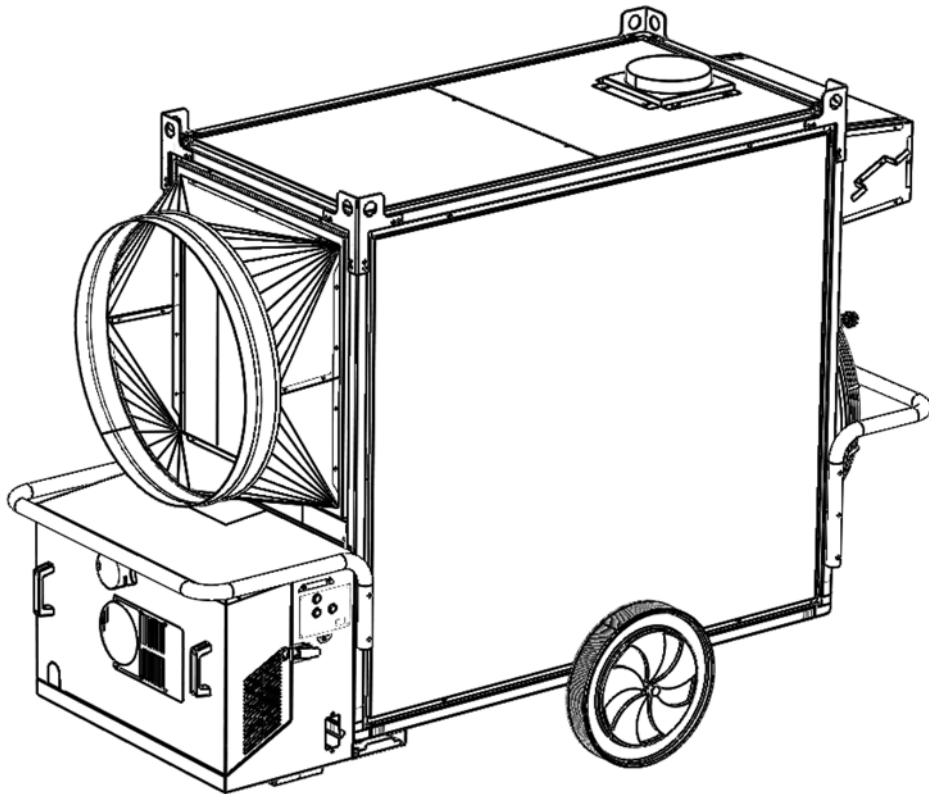




INSTRUCTIONS MANUAL
MANUEL D'INSTRUCTIONS

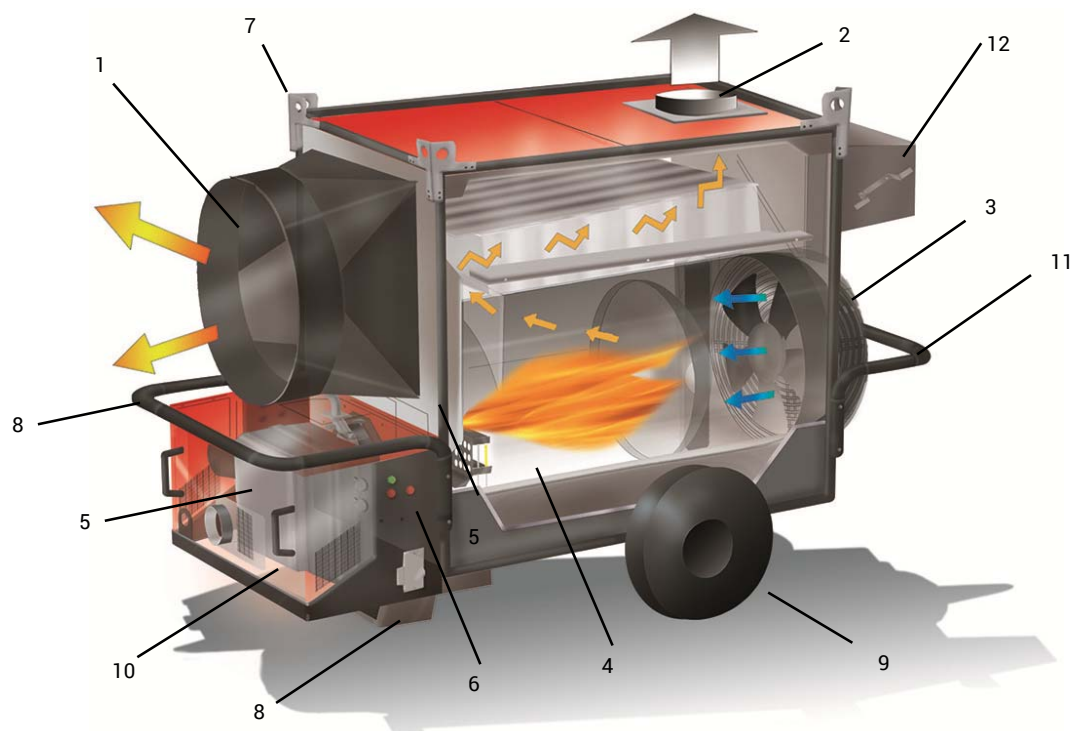
EN
FR

SPACE HEATER
GENERATEUR D'AIR CHAUD



JUMBO 400 - JUMBO 600 - JUMBO 800

CONTROL BOARD - SCHÉMA DE FONCTIONNEMENT



1 HOT AIR OUTFLOW
SORTIE AIR CHAUD

2 CHIMNEY
CHEMINEE

3 COOLING FAN
VENTILATEUR REFROIDISSEMENT

4 COMBUSTION CHAMBER
CHAMBRE DE COMBUSTION

5 BURNER
BRULEUR

6 THERMOSTATS L2 BOX
BOITIER THERMOSTATS L2

7 HOISTING BRACKETS
ÉTRIERS DE LEVAGE

8 SUPPORT/HANDLE
SUPPORT/POIGNEE

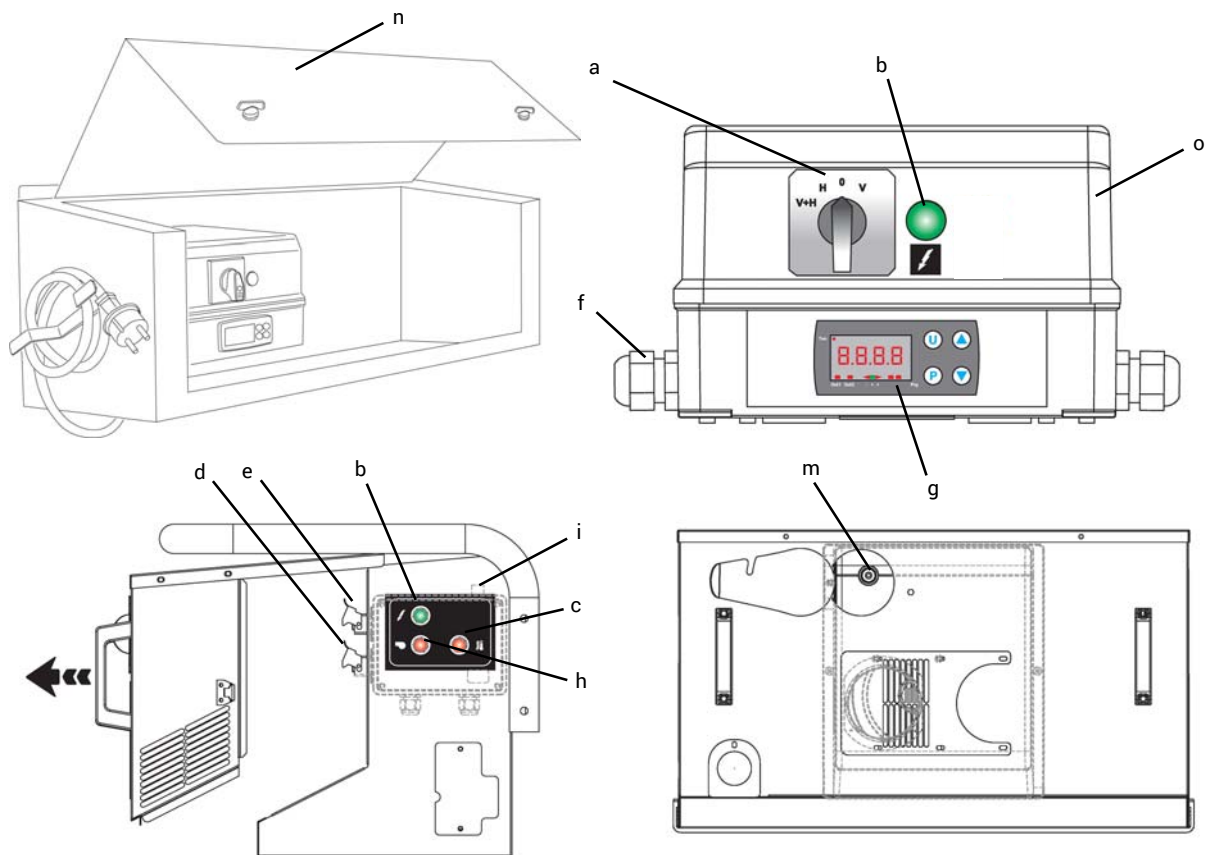
9 WHEEL
ROUE

10 BURNER BOX
BOÎTIER BRÛLEUR

11 BUFFER
PARE-CHOCS

12 ELECTRICAL PANEL BOX
BOÎTIER TABLEAU ÉLECTRIQUE

CONTROL PANEL - TABLEAU DE COMMANDE



a HEATING-VENTILATION SWITCH
INTERRUPTEUR CHAUFFAGE-VENTILATION

b VOLTAGE LAMP
TEMOIN TENSION

c OVERHEAT THERMOSTATS CONTROL LAMP, L2
TEMOIN THERMOSTATS DE SURCHAUFFE, L2

d ROOM THERMOSTAT PLUG
PRISE THERMOSTAT D'AMBIANCE

e INTAKE FOR PRE-HEAT FILTER
PRISE POUR FILTRE PRÉCHAUFFAGE

f CABLE CLAMP FOR POWER CABLE
PRESSE-CÂBLES POUR CÂBLE D'ALIMENTATION

g TEMPERATURE CONTROLLER
THERMORÉGULATEUR

h BURNER LIGHT
VOYANT BRÛLEUR

i SAFETY THERMOSTAT RESET BUTTON, L2
POUSOIR DE RÉARMEMENT THERMOSTAT DE SÉCURITÉ, L2

m BURNER RESET BUTTON / LAMP
TÉMOIN / POUSSOIR DE RÉARMEMENT BRÛLEUR

n ELECTRICAL PANEL BOX PANEL
PANNEAU BOÎTIER TABLEAU ÉLECTRIQUE

o ELECTRICAL PANEL
TABLEAU ÉLECTRIQUE

IMPORTANT

Before using the space heater, carefully read all of the instructions and follow them scrupulously. The manufacturer cannot be held responsible for damage to persons and/or property caused by improper use of the equipment. This instruction manual is an integral part of the equipment and must therefore be stored carefully and passed on with the unit in the event of a change of ownership.

1. DESCRIPTION

Space heaters described in this manual, are designed for use in medium to large-sized rooms and buildings where a fixed or mobile heating system is required.

The air required for combustion is sucked directly by the burner (6) installed on the heater, and can be supplied:

- from the outside by using the flexible connection tube (available as an accessory), which avoids consuming oxygen in the room to be heated, or
- from inside the room to be heated. In this case, the room must be well ventilated to guarantee sufficient exchange of air.

The flow of hot air is moved by the high-efficiency fan (4): air is heated by the thermal energy generated during the combustion and heat from the smoke is transmitted to the fresh air through the metal walls of the sealed combustion chamber and the heat exchanger. After the combustion products are cooled, they are conveyed to a discharge duct and eliminated through a chimney or flue large enough to guarantee their removal.

The space heaters can work with burners having ON-OFF work modes and fuelled by diesel #2 max.

Warning



Only burners approved by the manufacturer and listed in the "TECHNICAL SPECIFICATION TABLE" can be used. The heater's certification and warranty will lapse if the burner is replaced with a non-original model, even if it has similar specifications.

All of the space heaters are fit with an electronic device that controls the flame and with:

- safety devices (safety thermostat with manual reset, flame control, air pressure switch) that trip in case of serious malfunctions and cause a safety stop. In this case the heater stops, button (d) lights with a steady red light (Stop Light) and the heater can resume operation only after the cause of the stop has been identified and eliminated;
- control devices (temperature controller to control temperature of air outflow, complete with hour counter, fan thermostat, burner thermostat, voltage control) that trip in case of minor operating faults or supply faults, causing temporary stop of the space heater. In this case, the heater will restart automatically when the required condition is restored.

The section "TROUBLESHOOTING" describes all possible operating faults and their possible remedies.

2. CONDITIONS OF SUPPLY

The heater is delivered with parts to be assembled and set as described in chapter 4.

- Heater body
- Burner
- Air distribution connector
- Any required accessories (flue pipes, air distribution pipes, etc.)

Warning



Prior to installation, burner adjustment and ignition, the space heater should be assembled in full. All assembly operations should only be performed by professionally qualified personnel only.

The following are also supplied:

- use and maintenance manuals for
 - space heater
 - burner
- manuals with drawings and spare part lists:
 - space heater
 - burner

Warning



All documents provided constitute an integral part of the unit. The documents should therefore be looked after with care and supplied with the unit in the event of a change in ownership.

Parts are to be transported and moved using either a manual or automatic forklift truck with sufficient load capacity.

Warning



Never try to lift the heater manually. Doing so could cause serious physical injury.

3. GENERAL ADVICE

The space heater must be installed, adjusted, and used in conformity to national and local laws and regulations for its operation.

General guidelines:

- Follow the instructions in this booklet very carefully;
 - 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;
 - The heater is not installed in an area where there is a high risk of fire or explosions;
 - Minimum clearances from combustible material must be:
 - 1 m (3 feet) from side and rear (air inlet) of heater
 - 1 m(3 feet) on top of heater
 - 3 m (10 feet) on air outlet of heater.
 - Keep inflammable material at a safe distance from the heater (minimum 3 metres);
 - Check that there is no overheating of walls, ceilings or floors made of inflammable materials,
 - All precautions have been taken to prevent fires;
 - The room being heated must be sufficiently ventilated so that the heater has enough air to function properly;
 - The heater must be near a chimney or chimney flue and an electrical panel conforming to declared specifications;
 - Check the heater before switching it on and at regular intervals during its use;
 - After use, make sure the disconnecting switch is off.
- When using any type of space heater it is obligatory:
- not to exceed the maximum heat output level of the furnace ("TECHNICAL SPECIFICATION TABLE");
 - make sure that the air flow is not below the rated level; check that

there are no obstacles or obstructions to the air suction and/or delivery ducts, such as sheets or covers on the equipment, walls or large objects near the heater.

Warning



This unit may not be used by persons (including children) with reduced physical, sensorial or mental capacities or with limited experience and familiarity unless they are under supervision or instructed on how to use the unit by the person responsible for its safety.

4. INSTALLATION INSTRUCTIONS

Warning

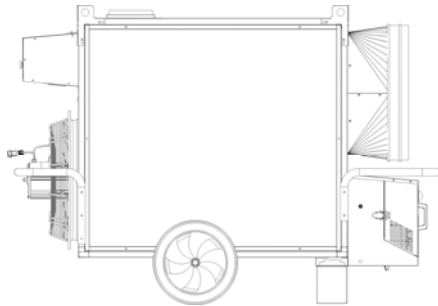


All of the operations described in this section must be performed by professionally qualified personnel only.

4.1. INSTALLATION ON FLOOR OR CEILING

The space heater may be installed:

- on the floor in a stable position

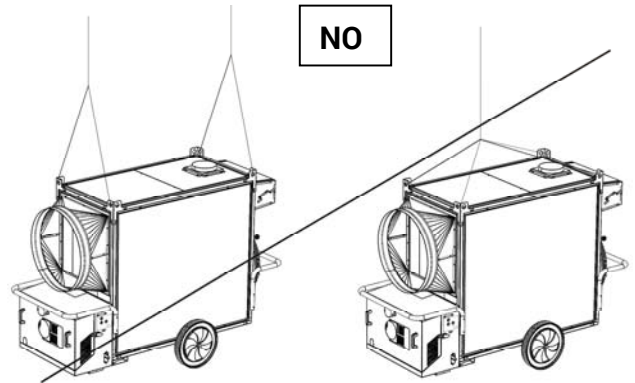
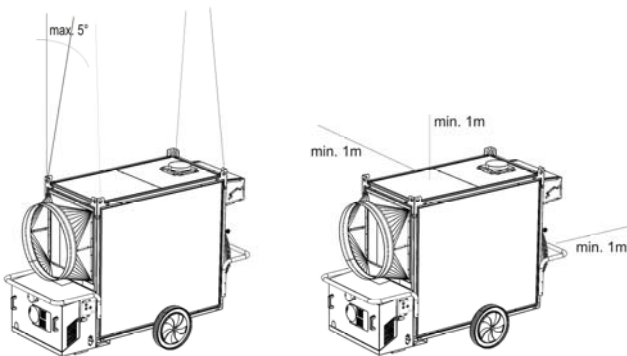


- or suspended by hooking it to the ceiling using cables and/or chains of an appropriate size and length secured to the four suspension points.

Warning



Make sure that the ropes and/or chains form an angle not more than 5° with vertical to the ceiling, that the ropes do not cross, and that a different rope is used for each hook.



The minimum distance from surrounding walls and/or ceiling must always be at least 1 metre.

4.2. POWER CONNECTIONS

Warning



The 120V unit is fitted with a proper power cord. The 220V equipment is fitted with a temporary power cable, used for the final control test at factory. The temporary power cord must be removed and replaced with a proper power cord whose type and dimension shall be in accordance with national rules.

Warning



The power line of the generator must feature an earthlead and a residual current circuit breaker. The supply cable must be connected to a switchboard with sectioning switch.

Warning



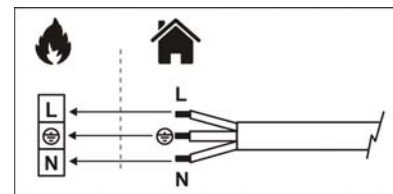
When installed, the appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, and/or the CSA C22.1, Canadian Electrical Code, if an external electrical source is utilized.

The electrical power cable must be connected in conformity to the polarity specified on the main terminal board of the electrical panel: phase (L) and neutral (N).

Warning



If polarities L and N are incorrect, the space heater may stop a few seconds after it is switched on for the first time.



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.

Any room thermostat or other accessories (such as a timer) are connected to the system by connecting the electrical cable to the thermostat plug (c):

- Take the plug (c) out of the electrical panel, open the plug and remove the jumper between terminals 2 and 3.
- Connect the thermostat electrical cable to terminals 2 and 3 of the thermostat plug (c).
- Close the plug again and plug it back into the panel.

Warning



Never attempt to switch the heater on or off by connecting the room thermostat (or other control devices) to the electrical power line.

The installation and connection of all the other accessories are described in the specific instructions included with each accessory, together with operating instructions.

The electrical diagram shown in this manual refers to the electrical connection only.

4.3. CONNECTION TO HOT AIR DELIVERY DUCTS

The space heater is set to operate with direct distribution of air. Nevertheless, it can be connected to appropriately sized air distribution channels, if required, with maximum diameter and length as shown in the "TECHNICAL SPECIFICATION TABLE."

Warning



Before starting the heater, check that the direction of rotation of the fan matches the direction shown on the fan itself.

The air distribution channels can be connected by using the various accessories supplied, placing the connector head-on to one or more outlets chosen as needed.

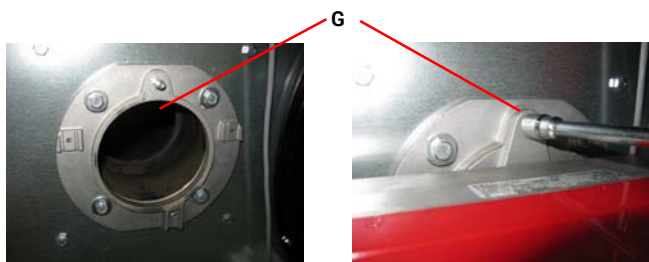
4.4. MOUNTING THE DIESEL BURNER

4.4.1. RIELLO BURNER

- Open the box containing the diesel burner;
- Consult the user manual of the burner; and fit the burner fixing screw onto the burner plate according to the instructions



- Secure the burner plate to the machine by using the 4xM8 screws and the D8 x D24 washers;



- Insert the burner and fix it to the plate by tightening the nut supplied onto the screw G;
- Locate the black cable with 7-pin Wieland plug running out of the

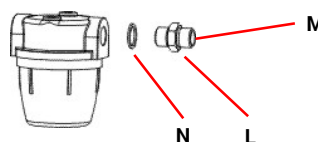
electrical panel and insert the plug into the socket H on the burner;



- Remove the burner cover and secure the two hoses to the fittings of the fuel pump already in place;
- The burner is not pre-adjusted by the manufacturer and must be set according to data reported in Table of Technical Characteristics of the user manual: follow the instructions in the manual to complete the connection of the machine to the gas supply system and for commissioning

4.4.2. DIESEL FILTER

- Take the diesel filter and nipple L. Place aluminium washer N between the connection and nipple L and screw the nipple fully down.

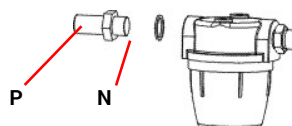


Warning



The threaded portion with internal conical chamfer M must protrude in order to allow seal tightening with the hose.

- Remove the through nipple and secure it to the diesel filter by inserting the shorter threaded part into the filter, taking care to place aluminium seal N between them.



- On the top left side of the burner box, secure the diesel filter unit and secure it to the metal panel by tightening with the 1/4" nut.
- On the bottom left side of the burner box, secure second through nipple and secure it to the metal panel by tightening with the 1/4" nut.



Warning



The threaded portion with internal conical chamfer M must protrude in order to allow seal tightening with the hose.

- Screw the flexible suction hose of the pump onto fitting M on the diesel filter unit.
- Screw the flexible supply pipe of the pump onto the second

through nipple.

- Close the burner cover;

4.5. CONNECTION TO FUEL SUPPLY

Warning



The heater must be installed, set up, and used in compliance with all applicable regulations.

Connection to the diesel supply pipe can be made by connecting the fuel tank to the burner pump:

- directly, i.e., by using the burner's diesel pump, in conformity to the dimensions and lengths specified in the burner instruction manual attached hereto.
- indirectly, i.e., by using an auxiliary return diesel pump. In this case, contact a Customer Service Centre to ensure correct sizing of the fuel system.

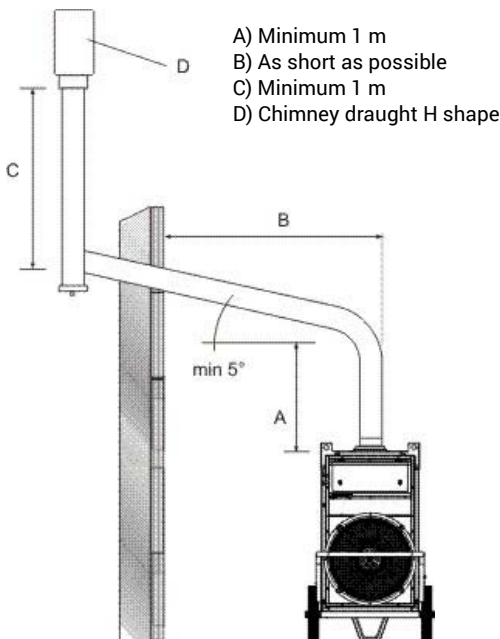
4.6. CONNECTION TO EXHAUST DUCT

Exhaust ducts must be in steel and conform to local/national rules. Efficient combustion and trouble-free working of the burner depend on efficient flue draft.

The unit must be connected to the chimney flue in compliance with current legal regulations and in line with the following guidelines:

- The path of the flue pipe smoke should be as short as possible and should slant upwards (minimum height 1 m);
- There should be no sharp curves in the pipes, and the diameter of the pipes must never be reduced;
- there must always be a wind deflector to prevent the entrance of rain and to prevent smoke from being blocked by the wind;
- flue draft must at least equal the level in the Technical Specifications.
- When the heater is connected to a flue pipe, the flue pipe shall terminate in a vertical section at least two feet long and sufficient draft shall be created to assure safe and proper operation of the heater;
- every heater must have its own chimney;

The following diagrams show possible flue positions:



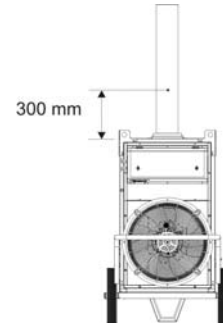
4.7. FIRST START-UP AND COMBUSTION ADJUSTMENT

Warning



The first start-up should always be carried out by a specialised technician checking the correctness of the combustion parameters.

The adjustment values (burner diesel pressure, combustion head position, air adjustment) for each of the burners approved for these units are indicated in the "TECHNICAL CHARACTERISTICS TABLE". The probe used to periodically check combustion and flue smoke temperatures is to be inserted as indicated:



Combustion is clean and stable when combustion values are as follows:

Bacharach index: 0 (white)
CO₂: 11 ÷ 12,5 %
Oxygen (O₂): 4,5 ÷ 6 %
CO_{max}: 500 ppm

You may have to change the burner settings due to the fuel used and/or installation conditions (high altitude, air suction pipe with or without Snorkel, etc.) if combustion parameters are not correct. When inspection tests are completed, the hole drilled for the probe must be sealed with a material that is resistant to high temperatures and that ensures the tube remains airtight.

5. OPERATING INSTRUCTIONS

5.1. START

To start the heater:

- Raise panel (n) on the electrical panel box;
- Make sure the switch (a) is set to "0";
- Supply electrical power to the space heater by pulling up the disconnecting switch on the electric power panel: the green lamp (b) will light up indicating that power is being supplied to the panel;
- Turn switch (a) to position H or H+V: the burner will begin the start-up and pre-wash cycle, after which the flame will ignite; after the combustion chamber has been heating for a few minutes, the main fan will start up;

Warning



The fan runs continuously in H+V mode, even when the desired room temperature has been reached, and the burner turns off.

Warning



In H mode, the fan only runs when the combustion chamber is sufficiently hot. Therefore, when the desired room temperature has been reached, the burner turns off and the fan keeps running only until the combustion chamber has cooled completely.

- If the heater does not work during the start cycle or work cycle, consult "TROUBLESHOOTING" to find the cause of the malfunction.

Warning



If the burner goes into safety stop (lamp m) push reset button (d) for 3 seconds to restart the heater.

Warning



If the safety thermostat goes into safety stop (lamp h), push reset button (i) for 3 seconds to restart the heater.

Warning



NEVER do more than two restarts in a row: unburned fuel can accumulate in the combustion chamber and suddenly flare up at the next restart.

5.2. STOP

Stop the heater by turning switch (a) to "0" position or, if the heater is in automatic mode, by setting the room thermostat to a lower temperature: the burner shuts off and lamp (f) goes out. The fan keeps working, starting and stopping several times until the combustion chamber has cooled completely.

Warning



Never stop the heater by simply turning off the disconnecting switch on the panel. The electrical supply must be disconnected ONLY when the fan has come to a complete stop.

5.3. VENTILATION

To run the heater only in continuous ventilation mode, turn switch (a) to the position with the symbol V.

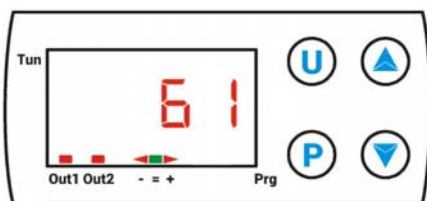
5.4. TEMPERATURE CONTROLLER

The heater is equipped with a temperature controller (g) with LCD screen, which displays and controls the following parameters:

- Display of air outflow temperature
- Display of hours of operation
- Control of trip temperature of fan thermostat
- Control of trip temperature of burner thermostat

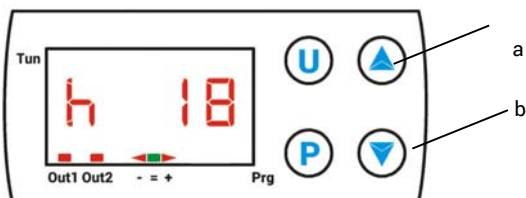
Display of air outflow temperature

The screen displays the measured temperature in [°C]:



Display of hours of operation

Press key (a) twice: the screen shows the operating time in hours [h]:



Warning

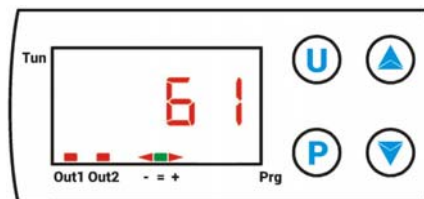


The time shown is not actual heating time, but connection time to the electrical power supply line.

Reset the counter as follows:

- Turn the heater's main switch to position "0" (OFF)
- Press button P on the temperature controller for at least 3 seconds: the word "PASS" will flash for 5 seconds
- Enter code "-481" by pressing key (b) several times until obtaining the number required; press key P to confirm and go to the next number
- Lastly, press key U: the display again shows the air outflow temperature

Control of trip temperature of fan thermostat



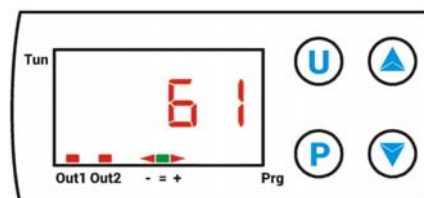
The temperature controller is programmed to start and stop the main fan automatically when the combustion chamber reaches the set temperature. This prevents cold air from blowing when the burner starts and the combustion chamber is not yet hot enough, and ensures that residual heat in the heater is dissipated when the burner stops.

The temperature is factory-set to 35°C, with hysteresis of 5°C.

Red LED "OUT 1" shows the operating state of the fan thermostat:

- LED ON: the fan is on
- LED OFF: the fan is off

Control of trip temperature of burner thermostat



The temperature controller is programmed to start and stop the burner automatically when the combustion chamber reaches the set over-temperature. This prevents excessive overheating of the combustion chamber and subsequent tripping of safety thermostat L2, which blocks operation of the heater (see chapter 7 for details on operating problems that cause tripping of safety thermostat L2).

The temperature is factory-set to 95 °C, with hysteresis of 5°C.

Red LED "OUT 2" shows the operating state of the burner thermostat, while the LED group "- = +" indicates the current temperature compared to the set temperature:

- if the red arrow at the symbol "-" is ON, it means that the temperature is below the set value and, therefore, the thermostat is ON, i.e., the burner is ON.
- if the green LED at the symbol "=1" is ON, it means that the temperature is at the set value.
- if the red arrow at the symbol "+" is ON, it means that the temperature is above the set value and, therefore, the thermostat is OFF, i.e., the burner is OFF.

Warning



The trip temperatures of the fan thermostat and burner thermostat should be changed only if absolutely necessary. Contact the manufacturer for information needed to reprogram the temperature controller.

6. MAINTENANCE

Warning



All of the operations described in this section must be performed by professionally qualified personnel only.

The following procedures must be done at regular intervals to ensure efficient operation of the heater. Make sure you have detached the electrical power line from the heater before starting any work.

Warning



Before doing any maintenance:

- Stop the heater as indicated in the "STOP" paragraph;
- Switch off the power supply by means of the cut-off on the electrical panel;
- Wait until the heater cools.

- Pipes, connectors and joints:
 - Clean with a cloth.
- External body:
 - Clean with a cloth.
- Air inlet/outlet:
 - Remove all dirt and debris
 - Make sure the air inlet is not obstructed.

6.3 Cleaning the motor and the fan

Clean the fan blades and the motor as follows:

- Remove the fan group fixing screws and then remove the fan group.
- Clean the motor with compressed air.
- Clean the fan blades with a hard brush.
- Reinstall the fan group.

6.4 CHECKING THE ELECTRICAL CONNECTIONS

After detaching the power cable, check all electrical connections as follows:

- Make sure that all connections are complete and tight.
- If there are traces of dirt or corrosion, clean or replace the connections if necessary.
- Replace any damaged wires or connectors if necessary.

6.5 CHECKING AND TESTING THE BURNER

To reach the burner:

- Remove the burner fixing screw.
- Remove the burner and follow the checking and cleaning instructions in the burner manual.
- Reinstall the burner.
- Run the procedures described in paragraphs 4.7 and 4.8 to measure combustion parameters and check that combustion is stable and clean.

6.6 CHECKING THE THERMOSTATS

Inspect the thermostats as follows:

- Remove any air outlet connection ducts
- Find the thermostats fixed to the internal panel of the space heater.
- Clean with a dry cloth, taking care not to cut or bend the capillary tube.

6.7 CLEANING THE INTERIOR OF THE HEATER

For thorough cleaning, the heater can be cleaned and washed inside and outside with water. It is however necessary to ensure that:

- the electrical cable is disconnected and unplugged from the socket
- completely close all access panels
- do not use water jets at a pressure exceeding 70 bar at a distance less than 30 cm
- completely dry all parts before reconnecting the electrical cable.

6.8 CLEANING THE COMBUSTION CHAMBER

To maintain the burner's high efficiency and prolong its life, the procedure described in this paragraph must be done at least once at the end of the work season or more frequently if there is an excessive build-up of soot. Excessive soot may be caused by poor chimney draught, poor fuel quality, poor regulation of the burner, or more or less frequent alternation of burner starts and stops. Pay attention during operation: pulsations at start may be due to excessive amounts of soot.

To access the heat exchanger (1), take off the rear panel (3), remove the smoke box inspection panel (2), and then remove baffle plates (7).

To access the combustion chamber (4) remove the burner (5). Clean with compressed air or, if necessary, with a metal brush to

Procedure	Periodic maintenance			
	Every day	Every week	Every six months	Every year
Check heater	X			
Check diesel supply line	X			
Clean exterior of heater	X			
Clean motor and fan		X		
Check electrical connections			X	
Check and test burner			X	
Check thermostats			X	
Clean interior of heater			X	
Inspect and clean chamber				X

6.1. CHECKING THE HEATER AND THE DIESEL SUPPLY LINE

Perform the following checks:

- Make sure the heater is not installed where there may be a risk of fire or explosion
- Make sure that flammable materials are kept a safe distance away
- If you find diesel leaks:
 - Close the diesel stopcock
 - Find and repair the source of the diesel leak
- Do not use the heater if any removed panels have not been remounted
- Make sure the room to be heated is sufficiently ventilated
- Make sure that the air intake and outlet are completely unobstructed
- Make sure that the heater is not covered by any sheets or covers
- Check that the heater is in a fixed and stable position;
- Make sure the heater is constantly monitored during operation and checked before being started; and checked before being started

6.2 CLEANING THE EXTERIOR OF THE HEATER

To ensure efficient operation, clean the following parts:

- Burner:
 - Remove all external dirt and debris
 - Make sure the air inlet is not obstructed.

remove any deposited soot and combustion residues.

Warning



After any technical work, always check that the heater works correctly.

7. TROUBLESHOOTING

In the event of serious anomalies, various safety devices are able to block the machine's operation and signal the same:

- on the electrical panel



the blocking signal following intervention by safety thermostat L2: the reset button is located inside the burner



box.

- on the burner










the blocking signal following intervention by the burner's flame control box.

Warning

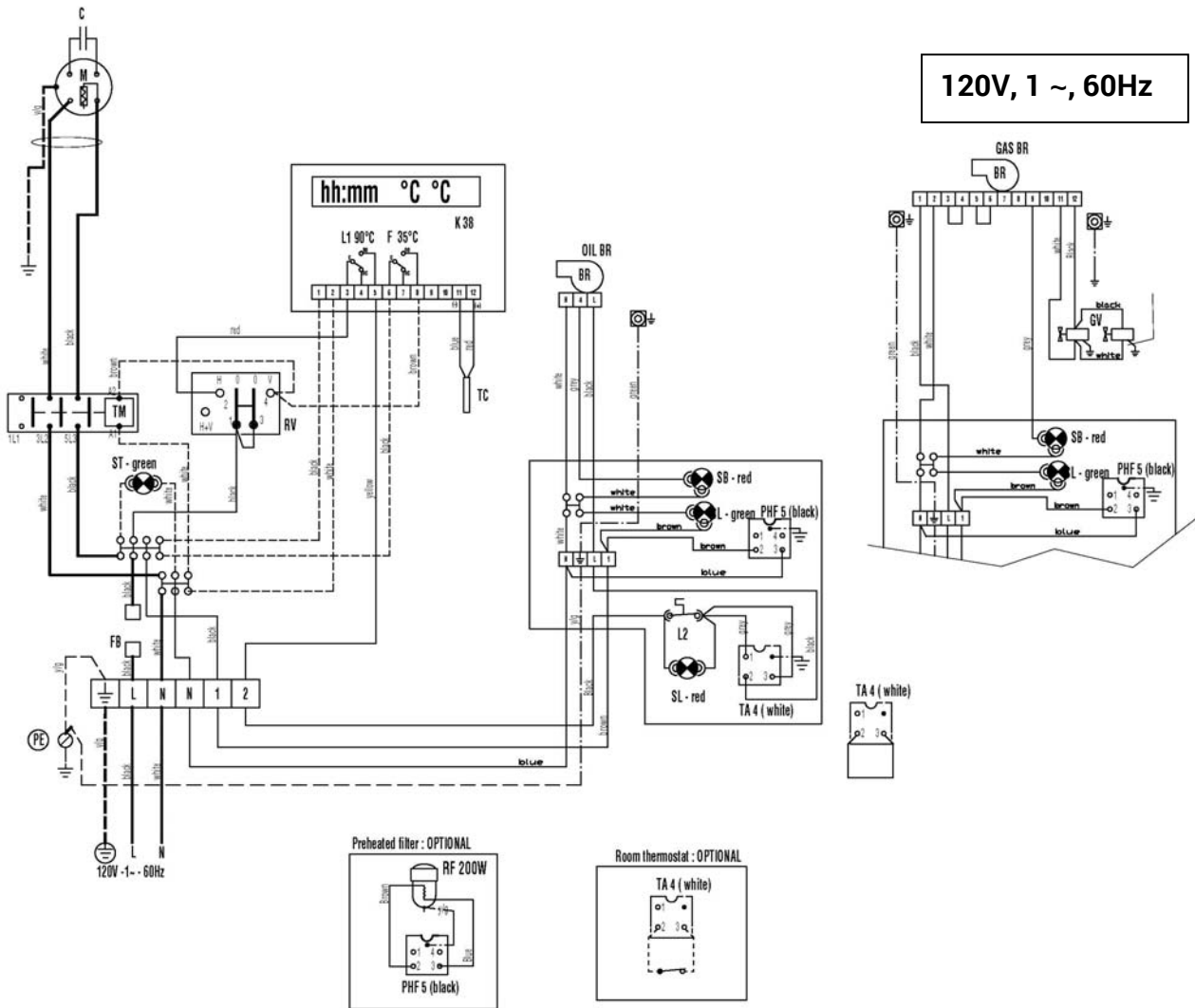


NEVER do more than two restarts in a row: unburned fuel can accumulate in the combustion chamber and suddenly flare up at the next restart.

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

FAULT	CAUSE	REMEDY
<ul style="list-style-type: none"> • The heater does not start:  lamp  is off	<ul style="list-style-type: none"> • No power supply 	<ul style="list-style-type: none"> • Check functioning and position of switch • Check the mains • Check power connections • Check fuse
<ul style="list-style-type: none"> • The heater does not start:  lamp  is on	<ul style="list-style-type: none"> • Switch (a) in wrong position • Incorrect functioning of the room thermostat 	<ul style="list-style-type: none"> • Select correct position • Check that thermostat connection plug is inserted • Check thermostat electrical connection • Check thermostat setting and correct it • Check functioning of thermostat
<ul style="list-style-type: none"> • The heater works erratically and the burner goes on and off alternately: 	<ul style="list-style-type: none"> • Insufficient or no fuel at burner 	<ul style="list-style-type: none"> • Check condition of pump-motor coupling • Check for air infiltrations in fuel circuit by checking air-tightness of pipes and filter seal • Clean nozzle or replace if necessary
	<ul style="list-style-type: none"> • Burner thermostat has tripped due to overheating 	<ul style="list-style-type: none"> • Check correct position of air distribution channels and opening of any flaps, openings, etc. • Remove any foreign bodies trapped in the air ducts or ventilation grilles
<ul style="list-style-type: none"> • The heater does not work:  the lamp  on the electrical panel is on	<ul style="list-style-type: none"> • Manual reset safety thermostat has tripped due to excessive overheating of combustion chamber 	<ul style="list-style-type: none"> • Check that the fan motor starts correctly and is not obstructed • Check that the fan motor is not burned out or that the motor condenser is not broke • Check burner calibration • Check the path and correct discharge of fumes
<ul style="list-style-type: none"> • The heater does not work:  the lamp on the burner is steady on	<ul style="list-style-type: none"> • Burner's safety equipment has tripped 	<ul style="list-style-type: none"> • Refer to the burner manual for diagnosis and causes
<ul style="list-style-type: none"> • Fan noise or vibrations 	<ul style="list-style-type: none"> • Foreign bodies on fan blades 	<ul style="list-style-type: none"> • Remove foreign bodies
	<ul style="list-style-type: none"> • Insufficient air circulation 	<ul style="list-style-type: none"> • Eliminate all possible obstacles to proper air flow
<ul style="list-style-type: none"> • Insufficient heating 	<ul style="list-style-type: none"> • Insufficient burner capacity 	<ul style="list-style-type: none"> • Contact Customer Service

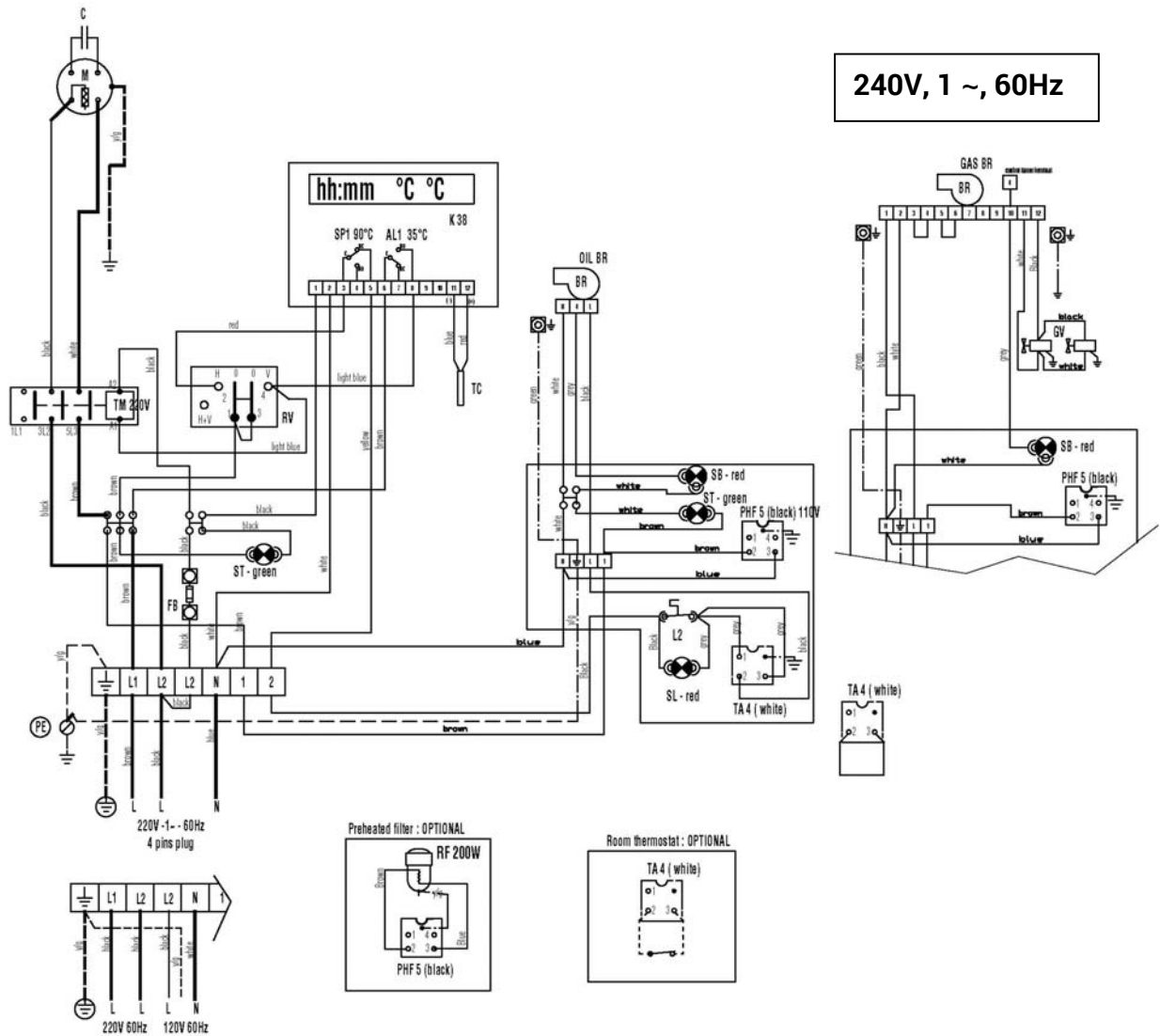
WIRING DIAGRAM - SCHEMA ELECTRIQUE



- M** FAN MOTOR
MOTEUR VENTILATEUR
- F** FAN THERMOSTAT (setting: 30°C)
THERMOSTAT VENTILATEUR (régulation: 30°C)
- FB** FUSE
FUSIBLE
- ST** POWER LAMP
LAMPE TEMOIN MISE SOUS TENSION
- L2** LIMIT THERMOSTAT WITH MANUAL RESTART
THERMOSTAT DE SECURITE A REARMEMENT MANUEL
- RV** HEATING-STOP-VENTILATION SWITCH
COMMUTATEUR CHAUFFAGE - ARRÊT - VENTILATION
- SL** OVERHEAT THERMOSTATS CONTROL LAMP
LAMPE TEMOIN SECURITE DE SURCHAUFFE
- L1** BURNER THERMOSTAT (setting: 90°C)
THERMOSTAT BRULEUR (régulation: 90°C)
- TA** ROOM THERMOSTAT PLUG
PRISE THERMOSTAT D'AMBIACE
- RE2** DELAYED IGNITION RELAY

- R** RELAIS DE RETARD ALLUMAGE
ANTI-CONDENSATION RESISTANCE
RÉSISTANCE ANTICONDENSATION
- TM** FANS TELE-CONTACTOR
TÉLERUPTEUR VENTILATEUR
- RM** FANS THERMAL RELAY
RELAIS THERMIQUE VENTILATEUR
- ST** POWER LAMP
LAMPE TEMOIN MISE SOUS TENSION
- SM** FAN STOP LAMP
TÉMOIN VENTILATEUR BLOQUÉ
- BR** BURNER
BRULEUR
- PB7** BURNER PLUG
PRISE BRULEUR
- RV** HEATING-STOP-VENTILATION SWITCH
COMMUTATEUR CHAUFFAGE - ARRÊT - VENTILATION

WIRING DIAGRAM - SCHEMA ELECTRIQUE



240V, 1 ~, 60Hz

- M** FAN MOTOR
MOTEUR VENTILATEUR
- F** FAN THERMOSTAT (setting: 30°C)
THERMOSTAT VENTILATEUR (régulation: 30°C)
- FB** FUSE
- ST** POWER LAMP
LAMPE TEMOIN MISE SOUS TENSION
- L2** LIMIT THERMOSTAT WITH MANUAL RESTART
THERMOSTAT DE SECURITE A REARMEMENT MANUEL
- RV** HEATING-STOP-VENTILATION SWITCH
COMMUTATEUR CHAUFFAGE - ARRÊT - VENTILATION
- SL** OVERHEAT THERMOSTATS CONTROL LAMP
LAMPE TEMOIN SECURITE DE SURCHAUFFE
- L1** BURNER THERMOSTAT (setting: 90°C)
THERMOSTAT BRULEUR (régulation: 90°C)
- TA** ROOM THERMOSTAT PLUG
PRISE THERMOSTAT D'AMBIACE
- RE2** DELAYED IGNITION RELAY

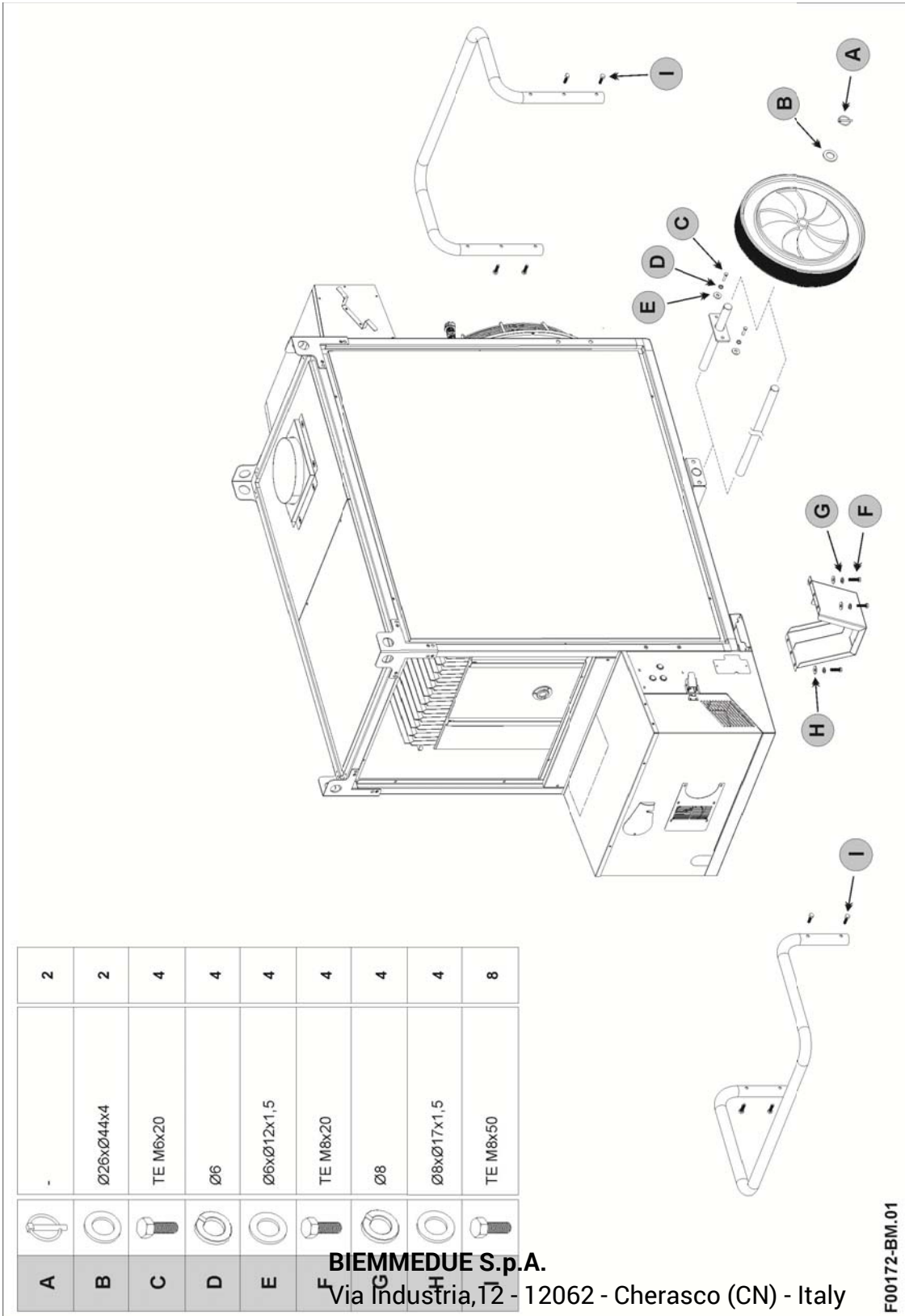
- R** RELAIS DE RETARD ALLUMAGE
ANTI-CONDENSATION RESISTANCE
RÉSISTANCE ANTICONDENSATION
- TM** FANS TELE-CONTACTOR
TÉLERUPTEUR VENTILATEUR
- RM** FANS THERMAL RELAY
RELAIS THERMIQUE VENTILATEUR
- ST** POWER LAMP
LAMPE TEMOIN MISE SOUS TENSION
- SM** FAN STOP LAMP
TÉMOIN VENTILATEUR BLOQUÉ
- BR** BURNER
BRULEUR
- PB7** BURNER PLUG
PRISE BRULEUR
- RV** HEATING-STOP-VENTILATION SWITCH
COMMUTATEUR CHAUFFAGE - ARRÊT - VENTILATION

TECHNICAL SPECIFICATIONS		JUMBO 400	
Nominal heat input	[BTU/h]	400,000	
Heat input	[BTU/h]	396,730	
Fuel consumption	[USgal/h]	2.83	
Burner Model		RIELLO R40-F10TC	
Burner Nozzle	[USgal/h]	Delavan 2.00 - 60° B	
Combustion head setting	[N°]	5	
Pump pressure	[psi]	174	
Burner air setting	[N°]	5.0	
Air flow	[cfm]	5,297	
Fan Thermostat Setting	[°F]	95	
Burner Thermostat Setting	[°F]	194	
Power supply	Phase		1
	Voltage	[V]	120
	Frequency	[Hz]	60
Electric consumption		[W]	950
		[A]	8.2
Flue diameter	[in]	5.91	
Compulsory flue draft	[in]	0.05	
Maximum air temperature	[°F]	250	
Air distribution duct	Max Static pressure	[in]	0,48
	Max length 1 way - dia 20"	[ft]	60
	Max length 2 ways - dia 16"	[ft]	36
Inlet flexible duct	Max length 1 way - dia 26"	[ft]	12
Noise level at 1 m	[dBA]	68	
Dimensions, L x W x H	[in]	73.43 x 30.63 x 47.72	
Weight	[lb]	440.9	

TECHNICAL SPECIFICATIONS		JUMBO 600	
Nominal heat input	[BTU/h]	600,000	
Heat input	[BTU/h]	593,367	
Fuel consumption	[USgal/h]	4.23	
Burner Model		RIELLO R40-F15TC	
Burner Nozzle	[USgal/h]	Danfoss 3.00 - 60° S	
Combustion head setting	[N°]	4	
Pump pressure	[psi]	174	
Burner air setting	[N°]	3.7	
Air flow	[cfm]	7,063	
Fan Thermostat Setting	[°F]	95	
Burner Thermostat Setting	[°F]	194	
Power supply	Phase		1
	Voltage	[V]	120
	Frequency	[Hz]	60
Electric consumption		[W]	1,350
		[A]	12.0
Flue diameter	[in]	7.87	
Compulsory flue draft	[in]	0.05	
Maximum air temperature	[°F]	250	
Air distribution duct	Max Static pressure	[in]	0,60
	Max length 1 way - dia 28"/26"	[ft]	60
	Max length 2 ways - dia 20"	[ft]	36
	Max length 4 way - dia 14"	[ft]	30
Inlet flexible duct	Max length 1 way - dia 28"	[ft]	12
Noise level at 1 m	[dBA]	68	
Dimensions, L x W x H	[in]	83.66 x 36.22 x 55.65	
Weight	[lb]	595.2	

TECHNICAL SPECIFICATIONS		JUMBO 800	
Nominal heat input		[BTU/h]	800,000
Heat input		[BTU/h]	784,030
Fuel consumption		[USgal/h]	5.59
Burner Model			RIELLO R40-F20TC
Burner Nozzle		[USgal/h]	Danfoss 4.50 - 60° S
Combustion head setting		[N°]	5
Pump pressure	I Stage	[psi]	116
	II Stage	[psi]	174
Burner air setting	I Stage	[N°]	3,5
	II Stage	[N°]	5,0
Air flow		[cfm]	10,005.8
Fan Thermostat Setting		[°F]	95
Burner Thermostat Setting		[°F]	194
Power supply	Phase		1
	Voltage	[V]	240
	Frequency	[Hz]	60
Electric consumption		[W]	3,300
		[A]	15.5
Flue diameter		[in]	7.87
Compulsory flue draft		[in]	0.05
Maximum air temperature		[°F]	250
Air distribution duct	Max Static pressure	[in]	0,80
	Max length 1 way - dia 28"/26"	[ft]	90
	Max length 2 ways - dia 24"	[ft]	45
	Max length 4 way - dia 18"	[ft]	45
	Max length 5 way - dia 14"		36
Inlet flexible duct	Max length 1 way - dia 28,8"	[ft]	18
Noise level at 1 m		[dBA]	71
Dimensions, L x W x H		[in]	91.93 x 38.98 x 62.34
Weight		[lb]	773.8

NOTICE DE MONTAGE DU PIED/DE LA POIGNEE - FOOT / HANDLE ASSEMBLY INSTRUCTION



A		-	2
B		Ø26xØ44x4	2
C		TE M6x20	4
D		Ø6	4
E		Ø6xØ12x1,5	4
F		TE M8x20	4
G		Ø8	4
H		Ø8xØ17x1,5	4
I		TE M8x50	8

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