

ELECTRIC HEATER

	KITS	FOR	
1.5 KW:	K 70 C 040 Z	TWN	size 02
1.6 KW:	K 70 C 041 Z	TWN	size 03
2.0 KW:	K 70 C 042 Z	TWN	sizes 04 - 05
3.0 KW:	K 70 C 043 Z	TWN	sizes 06 - 08

TWN FAN COIL UNITS

SUMMARY

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1 - GENERAL

- The equipment must be installed, started-up and maintained by authorised and qualified personnel, in accordance with local rules and professional standards.
- See the TWN installation manual (No. 10 11 489).

1.1 - GENERAL CONDITIONS OF DELIVERY

- Generally speaking, the material is transported at the consignee's risk.
- In the event of damages during transport, the consignee must notify the carrier by registered letter within three days following delivery.

1.2 - VOLTAGE

- Before carrying out any operation, check that the voltage indicated on the unit corresponds to the mains voltage.

1.3 - USE OF EQUIPMENT

- Electric heating kit designed for installation in TECHNIBEL fan coil units of the type indicated in this manual (excluding 4-tube models).

1.4 - PRESENTATION

- The heating kit is composed of:
 - a shielded electric resistance heater with aluminum fins for 230V/1/50Hz operation,
 - overheat safety thermostat with automatic reset,
 - a heat-sensitive fuse for overheat protection with manual reset,
 - mounting elements (2 flanges, 2 clamps, mounting screws),
 - control contactor.

CAUTION: If the heat-sensitive fuse should become fused, the unit must be inspected by a qualified technician.
The unit will then be placed back into service once the fuse has been replaced.

1.5 - PRECAUTIONS

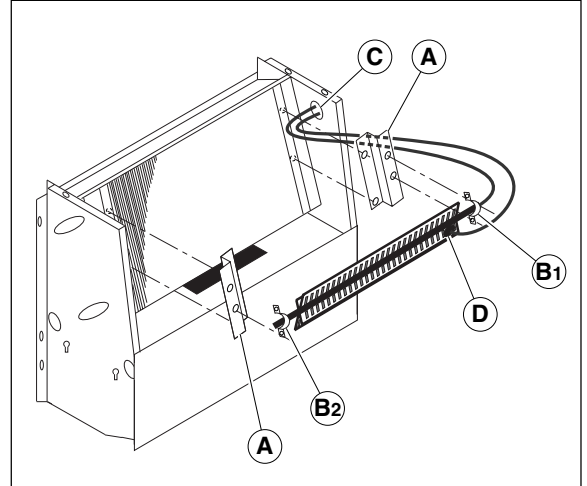
IMPORTANT NOTE

**Before carrying out any work on the machine, make sure that it is switched off and that access to it is prevented.
With the electric heater's power supply being separate from that of the fan coil unit,
make sure that all power supplies are disconnected..**

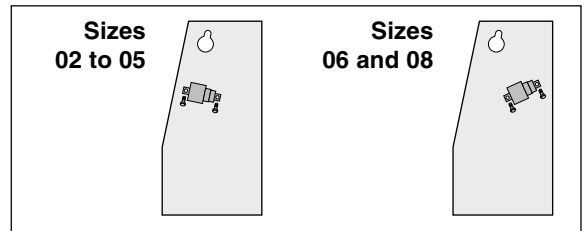
- Ensure that the electric wires are securely fastened to the terminals. Poor connection can generate heat and thus cause fires.
- Ensure that the electric wires are well insulated in relation to any sheet metal or other metal part that might damage them.
- The air conditioner must not be installed near inflammable materials.
- Refer to the appliance's installation manual.

2 - INSTALLATION

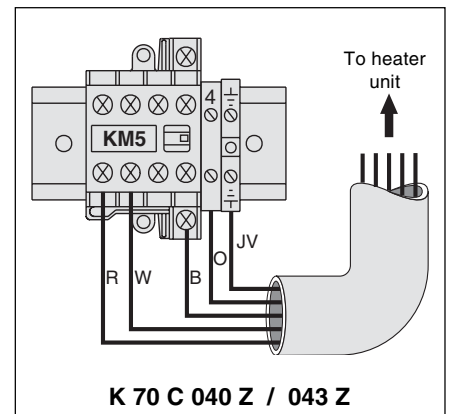
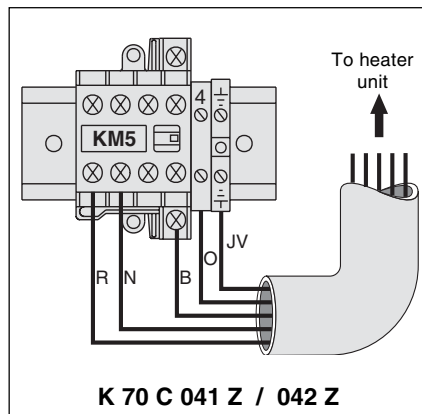
- Remove the casing, as required (refer to the unit's installation manual).
- Remove the upper panel on vertical units or the condensate tray for horizontal units.
- Install the 2 mounting brackets (A) on the exchanger's guard plate (4 screws + 2 brackets supplied).
- Position the heater unit with the electrical wires on the side with the electrical connections.
- Secure the heater with the 2 clamps (B1) and (B2) and the 4 screws provided.
The heating element must be secured only on the electrical connection side (clamp (B1)).
The screws, (B2) side, must not be fully tightened in order to allow for thermal expansion of the heating element.
- Check that the automatic thermostat is correctly secured to the contact of the heating element.
- Check that the thermo-fuse is not damaged.
- The thermo-fuse must be located in the middle of the heating element's upper fins.
- Open the pre-punched hole (C) provided for the wires on the side of the unit.
- Install a grommet, then thread the wiring through the hole.
- **IMPORTANT:**
The overheat safety thermostat with automatic reset (D) must be installed toward the bottom of the heater unit and near the electrical wires.
Change the position if necessary (in case of an electrical connection at the left, for example).



- Install the contactor with its DIN rail support on the side of the unit using the 2 screws provided (make sure that the DIN rail support is securely fastened).
The position is different depending on the size (see drawings opposite).



- Connect the heater unit's wiring to the KM5 contactor as indicated in the wiring diagram below.



B : blue wire **JV** : yellow/green wire **N** : black wire **R** : red wire **W** : white wire
O : orange wire

- Replace the upper panel on vertical units or the condensate tray for horizontal units.
- Replace the casing if it was removed previously.
- **Replace the ABS supply grille with those supplied with the heater unit.**

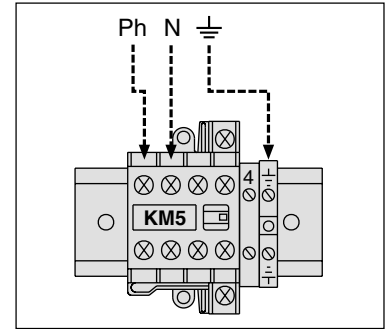
3 - ELECTRICAL CONNECTION

3.1 - GENERAL

- The electrical cables must be fixed (use the cable clip supplied with the kit).
- Do not rout wiring near sharp edges which may damage the insulation (sharp sheetmetal edges, for example).

3.2 - MAINS SUPPLY

- The electrical power supply is single-phase 230 V/50 Hz, and is connected directly to the heater kit's KM5 contactor.
- This power supply must be separate from that of the fan coil unit.
- The power supply must come from an isolation and electric protection device (not supplied) in accordance with existing regulations.
- This unit is as a Class 1 appliance.



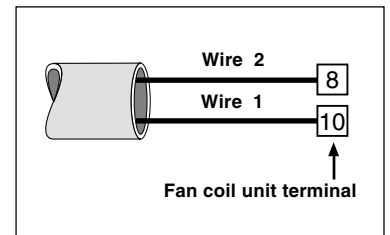
- Wiring dimensions:

		Size					
		02	03	04	05	06	08
Power	W	1500	1600	2000	2000	3000	3000
Current	A	6.5	7.0	8.7	8.7	13.0	13.0
Size	mm²	3 G 2.5 mm ²				3 G 4 mm ²	

- The sections are given as an indication only. They have to be verified and adapted, if necessary, according to the installation conditions and the standards in force.

3.3 - CONTROL

- Connect the control cable supplied with the kit to the terminal of the fan coil unit.



4 - SPECIAL RECOMMENDATIONS - MAINTENANCE

IMPORTANT:

- **For enclosed units not equipped with a control panel, secure the traps with the screws furnished to avoid accidental contacts with electrical components.**
- Never obstruct the air intake and supply grilles.
- Never pour liquid into the unit.
- Never insert objects into the unit.
- The heating kit may ensure the following functions:
 - primary heating,
 - emergency heating.

In no case should the unit be used as back-up heating in addition to the hot water heat exchanger.

ROUTINE MAINTENANCE OPERATIONS

- **Weekly:**
 - clean the fan coil unit's air filter.
- **At least once a year** (before turning on the heater):
 - remove dust from components,
 - check the condition of electrical wiring and connecting terminals,
 - check the ground connection.

5 - WIRING DIAGRAM

SYMBOLS OF THE COMPONENTS

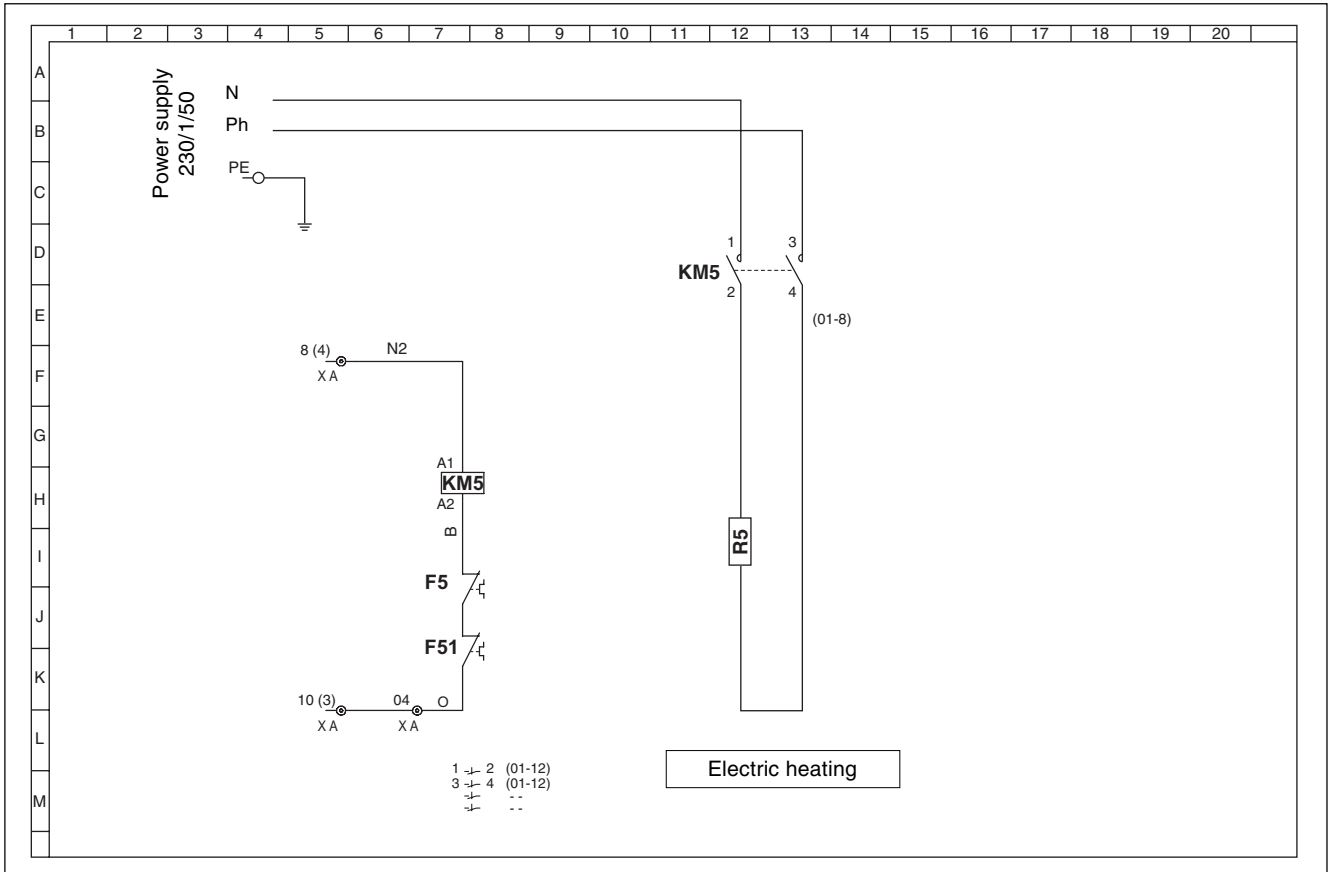
- | | |
|---------------------------|--------------------------------|
| F5 Automatic reset | KM5 Heating contactor |
| F51 Manual reset | R5 Electric heater unit |

COLOURS OF THE WIRES

- | | |
|----------|--------|
| B | Blue |
| N | Black |
| O | Orange |

TWN heating kit

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Due to our policy of continuous development, our products are liable to modification without notice.

Technibel

R.D. 28 Reyrieux BP 131 01601 Trévoux CEDEX France
Tel. 33 4 74 00 92 92 - Fax 33 4 74 00 42 00
R.C.S. Bourg-en-Bresse B 759 200 728