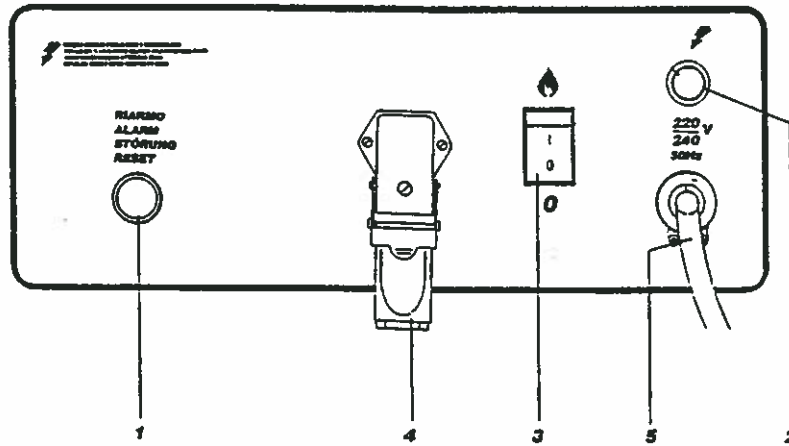


*TRANSPORTABEL VARMLUFTAGGREGAT  
GENERATEURS D'AIR CHAUD  
WARMLUFTERHITZER  
SPACE HEATERS*

***MD - MC***

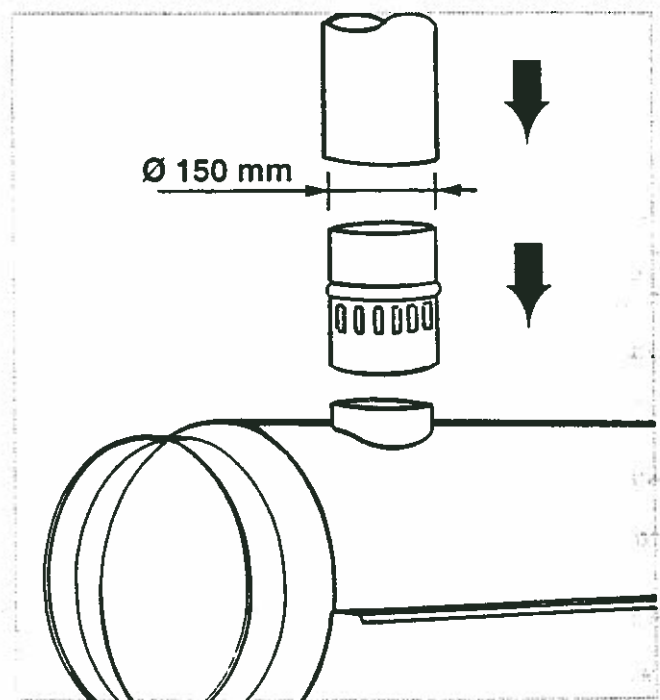
*INSTRUKTION OG RESERVEDELE  
LIVRET D'ENTRETIEN  
BEDIENUNGSANLEITUNG  
INSTRUCTIONS MANUAL*

**KONTROLPANEL - TABLEAU DE COMMANDE**  
**KONTROLLTAFEL - CONTROL BOARD**



- |  |   |
|--|---|
| <p><b>1</b>    Reset-knap med kontrollampe<br/>         Bouton réarmement avec lampe témoin<br/>         Reset Knopf mit Kontrollampe<br/>         Reset button with control lamp</p> <p><b>2</b>    Kontrollampe<br/>         Lampe témoin d'alimentation<br/>         Kontrollampe<br/>         Control lamp</p> <p><b>3</b>    ON/OFF kontakt<br/>         Interrupteur marche - arrêt<br/>         Ein - aus Schalter<br/>         Main switch</p> | <p><b>4</b>    Stikdåse for rumtermostat<br/>         Prise thermostat d'ambiance<br/>         Raumthermostat Steckdose<br/>         Room thermostat plug</p> <p><b>5</b>    Elkabel<br/>         Câble électrique<br/>         Elektro Kabel<br/>         Power cord</p> |
|--|---|

**Monteringsanvisning for tilslutning af skorsten**  
**Schéma de montage du départ de cheminée**  
**Anbauanleitung für Kamin**  
**Fitting instructions for chimney**



## GENERAL RECOMMENDATIONS

MD and MC heaters are to be run on heating with oil or kerosene. MC heaters produce warm air mixed with combustion gases. MD heaters produce pure warm air since they are equipped with a chimney connection to canalize the combustion gases outside via a flue.

Always follow local ordinances and codes when using this heater.

- Read and follow this owner's manual before using the heater.
- Use only in places free of flammable vapors or high dust content.
- Never use heater in immediate proximity of flammable materials. Minimum clearance 2.50 m.
- Make sure fire fighting equipment is readily available.
- Make sure sufficient fresh outside air is provided according to the heater requirements. MC heaters should only be used in well vented areas in order to avoid carbon monoxide poisoning.
- Never block air inlet (rear) or air outlet (front).
- In case of very low temperatures add kerosene to the heating oil.
- Make sure heater is always under surveillance and keep children and animals away from it.
- Before starting the heater always check free rotation of ventilator.
- Unplug heater when not in use.

## OPERATION


Before any attempt of starting the heater is made, check that your electrical supply conforms to the data on the model plate.

### Warning



**Mains must be fitted with a thermo-magnetic differential switch.  
Unit plug must be linked to a socket with a mains switch.**

The heater can run automatically when connected to a control device such as thermostat, time clock or humidistat. Connection of control is made at connectors 2 and 3 of the plug (4) fitted to the heater after having removed the bridge between 2 and 3 as fitted ex works. This bridge should be kept and retrofitted if manual running of heater is wished at another time.

To start heater, connect to mains, set control device at desired value, set switch (3) on position : the ventilator starts, immediately followed by ignition. When unit is started for the first time or is started after the oil tank has been totally emptied, the flow of oil to the burner may be impaired by air in the circuit. In this case the control box will cut out the heater and it might be necessary to renew the starting procedure once or twice by depressing the reset button (1).

Should the heater not start, check that oil tank is full and depress reset button (1).

Should the heater still not work, please refer to chapter "OBSERVED FAULTS, POSSIBLE CAUSES AND REMEDIES".

## STOPPING THE HEATER

Set main switch (3) on "0" position or turn thermostat or other control device on lowest setting.

## SAFETY DEVICES

The unit is fitted with an electronic flame control box. In case of malfunction this box will cut in and stop the heater, at the same time the pilot lamp in the control box reset but-

ton (1) will light up.

Heaters are also equipped with an overheat thermostat safety cut out which will stop the heater in case of overheating. This thermostat will reset automatically but you will have to depress button (1) on control box before being able to restart the heater.

### Warning



**Before making any attempt to restart heater find and eliminate reason of overheating .**

## TRANSPORT

Before heater is moved it must be stopped and unplugged. Before moving the heater wait till it has totally cooled off and make sure oil tank cap is securely fixed.

MD/MC heaters with wheels must be wheeled. The suspended version which has no wheels must be transported with adequate machinery.

## MAINTENANCE

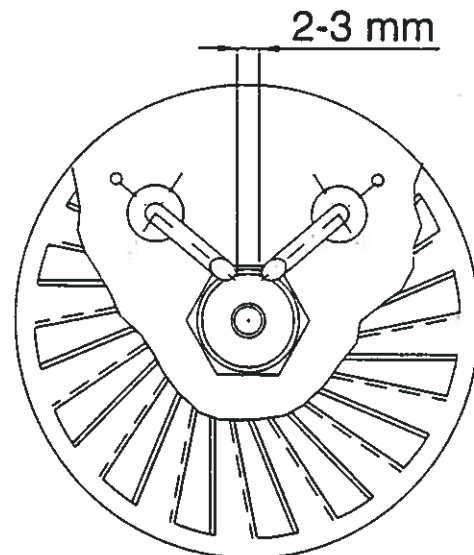
Preventive and regular maintenance will ensure a long trouble free life to your heater.

### Warning



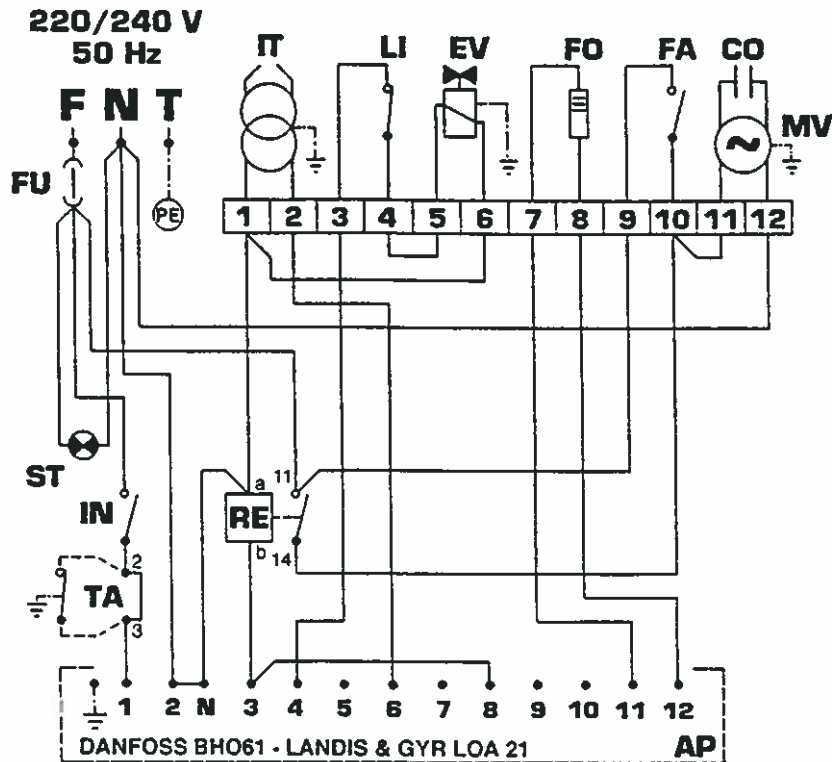
**Never service heater while it is plugged in, operating or hot.  
Severe burns or electrical shock can occur.**

Every 50 hours of operation: disassemble filter and wash with clean oil, remove upper body parts and clean inside and ventilator with compressed air, check correct attachment of H.T. connectors to the electrodes and check H.T. cables, remove burner assembly, clean and check electrode settings, adjust according to indication as follows.





Scheme 1

# EL-DIAGRAM - SCHEMA ELECTRIQUE SCHALTSCHHEMA - WIRING DIAGRAM



<p><b>FU</b> SIKRING FUSIBLE &gt;&gt; MC 25, MC 40, MD 40: 6 A SICHERUNG MC 70, MD 100: 10 A FUSE</p>	<p><b>MV</b> VENTILATORMOTOR MOTEUR DU VENTILATOR VENTILATOR MOTOR FAN MOTOR</p>
<p><b>IT</b> TRANSFORMER HØJSPÆNDING TRANSFORMATEUR H.T. ZUNDTRANSFO TRANSFORMER H.V.</p>	<p><b>ST</b> LAMPE FOR STRØMTILFØRSEL LAMPE TEMOIN D'ALIMENTATION STROMANZEIGLAMPE ELECTRIC PILOT LAMP</p>
<p><b>LI</b> OVEROPHEDNINGSTERMOSTAT THERMOSTAT DE SURCHAUFFE SICHERHEITSTERMOSTAT OVERHEAT THERMOSTAT</p>	<p><b>IN</b> AFBRYDER INTERRUPTEUR SCHALTER SWITCH</p>
<p><b>EV</b> MAGNETVENTIL ELECTROVANNE MAGNETVENTIL SOLENOID VALVE</p>	<p><b>TA</b> RUMTHERMOSTAT PRISE THERMOSTAT D'AMBIANCE RAUMTHERMOSTAT STECKDOSE ROOM THERMOSTAT PLUG</p>
<p><b>FO</b> FOTOCELLE PHOTORESISTANCE PHOTOZELLE PHOTOCELL</p>	<p><b>RE</b> RELÆ RELAIS RELAIS RELAY</p>
<p><b>FA</b> FAN THERMOSTAT THERMOSTAT VENTILATEUR LUFTREGLER FAN THERMOSTAT</p>	<p><b>AP</b> KONTROLBOKS COFFRET DE SECURITE STEURGERAT CONTROL BOX</p>
<p><b>CO</b> KONDENSATOR CONDENSATEUR KONDENSATOR CONDENSER</p>	

OBSERVED FAULTS, POSSIBLE CAUSES AND REMEDIES

Observed fault	Possible cause	Remedy
<ul style="list-style-type: none"> <li>• Motor does not start, no ignition</li> </ul>	<ul style="list-style-type: none"> <li>• No electrical current</li> </ul>	<ul style="list-style-type: none"> <li>• Check mains (should be 220-240V-1-50Hz)</li> <li>• Check proper positioning and functioning of switch</li> <li>• Check fuse</li> </ul>
	<ul style="list-style-type: none"> <li>• Wrong setting of room thermostat or other control</li> </ul>	<ul style="list-style-type: none"> <li>• Check correct setting of heater control. If thermostat, make sure selected temperature is higher than room temperature</li> </ul>
	<ul style="list-style-type: none"> <li>• Thermostat or other control defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace control device</li> </ul>
	<ul style="list-style-type: none"> <li>• Electrical motor defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace electrical motor</li> </ul>
	<ul style="list-style-type: none"> <li>• Electrical motor bearings defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace electrical motor bearings</li> </ul>
<ul style="list-style-type: none"> <li>• Motor starts, no ignition or cuts out</li> </ul>	<ul style="list-style-type: none"> <li>• Burned out condenser</li> </ul>	<ul style="list-style-type: none"> <li>• Replace condenser</li> </ul>
	<ul style="list-style-type: none"> <li>• Electric ignitor defective</li> </ul>	<ul style="list-style-type: none"> <li>• Check connection of H.T. leads to electrodes and transformer</li> <li>• Check electrodes setting (see scheme I)</li> <li>• Check electrodes for cleanliness</li> <li>• Replace H.T. transformer</li> </ul>
	<ul style="list-style-type: none"> <li>• Flame control box defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace control box</li> </ul>
	<ul style="list-style-type: none"> <li>• Photo cell defective</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace photocell</li> </ul>
	<ul style="list-style-type: none"> <li>• Not enough or no fuel at all at burner</li> </ul>	<ul style="list-style-type: none"> <li>• Check state of motor-pump plastic coupling</li> <li>• Check fuel line system including fuel filter for possible leaks</li> <li>• Clean or replace oil nozzle</li> </ul>
<ul style="list-style-type: none"> <li>• Motor starts, heater emits smoke</li> </ul>	<ul style="list-style-type: none"> <li>• Solenoid defective</li> </ul>	<ul style="list-style-type: none"> <li>• Check electrical connection</li> <li>• Check thermostat LI</li> <li>• Clean or replace solenoid</li> </ul>
	<ul style="list-style-type: none"> <li>• Not enough combustion air</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure air inlet and outlet are free</li> <li>• Check setting of combustion air flap</li> <li>• Clean burner disc</li> </ul>
	<ul style="list-style-type: none"> <li>• Too much combustion air</li> </ul>	<ul style="list-style-type: none"> <li>• Check setting of combustion air flap</li> </ul>
	<ul style="list-style-type: none"> <li>• Fuel contaminated or contains water</li> </ul>	<ul style="list-style-type: none"> <li>• Drain fuel in tank with clean fuel</li> <li>• Clean oil filter</li> </ul>
	<ul style="list-style-type: none"> <li>• Air leaks in fuel circuit</li> </ul>	<ul style="list-style-type: none"> <li>• Check fuel line and filter for possible leaks</li> </ul>
	<ul style="list-style-type: none"> <li>• Not enough fuel at burner</li> </ul>	<ul style="list-style-type: none"> <li>• Check pump pressure</li> <li>• Clean or replace fuel nozzle</li> </ul>
<ul style="list-style-type: none"> <li>• Too much fuel at burner</li> </ul>	<ul style="list-style-type: none"> <li>• Check pump pressure</li> <li>• Replace nozzle</li> </ul>	
<ul style="list-style-type: none"> <li>• Heater does not stop</li> </ul>	<ul style="list-style-type: none"> <li>• Solenoid defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace solenoid coil or complete solenoid</li> </ul>
<ul style="list-style-type: none"> <li>• Motor does not stop</li> </ul>	<ul style="list-style-type: none"> <li>• Ventilation thermostat defective</li> </ul>	<ul style="list-style-type: none"> <li>• Replace FA thermostat</li> </ul>

If heater still not working properly, please revert to nearest authorized dealer.

<b>TEKNISKE DATA CARACTERISTIQUES TECHNIQUES TECHNISCHEN DATEN TECHNICAL SPECIFICATIONS</b>	<b>MC 25</b>	<b>MC 40</b>	<b>MC 70</b>	<b>MD 40</b>	<b>MD 100</b>
Max. varmeydelse - Puissance thermique max Wärmeleistung max - Max heating output (kW)	29,07	46,51	81,4	40,7	104,65
Nominel luftmængde - Débit d'air Nenn-Lufleistung - Air output (m <sup>3</sup> /h)	1500	1800	3300	1200	4000
Nominel varmeydelse - Puissance thermique nette Nennwärmeleistung - Net heating output (kW)	25	39	69	41	105
Brændstoffforbrug - Consommation Brennstoffverbr. - Fuel consumption (kg/h)	2,4	3,9	6,8	3,4	8,9
Strømforsyning - Alimentation électrique Netzanschluss - Power supply Fase - Phase - Phase - Phase	1	1	1	1	1
Spænding - Tension - Spannung - Voltage (V)	230	230	230	230	230
Frekvens - Fréquence - Frequenz - Frequency (Hz)	50	50	50	50	50
Effektforbrug - Puissance électrique Leistungsaufnahme - Power consumption (W)	290	480	1140	330	1170
Dyse 80° S - Gicleur 80° S Düse 80° S - Nozzle 80° S (USgal/h)	0,65	1,00	1,50	0,75	2,00
Pumpetryk - Pression pompe Pumpendruck - Pump pressure (lbar)	10	10	12	13	12
Indstilling af forbrændingsluftklap Réglage du volet d'air comburant Einstellung der Brennluftklappe Adjustment of combustion air flap (mm)	13	15	8	Helt åben Ouverture max. Ganz offen Completely open	13
Røggasrør-diameter - Diamètre sortie fumées Abgasrohr Durchmesser - Flue diameter (mm)	150	150	150	---	---
Tankindhold - Capacité réservoir Tankinhalt - Tank capacity (l)	65	65	105	65	105
Lydniveau i 1 m afstand - Niveau sonore à 1 m Gerauschspegel a 1 m - Noise level at 1 m (dB(A))	75,7	73,7	77,8	73,2	76,9
Dimensioner H x B x D - Dimensions, L x P x H Masse, H x B x T - Dimensions, L x W x H (mm · mm · mm)	1160 x 490 x 960	1280 x 490 x 960	1580 x 680 x 1110	1060 x 490 x 760	1580 x 680 x 910
Vægt - Poids Gewicht - Weight (kg)	66	72	123	55	101

