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CE

INSTRUCTION MANUAL

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1. GENERAL SAFETY RULES

READ THIS MANUAL CAREFULLY BEFORE TRYING TO ASSEMBLE AND OPERATE THIS APPLIANCE.

Improper use of the appliance can cause injury to persons or animals, treat with care.

Use only in well-ventilated environments with a continuous air exchange.

Do not use the appliance in closed rooms or in living areas.

Use only Diesel or Paraffin.

The appliance must be operated only by trained people and must kept under observation during operation.

Unplug the heater before fueling or maintenance.

Never use external fuel tanks.

Check that the air inlet and outlet sections are free of obstruction before operation.

Never use the appliance in places where there might be a risk of fire or explosion.

Do not touch the exhaust gas outlet. Danger of burns!

2. DESCRIPTION OF THE APPLIANCE

Mobile Diesel-or Paraffin-Fired Air Heater with air pump, burner, open combustion chamber, without flue.

MODELS WITH FLUE: Mobile, oil-fired hot air generator with closed combustion chamber and connection duct to a stack for fume exhaust.

3. TECHNICAL DATA

Model	14.5 kW**	15 kW*	23 kW*	26 kW**	28 kW*	38.5 kW**	43 kW*	61.3 kW*
Air Delivery (m³/h)	650	350	400	900	500	1200	1050	1300
Fuel Consumption (kg/h)	1.15	1.26	1.97	2.20	2.37	3.05	3.64	4.85
Voltage (V)	230 -50 Hz							
Motor Power (W)	150	70	100	250	150	250	250	250
Length (mm)	860	805	830	930	860	1065	930	1065
Width (mm)	485	305	430	560	485	560	560	560
Height (mm)	570	345	465	625	530	650	615	625
Air Pump Pressure (bar)	0.30	0.28-0.32	0.26-0.33	0.30-0.35	0.30-0.36	0.34	0.30-0.39	0.34

* without flue - **with flue

4. ASSEMBLY

The appliance is supplied with wheels and handle. Wheels, handle and the mounting accessories are found in the shipping carton.

In the carton you find the following items:

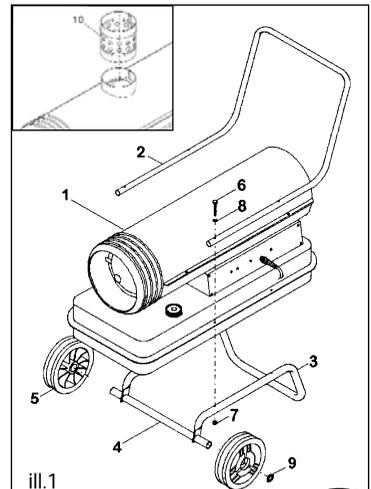
- | | |
|--------------------------|-------------------------------------|
| 1) 1 body of the heater | 6) 4 screws |
| 2) 1 handle | 7) 4 nuts |
| 3) 1 wheel support frame | 8) 4 washers |
| 4) 1 axle | 9) 2 cap nuts |
| 5) 2 wheels | 10) Flue adapter (models with flue) |

To assemble the heater, proceed as follows (see ill.1):

Slide axle (4) through wheel support frame (3). Install in the following order: wheels (5), and cap nuts (9) on axle ends, by tapping lightly.

Place heater on wheel support frame and line up holes on the fuel tank flange with holes on wheel support frame.

Insert screws and washers through handles, fuel tank flange and wheel support frame. Attach nut finger tight after each screw is inserted, then tighten all nuts firmly.



5. SETUP

To get a good ventilation a fresh air opening of at least 0.01 m²/kW is necessary. It should be in proportion to the thermal power of the appliance. Minimum area for air openings:

Model	14.5 kW	15 kW	23 kW	26 kW	28 kW	38.5 kW	43 kW	61.3 kW
m ²	0.145	0.150	0.230	0.260	0.280	0.385	0.430	0.613

For use in construction industry and in agriculture the safety regulations in force must be respected. In particular, the following safety distances from flammable materials should be taken in consideration:

Side: 0.60 m	Air intake side: 0.60 m
Top: 1.50 m	Air outlet side: 3.00 m

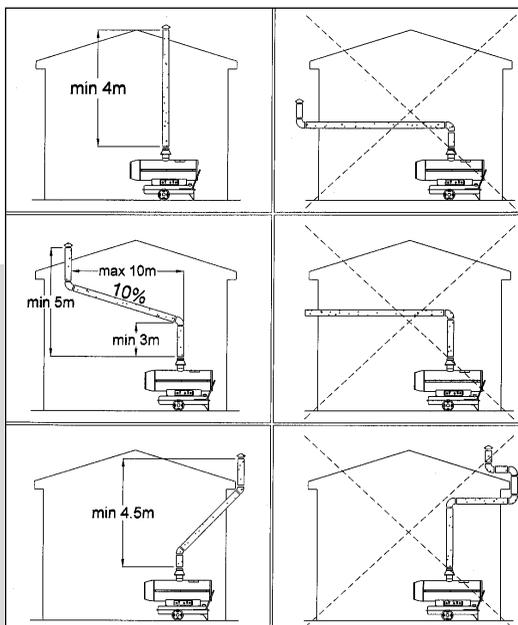
Inspections

According to working conditions, the appliance should be inspected by the Technical Service at least once a year.

Prior to start-up, operating personnel must check for any non-compliance with rules of use, safety and protection.

MODELS WITH FLUE: When the appliance installed in closed environments with fume venting to the open air through a stack, an external air delivery of approx. 80 m³/h must be assured for good combustion. If the appliance is installed in a closed environment and fumes are not vented through a stack, good ventilation of the environment must be assured.

Connect the appliance to any stack or to a flue to vent fumes into the outside air. To obtain a draught of at least 0.1 mbar in the flue, the flue path must rise. Avoid any bends or elbows in the initial section of pipe for at least 3 m.



6. INSTRUCTIONS FOR USE

General functioning

The air pump forces air through the air line up to the burner head nozzle. Air under pressure causes fuel to be sucked from the tank. Fuel mixed with air is then sprayed into the combustion chamber.

The fan, run by a motor, pushes air into and around the combustion chamber.

A stream of air at high temperature flows out of the front section of the appliance.

The flame-out control system ignites the flame and stops the heater if malfunctioning.

Start-up

Fill fuel tank with clean diesel or paraffin.

Plug power cord of heater into a standard 230 V-50 Hz outlet, properly grounded. Turn switch to "ON" (I)

MODELS WITH FLUE: For functioning of the appliance with environment thermostat (230V), remove the protective cap from the thermostat outlet and insert the thermostat plug in the outlet. For functioning without thermostat, insert the protective cap of the thermostat outlet in the outlet.

Set environment thermostat to maximum temperature. Turn the switch to the "ON" (I) position.

Adjust the thermostat to the required temperature.

On this model you have a preventilation and an aftercooling time. This means that:

1) at start, the burner lights about 10 s after fan rotation. 2) at shut off, the fan goes on rotating for about 1 min to allow the unit to cool.

NEVER SHUT OFF BY PULLING OUT POWER PLUG. ALWAYS USE ON/OFF SWITCH!

Lock-out

In case of defective ignition or overheating the flame-out control system shuts the heater off. If this occurs:

- detect and rectify the cause of lock-out. In particular the air inlet and outlet sections should not be obstructed and the fan should rotate freely.
- turn switch to "OFF" (0).
- wait a few minutes to let the heater cool.
- turn switch to "ON" (I).

If the cause of lock-out cannot be detected please shut the appliance down and call a Qualified Technical Service.

Shut-down

Turn switch to "OFF" (0).

7. MAINTENANCE

The maintenance operations described in this chapter must be carried out only by a Professional Technical Service.

Use only original spare parts.

Fan

Clean fan using a cloth moistened with paraffin or light solvent. Dry fan thoroughly using compressed air. Clean fan blades at least every 500 hours of functioning.

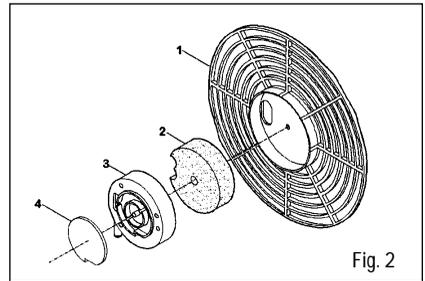


Fig. 2

Nozzle

Carefully remove nozzle from the nozzle adapter. Blow compressed air through the face of nozzle to free any dirt.

Air Filters (ill. 2)

Clean the air filter regularly, especially if the appliance is used in dusty environments. Remove filter end cover (1), wash air intake filter (2) using a light detergent and dry it thoroughly before reinstalling. Replace air delivery filter (4) at least once a year.

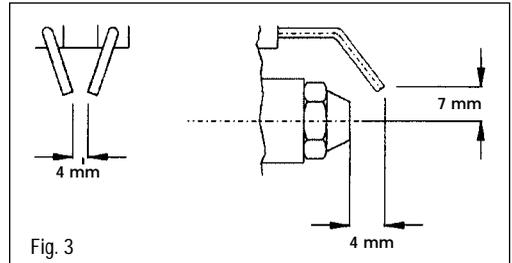


Fig. 3

Ignition Electrodes (ill.3)

Clean, adjust and if necessary replace ignition electrodes every 300 hours of functioning. For electrode gap see illustration.

Pump Pressure Adjustment

Remove pressure gauge plug from filter end cover. Install a pressure gauge with a precision of at least 0.02 bar. Start heater and read air pressure value. If necessary adjust pressure as follows:

Model	14.5 kW	15 kW	23 kW	26 kW	28 kW	38.5 kW	43 kW	61.3 kW
Air Pump Pressure (bar)	0.30	0.28 - 0.32	0.26 - 0.33	0.30 - 0.35	0.30 - 0.36	0.34	0.30 - 0.39	0.34

8. TROUBLE-SHOOTING

The maintenance operations written in boldface must be carried out only by a Professional Technical Service.

FAULT	CAUSE	REMEDY
Motor does not start	No power or low voltage	Check power line and voltage Check fuse and replace if necessary
	Faulty or damaged power cord	Check power cord - Replace power cord
	Faulty motor/capacitor	Check and if necessary replace
	Lock-out of appliance due to overheating	Detect the cause of overheating Shut the appliance down Check air inlet and outlet Wait some minutes and restart the appliance If necessary apply to the Professional Technical Service
Motor runs, but the heater does not ignite and after a short time locks out	Empty fuel tank, of dirty or wrong fuel	Remove wrong or dirty fuel Fill the tank with clean Diesel or Paraffin.
	Fuel filter clogged	Clean or replace fuel filter
	Leaks in Fuel line	Check pipes, tighten connections, if necessary replace
	Burner nozzle clogged	Clean nozzle blowing compressed air, replace if necessary
	Diesel viscosity increased due to low temperature	Mix Diesel with 10-20% Paraffin
Flames come out of air outlet	Insufficient air flow into combustion chamber Pump pressure too high	Check fan Check pump air pressure Reduce air pressure to nominal value
Heater starts, flame lights up, but flame-out control system shuts off the appliance	Dirty photocell	Check photocell and be sure that it acknowledges the flame Clean photocell lens
	Faulty photocell	Replace photocell
	Defective connection between photocell and flame-out control	Check and connect properly
	Faulty flame-out control	Check and replace if necessary