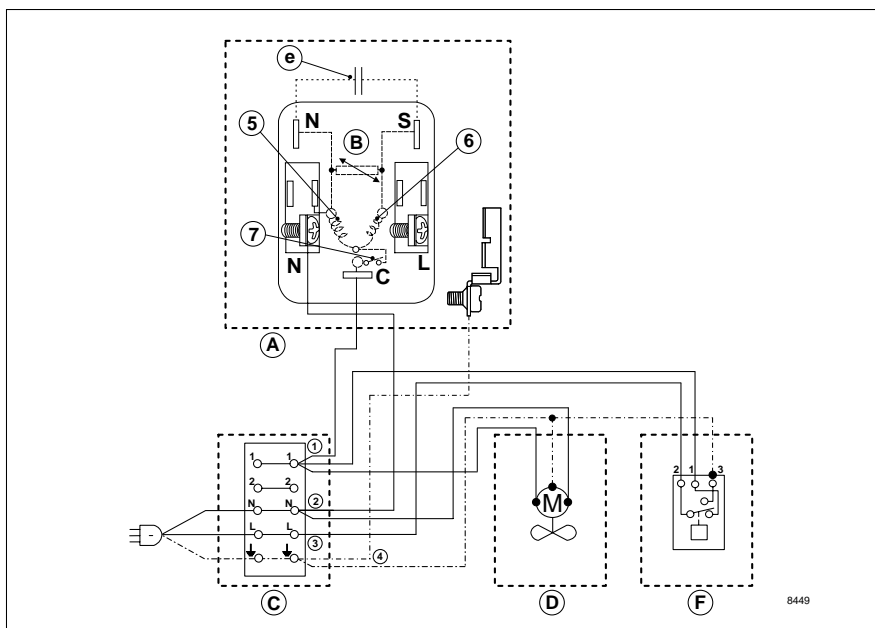
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F1504
Size	BG1
Condenser	118U0100
Fancoil	118U0401
Fanblade	117-3819 (Ø 170 mm)
Fanmotor	118U0200 (5W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Electrical equipment (PTC)
C	Connection box
D	Fan motor
F	Thermostat
e	Run capacitor (optional)
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector

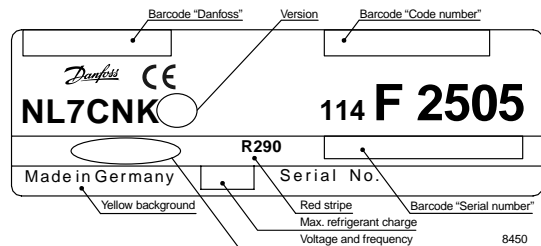


NL7CNK LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet

General

Condensing unit		NL7CNK
Version	Size	Code number
N0 - for capillary tube	BG2	114F2505



Application

Application		LBP/MBP
Evaporating temperature range at 32°C	°C	-40 to 5
	at 43°C	°C
		-40 to -15
Voltage range	V/Hz	198 - 254 /50
Maximum refrigerant charge R290	g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



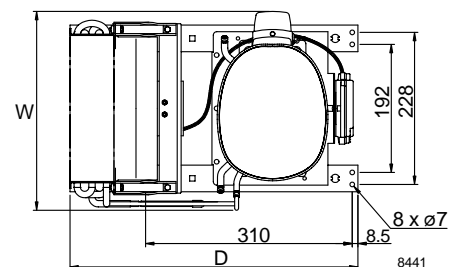
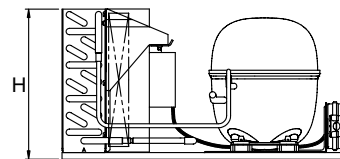
Yellow warning label

Packing data

Net weight	kg	18
Gross weight	kg	19
Package height	mm	245
Package width	mm	400
Package depth	mm	530

Dimensions

Height (H)	mm	225
Width (W)	mm	298
Depth (D)	mm	432
Distance (a)	mm	310
Suction connecton	I.D. mm	6.2
Liquid connection	I.D. mm	6.5
Process connecton	I.D. mm	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL7CNK -BG2		141	188	243	305	327	373	449	531	619	712	808		

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL7CNK -BG2		178	201	223	246	254	270	296	325	357	394	436		

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL7CNK -BG2		1.63	1.65	1.68	1.73	1.75	1.80	1.89	1.99	2.13	2.28	2.46		

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL7CNK -BG2		136	182	235	294	316	361	434	513	597	686	779		

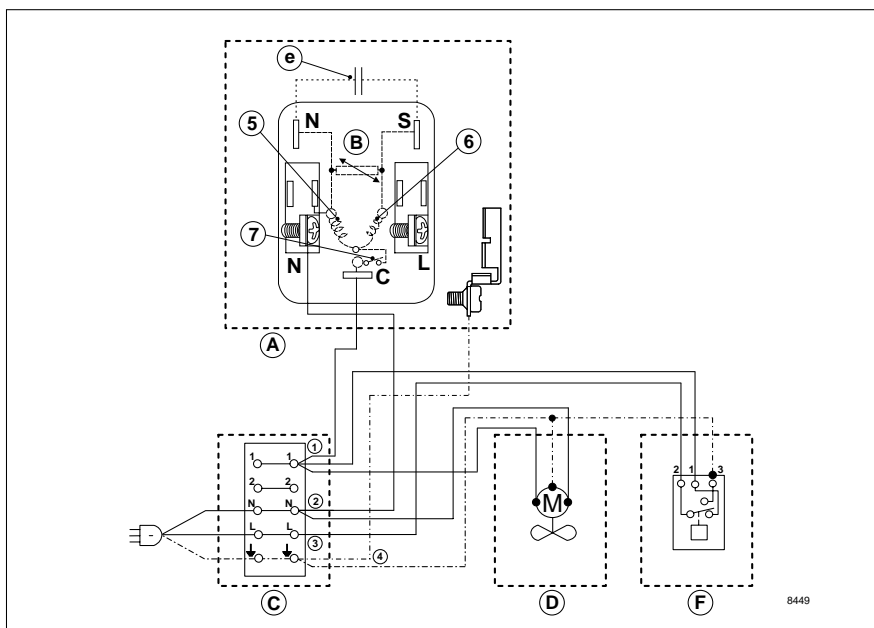
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F2505
Size	BG2
Condenser	118U0101
Fancoil	118U0402
Fanblade	117-3814 (Ø 200 mm)
Fanmotor	118U0200 (5W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Electrical equipment (PTC)
C	Connection box
D	Fan motor
F	Thermostat
e	Run capacitor (optional)
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector

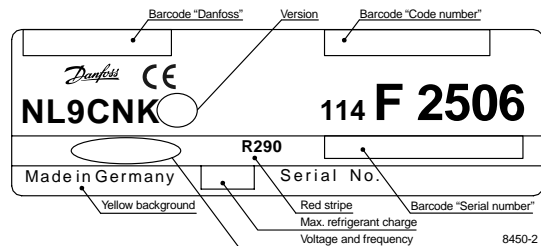


NL9CNK LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet

General

Condensing unit		NL9CNK
Version	Size	Code number
N0 - for capillary tube	BG2	114F2506



Application

Application		LBP/MBP
Evaporating temperature range at 32°C	°C	-40 to 0
	at 43°C	°C
		-40 to -15
Voltage range	V/Hz	198 - 254 /50
Maximum refrigerant charge R290	g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



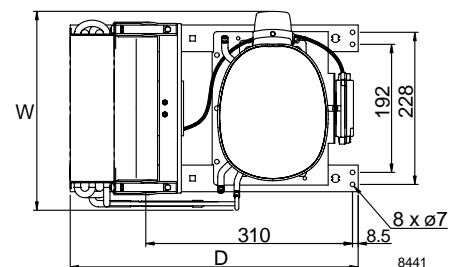
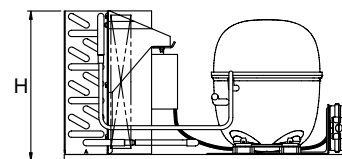
Yellow warning label

Packing data

Net weight	kg	18
Gross weight	kg	19
Package height	mm	245
Package width	mm	400
Package depth	mm	530

Dimensions

Height (H)	mm	225
Width (W)	mm	298
Depth (D)	mm	432
Distance (a)	mm	310
Suction connecton	I.D. mm	6.2
Liquid connection	I.D. mm	6.5
Process connecton	I.D. mm	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL9CNK -BG2		161	214	275	343	368	419	500	588	680	775			

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL9CNK -BG2		196	222	248	276	286	305	338	374	415	460			

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL9CNK -BG2		1.66	1.70	1.75	1.83	1.86	1.93	2.05	2.19	2.36	2.56			

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
NL9CNK -BG2		155	207	266	332	356	404	483	567	656	748			

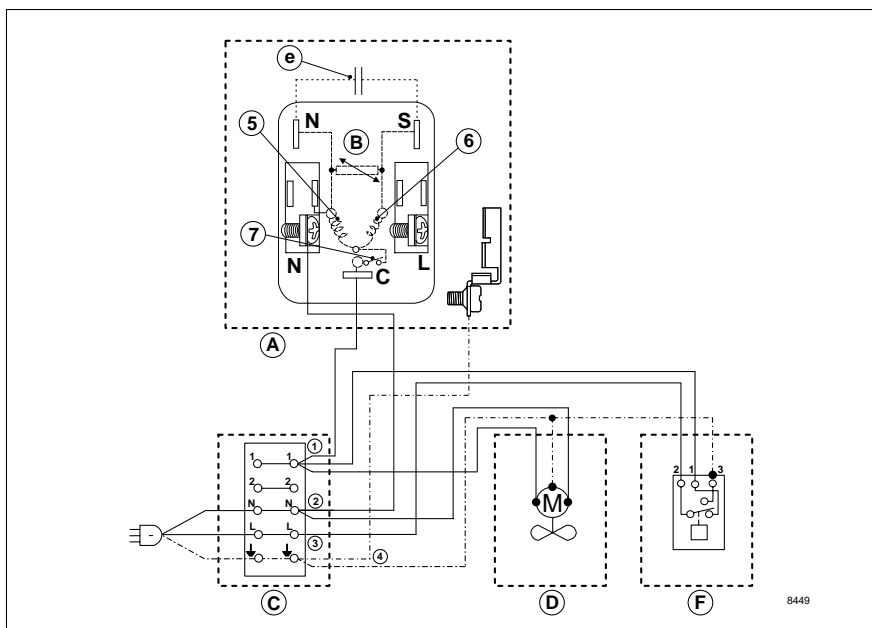
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F2506
Size	BG2
Condenser	118U0101
Fancoil	118U0402
Fanblade	117-3814 (Ø 200 mm)
Fanmotor	118U0200 (5W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Electrical equipment (PTC)
C	Connection box
D	Fan motor
F	Thermostat
e	Run capacitor (optional)
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector

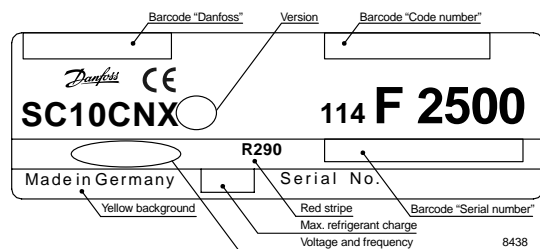


SC10CNX LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet (Replaces CD.34.A2.02)

General

Condensing unit		SC10CNX
Version	Size	Code number
N0 - for capillary tube	BG2	114F2500
N0 - for capillary tube	BG3	114F3500



Application

Application	LBP/MBP
Evaporating temperature range at 32°C °C	BG2: -40 to 0
	BG3: -40 to 5
at 43°C °C	BG2: -40 to -20
	BG3: -40 to -10
Voltage range V/Hz	198 - 254 /50
Maximum refrigerant charge R290 g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



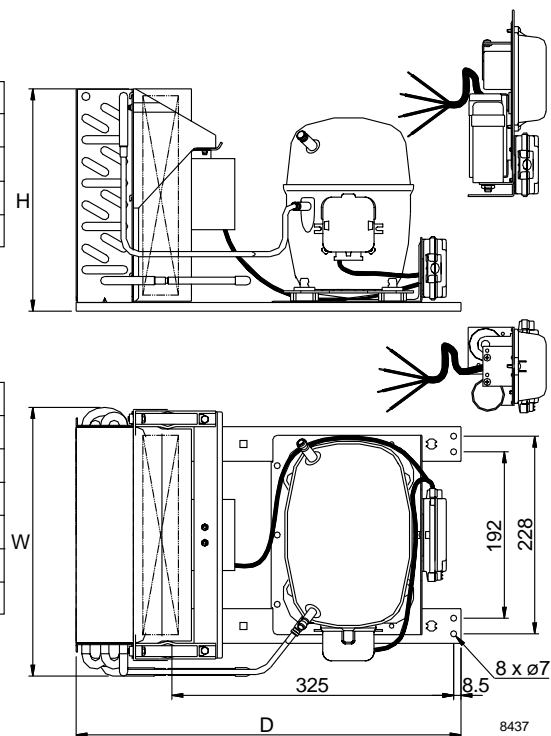
Yellow warning label

Packing data

		114F2500	114F3500
Net weight	kg	17.8	18.8
Gross weight	kg	19.8	20.8
Package height	mm	245	275
Package width	mm	400	400
Package depth	mm	530	530

Dimensions

		114F2500	114F3500
Height (H)	mm	225	257
Width (W)	mm	285	310
Depth (D)	mm	432	444
Distance (a)	mm	310	325
Suction connector	I.D. mm	8.2	8.2
Liquid connection	I.D. mm	6.5	6.5
Process connecton	I.D. mm	6.2	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC10CNX -BG2		153	204	263	333	358	411	499	596	701	814			
SC10CNX -BG3		162	217	282	358	386	445	545	656	778	913	1058		

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC10CNX -BG2		210	240	270	301	312	333	366	400	434	469			
SC10CNX -BG3		222	251	280	309	319	339	369	399	429	460	491		

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC10CNX -BG2		1.33	1.42	1.52	1.63	1.67	1.75	1.88	2.03	2.19	2.37			
SC10CNX -BG3		1.39	1.48	1.57	1.67	1.70	1.78	1.90	2.03	2.18	2.33	2.50		

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC10CNX -BG2		148	197	255	322	346	398	482	575	676	784			
SC10CNX -BG3		157	210	272	346	373	430	526	632	750	879	1018		

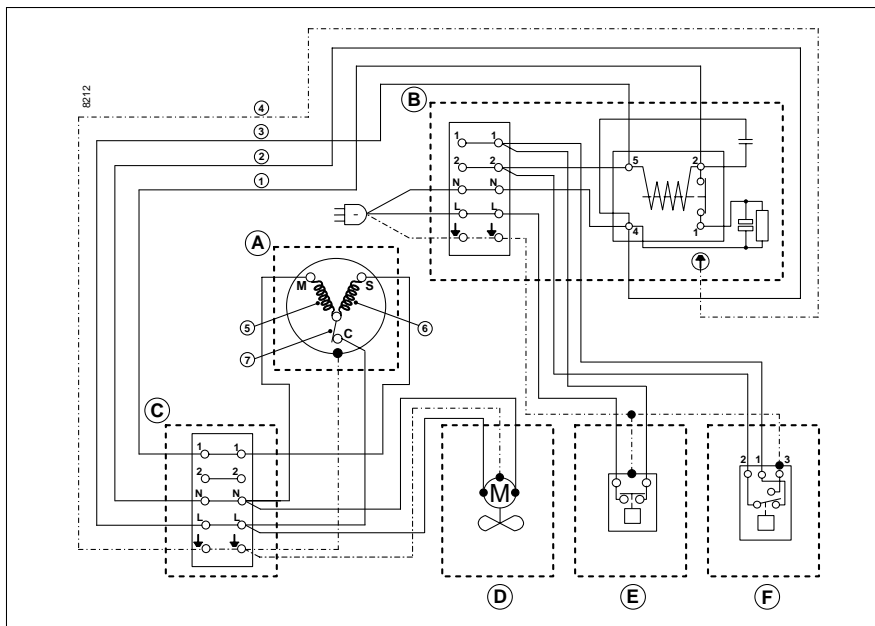
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F2500	114F3500
Size	BG2	BG3
Condenser	118U0101	118U0102
Fancoil	118U0402	118U0403
Fanblade	117-3814 (Ø 200 mm)	118U0600 (Ø 230 mm)
Fanmotor	118U0200 (5W)	118U0201(11W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Danfoss electrical equipment
C	Extra connection box
D	Fan motor
E	Pressure switch
F	Thermostat
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector

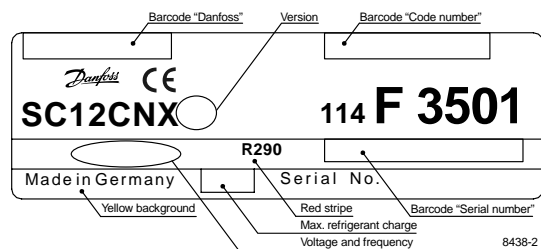


SC12CNX LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet

General

Condensing unit		SC12CNX
Version	Size	Code number
N0 - for capillary tube	BG3	114F3501
N0 - for capillary tube	BG4	114F4501



Application

Application	LBP/MBP
Evaporating temperature range at 32°C °C	-40 to 5
at 43°C °C	BG3: -40 to -10 BG4: -40 to -5
Voltage range V/Hz	198 - 254 /50
Maximum refrigerant charge R290 g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



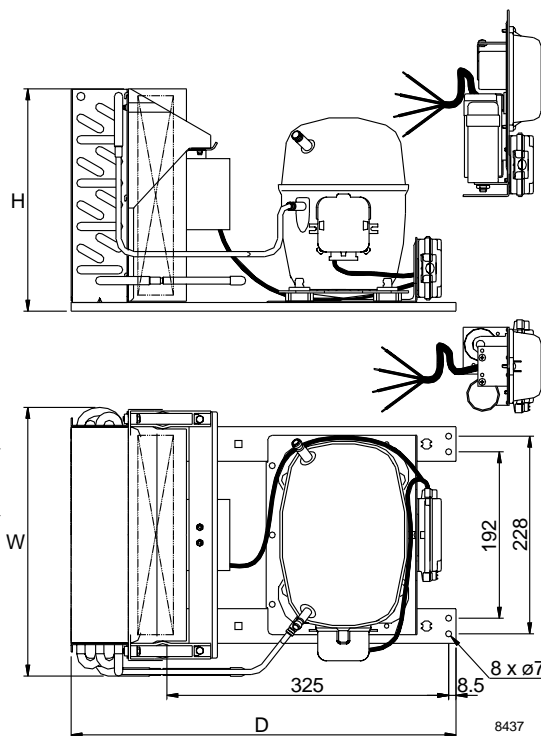
Yellow warning label

Packing data

		114F3501	114F4501
Net weight	kg	18.8	20.6
Gross weight	kg	20.8	22.6
Package height	mm	275	320
Package width	mm	400	400
Package depth	mm	530	590

Dimensions

		114F3501	114F4501
Height (H)	mm	256	296
Width (W)	mm	310	330
Depth (D)	mm	444	451
Distance (a)	mm	325	325
Suction connecton	I.D. mm	8.2	8.2
Liquid connection	I.D. mm	6.5	6.5
Process connecton	I.D. mm	6.2	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC12CNX -BG3		219	284	358	446	479	547	665	799	949	1116	1298		
SC12CNX -BG4		225	292	369	462	497	571	698	846	1014	1202	1410		

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC12CNX -BG3		271	304	339	375	388	415	458	505	557	614	678		
SC12CNX -BG4		289	321	354	389	401	426	467	511	560	613	673		

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC12CNX -BG3		1.56	1.69	1.83	1.99	2.05	2.17	2.36	2.58	2.83	3.10	3.41		
SC12CNX -BG4		1.71	1.83	1.96	2.11	2.16	2.27	2.46	2.66	2.88	3.14	3.42		

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC12CNX -BG3		212	274	346	431	462	529	642	771	915	1075	1249		
SC12CNX -BG4		218	282	357	446	480	551	674	816	978	1158	1358		

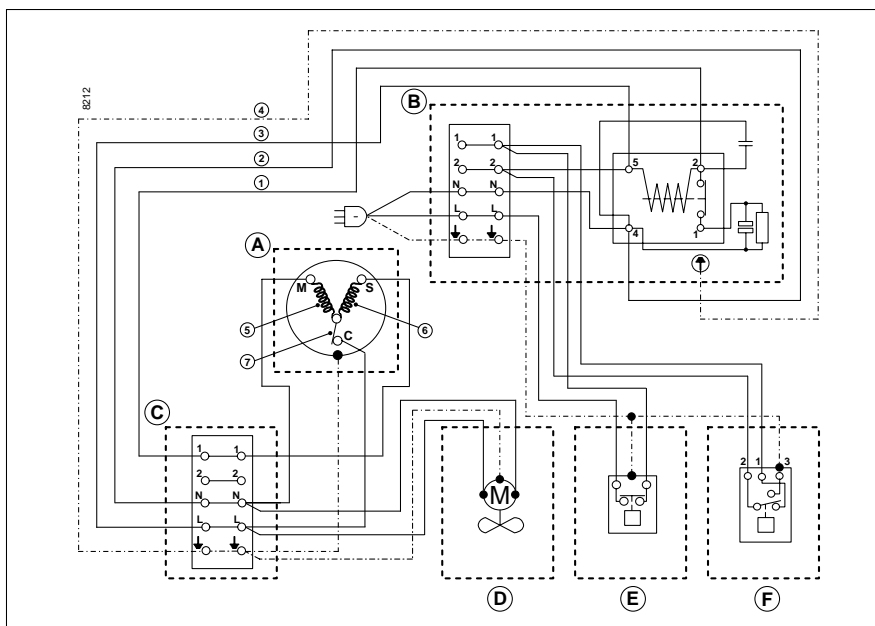
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F3501	114F4501
Size	BG3	BG4
Condenser	118U0102	118U0103
Fancoil	118U0403	118U0404
Fanblade	118U0600 (Ø 230 mm)	118U0601 (Ø 254 mm)
Fanmotor	118U0201 (11W)	118U0202 (16W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Danfoss electrical equipment
C	Extra connection box
D	Fan motor
E	Pressure switch
F	Thermostat
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector

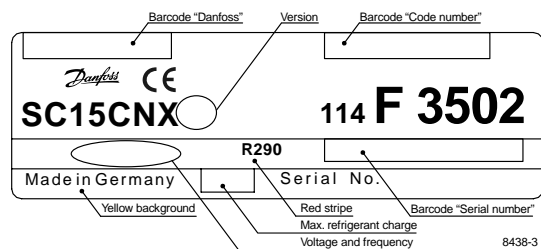


SC15CNX LBP/MBP Condensing Unit R290 (Propane) 220-240V 50Hz

Data Sheet

General

Condensing unit		SC15CNX
Version	Size	Code number
N0 - for capillary tube	BG3	114F3502
N0 - for capillary tube	BG4	114F4502



Application

Application	LBP/MBP
Evaporating temperature range at 32°C °C	BG3: -40 to -5
	BG4: -40 to 5
at 43°C °C	BG3: -40 to -20
	BG4: -40 to -10
Voltage range V/Hz	198 - 254 /50
Maximum refrigerant charge R290 g	150

Flammable Refrigerant:

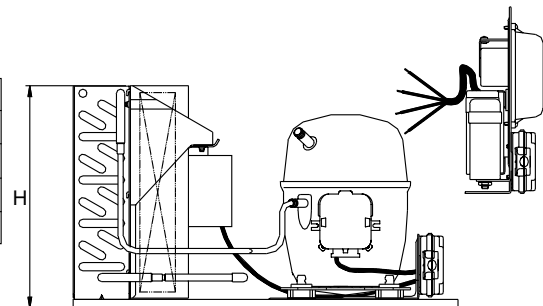
Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



Yellow warning label

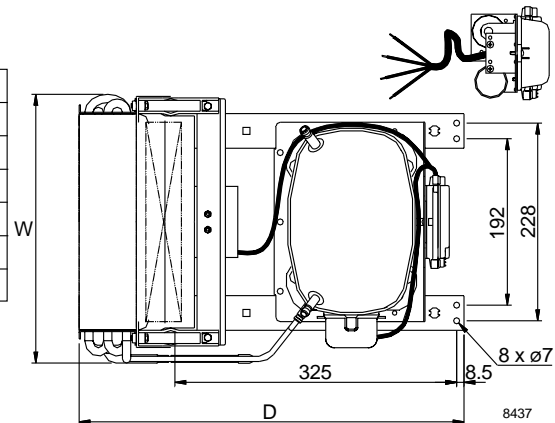
Packing data

		114F3502	114F4502
Net weight	kg	18.8	20.6
Gross weight	kg	20.8	22.6
Package height	mm	275	320
Package width	mm	400	400
Package depth	mm	530	590



Dimensions

		114F3502	114F4502
Height (H)	mm	256	296
Width (W)	mm	310	330
Depth (D)	mm	444	451
Distance (a)	mm	325	325
Suction connector	I.D. mm	8.2	8.2
Liquid connection	I.D. mm	6.5	6.5
Process connecton	I.D. mm	6.2	6.2



drawing shows **N0** version

Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC15CNX -BG3		252	340	440	554	595	680	818	968	1127				
SC15CNX -BG4		266	358	465	586	630	722	874	1040	1221	1415	1621		

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC15CNX -BG3		314	360	407	456	473	508	567	634	712				
SC15CNX -BG4		337	381	425	471	487	519	572	632	701	780	871		

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC15CNX -BG3		1.63	1.84	2.08	2.33	2.42	2.61	2.91	3.24	3.61				
SC15CNX -BG4		1.78	1.99	2.21	2.45	2.53	2.71	2.99	3.29	3.63	4.00	4.40		

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC15CNX -BG3		244	329	426	535	575	657	790	934	1087				
SC15CNX -BG4		257	347	450	566	609	698	844	1004	1177	1363	1559		

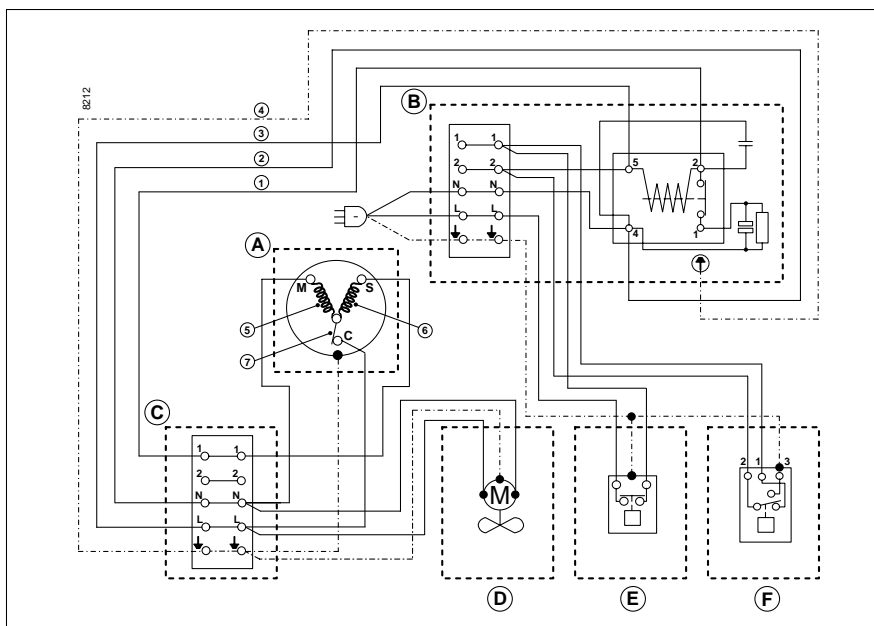
Test conditions (220V 50Hz) EN 13215/CECOMAF DIN 8971
 Ambient temperature 32°C 32°C
 Suction gas temperature 32°C 25°C
 Temperature of refrigerant at condenser outlet is subcooled within the condensing limits of the unit.
 1 Watt = 0.86 kcal/h, 1 Watt = 3.41 Btu/h

Spareparts

Devices	114F3502	114F4502
Size	BG3	BG4
Condenser	118U0102	118U0103
Fancoil	118U0403	118U0404
Fanblade	118U0600 (Ø 230 mm)	118U0601 (Ø 254 mm)
Fanmotor	118U0201 (11W)	118U0202 (16W)

Wiring diagram

Fig.	Devices
A	Compressor
B	Danfoss electrical equipment
C	Extra connection box
D	Fan motor
E	Pressure switch
F	Thermostat
1	Black wire
2	Blue wire
3	Brown wire
4	Green-yellow wire
5	Main Winding
6	Start Winding
7	Winding Protector



SC18CNX

LBP/MBP Condensing Unit

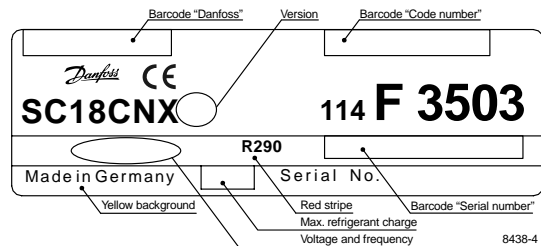
R290 (Propane)

220-240V 50Hz

Data Sheet

General

Condensing unit		SC18CNX
Version	Size	Code number
N0 - for capillary tube	BG3	114F3503
N0 - for capillary tube	BG4	114F4503



Application

Application	LBP/MBP
Evaporating temperature range at 32°C °C	BG3: -40 to -10 BG4: -40 to 0
at 43°C °C	BG3: -40 to -25 BG4: -40 to -20
Voltage range V/Hz	198 - 254 /50
Maximum refrigerant charge R290 g	150

Flammable Refrigerant:

Unit must only be installed and serviced by authorized personnel (see instructions "Fan-cooled Condensing Units 220-240V for R290", CI.34.C).



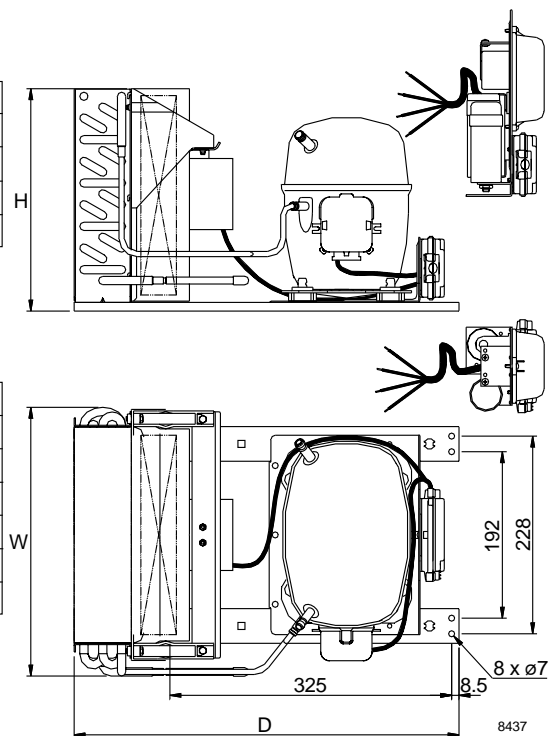
Yellow warning label

Packing data

		114F3503	114F4503
Net weight	kg	18.8	20.6
Gross weight	kg	20.8	22.6
Package height	mm	275	320
Package width	mm	400	400
Package depth	mm	530	590

Dimensions

		114F3503	114F4503
Height (H)	mm	256	296
Width (W)	mm	310	330
Depth (D)	mm	444	451
Distance (a)	mm	325	325
Suction connecton	I.D. mm	10.2	10.2
Liquid connection	I.D. mm	6.5	6.5
Process connecton	I.D. mm	6.2	6.2



Capacity (EN 13215/CECOMAF)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC18CNX -BG3		271	374	491	621	669	766	924	1096					
SC18CNX -BG4		287	395	519	658	710	814	986	1173	1376	1594			

Power consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC18CNX -BG3		356	412	471	537	561	612	698	799					
SC18CNX -BG4		380	434	492	554	576	623	701	790	893	1014			

Current consumption

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC18CNX -BG3		2.12	2.35	2.59	2.86	2.95	3.14	3.46	3.80					
SC18CNX -BG4		2.27	2.50	2.73	2.98	3.07	3.24	3.53	3.84	4.19	4.56			

Capacity (DIN 8971)

Evap. temp in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	10	15
SC18CNX -BG3		262	362	474	600	646	739	891	1055					
SC18CNX -BG4		278	383	502	636	685	786	951	1131	1325	1532			

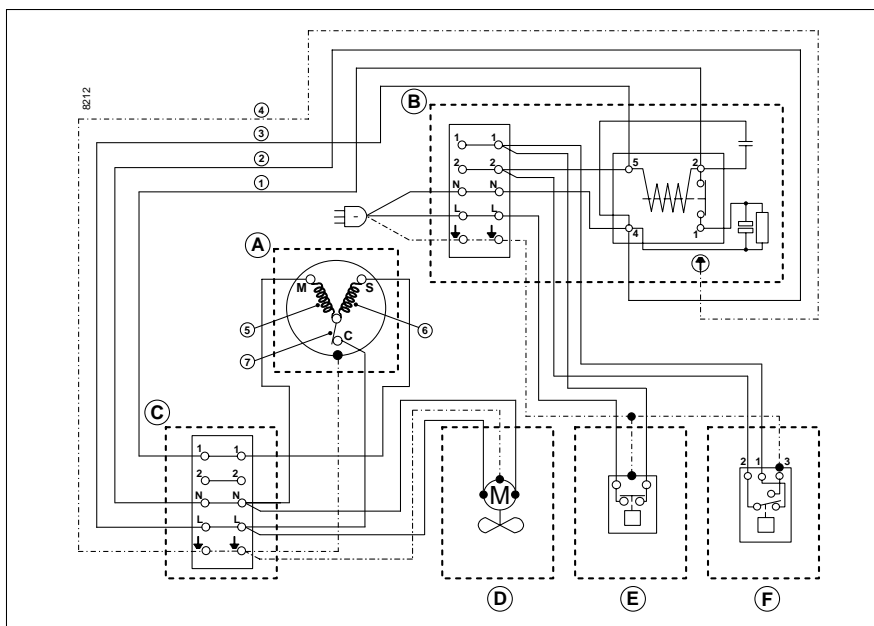
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Wiring diagram

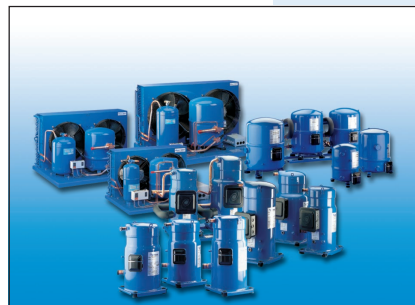
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The Danfoss product programme for the refrigeration industry contains:

Compressors for Refrigeration and Air Conditioning

A wide range of hermetic reciprocating compressors and scroll compressors as well as aircooled condensing units. The product range is applied in air conditioning units, water chillers and commercial refrigeration systems.



Compressors for Refrigerators and Freezers

Hermetic compressors and fan-cooled condensing units for household refrigeration units such as refrigerators and freezers, and for commercial installations such as sales counters and bottle coolers. Compressors for heating pump systems. 12 and 24 V compressors for refrigerators and freezers in commercial vehicles, buses, and boats.



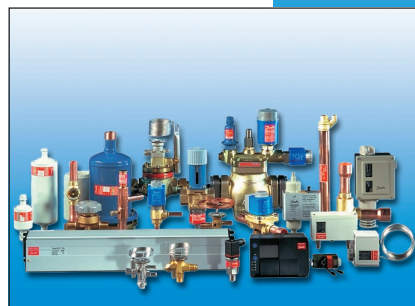
Appliance Controls

For the regulation of refrigeration appliances and freezers Danfoss supply a CFC-free product range of electromechanical thermostats for refrigerators and electromechanical thermostats for refrigerators and freezers produced according to customer specification; Hermetic valves for refrigerator/freezer combinations and for energy saving applications; Service thermostats – for all refrigerating and freezing appliances.



Refrigeration and Air Conditioning Controls

With our full product range we cover all the requirements for mechanical and electronically controlled refrigeration systems. The functions cover: control, safety, system protection and monitoring. Our products are applied for all commercial- and industrial refrigeration applications as well as for air conditioning.



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