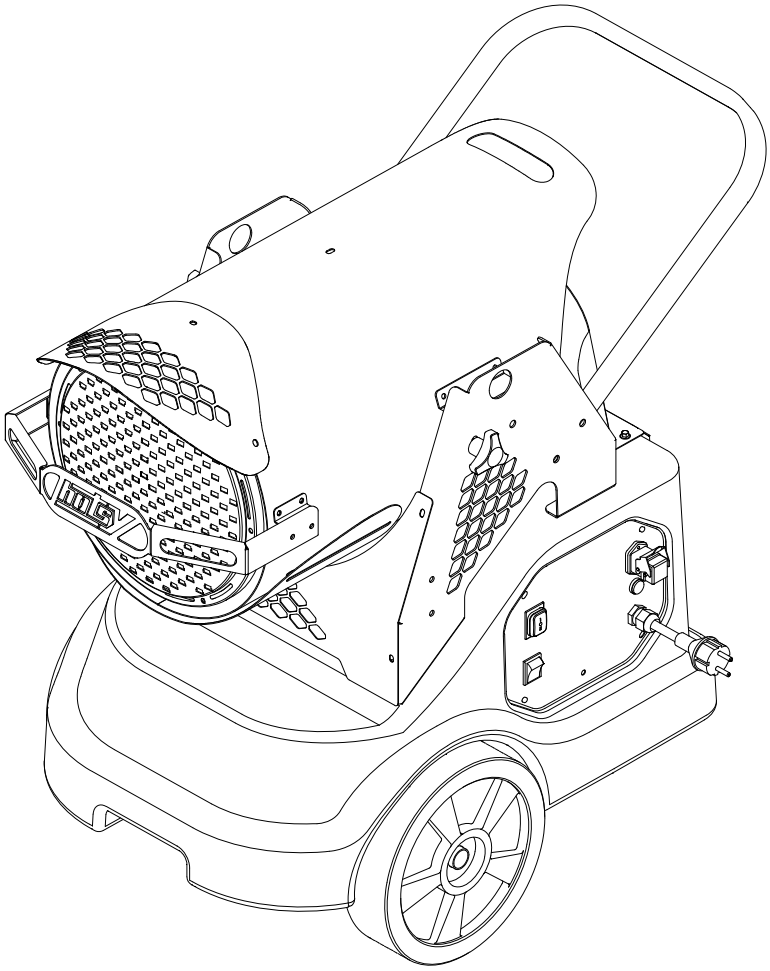
HEATMIZER 115

Description

Operating Instructions (ENG)

MODELS: **1.103-078.0**



98077660-B 07/25/17

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

This manual contains the following sections:

- How to Use This Manual
- Safety
- Operations
- Maintenance

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model: _____

Date of Purchase: _____

Serial Number: _____

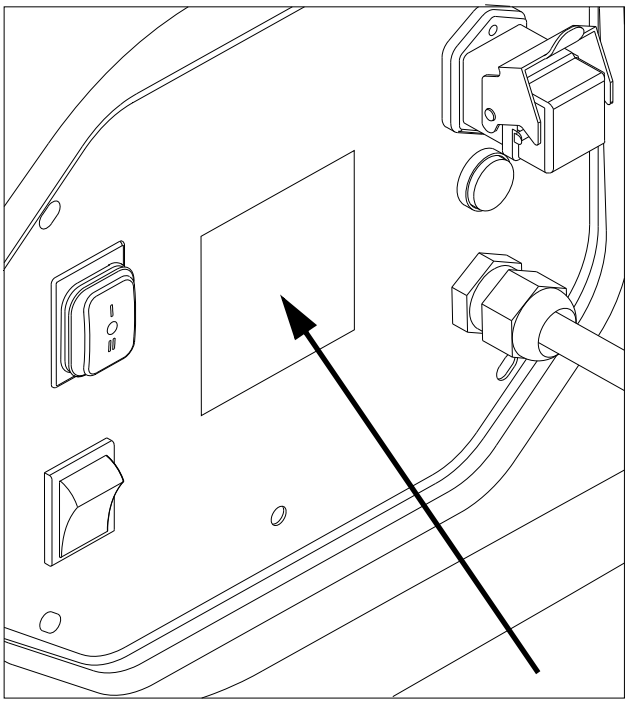
Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

The model and serial number of your machine is located on the control panel of the machine.



The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance information to keep the machine and its components in good working condition. They are listed in this general order:

- Maintenance
- Troubleshooting

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The manual part number is located on the lower right corner of the front cover.

Important Safety Instructions

When using this machine, basic precaution must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.

⚠WARNING: To reduce the risk of fire, electric shock, or injury:

- THE INSTALLATION OF THE UNIT SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION. Also, as a recommended installation practice reference should be made to the current issue of CSA B139, Installation Code for Oil Burning Equipment in Canada and NFPA 31 Standard for the Installation of Oil-Burning Equipment in the USA.
- Use only in places free of flammable vapors or high dust content.
- Never use heater in immediate proximity of flammable materials. The minimum distance must be 10 Feet (3 m).
- Make sure fire fighting equipment is readily available.
- Ensure that the machine resting surface or ground is not made of flammable material.
- Make sure sufficient fresh outside air is provided according to the heater requirements. Direct combustion heaters should only be used in well vented areas in order to avoid carbon monoxide poisoning.
- A rough estimate of opening required for each gallon (US) of capacity is three square foot at heater level, for direct-fired heaters.
- Never block air inlet (rear) or air outlet (front).
- In case of very low temperatures add kerosene to the heating oil.
- The heater is installed and connected to an electrical switchboard.
- Connect the power cord to the mains and wait at least 15 minutes before starting the heater, to allow the pre-heated filter to warm the heating oil inside the filter.
- Minimum clearances from combustible material must be:
  30” from side and rear (air inlet) of heater
  80” from ceiling
  40” on air outlet of heater
- 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.
- Heater is not duct able.
- Follow the instructions in this booklet very carefully.

READ AND SAVE THESE INSTRUCTIONS

Consignes De Sécurité Importantes

Lors de l'utilisation de cette machine, des précautions de base doivent toujours être prises, y compris les précautions suivantes :

LIRE TOUTES LES INSTRUCTIONS AVANT D'UTILISER CETTE MACHINE.

⚠ AVERTISSEMENT: Pour réduire le risque d'incendie, d'électrocution ou de blessure :

- L'INSTALLATION DE LA MACHINE DOIT ETRE FAITE CONFORMEMENT AUX LOIS EN VIGUEUR. L'installation doit tenir compte des règles CSA B139, Installation Code for Oil Burning Equipment et NFPA 31 Standard for the Installation of Oil-Burning Equipment in the USA
- Le générateur ne soit pas installé dans des locaux où il y aurait des risques d'explosion ou d'incendie.
- Des matériaux inflammables ne soient pas déposés à côté de l'appareil (la distance minimum doit être de 3 mètres (10 pieds).
- De mesures suffisantes de prévention anti-incendie aient été prévues.
- L'aération du local dans lequel se trouve le générateur soit garantie et suffisante pour les nécessités du générateur, et en particulier, pour le générateurs à combustion directe le renouvellement d'air doit être évalué en considérant que ce générateur envoie dans la pièce aussi bien de l'air chaud que les produits de combustion.
- Une évaluation du rechange d'air pour chaque gallon (US) de capacité est 1 pied carré pour les générateurs à combustion indirecte et 3 pieds carrés pour les générateurs à combustion directe.
- Les distances minimales de tout matériau combustible doivent être:

  30" des parties latérales et de l'aspiration d'air;
  80" de le plafond;
  40" de la sortie d'air
- Il n'y ait pas d'obstacles ou d'obstructions à l'aspiration et à la sortie de l'air, tels que des toiles ou des couvertures étendues sur l'appareil ou sur les parois, ou des objets encombrants à côté du générateur.
- Du kérosène soit rajouté dans le réservoir si la température de la pièce est très basse.
- Le générateur soit contrôlé avant sa mise en marche et régulièrement surveillé durant son utilisation; il faut éviter que des enfants ou des animaux non surveillés s'en approchent.
- Au début de chaque période d'utilisation, avant de brancher la fiche dans la prise électrique, contrôler que le ventilateur tourne librement.
- Contrôler que le sol destiné à recevoir la machine ne soit pas en matériau inflammable.
- Brancher le cordon d'alimentation au réseau et attendre 15 minutes au moins avant d'allumer l'appareil de chauffage afin de permettre le préchauffage du fuel dans le filtre.
- Le générateur soit installé et relié à un coffret électrique.
- À la fin de chaque période d'utilisation enlever la fiche de la prise de courant.
- Générateur pas canalisable.
- Les instructions contenues dans ce livret soient suivies scrupuleusement

LIRE ET CONSERVER CES INSTRUCTIONS

The following symbols are used throughout this guide as indicated in their descriptions:

Hazard Intensity Level

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and ***FOR SAFETY***. The level of hazard intensity is determined by the following definitions:

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.
Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:
DO NOT OPERATE MACHINE:
Unless Trained and Authorized.
Unless Operation Guide is Read and understood.
In Flammable or Explosive areas.
In areas with possible falling objects

WHEN SERVICING MACHINE:
Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

Les symboles suivants sont utilisés dans tout ce manuel, tels que décrits ici :

Niveau D'intensité Du Danger

Il existe trois niveaux d'intensité du danger, identifiés par des termes d'avertissement - **AVERTISSEMENT**, **ATTENTION** et ***POUR VOTRE SÉCURITÉ***. Le niveau d'intensité du danger est déterminé par les définitions suivantes :

⚠ AVERTISSEMENT:

AVERTISSEMENT - Les dangers ou des pratiques contraires à la sécurité qui POURRAIENT entraîner des blessures personnelles ou la mort.

⚠ ATTENTION:

ATTENTION - Les dangers ou des pratiques contraires à la sécurité qui pourraient entraîner des blessures personnelles légères ou des dégâts sur le produit ou d'autres biens.

POUR DES RAISONS DE SÉCURITÉ : Pour identifier les actions qui doivent être exécutées pour un fonctionnement sûr de l'équipement.

Signaler immédiatement tout dommage subi par la machine ou fonctionnement défectueux. Ne pas utiliser la machine si elle ne fonctionne pas correctement. Ci-dessous se trouvent les informations indiquant les conditions potentiellement dangereuses pour l'opérateur ou l'équipement. Lire attentivement ces informations. Être conscient que ces conditions peuvent survenir. Repérer tous les dispositifs de sécurité sur la machine. Suivre les étapes nécessaires de formation du personnel qui utilise la machine.

POUR DES RAISONS DE SÉCURITÉ :

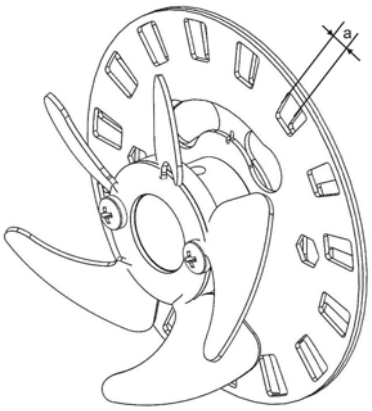
NE PAS FAIRE FONCTIONNER LA MACHINE :
Sauf si le personnel est formé et autorisé.
Sauf si le manuel d'utilisation est lu et compris.
Dans des zones inflammables ou explosives.
Dans des zones contenant des objets susceptibles de tomber

LORS DE L'ENTRETIEN DE LA MACHINE :

Éviter les pièces mobiles. Ne pas porter de vêtements, vestes, chemises ou manches vagues lors de l'entretien de la machine. Utiliser les pièces de rechange approuvées par le fabricant.

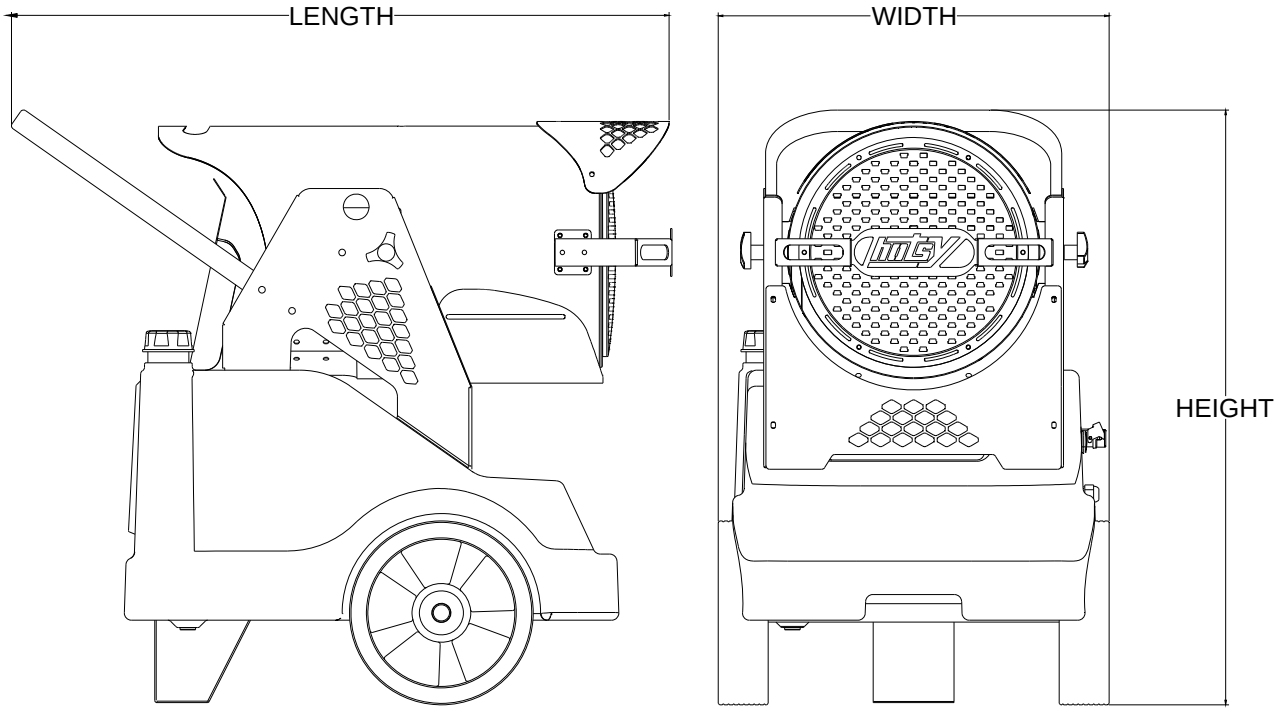
Technical Specifications

ITEM	DIMENSION/CAPACITY
Heat Output	115,159 BTU/h
Fuel Consumption	.85 USgal/H
Power Supply	Single Phase 120 V 60 Hz
Electrical Consumption	175 W
Nozzle	0.65-80° W USgal/H
Pump Pressure	180 psi
Noise Level at 3.2 ft (1M)	69 dBA
Fuel Tank Capacity	11.35 Gal (43 L)
Adjustment of Combustion Air Flap (A)	0.126 in (3.2 mm)



Combustion Air Flap

ITEM	MEASURE
Height	31.8 in (807.7 mm)
Length	35.2 in (894 mm)
Width	20.9 in (530.9 mm)
Weight	92.5 lb (54.4 kg)

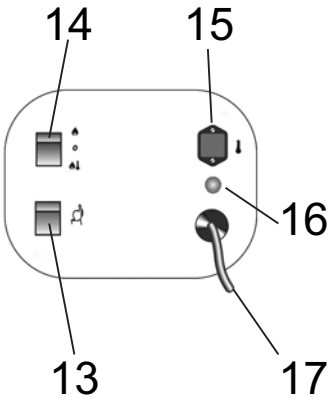


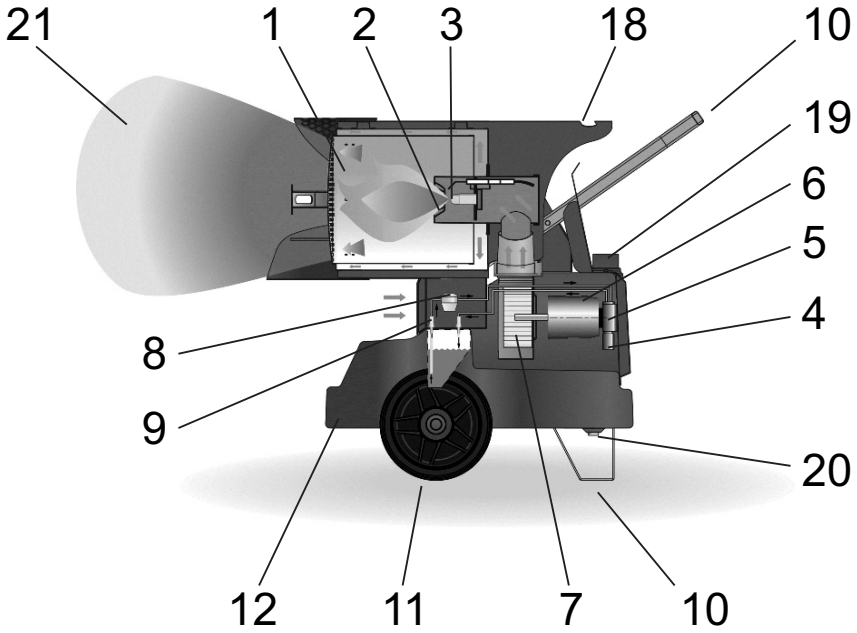
⚠ CAUTION:

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

⚠ ATTENTION:

Cet appareil n'est pas prévu à l'usage des personnes (enfants y compris) avec des possibilités physiques, sensorielles ou mentales réduites, ou le manque d'expérience et de connaissance, à moins qu'ils aient été donnés la surveillance ou l'instruction au sujet de l'utilisation de l'appareil par une personne chargée de leur sûreté. Des enfants devraient être dirigés pour s'assurer qu'ils ne jouent pas avec l'appareil.





Components

1. Combustion Chamber
2. Burner
3. Nozzle
4. Solenoid Valve
5. Diesel Pump
6. Motor
7. Fan
8. Fuel Filter
9. Fuel Circuit
10. Support/Handle
11. Wheel
12. Fuel Tank
13. Reset Button with Control Lamp
14. Main Switch
15. Room Thermostat Plug
16. Control Lamp
17. Power Cord
18. Handel
19. Fuel Cap
20. Drain Plug
21. Heat Flow

The heater described in this manual is a portable oil-fueled infrared heat generator running on heating oil.

Its easy handling and large fuel tank allow it to be used locally and temporarily with complete stand-alone operation. The area to be heated is therefore hit by an even and uniform flow of heat, as can be seen by the shape of the irradiation cone (18), without air movement.

The unit is a direct combustion hot generator that works by sending both hot air and combustion products in the room you wish to heat: all the necessary precautions must therefore be taken to guarantee a sufficient exchange of air.

How this machine works

Before switching on the heater and, therefore, before plugging it into the electrical power supply, check that the power supply specifications are the same as those stated on the identification plate.

⚠WARNING:

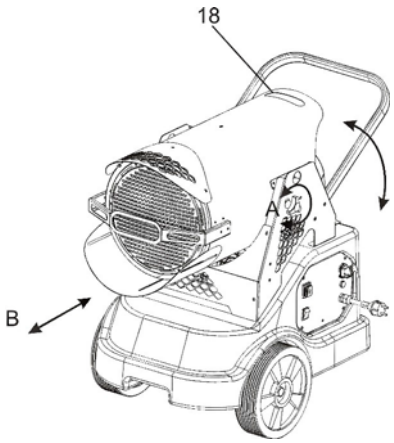
Mains must be fitted with a thermo-magnetic differential switch. Unit plug must be linked to a socket with a mains switch.

⚠AVERTISSEMENT:

La ligne électrique d'alimentation du générateur doit être pourvue d'une mise à la terre et d'un interrupteur magnéto-thermique avec un différentiel. La fiche électrique du générateur doit être reliée à une prise munie d'un interrupteur de sectionnement.

The heater must be placed on a flat, stable and level surface to avoid machine tipping and/or gas oil leakage from the tank fuel cap. The flow of heat can be directed upward with an approximately 5° angle:

Loosen the two locking knobs (A) and tilt the combustion unit by pressing on the handle (18) until the desired angle is reached, then lock the knobs (A) by screwing them.



⚠WARNING:

Before start-up, always ensure the guard (B) has been completely pulled out, so as to guarantee maximum protection of the machine resting surface.

⚠AVERTISSEMENT:

Avant de démarrer la machine, contrôler toujours que lecarter de protection (B) est complètement sorti, de façonà garantir la protection maximum de la surface d'appuide la machine.

The heater can only work automatically when a control device, such as for example a thermostat or a timer, is connected to the heater.

Connection to the heater is made by removing the socket cover (15) and inserting the thermostat plug.

To start the machine you must:

If connected to the thermostat, turn the switch to (ON +)

If not connected to the thermostat, turn the switch to (ON)

When unit is started for the first time or is started after the oil tank has been totally emptied, the diesel flow 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 by depressing the reset button (13) for three seconds.

If the heater does not function, the first things to do are:

Check that the tank still contains some diesel.

Push reset button (13) for three seconds.

If the heater still does not function, see "TROUBLESHOOTING" to identify the cause of the malfunction.

Stopping The Heater

Set main switch (14) on "0" position or turn thermostat or other control device on lowest setting.

The flame goes out and the fan continues to work for approximately 90 sec. cooling the combustion chamber.

Flame Control Cycles

Reset Lamp Light 2.1

During the operating condition, the reset button may have different type of light depending of its operating status (FUNCTION LIGHT):

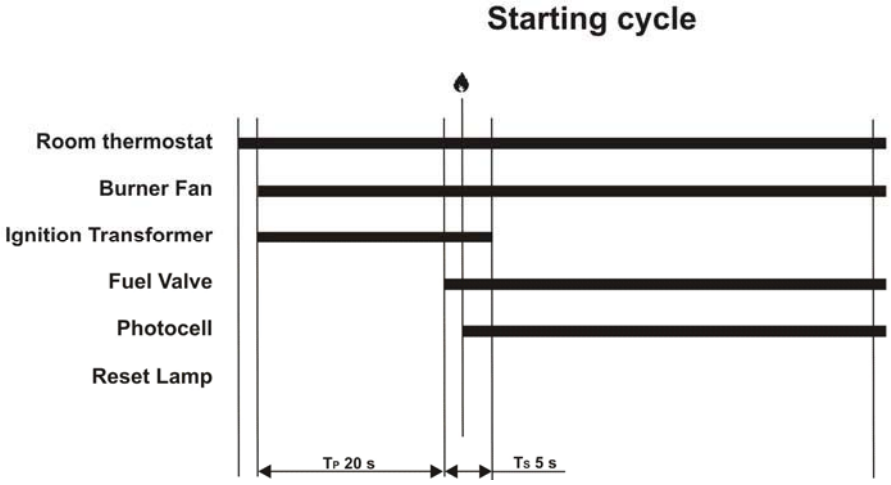
- light off: unit is in stand-by status (waiting for heating request) or starting cycle or running.
- steady red light: the heater stops permanently in lock-out status and can restart only if reset button is pressed.
  To troubleshooting the unit when it is in lock-out condition, press the reset button for about 10 seconds and then release it. A diagnostic routine is enabled, causing the reset button on the main board to flash (SELF-DIAGNOSIS LIGHT) with the following description

	Number of blinks	Fault Description
	2	Flame failure in starting cycle
	4	Extraneous light / flame in starting cycle
	7	Flame failure in running cycle
	8 - 14	Internal failure of electronic control

Operating Cycles 2.2

Depending on the type of the operating cycles, the main components (room thermostat, fan, ignition transformer, fuel valve) and controls element (photocell, reset button) are activated or de-activated according to specific rules and times.
In the following diagrams are shown

- Starting cycle
- Shut off cycle
- Flame failure in starting cycle
- Extraneous light or flame during starting cycle
- Flame failure in running cycle.

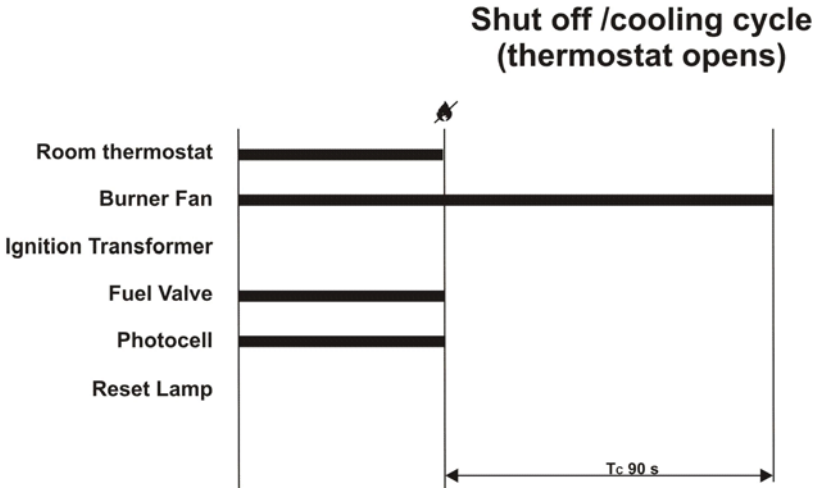


The flame control unit starts the sequence of operation after a heating request (normal operation or thermostat operation) and it consists of the following steps:

- Self-test (less than 3 s): self-check of electronics efficiency;
- Purging time T_P (20 seconds): fan motor and ignition transformer are simultaneously switched on while the fuel valve remains closed to eliminate any fuel or unburnt residual.
  During the purging stage, the flame signal is constantly monitored and any kind of failure leading to combustion prevents the burner ignition causing the controls to lock out the unit.

In case of heating request opening (room thermostat opening), the control unit goes to stand-by position. The device remains in this status till closing of the room thermostat;

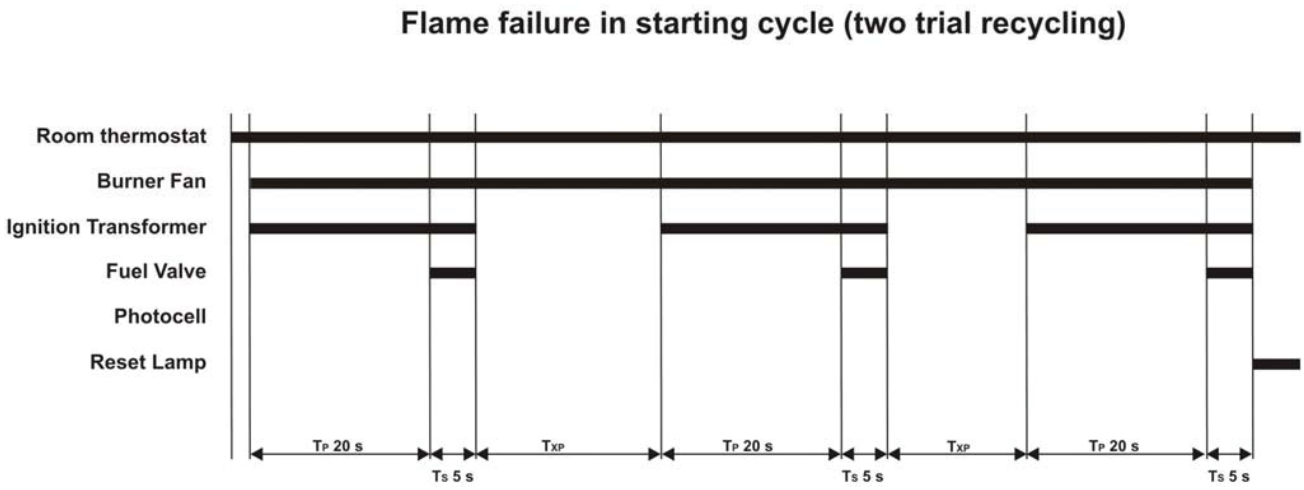
- Safety time (5 seconds): at the end of the purging time T_P, the fuel valve is switched on and opens the fuel to the nozzle.
  In case of flame detection failure by the end of the T_S safety time, the control unit goes to lockout, and the fan motor, the ignition transformer and the fuel valve are de-energized, while the lockout signal is enabled.
  Otherwise, at the end of the T_S safety time the control unit disables the ignition transformer and goes to running position.



When the heating request (normal operation or thermostat operation) opens:

- fuel valve and ignition transformer are switched off and the flame lights off;
- burner fan operates a 90 s post-purge ventilation

Restoring the heating request causes the post-purge to be interrupted and the starting cycle to be performed.



If during the safety time TS, the photocell monitors a flame failure (signal to photocell become lower than minimum), at the end of safety time the unit tries to restart twice: should the flame failure being confirmed, then the unit goes in lock out:

- burner fan, ignition transformer and fuel valve are de-energized;
- alarm lamp on reset button becomes steady red

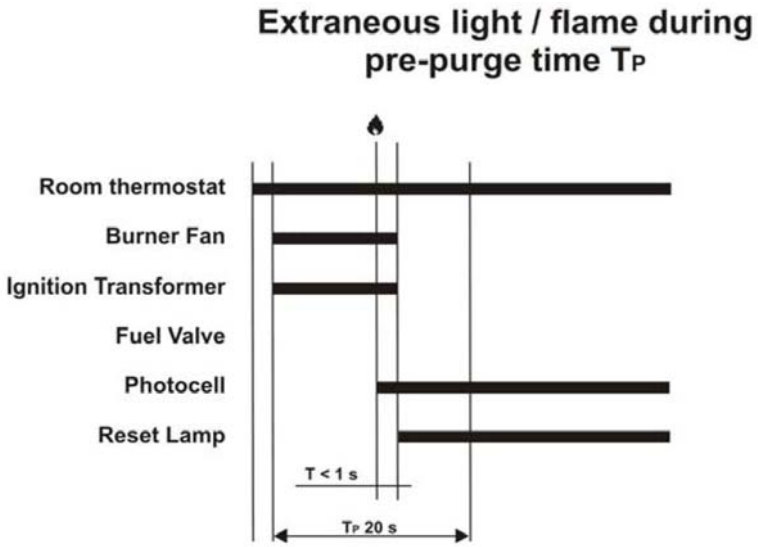
If troubleshooting on reset button is activated as described in 2.1, then the alarm lamp on reset button starts flashing with 2 blinks.

FUNCTION LIGHT: steady red

SELF-DIAGNOSIS LIGHT: flashing red with 2 blinks

Unit can re-start only after pressing the reset button.

NOTE: While starting cycle is repeated, a cooling time T_{XP} is required to get the ignition transformer be ready to operate.



If during the pre-purge time the photocell monitors any residual flame then the unit goes in lock out:

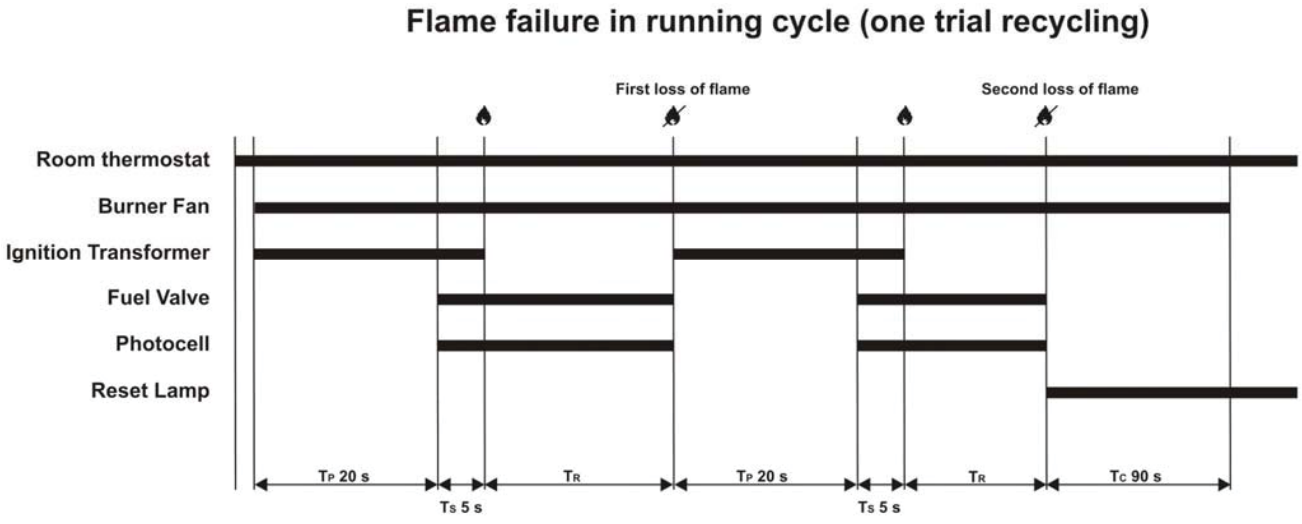
- burner fan stop to purging combustion chamber
- fuel valve and ignition transformer are de-energized
- reset lamp becomes steady red

If troubleshooting on reset button is activated as described in 2.1, then the alarm lamp on reset button starts flashing with 4 blinks.

FUNCTION LIGHT: steady red

SELF-DIAGNOSIS LIGHT: flashing red with 4 blinks

Unit can re-start only after pressing the reset button.



In case of flame failure in running status, the flame control unit makes one trial restarting the unit.
If the reason of flame failure is confirmed, then the unit stops in lock-out mode, and the reset lamp becomes steady red.
If troubleshooting on reset button is activated as described in 2.1, then the alarm lamp on reset button starts flashing with 7 blinks.
FUNCTION LIGHT: steady red
SELF-DIAGNOSIS LIGHT: flashing red with 7 blinks

Unit can re-start only after pressing the reset button.

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 button (13) will light up.

The reset push-button emits a different light, depending on the state of the machine:

Off, when the machine is running regularly;

Red, when the machine is in safety lock-out mode: to restart it, the reset button (13) must be pressed for three seconds.

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 the reset button (13) on control box for three seconds before being able to restart the heater.

Transport

Before moving the heater:

- Stop the heater as indicated in the “Stopping the Heater” paragraph;
- Cut electrical power by removing the plug from the electrical socket.
- Wait until the heater cools
- Before moving the heater, make sure the oil tank cap is securely attached.

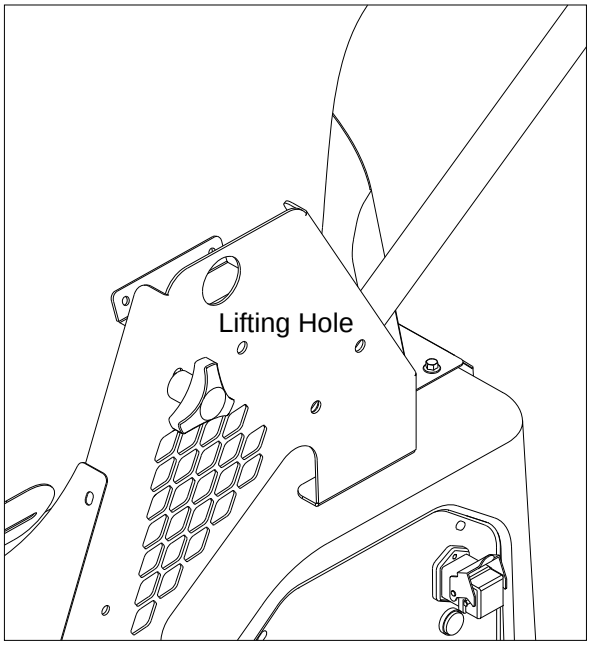
⚠WARNING:

During handling and transport gas-oil may leak: the tank fuel cap cannot guarantee sealing to allow the introduction of air and tank emptying during machine operation.

⚠AVERTISSEMENT:

En cours de déplacement et de transport du fuel peut s'échapper: en effet, le bouchon de remplissage du réservoir n'est pas étanche afin de permettre l'introduction d'air dans le réservoir et l'aspiration du fuel pendant le fonctionnement de la machine.

For handling in short to medium distances, it is enough to grab the heater by the handle (10) and roll it on its wheels. In case of need, the generator can be lifted using ropes or chains secured to lifting holes located on top of both side panels. In this case it is always best to ensure that the ropes and/or chains are securely hooked and that they are intact and stably in place before handling.



Maintenance

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

⚠WARNING:

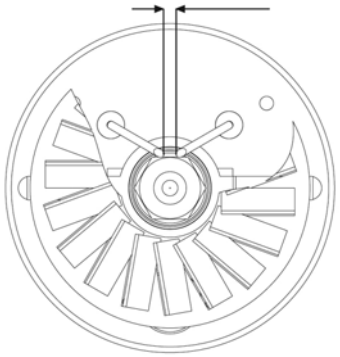
Never service heater while it is plugged in, operating or hot. Severe burns or electrical shock can occur.

⚠AVERTISSEMENT:

Avant de commencer une quelconque opération d'entretien il faut:

- **Arrêter le générateur selon les indications du paragraphe "ARRET";**
- **Débrancher l'alimentation électrique en enlevant la fiche de la prise de courant;**
- **Attendre que le générateur soit froid.**

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 the following scheme.



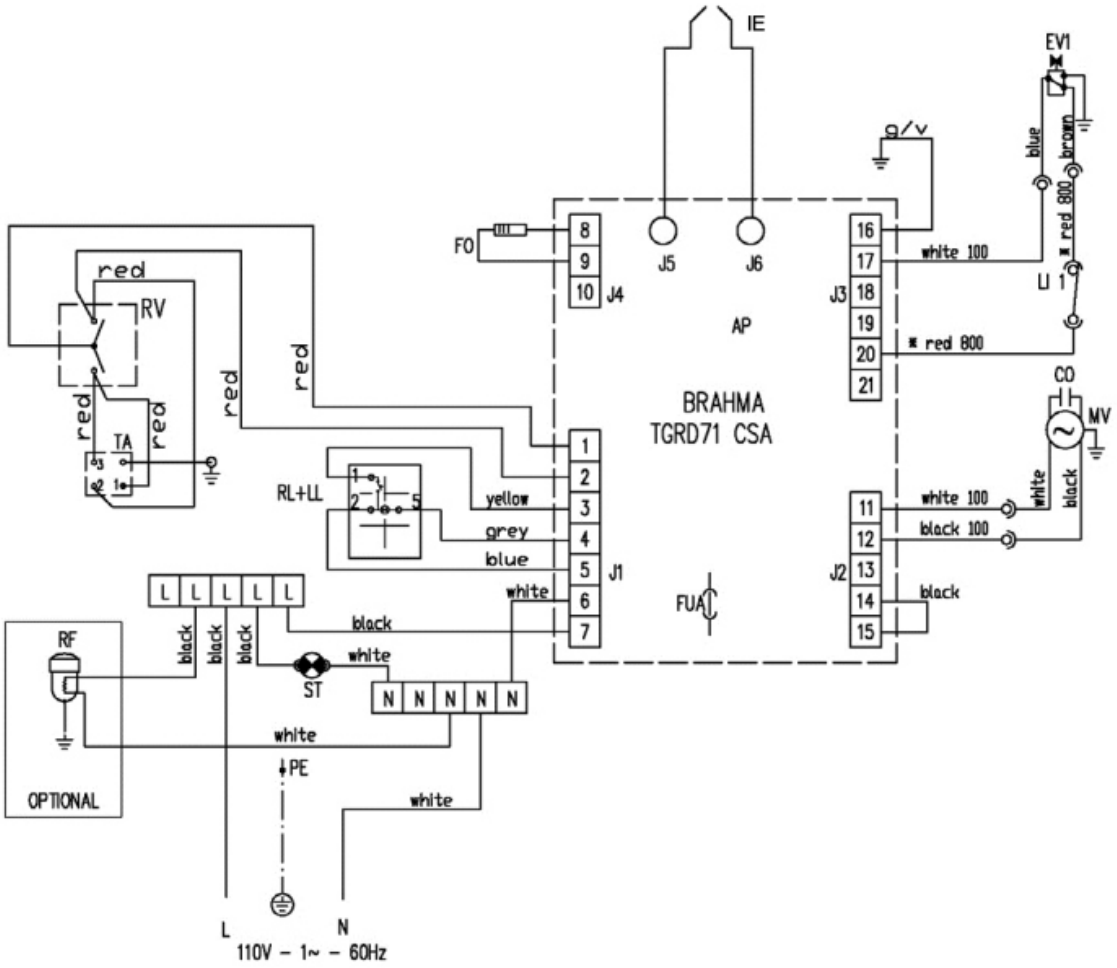
.079-118 in (2-3 mm)

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Motor Does Not Start, No Ignition	No electrical current.	Check mains cable.
		Check proper positioning and functioning of switch.
		Check fuse.
	Wrong setting of room thermostat or other control. (Thermostat and Clock)	Check correct setting of heater control. If thermostat, make sure selected temperature is higher than room temperature.
	Thermostat or other control defective.	Replace control device.
	Electrical motor defective.	Replace electrical motor.
	Electrical motor bearings defective.	Replace electrical motor.
	Burned out condenser.	Replace condenser.
Motor Starts, No Ignition Or Cuts Out	Electric igniter defective.	Check connection of H.T. leads to electrodes and transformer.
		Check electrodes setting (see scheme in Maintenance Section).
		Check electrodes for cleanliness.
		Replace H.T. Transformer.
	Flame control box defective.	Replace control box.
	Photocell defective.	Clean or replace photocell.
	Not enough or no fuel at burner.	Check state of motor-pump plastic coupling.
		Check fuel line system including fuel filter for possible leaks.
		Clean or replace oil nozzle.
	Solenoid defective.	Check electrical connection.
		Clean or replace solenoid.
Motor Starts, Heater Emits Smoke	Not enough combustion air.	Make sure inlet and outlet are free.
		Check setting of combustion air flap.
		Clean burner disk.
	Too much combustion air.	Check setting of combustion air flap.
	Fuel contaminated or contains water.	Drain fuel in tank and replace with clean fuel.
		Clean oil filter.
	Air leaks in fuel circuit.	Check fuel line and filter for possible leaks.
	Not enough fuel at burner.	Check pump pressure.
		Clean or replace fuel nozzle.
	Too much fuel at burner.	Check pump pressure.
		Replace nozzle.
Heater does not stop	Solenoid defective.	Replace solenoid coil or complete solenoid.

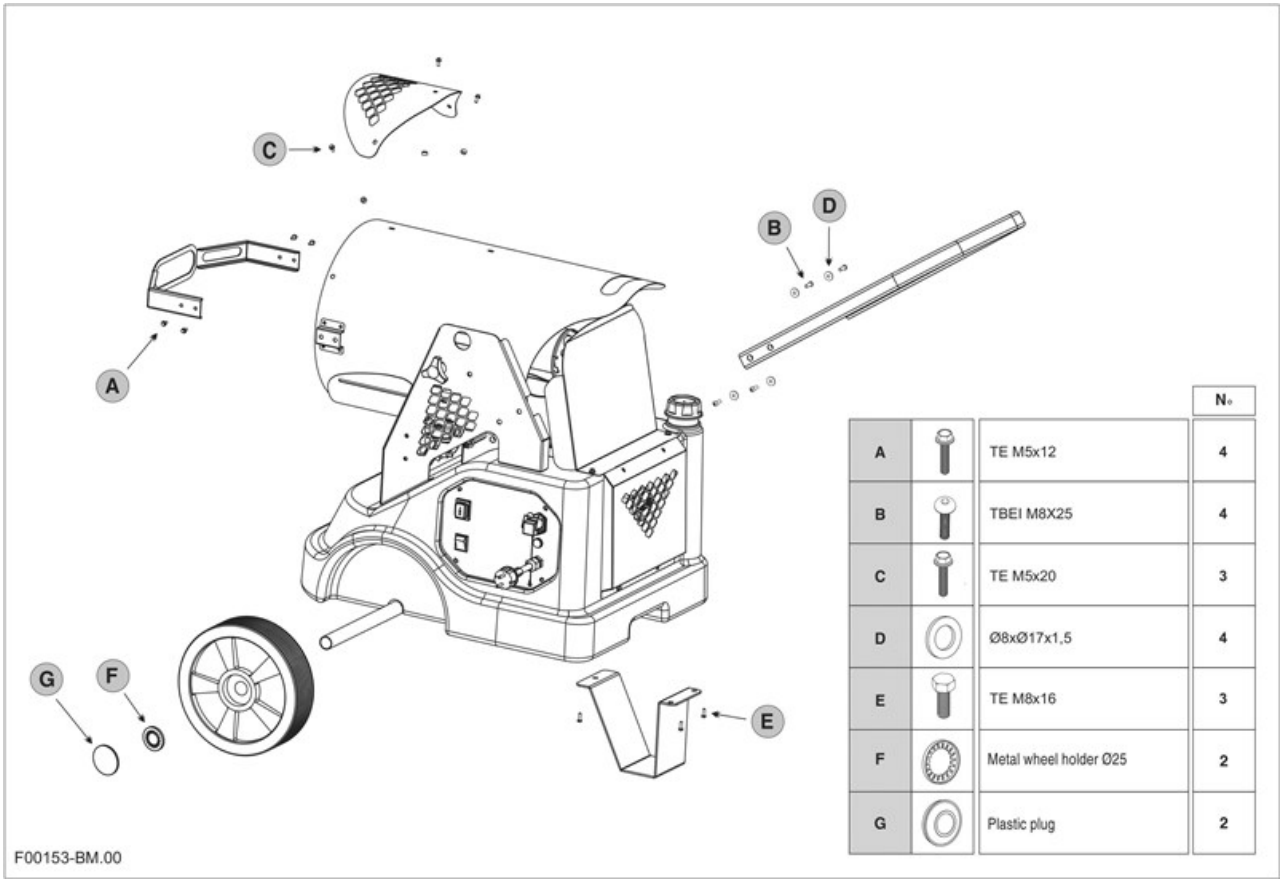
If the heater is still not working properly, please contact your nearest authorized dealer.

Wiring Diagram



AP	Control Box	MV	Burner Motor
TA	Room Thermostat Plug	FUA	Fuse
ST	Electric Pilot	RV	Switch
LI1	Overheat Thermostat	RF	Heated Filter (Optional)
EV1	Solenoid Valve	RL	Reset Button
CO	Capacitor	LL	Lock Out Indicator Light
IE	Ignition Electrode	RV1	Switch
TD	Transformer H.V.	FO	Photocell

Foot and Handle Assembly Instructions



			N°
A		TE M5x12	4
B		TBEI M8X25	4
C		TE M5x20	3
D		Ø8xØ17x1,5	4
E		TE M8x16	3
F		Metal wheel holder Ø25	2
G		Plastic plug	2

Wheel Installation Instructions