

***FIREBALL***  
***SPACE HEATERS***

Ed. 06/08

CARATTERISTICHE TECNICHE - CARACTERISTIQUES TECHNIQUES TECHNISCHEN DATEN - TECHNICAL SPECIFICATIONS CARACTERÍSTICAS TÉCNICAS - ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ		FIREBALL 1280S	FIREBALL 1645S
Combustione - Combustion Verbrennung - Combustion Combustión - Сгорание		Diretta, Directe, Direkt Direct, Directa, Прямое	
Potenza termica max - Puissance thermique max Wärmeleistung max - Max heating output Potencia térmica máx - Макс. тепловая мощность	Hi [kW]	36,0	46,0
Portata d'aria - Débit d'air Nenn-Luftleistung - Air output Capacidad aire - Производительность воздуха	[m³/h]	450	1.400
Consumo combustibile - Consommation Brennstoffverbr - Fuel consumption Consumo combustible - Расход топлива	[kg/h]	3,04	3,88
Alimentazione elettrica - Alimentation électrique Netzanschluss - Power supply Alimentación eléctrica - Электрическое питание	Fase - Phase Phase - Phase Fase - Фазы	1	1
	Tensione - Tension Spannung - Voltage Tension - Напряжение	[V] 230	230
	Frequenza - Fréquence Frequenz - Frequency Frecuencia - Частота	[Hz] 50	50
Potenza elettrica - Puissance électrique Leistungsaufnahme - Power consumption Potencia eléctrica - Электрическая мощность	[W]	290	430
Ugello - Gicleur Düse - Nozzle Boquilla - Форсунка	[USgal/h]	0,60-80° S	1,00-80° S
Pressione pompa - Pression pompe Pumpendruck - Pump pressure Presion bomba - Давление насоса	[bar]	14,50	10,00
Diametro uscita fumi - Diamètre sortie fumées Abgasrohr Durchmesser - Flue diameter Diametro salida humos - Диаметр выхода продуктов сгорания	[mm]	---	---
Capacità serbatoio - Capacité réservoir Tankinhalt - Tank capacity Capacidad depósito - Емкость бака	[l]	42	
Livello sonoro a 1 m - Niveau sonore à 1 m Geraüschspegel a 1 m - Noise level at 1 m Nivel sonoro a 1 m - Уровень шума на расстоянии 1 м	[dBA]	76,5	736,8
Dimensioni, L x P x A - Dimensions, L x P x H Masse, H x B x T - Dimensions, L x W x H Dimensiones, L x W x H - Размеры, Д x Г x В	[mm]	1075 x 440 x 615	1075 x 440 x 630
Peso - Poids Gewicht - Weight Peso - Вес	[kg]	25	39
Fusibile, Fusible Sicherung, Fuse Fusible - Предохранитель	[A]	6	

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## IMPORTANT

**Before using the heater, read and understand all instructions and follow them carefully. The manufacturer is not responsible for damages to goods or persons due to improper use of units.**

### GENERAL RECOMMENDATIONS

The hot air generators run on diesel fuel. Those with direct combustion send hot air and the combustion products into the room, while those with indirect combustion are fitted with a flue to take the fumes away through the chimney.

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 vapours or high dust content;
- Never use heater in immediate proximity of flammable materials (the minimum distance must be 2 m);
- Make sure fire fighting equipment is readily available;
- 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;
- the generator is installed near a chimney to take away the fumes (see the paragraph "FUMES FLUE POSITIONING DIAGRAM") and connected to an electrical switchboard;
- 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 generator can only work automatically when a control device, such as for example a thermostat or a timer, is connected to the generator. Connection to the generator is made by removing the socket cover (4) 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 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, CAUSES AND REMEDIES".

### STOPPING THE HEATER

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

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

### 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 (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.

### TRANSPORT

#### Warning



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

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.

The hot air generators 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.**

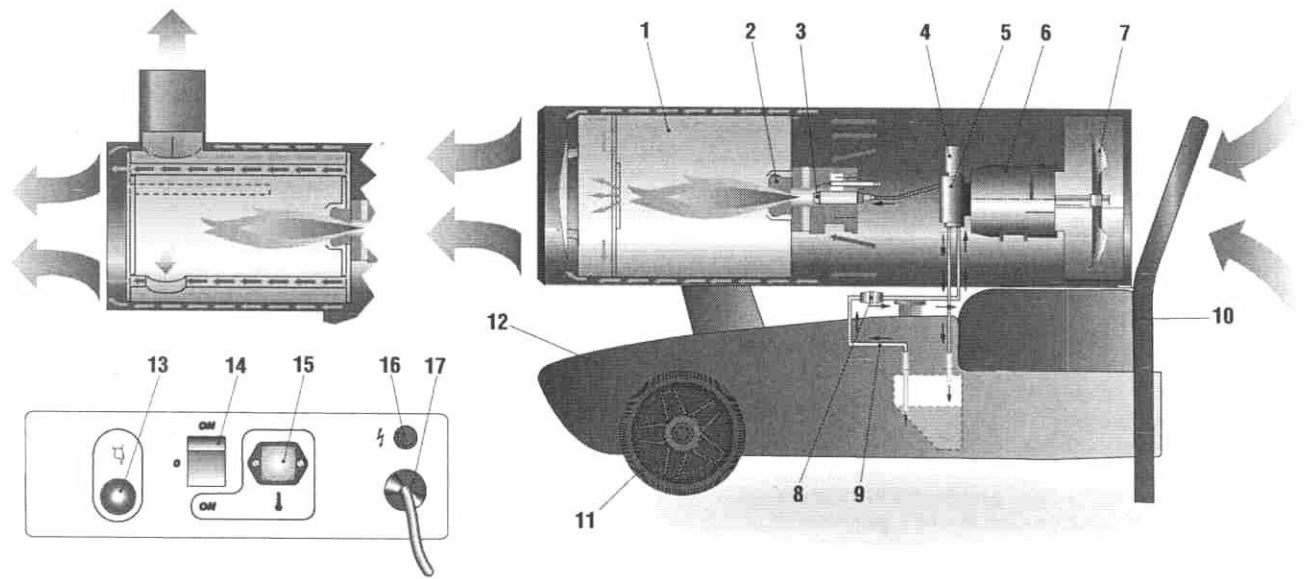
Every 50 hours of operation: disassemble filter and wash with clean oil, remove upper body parts and clean inside and ventilator with compressed air, check correct attachment of H.T. connectors to the electrodes and check H.T. cables, remove burner assembly, clean and check electrode settings, adjust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

## OBSERVED FAULTS, CAUSES AND REMEDIES

OBSERVED FAULT	CAUSE	REMEDY
• Motor does not start, no ignition	• No electrical current	• Check mains (should be 230 V – 1~ – 50 Hz)
		• Check proper positioning and functioning of switch
		• Check fuse
	• Wrong setting of room thermostat or other control	• 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 bearings
• Motor starts, no ignition or cuts out	• Electric ignitor defective	• Check connection of H.T. leads to electrodes and transformer
		• Check electrodes setting (see scheme "REGULATION OF ELECTRODES")
		• 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 all 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
• Check thermostat LI		
• Clean or replace solenoid		
• Motor starts, heater emits smoke	• Not enough combustion air	• Make sure air inlet and outlet are free
		• Check setting of combustion air flap
		• Clean burner disc
	• Too much combustion air	• Check setting of combustion air flap
	• Fuel contaminated or contains water	• Drain fuel in tank with clean fuel
		• Clean oil filter
	• Air leaks in fuel circuit	• Check the seals on the ducts and the diesel filter
	• 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

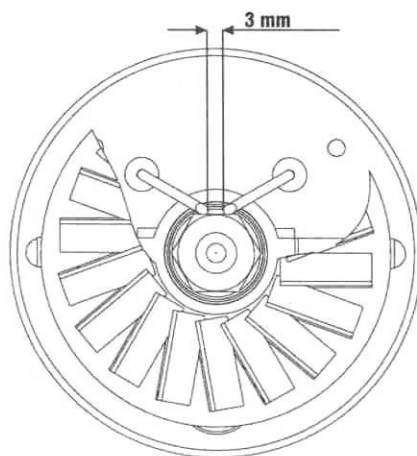
If heater still not working properly, please revert to nearest authorized dealer.

# CONTROL BOARD



- |                      |                   |                                   |
|----------------------|-------------------|-----------------------------------|
| 1 COMBUSTION CHAMBER | 7 FAN             | 13 RESET BUTTON WITH CONTROL LAMP |
| 2 BURNER             | 8 FUEL FILTER     | 14 MAIN SWITCH                    |
| 3 NOZZLE             | 9 FUEL CIRCUIT    | 15 ROOM THERMOSTAT PLUG           |
| 4 SOLENOID VALVE     | 10 SUPPORT/HANDLE | 16 CONTROL LAMP                   |
| 5 DIESEL PUMP        | 11 WHEEL          | 17 POWER CORD                     |
| 6 MOTOR              | 12 FUEL TANK      |                                   |

# DIAGRAM ELECTRODES





DECLARATION OF CONFORMITY  
CE - KONFORMITÄTSEKLRÄRUNG  
DECLARACION CE DE CONFORMIDAD  
CE - ÖVERENSSTEMMELSESTEST  
CE - VAATIMUSTENMUKAISUUDEN VAHVISTUS  
Αηλοση ομοιοτητα CE

DECLARATION OF CONFORMITY  
CE DECLARATION OF CONFORMITY  
DECLARAÇÃO CE DE CONFORMIDADE  
CE - ÖVERENSSTÄMNINGSINTYG  
VERKLARING VAN CONFORMITEIT CE



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La sottoscritta - La société - Der/die Unterzeichnende - We - La suscrita - A abaixo assinada  
Firmaet - Undertecknad firma - Yritys - Ondergetekende - Ηυπογεγραμμενη

Dichiara sotto la propria responsabilità che la macchina nuova:  
Déclare sous la propre responsabilité que la nouvelle machine:  
Erklärt unter eigener Verantwortung, daß die neue Maschine:  
Declare under our sole responsibility that the new machine:  
Declara sobre la propia responsabilidad que la máquina nueva:  
Declara sob a própria responsabilidade que a máquina nova:

Attester herved på eget ansvar, at den nye maskine:  
Intygat på eget ansvar, att den nya maskinen:  
Vahvistaa täten omavastuisesti, että sen toimittama ja oheisissa käyttöohjeissa  
tarkemmin esittelemä uusi kone:  
Verklaart onder eigen verantwoordelijkheid dat de nieuwe machine:  
δηλωνη κατω απο τη δικια της ευθυνη οτι η καινουργα μηχανη:

Modello - Modèle - Modell - Make - Modelo - Modelo  
Model - Modell - Malli - Model - πρωτοτυπο

Tipo - Type - Typ - Type - Tipo - Tipo  
Type - Typ - Τυππι - Type - εισος

Matricola - Numéro de matricule - Registriernummer - Serial no.  
Matricula - Matrícula - Seriennummer - Seriennummer  
Valmistusnumero - Registratienummer - Μητρωο

Anno di costruzione - Année de production - Baujahr - Year of constr.  
Año de construcción - Ano de construção - Fremstillingsår - Tillverkningsår  
Valmistusvuosi - Bouwjaar - Χρονος κατασκευης

è conforme ai requisiti essenziali di sicurezza indicati dalla **Direttiva Macchine 89/392** comprese le varianti introdotte con le **Direttive 91/368, 93/44, 93/68 e 98/37** e dalle **Direttive 89/336, 92/31, 73/23**.

est conforme aux exigences essentielles de sécurité reprises dans la **Directive Machines 89/392** y compris les modifications introduites par les **Directives 91/368, 93/44, 93/68 et 98/37** et les **Directives 89/336, 92/31, 73/23**.

auf die sich diese Erklärung bezieht, die Anforderungen des **Maschinengesetztes 89/392** mit **Änderungen 91/368, 93/44, 93/68 und 98/37** entsprechen und der **Richtlinie 89/336, 92/31** und der **Richtlinie 73/23** entsprechen.

to which this declaration relates, conforms to the provision of **Machinery Directive 89/392** and its **Modifications 91/368, 93/44, 93/68 and 98/37** and the **Directives 89/336, 92/31, 73/23**.

es conforme con la **Directiva Maquinas 89/392** y sucesivas **Modificaciones 91/368, 93/44, 93/68 y 98/37**, y la **Directiva 89/336, 92/31, 73/23**.

està conforme a **Directiva Máquina 89/392** e **Alterações posteriores 91/368, 93/44, 93/68 e 98/37**, e la **Directiva 89/336, 92/31, 73/23**.

er i overensstemmelse med gældende lov, der har indført **Maskindirektivet nr. 89/392** med ændringer **91/368, 93/44, 93/68, 98/37** **Direktivet 89/336, 92/31, 73/23**.

överensstämmer med de lagar, som antagit **Maskindirektivet nr. 89/392** med ändringar **91/368, 93/44, 93/68, 98/37, Direktivet 89/336, 92/31, 73/23**.

EU: n koneita koskevan **Direktiivin nro 89/392** ja sen muutokset vahvistaanutta lakia **91/368, 93/44, 93/68, 98/37, Direktiivin nro 89/336, 92/31, 73/23**.

conform de wettelijke beschikkingen is, die de richtlijnen **Betreffende de Machines 89/392** en de daaropvolgende amendementen omzetten **91/368, 93/44, 93/68, 98/37, Betreffende 89/336, 92/31, 73/23**.

περιγραμμενη στις συνημμενες οδηγιες χηησεως ειναι συμφωνη με τις νομικες διαταξεις που αναφερονται στη **Διευθυνση Μηχανων 89/392** και στις επομενες τροπολογιες **91/368, 93/44, 93/68, 98/37**, και **Διευθυνση 89/336, 92/31, 73/23**.

Paul Ippaso