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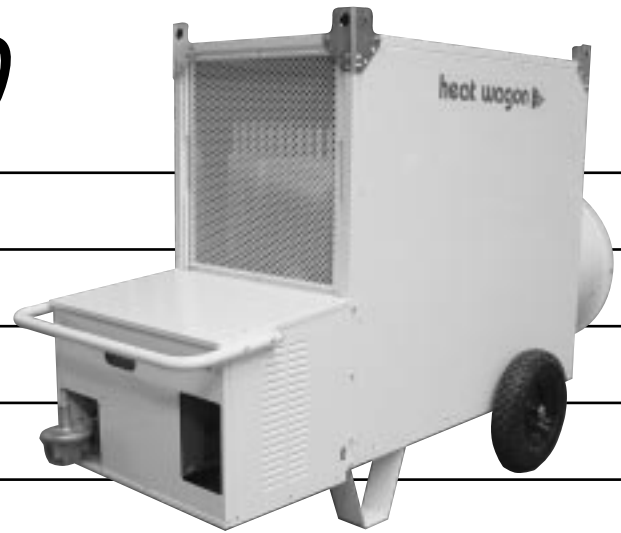
Installation and Maintenance Manual

Please retain this manual for future reference.

VF/VG700

Jumbo

Construction Heater



CAUTION: Do not use this heater in a space where gasoline or other liquids having flammable vapors are stored.

CONSTRUCTION HEATER GENERAL HAZARD WARNING:

Failure to comply with the precautions and instructions provided with this heater, can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, carbon monoxide poisoning, and/or electrical shock.

Only persons who can understand and follow the instructions should use or service this heater.

If you need assistance or heater information such as an instruction manual, labels, etc., contact your local Heat Wagon dealer or the manufacturer.

W A R N I N G

Fire, burn, inhalation, and explosion hazard. Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the heater as recommended by the instructions. Never use the heater in spaces which do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.

Not for home or recreational vehicle use!

WARRANTY

All new Heat Wagon and Sure Flame heaters and fans are guaranteed against defective materials and workmanship for one (1) year from invoice date.

Warranty repairs may be made only by an authorized, trained and certified Heat Wagon dealer. Warranty repairs by other entities will not be considered. Warranty claims must include model number and serial number.

LIMITATIONS

Warranty claims for service parts (wear parts) such as spark plugs, igniters, flame rods will not be allowed. Diagnostic parts such as voltage meters and pressure gauges are not warrantable.

Evidence of improper fuel usage, fuel pressures outside of manufacturer's specification, poor fuel quality, and improper electric power, misapplication or evidence of abuse may be cause for rejection of warranty claims.

Travel time, mileage and shipping charges will not be allowed. Minor adjustments of heaters are dealers' responsibility. Defective parts must be tagged and held for possible return to the factory for 60 days from date of repair. The factory will provide a return goods authorization, (RGA) for defective parts to be returned.

No warranty will be allowed for parts not purchased from Heat Wagon.

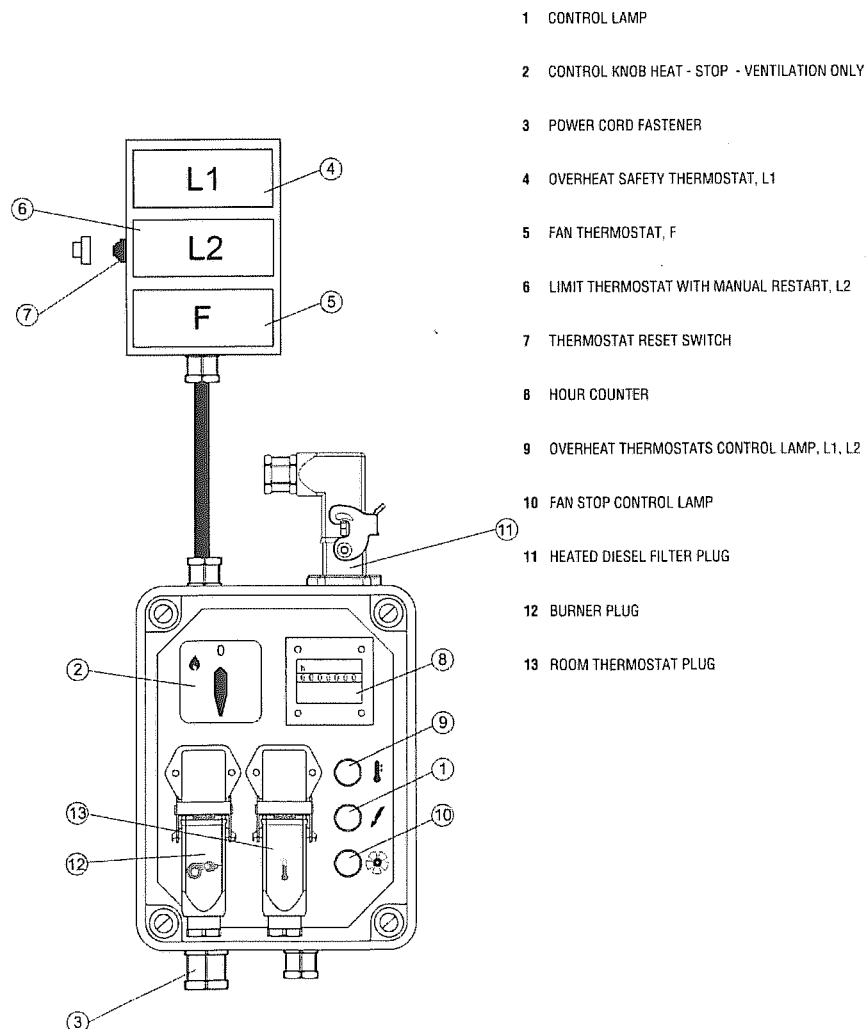


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| TECHNICAL SPECIFICATIONS | | | VF/VG700 JUMBO 700 |
|--|-----------|------|-----------------------------|
| Heat input | [kBTU/h] | | 700 |
| Air flow | [cfm] | | 7.420 |
| Heat output | [kBTU/h] | | 595 |
| Oil N°2 Max fuel consumption | [GPH] | | 5.17 |
| Natural gas fuel consumption | [CFH] | | 684,9 |
| Propane fuel consumption | [CFH] | | 274,7 |
| Power supply | Phase | | 1 |
| | Voltage | [V] | 240 |
| | Frequency | [Hz] | 60 |
| Electric consumption | | [kW] | 2.120 |
| | | [A] | 7,0 |
| Diesel burner model | | | Riello 40 F15 |
| Nozzle | [USgal/h] | | 3,50 GPH 60° B |
| Gas burner model (natural gas or propane) | | | Riello 40 G750 |
| Gas supply pressure: natural gas | | | min 7" w.c. max 14" w.c. |
| Gas supply pressure: propane | | | min 8" w.c. max 14" w.c. |
| Static pressure | [in WC] | | 0,4 |
| Flue diameter | [in] | | 7,9 |
| Compulsory flue draft | [in WC] | | 0,05 |
| Maximum air temperature | *F | | 250,0 |
| JUMBO Dimensions, L x W x H | [in] | | 85x35x53 |
| Weight | [lb] | | 550 |
| Manifold Pressure | | | 2.8"W.C. |

3.7 Orifice
2.0 Orifice

CONTROL BOARD - TABLEAU DE COMMANDE



DESCRIPTION

JUMBO space heaters have been designed for use in small to medium-sized rooms and buildings where a fixed or mobile heating system is required.

Heat is produced by combustion and the heat from the smoke is transmitted to the fresh air through the metal walls of the combustion chamber and the heat exchanger. The combustion chamber is of the type where smoke circulates twice.

The air and smoke pass through separated ducts, both of which are welded and sealed. When, after combustion, the waste gases have cooled, they are expelled through a duct which must be connected to a chimney or chimney flue. The chimney or chimney flue must be big enough to guarantee that the smoke is expelled efficiently.

The air which is used in combustion is aspirated directly from the room or building which is being heated. It is therefore of utmost importance that the room or building be properly ventilated so that enough fresh air is circulating at all times.

The air outlet can be replaced by outlet panels with two or four openings, all of which must be kept open.

Jumbo heaters can operate with burners that are fuelled by diesel oil #2 max., natural gas or propane.

Warning



Only the burners which are chosen and supplied by the manufacturer can be used. If another type of burner is used the heater no longer complies with CSA / UL regulations.

Applied burners are listed in the final "TECHNICAL CHARACTERISTICS" sheet

There are three safety devices which are activated in case of serious malfunction. The Burner Control Device, which is mounted on the burner and has a restart button, automatically stops the burner if the flame goes out. The Overheat Thermostat, L2, of the manual restart type, is activated if the temperature of the combustion chamber rises above the set maximum limit; the warning light (9) lights up and the heater stops working. The Thermal Relay, RM, is activated if the fan motor starts to use more electrical current than the maximum permitted limit; the warning light (10) lights up and the heater stops working.

If any of these safety devices are activated you should check carefully what the problem actually is before pressing the restart button and starting the heater off again ("OBSERVED FAULTS, CAUSES AND REMEDIES").

Overheat safety thermostat, L1, shuts down the heater if air flow is not sufficient to cool off combustion chamber: the heater will restart automatically as soon as the heater has cooled down enough (The lamp (9) lights up and then it cuts down).

GENERAL ADVICES

The heater is designed and approved for use as a construction heater in accordance with Standard ANSI Z83.7 - CGA 2.14.

Intended use is the temporary heating of buildings or structures under construction, alteration or repair.

Warning



CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE QUESTIONS ABOUT APPLICATIONS.

Here are a few general guidelines which should be followed:

- Follow the instructions in this booklet very carefully.
- Don't install the heater in places where there may be a risk of fire or explosion.
- Inflammable material should be kept at a safe distance from the heater (Minimum 6 feet).
- All fire prevention regulations must be adhered to.
- The room or building which is 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 a suitable electric switchboard.

- Don't let animals or children near the heater.
 - Make sure heater is inspected before each use, and at least annually by a qualified service person.
 - After use make sure the disconnecting switch is off.
- When using any type of space heater it is obligatory:
- not to exceed the maximum level of heat output of the furnace ("TECHNICAL SPECIFICATION TABLE");
 - to make sure that there is adequate air circulation and air supply to the heater and that nothing is obstructing the aspiration and expulsion of air; movement of air may be obstructed in various ways including placing covers or other objects on the heater or positioning the heater too near a wall or other large object. If the airflow is not adequate, the combustion chamber will overheat and the overheat safety thermostat L1 will turn the burner off and on continuously ("OBSERVED FAULTS, CAUSES AND REMEDIES").

INSTALLATION

Warning

The following operations must be carried out by qualified personnel only.

Electrical CONNECTIONS AND SETTINGS



The space heater is supplied along with the safety and control which are indispensable to the correct functioning of the unit. The electric switchboard, burner, the fan thermostat, overheat safety thermostat and the overheat thermostat with manual restart have already been connected.

Warning

Power supply cord of proper dimension shall be connected to the main switchboard and heater shall be grounded.



Electrical grounding shall be in compliance with the National Electrical Code ANSI/NFPA 70 or the CSA C22.1 Canadian Electrical Code, Part I.

The following operations must now be carried out:

- Plug in the power cord having read the adhesive label which details electricity supply characteristics.
- The burner must be connected to the fuel supply (Burner Instruction Manual).
- Connect the burner to the electricity supply with the burner plug.
- Connect accessories such as the room thermostat or clock to the unit's electric switchboard with the thermostat plug.

Having completed all these operations check carefully that all electrical connections correspond to the wiring diagram. When the heater is first turned on you must check that the fan does not use more current than the maximum permitted limit.

Finally, to regulate the burner follow the instructions in the Burner Instruction Manual.

CONNECTION TO HOT AIR DUCTS

The space heater provides heat by releasing and dispersing hot air. An air head is supplied with each unit but it can be replaced by other types of head with two or four openings which allow for flexible tubes in heat distribution. The screws which hold the original outlet in place should be removed and the new outlet should be screwed on in place of the old.

The new head may be connected to new air ducts if the user wishes to satisfy specific needs. In this case and in particular if the diameter and length of the ducts have been changed or if the number of bends has been modified, air output may vary. Consequently it is very important to check and regulate air output when any modification is made to air heads or air ducts. In all circumstances you must ensure

that:

- The fan motor does not absorb more current than the maximum permitted limit;
- The volume of air flow corresponds to the recommended level.

If the heater is equipped with centrifugal fan and if the volume of hot air differs from preset values proceed as follows (Fig. 1):

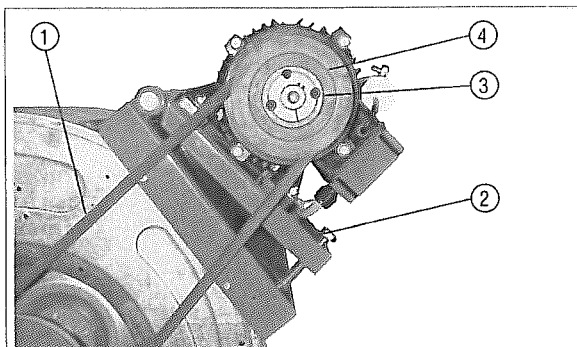


Fig. 1

- 1) Remove the aspiration grill which is on fan motor side of the unit.
- 2) Remove the screws (2) from the motor slide.
- 3) Remove the belt (1).
- 4) Loosen the bolts (3).
- 5) Turn the pulley clockwise and anti-clockwise in order to increase or reduce the volume of air.
- 6) Tighten the bolts (3).
- 7) Put back the aspirations grill
- 8) Repeat operations from (1) to (7) until the correct volume of air flow has been achieved.

DRAFT

The evacuation smoke flues shall be made with steel.

Efficient combustion and trouble-free working of the burner depend on efficient flue draft. The unit must be connected to the chimney flue in accordance with current legal regulations and in line with the following guidelines:

- The tube which carries the smoke should cover as short a distance as possible and should slant upwards.
- There should be no sharp bends in the tubes and the diameter of the tubes must never be reduced.
- Every heater must have its own chimney.
- Flue draft must at least correspond to the minimum compulsory level in the Technical Specifications.

ANALYSIS OF COMBUSTION WASTE PRODUCTS

The probes which check the composition of combustion waste products and smoke temperature must be positioned as indicated in Fig. 2.

When these tests have been completed the hole which was drilled for the probe must be sealed with a material which is resistant to high temperatures and which ensures that the tube remains airtight.

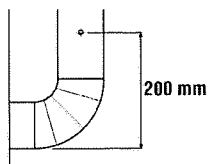


Fig. 2

CONNECTION TO FUEL SUPPLY

To connect the burner to the fuel supply follow the instructions in the Burner Instruction Manual.

The gas burner can use both natural gas or propane. Burners are predisposed at factory to be used with propane. If natural gas shall be

used, burners shall be adapted according to the instruction manual of the burner.

In case of connection of heater to natural gas, the installation shall conform with local codes, or, in the absence of local code, with the National Fuel Gas Code ANSI Z223.1/NFPA and the Natural Gas and Propane Installation Code, CSA B149.1.

In case of connection of heater to propane supply cylinder, the installation shall conform with local codes or, in the absence of local code, with the Standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/FNPA 548 and the Natural Gas and Propane Installation Code, CSA B149.1.

Heater must be located at least 6 ft in the U.S. or 10 ft in Canada from any propane gas container.

Propane gas cylinder shall be in compliance with national standards and shall be arranged to provide for vapor withdrawal from the operating cylinder.

The gas shall be turned off at the propane supply cylinder when the heater is not in use.

Visually inspect hose assembly prior to each use of the heater. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation.

After installation, proper instruments or devices shall be used to check and avoid any gas leakage. Gas leakage testing shall be regularly operated.

NOTE: Manifold Pressure - Natural Gas 2.8" W.C. 3.7 Orifice
Vapor Propane 2.8" W.C. 2.0 Orifice

REGULATION OF COMBUSTION - 1st OPERATION

After having checked the hermetic seal and of combustion waste products line, heater may be operated for the first time.

To perform regulation of combustion correctly, combustion waste products must be analyzed using appropriate instruments: values recommended by actual standards must be reached.

The regulation procedure has been on the Burner Instruction Manual; final values of CO₂ shall be correspondent to excess air factor of 1,2 (12,5 for gas-oil, 9,7% for G20, 9,6% for G25, 11,7% for G30 and 11,7% for G31) while CO level shall be less than 75 ppm.

INSTRUCTIONS FOR USE

SWITCHING ON

- Set the control knob (2) in position "0";
- Turn on the disconnecting switch on the electric switchboard;
- If the unit is operated manually turn the control knob to . The burner starts up, the combustion chamber heats up and then the fan starts;
- If the unit operates automatically set the room thermostat at the desired level and turn the control knob (2) to : the heater will now start and stop automatically.
- If the heater doesn't start after you have completed the above operations consult the Troubleshooting section of this manual.

TURNING OFF

In manual operation turn control knob (2) to "0" or turn off control thermostat in automatic operation.

The burner stops while the fan turns itself on and off until the combustion chamber has completely cooled down.

Warning



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

VENTILATION

When the control knob is turned to the symbol the heater operates in continuous fan mode.

MAINTENANCE

Warning



The following operations must be carried out by qualified personnel only. Before carrying out any maintenance operation the heater must be disconnected from the mains. Therefore:

- Stop the machine as instructed above
- Turn off the disconnecting switch on the electric switchboard.
- Wait until the heater has cooled.

CLEANING THE HEAT EXCHANGER AND THE COMBUSTION CHAMBER

For the heater to operate efficiently the heat exchanger and combustion chamber must be cleaned after a period of prolonged use and more frequently if too much soot builds up. Soot builds up when there is not enough chimney draft, when the fuel is of very poor quality, when the burner is regulated incorrectly or when the heater is switched on and off too frequently. If the heater starts vibrating when it is turned on there is probably too much soot.

To get at the heat exchanger (1) take off the front panel (3) and then remove the smoke box panel (2) and remove baffle plates (7). To get at the combustion chamber (4) remove the burner (5).

CLEANING THE FAN

Remove any dirt or extraneous material from the mesh of the aspiration grill (6) and if necessary clean the propeller with an air-suction tool.

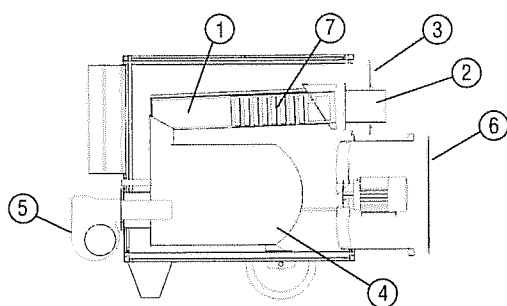


Fig. 3

CLEANING THE BURNER

For the heater to work efficiently the burner must be serviced regularly by an Authorized Service Technician. All cleaning, servicing and regulation operations must be carried out as indicated in the Burner Instruction Manual.

Warning



After every type of technical maintenance, please verify that the machine starting regularly.

TRANSPORTING AND MOVING THE HEATER

To move the Jumbo use the front handles and back wheels.

Warning



Before moving the unit:

- Turn it off as indicated above.
- Disconnect electricity by pulling out the plug.
- Wait until the heater cools down

Suitable equipment must always be used when moving a unit and the instructions given above must be scrupulously adhered to.

Warning



Never try to lift the heater manually. Doing so could result in physical injury.

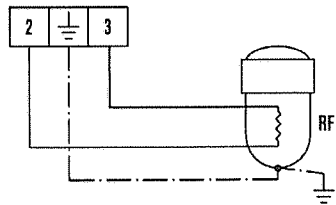
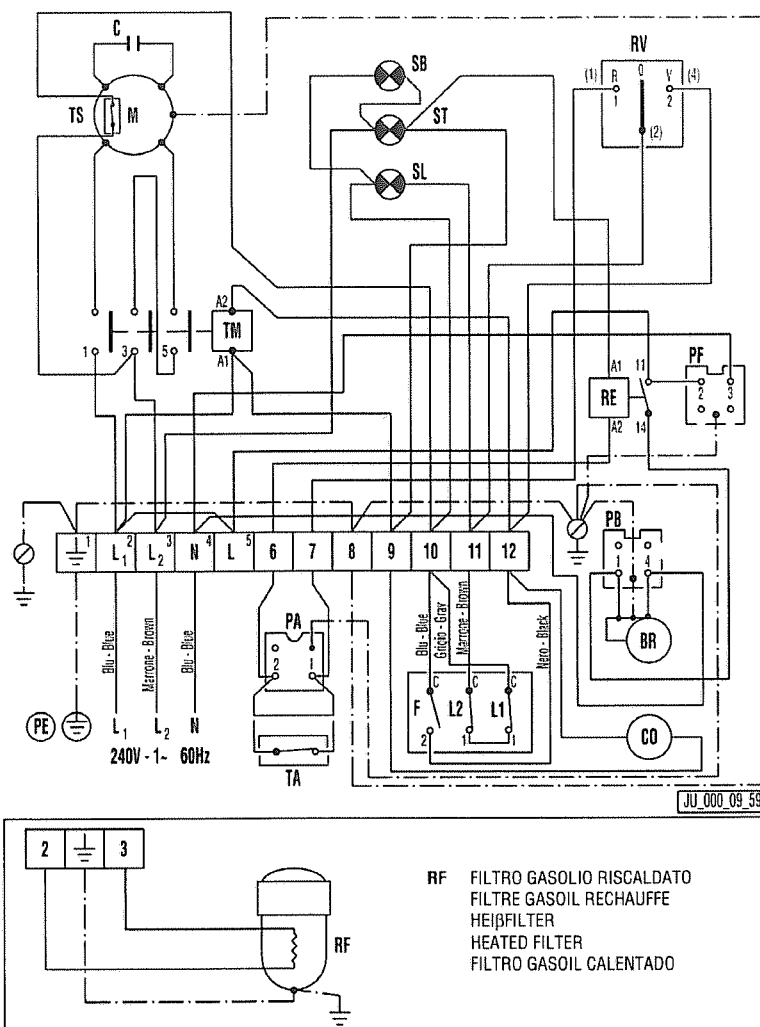
If heater is connected to propane supply cylinder and it is to be stored indoors, the connection between the propane cylinder and the heater must be disconnected and the cylinder removed from the heater and stored in accordance with Standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58 and CSA B149.1, Natural gas and Propane Installation Code.

OBSERVED FAULTS, CAUSES AND REMEDIES

| OBSERVED FAULT | CAUSE | REMEDY |
|---|--|--|
| • The heater won't start | <ul style="list-style-type: none"> Faulty electrical supply Wrong positioning of main switch Wrong setting of room thermostat Safety device (burner, thermostat L2, fan thermal relay) not reset after repairs | <ul style="list-style-type: none"> Check function and positioning of main switch Check power cord Check electrical connections Check fuses |
| | | <ul style="list-style-type: none"> Put main switch in correct position |
| | | <ul style="list-style-type: none"> Check setting of room thermostat Check function of room thermo-stat |
| | | <ul style="list-style-type: none"> Press the appropriate restart button: <ul style="list-style-type: none"> burner (button on control device) thermostat (button (6)) fan thermal relay (button (11)) |
| • Overheat safety thermostat L1 cuts out (the lamp (9) lights up and then it cuts down) | • The combustion chamber has overheated | <ul style="list-style-type: none"> Check fuel flow Check position registers, draw - holes, etc. Remove extraneous material from air ducts and ventilation grills |
| • Limit thermostat L2 cuts out (warning lamp (9) lights up) | • Excessive combustion chamber over heating | <ul style="list-style-type: none"> Check as indicated above If fault persists contact our Service Center |
| • Thermal relay TM cuts out (warning light (10) lights up) | • Fan motor current absorption is excessive | <ul style="list-style-type: none"> Heater with helicoidal ventilator: remove eventual debris preventing free flow of air on intake and outlet. Check length of air ducts, reduce if excessive. Heater with centrifugal ventilator: check setting of transmission belt as indicated in chapter ("CONNECTION TO HOT AIR DUCTS"). Always check that current absorption remains below value indicated on motor manufacturer plate |
| • The burner starts up, the flame doesn't light up and the reset light on the control device comes on | • Burner not working correctly | <ul style="list-style-type: none"> Press the reset button to turn on the heater. If the same problem arises again call and Authorized Service Technician |
| • The fan doesn't start up or starts up late | • No electrical power | <ul style="list-style-type: none"> Check fuses |
| | • F thermostat out of order | <ul style="list-style-type: none"> Check electrical connections |
| | • Winding of motor burnt or interrupted | <ul style="list-style-type: none"> Check the thermostat, set it and replace it if necessary |
| | • Capacitor burnt (mod. "M") | <ul style="list-style-type: none"> Replace the fan motor |
| • The fan vibrates or makes unusual noise | • Motor bearings blocked | <ul style="list-style-type: none"> Replace the capacitor Replace the bearings |
| | • Extraneous material on fan blades | <ul style="list-style-type: none"> Remove extraneous material |
| | • Not enough air circulation | <ul style="list-style-type: none"> Remove obstacles to air circulation |
| | • Wrong burner set-up | <ul style="list-style-type: none"> Call an Authorized Service Technician |
| • Not enough heat | | |

WIRING DIAGRAM

JUMBO 400C
JUMBO 700 - 700C
JUMBO 900 - 900C
VG700 - VF700



RF FILTRO GASOLIO RISCALDATO
 FILTRE GASOIL RECHAUFFE
 HEIßFILTER
 HEATED FILTER
 FILTRO GASOIL CALENTADO

TS TERMOSTATO DI SICUREZZA
 THERMOSTAT DE SECURITE
 SICHEREITSTHERMOSTAT
 FANS THERMAL RELAY

TM Teleruttore ventilatore
 Telerupteur ventilateur
 Fernschalter für Ventilator
 Fans tele-contactor

C CONDENSATORE MOTORE
 CONDENSATEUR DU MOTEUR
 Kondensator motor
 Condenser motor

PA PRESA TERMOSTATO AMBIENTE
 PRISE THERMOSTAT D'AMBIANCE
 RAUMTHERMOSTAT
 ROOM THERMOSTAT PLUG

RE RELE 220V/60Hz
 RELAIS 220V/60Hz
 RELAIS 220V/60Hz
 RELAY 220V/60Hz

SB SPIA BLOCCO VENTILATORE
 LAMPE TEMOIN ARRET VENTILATEUR
 Ventilator "Aus" Kontrollampe
 Fan stop control lamp

PB PRESA BRUCIATORE
 PRISE BRULER
 Brenner
 Steckdose burner plug

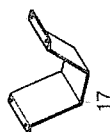
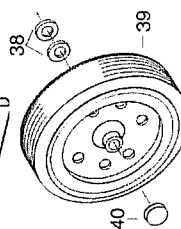
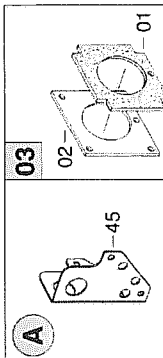
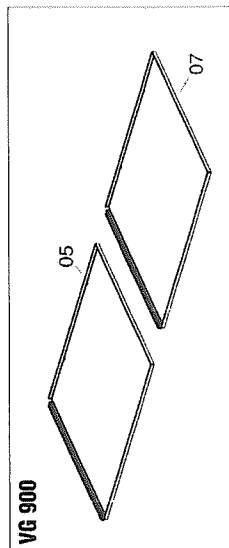
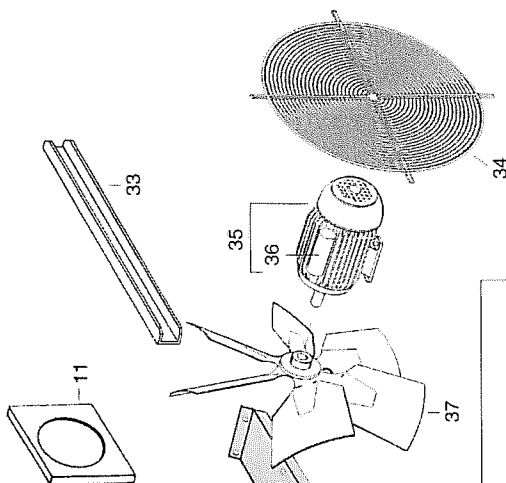
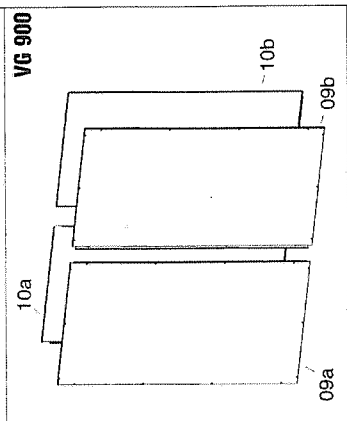
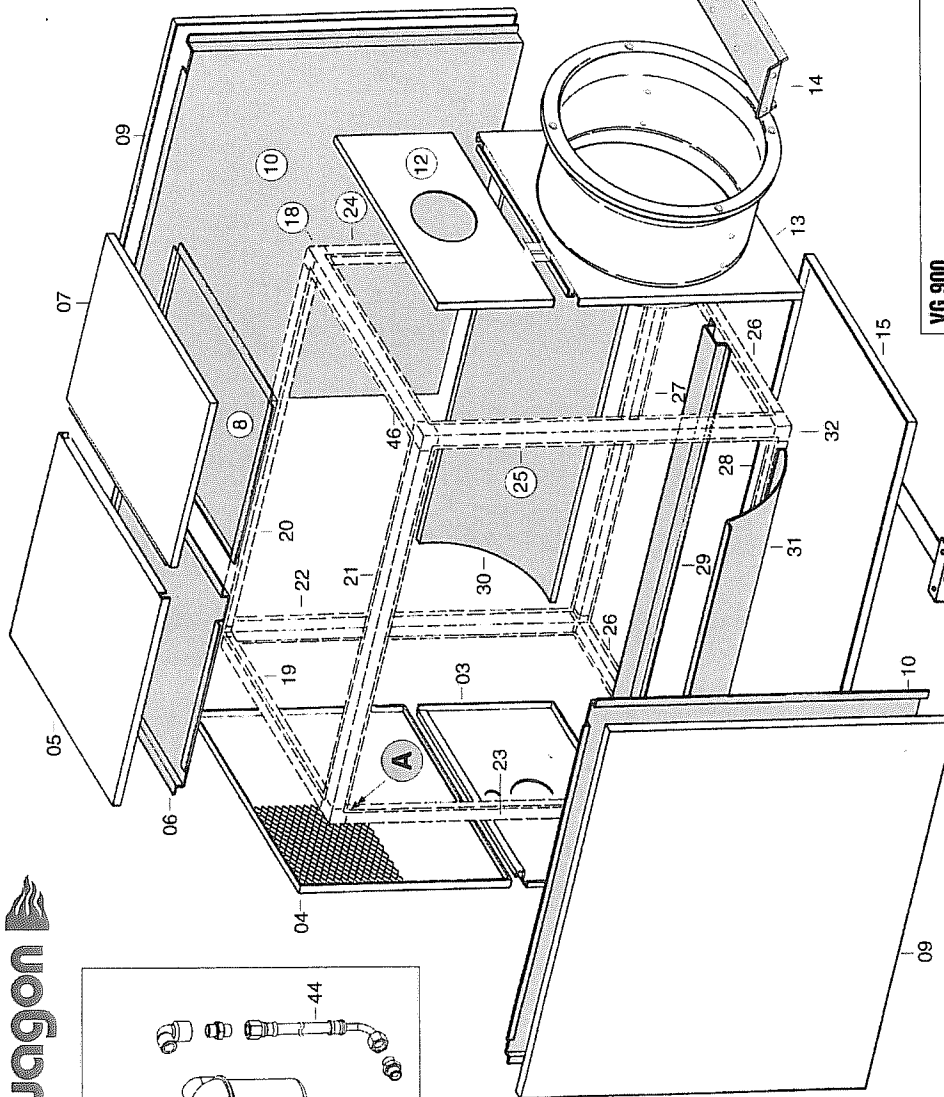
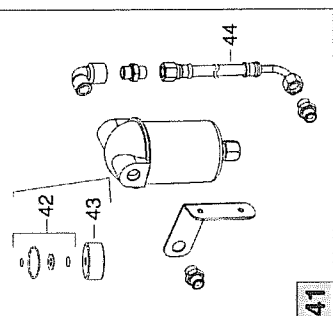
CO CONTAORE
 COMPTE-HEURES
 Stundenzähler
 Hour-counter

PF PRESA FILTRO GASOLIO RISCALDATO
 PRISE FILTRE GASOIL RECHAUFFE
 RAUM HEIßFILTER
 HEATED FILTER PLUG

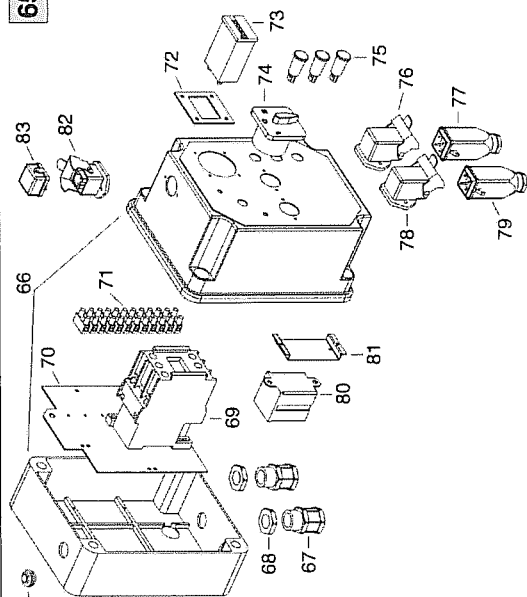
heat wagon

VG

VG 700 - VG 900



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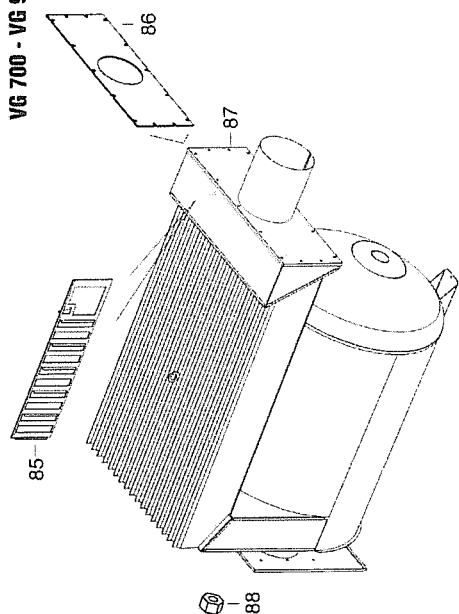


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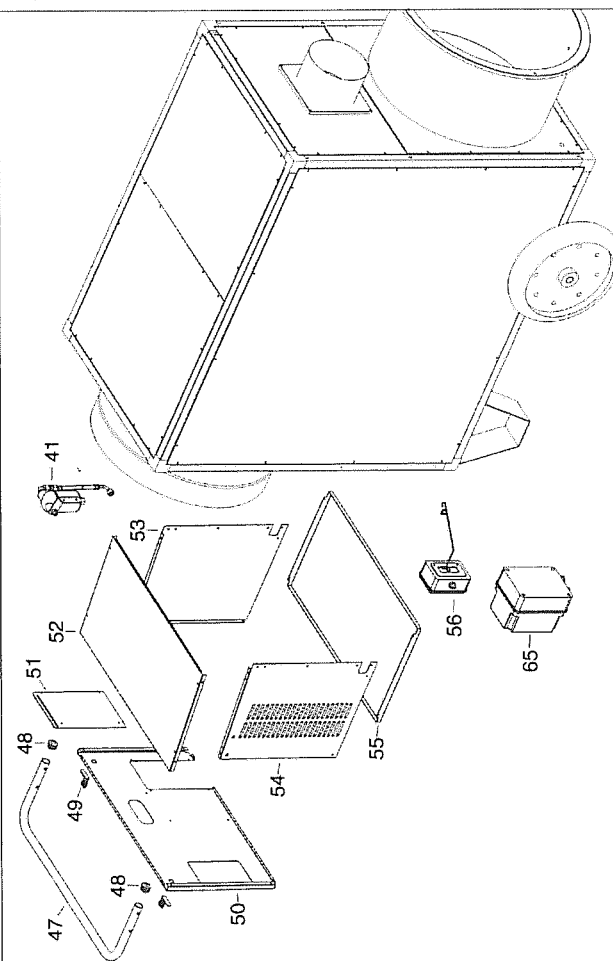


GV

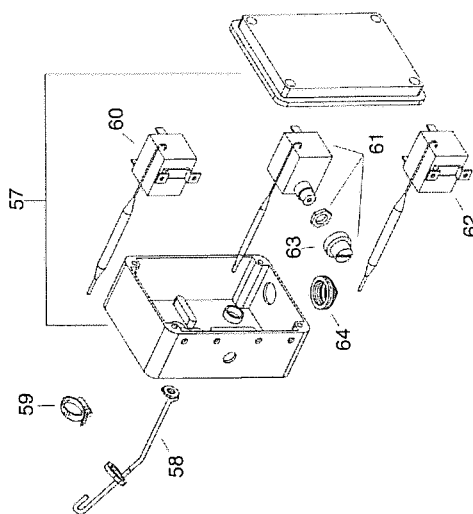
VG 700 - VG 900



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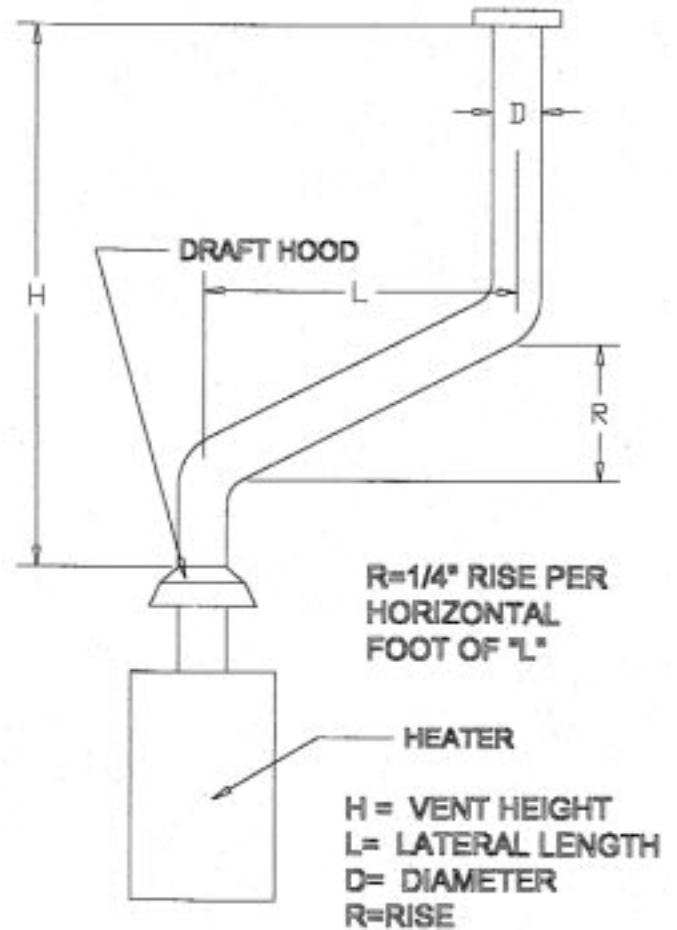
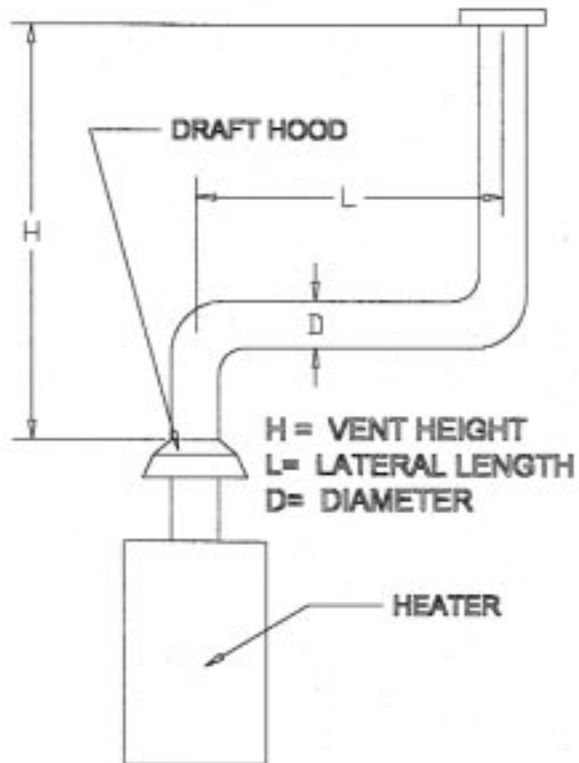
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| Pos. | Cod. | € | VG 700 | VG 900 | LEGENDA | LEGENDE | NOMENKLATUR | PART LIST |
|------|---------------|---|--------|--------|---|--|---|-------------------------------|
| 01 | G01653 | | • | • | Plastra supporto bruciatore | Plaque support brûleur | Brennertragsplatte | Burner support |
| 02 | T10634 | | • | • | Guarnizione isolante bruciatore 250x250x5 | Joint de bride 250x250x5 | Brennerdichtung 250x250x5 | Burner plate seal 250x250x5 |
| 03 | G04018-9010 | | • | • | Pannello bruciatore | Panneau brûleur | Brenner Platte | Burner panel |
| 04 | G04175-9010 | | • | • | Pannello uscita aria | Panneau de sortie air | Ausblashaube | Outlet air panel |
| 05 | G04176-9010 | | • | • | Pannello superiore anteriore | Panneau supérieur antérieur | Blindblech Brennerseite | Front upper panel |
| 06 | G01235 | | • | • | Pannello interno superiore anteriore | Panneau intérieur supérieur antérieur | Blindblech inner oben Brennerseite | Inner front upper panel |
| 07 | G01716-9001 | | • | • | Pannello superiore posteriore | Panneau supérieur postérieur | Blindblech oben Ventilatorseite | Rear upper panel |
| 08 | G01718 | | • | • | Pannello interno superiore posteriore | Panneau intérieur supérieur postérieur | Blindblech inner oben Ventilatorseite | Inner rear upper panel |
| 09 | G01720-9010 | | • | • | Pannello laterale | Panneau latéral | Blindblech seitlich | Side panel |
| 09a | G01683-9010 | | • | • | Pannello laterale anteriore | Panneau latéral antérieur | Blindblech seitlich Brennerseite | Side front panel |
| 09b | G01685-9010 | | • | • | Pannello laterale posteriore | Panneau latéral postérieur | Blindblech seitlich Ventilatorseite | Side rear panel |
| 10 | G01722 | | • | • | Pannello interno laterale | Panneau intérieur latéral | Blindblech inner seitlich | Inner side panel |
| 10a | G01684 | | • | • | Pannello interno laterale anteriore | Panneau intérieur latéral antérieur | Blindblech inner seitlich Brennerseite | Inner panel front panel |
| 10b | G01686 | | • | • | Pannello interno laterale posteriore | Panneau intérieur latéral postérieur | Blindblech inner seitlich Ventilatorseite | Inner panel rear panel |
| 11 | G01687-9010 | | • | • | Flangia canino Ø200 | Bride cheminée Ø200 | Ø 200 Rauchfang Flansch | Chimney flange Ø200 |
| 12 | G01724-9010 | | • | • | Pannello camino | Panneau cheminée | Rauchfang Platte | Chimney panel |
| 13 | G01726-9010 | | • | • | Pannello supporto ventilatore | Panneau ventilateur | Ventilatorblechteil | Fan support panel |
| 14 | G01728 | | • | • | Plastra supporto motore | Plaque support moteur | Motorblechhalterung | Motor support plate |
| 15 | G01690 | | • | • | Pannello inferiore | Panneau inférieur | Blindblech unter | Bottom panel |
| 16 | G01732-9010 | | • | • | Assale | Essieu | Achse | Wheel axle |
| 17 | G01692-9010 | | • | • | Appoggio anteriore | Béquille | Fuss | Front support |
| 18 | U10103-9010 | | • | • | Angolare alluminio | Entretoise aluminium | Eckstück Aluminium | Aluminum joint |
| 19 | G01734-9010 | | • | • | Piantone superiore anteriore corto | Cornière supérieure antérieur courte | Oberer vordere Rahmen kurz | Upper front short angle steel |
| 20 | G01736-9010 | | • | • | Piantone superiore lungo SX | Cornière supérieure longue gauche | Oberer Rahmen lang links | Upper long SX angle steel |
| 21 | G01738-9010 | | • | • | Piantone superiore lungo DX | Cornière supérieure longue droite | Oberer Rahmen lang recht | Upper long DX angle steel |
| 22 | G01695-9010 | | • | • | Piantone verticale anteriore SX | Cornière verticale côté brûleur gauche | Senkrecht Rahmen Brennerseite links | Vertical front SX angle steel |
| 23 | G01742-9010 | | • | • | Piantone verticale anteriore DX | Cornière verticale côté brûleur droite | Senkrecht Rahmen Brennerseite recht | Vertical front DX angle steel |
| 24 | G01697-9010 | | • | • | Piantone verticale posteriore SX | Cornière verticale arrière gauche | Senkrecht Rahmen Ventilatorseite links | Vertical back SX angle steel |
| 25 | G01744-9010 | | • | • | Piantone verticale posteriore DX | Cornière verticale arrière droite | Senkrecht Rahmen Ventilatorseite recht | Vertical back DX angle steel |
| 26 | G01699/1-9010 | | • | • | Piantone inferiore corto | Cornière inférieure courte | Untener Rahmen kurz | Lower short angle steel |
| 27 | G04184-9010 | | • | • | Piantone inferiore lungo SX | Cornière inférieure longue gauche | Untener Rahmen lang links | Lower long SX angle steel |
| 28 | G01701-9010 | | • | • | Piantone inferiore lungo DX | Cornière inférieure longue droite | Untener Rahmen lang recht | Lower long DX angle steel |
| 29 | G01754 | | • | • | Appoggio camera combustione | Support chambre de combustion | Brennkammerstütze | Comb. chamber support |
| 30 | G01703 | | • | • | Protezione camera combustione SX | Protection gauche chambre de comb. | Brennkammerabdeckblech links | Comb. chamber SX support |

| Pos. | Cod. | € | VG 700 | VG 900 | LEGENDA | LEGENDE | NOMENKLATUR | PART LIST |
|------|----------------------------|---|--------|--------|--|--|---------------------------------------|-----------------------------------|
| 31 | G01756 G01705 | | • | • | Protezione camera combustione DX | Protection droite chambre de comb. | Brennkammerabdeckblech recht | Comb. chamber DX support |
| 32 | U10101-9010 | | • | • | Angolare alluminio | Entroise aluminium | Eckstück Aluminium | Aluminium joint |
| 33 | G01909-9010 G01908-9010 | | • | • | Traversa rinforzo | Entroise de renfort | Verstärkungsrahmen | Reinforced frame |
| 34 | P30139 P30131 | | • | • | Griglia aspirazione | Grille aspiration | Ansauggitter | Inlet grill |
| 35 | E10682-220 E10683-220 | | • | • | Motore HP 2, 220/60 mono | Moteur HP 2, 220/60 mono | Motor HP 2, 220/60 mono | Motor HP 2, 220/60 mono |
| 36 | E11235 E11236 | | • | • | Motore HP 3, 220/60 mono | Moteur HP 3, 220/60 mono | Motor HP 3, 220/60 mono | Motor HP 3, 220/60 mono |
| 37 | T10230-1 T10229-1 | | • | • | Condensatore 25 µF | Condensateur 25 µF | Kondensator 25 µF | Capacitor 25 µF |
| 38 | M20111 | | • | • | Condensatore 50 µF | Condensateur 50 µF | Kondensator 50 µF | Capacitor 50 µF |
| 39 | C106345 | | • | • | Ventilatore Ø580 18" | Ventilateur Ø580 18" | Ventilator Ø580 18" | Fan Ø580 18" |
| 40 | M20202 | | • | • | Ventilatore Ø625 18" | Ventilateur Ø625 18" | Ventilator Ø625 18" | Fan Ø625 18" |
| 41 | 02AC560 | | • | • | Rondella Ø26xØ4x4 | Rondelle Ø26xØ4x4 | Abstandsling Ø26xØ4x4 | Washer Ø26xØ4x4 |
| 42 | T20241 | | • | • | Rondella Ø400 - Ø25 | Roue Ø400 - Ø25 | Radverschluss Ø25 | Wheel Ø400 - Ø25 |
| 43 | T20242 | | • | • | Clips de fixation Ø25 | Clips de fixation Ø25 | Radverschluss Ø25 | Wheel holder |
| 44 | B98012 | | • | • | Kit filtro gasolio | Kit filtre pré-chauffage 1/4" | Kit Öl vorwärmfilter 1/4" | Kit Oil pre-heaters filter 1/4" |
| 45 | G04187-9010 | | • | • | Kit filtro gasolio | Kit OR filtre gasoil | Kit OR heizölfilter | OR KIT oil filter |
| 46 | G04181-3001 G04182-3001 | | • | • | Cartuccia filtro | Cartouche filtre | Filterelement | Filter cartridge |
| 47 | G04050-9010 | | • | • | Tubo flessibile | Flexibles | Schläuche | Hoses |
| 48 | C30328 | | • | • | Staffa | Étrier | Bügel | Flask |
| 49 | M20418 | | • | • | Plantone superiore posteriore corto | Comière supérieure postérieure courte | Oberer hintere Rahmen kurz | Upper back short angle steel |
| 50 | G04190-9010 G04191-9010 | | • | • | Mangia | Poignée | Handgriff | Handle |
| 51 | G04183-9010 G04194-9010 | | • | • | Tappo copristesta | Bouchon | Gumikuss | Plug |
| 52 | G04196-9010 G04197-9010 | | • | • | Serratura a galletto Ø22 | Serrure à ailettes Ø22 | Flügelmutterverschloß Ø22 | Wing nut lock |
| 53 | G04199-9010 G04200-9010 | | • | • | Pannello anteriore carter | Panneau antérieur carter | Vordere Gehäusebleche | Casing front panel |
| 54 | G04202-9010 G04203-9010 | | • | • | Sportello | Ouverture | Flügel | Flap door |
| 55 | G04205-9010 G04206-9010 | | • | • | Coperchio carter bruciature | Couvercle carter brûleur | Deckel Schutzabdeckung des Brenners | Burner casing top cover |
| 56 | G00218 | | • | • | Fianchello carter SX | Flanc gauche carter | Seitenwand der Schutzabdeckung links | Burner casing SX cover |
| 57 | E20719-02 | | • | • | Fianchello carter DX | Flanc droite carter | Seitenwand der Schutzabdeckung rechts | Burner casing DX cover |
| 58 | P30159 | | • | • | Pannello inferiore carter | Panneau inférieur carter | Untere Tafel der Schutzabdeckung | Tank casing lower panel |
| 59 | C30712 | | • | • | Quattro elettrico termostati | Coffret électrique | Schaltkasten | El control box |
| 60 | E30748 | | • | • | Scalola derivazione | Coffret électrique | Steuergerät-Hallenung | Electrical components box |
| 61 | E50749 | | • | • | Bacchetta portabulli | Porte-Bulbes | Kugelträger | Bulbs holder |
| 62 | E50747 | | • | • | Fascella serraggio | Collier | Klemme | Clip |
| 63 | E50750 | | • | • | Termostato TY95 30/90 °C Campini | Thermostat TY95 30/90 °C Campini | Thermostat TY95 30/90 °C Campini | Thermostat TY95 30/90 °C Campini |
| 64 | C30343 | | • | • | Termostato TY95H 120 °C Campini | Thermostat TY95H 120 °C Campini | Thermostat TY95H 120 °C Campini | Thermostat TY95H 120 °C Campini |
| 65 | G00221 | | • | • | Termostato TY95 0/60 °C Campini | Thermostat TY95 0/60 °C Campini | Thermostat TY95 0/60 °C Campini | Thermostat TY95 0/60 °C Campini |
| 66 | E20712 | | • | • | Protezione per Termostato sicurezza | Protection pour thermostat de sécurité | Sicherheitsthermostatschutz | Safety thermostat plastic profile |
| 67 | E20849 | | • | • | Passacavo Ø19 | Passacavo Ø19 | Kabeltülle Ø19 | Cable protection Ø19 |
| 68 | E20950 | | • | • | Quattro elettrico completo | Coffret électrique | Schaltkasten | El control box |
| 69 | E10419 | | • | • | Scalola derivazione | Coffret électrique | Steuergerät-Hallenung | Electrical components box |
| 70 | G04042 | | • | • | Pressacavo PG 13,5 | Presse écoupe PG 13,5 | Kabelpresse PG 13,5 | Cable fastener PG 13,5 |
| 71 | E20301 | | • | • | Ghiera PL PG13,5 | Embout PG13,5 | Nummutter PG13,5 | Ring nut PG13,5 |
| 72 | G04041 | | • | • | Teleruttore Wimex KN16-10 V230 | Contacteur Wimex KN16-10 V230 | Contacteur Wimex KN16-10 V230 | Contacteur Wimex KN16-10 V230 |
| 73 | DR205 | | • | • | Piastra supporto elementi elettrici | Plaque support | Tragplatte für elektrische Teile | Plate for electrical components |
| 74 | E10109 | | • | • | Morsellera 12 el. mmq 10 | Barrette de connection 12 el. mmq 10 | Klemme 12 el. mmq 10 | Terminal board 12 el. mmq 10 |
| 75 | E1021 | | • | • | Piastra supporto coniaore | Plaque support complet-heure | Blechhalterung für Stundenrechner | Hour-counter support plate |
| 76 | E20626 | | • | • | Comiatore | Commutateur | Stundenzähler | Hour-counter |
| 77 | E20627 | | • | • | Microspina rossa Ø12 V230 | Lampe lemain rouge Ø12 V230 | Rotle Kontrolllampe Ø12V230 | Red pilot lamp Ø12 V230 |
| 78 | E20629 | | • | • | Connettore presa 3P + T | Fiche thermostat 3P + T | Thermostat stecker 3P + T | Thermostat plug 3P + T |
| 79 | G00217 | | • | • | Connettore presa 4P + T | Fiche thermostat 4P + T | Thermostat stecker 4P + T | Thermostat plug 4P + T |
| 80 | E11120 | | • | • | Connettore spina 4P + T | Plaque de prise 4P + T | Steckdose platte 4P + T | Plate plug 4P + T |
| 81 | G04207 | | • | • | Relé Finder 65.31 AC | Relais Finder 65.31 AC | Relais Finder 65.31 AC | Relay Finder 65.31 AC |
| 82 | E20639 | | • | • | Supporto relé | Support relais | Relaishalterung | Relay flange |
| 83 | E20665 | | • | • | Connettore presa 4P + T | Fiche thermostat 4P + T | Thermostat stecker 4P + T | Thermostat plug 4P + T |
| 84 | G01773 | | • | • | Tappo | Bouchon | Propfen | Drain plug |
| 85 | G01672 | | • | • | Camera di combustione | Chambre de combustion | Brennkammer | Combustion chamber |
| 86 | T10635 | | • | • | Turbolenziatore | Turbuleur | Verwirbelungsplatte | Baffle plate |
| 87 | G01760 | | • | • | Guarnizione isol. cassa fumi 551x248x5 | Joint isolant 551x248x5 | Isolation Dichtung 551x248x5 | Chimney sea 551x248x5 |
| 88 | G01674 | | • | • | Guarnizione isol. cassa fumi 671x248x5 | Joint isolant 671x248x5 | Isolation Dichtung 671x248x5 | Chimney seal 671x248x5 |
| | | | • | • | Coperchio ispezione camino | Porte visite cheminée | Kamin Inspektionklappe | Chimney cover |
| | | | • | • | Tappo FE 1" FE | Bouchon 1" | Propfen 1" | Female plug 1" |

EXHAUST FLUE PIPE GUIDELINES



CAPACITY OF TYPE B DOUBLE-WALL VENTS SERVING A SINGLE DRAFT HOOD-HEATER x 1000 BTU'S

FOR INDOOR APPLICATIONS

| | | VENT DIAMETER (D) INCHES | | | |
|---------------------------|-------------------------|--------------------------|------|------|------|
| | | 8 | 10 | 12 | 14 |
| TOTAL VENT HEIGHT(H) FEET | LATERAL LENGTH (L) FEET | | | | |
| 6 | 0 | 370 | 570 | 850 | 1170 |
| | 2 | 285 | 455 | 650 | 890 |
| | 6 | 273 | 435 | 630 | 870 |
| | 12 | 255 | 406 | 610 | 840 |
| 8 | 0 | 415 | 660 | 970 | 1320 |
| | 2 | 322 | 515 | 745 | 1020 |
| | 8 | 303 | 490 | 720 | 1000 |
| | 16 | 281 | 458 | 685 | 950 |
| 10 | 0 | 450 | 720 | 1060 | 1450 |
| | 2 | 355 | 560 | 850 | 1130 |
| | 10 | 330 | 525 | 795 | 1080 |
| | 20 | 300 | 486 | 735 | 1030 |
| 15 | 0 | 525 | 840 | 1240 | 1720 |
| | 2 | 414 | 675 | 985 | 1350 |
| | 15 | 373 | 610 | 905 | 1250 |
| | 30 | 328 | 553 | 845 | 1180 |
| 20 | 0 | 575 | 930 | 1350 | 1900 |
| | 2 | 470 | 755 | 1100 | 1520 |
| | 10 | 443 | 710 | 1045 | 1460 |
| | 20 | 410 | 665 | 990 | 1390 |
| 30 | 0 | 650 | 1060 | 1550 | 2170 |
| | 2 | 535 | 865 | 1310 | 1800 |
| | 20 | 473 | 784 | 1185 | 1650 |
| | 40 | 415 | 705 | 1075 | 1520 |

REFERENCE CHARTS

VAPOR PROPANE QUICK
REFERENCE HOSE
CHART

| Hose Length in Feet | BTU 1 Million | |
|---------------------------|------------------|-------|
| | 1/2PSI | 10PSI |
| 10 | 1-1/4 | 3/4 |
| 25 | 1-1/4 | 3/4 |
| 35 | 1-1/4 | 3/4 |
| 50 | - | 3/4 |
| 75 | - | 3/4 |
| 100 | - | 3/4 |
| 125 | - | 3/4 |
| 150 | - | 3/4 |
| 175 | - | 3/4 |
| 200 | - | 3/4 |
| 225 | - | 3/4 |

NATURAL GAS QUICK
REFERENCE HOSE
CHART

| Hose Length in Feet | BTU 1 Million | | | |
|---------------------------|------------------|-------|-------|------|
| | <1PSI | 1PSI | 2PSI | 5PSI |
| 10 | 1-1/2 | 1-1/4 | 3/4 | 3/4 |
| 25 | 2 | 1-1/4 | 3/4 | 3/4 |
| 35 | 2 | 1-1/4 | 3/4 | 3/4 |
| 50 | 2 | 1-1/4 | 1-1/4 | 3/4 |
| 75 | 2 | 1-1/4 | 1-1/4 | 3/4 |
| 100 | 2 | 1-1/4 | 1-1/4 | 3/4 |
| 125 | 2-1/2 | 1-1/2 | 1-1/4 | 3/4 |
| 150 | 2-1/2 | 1-1/2 | 1-1/4 | 3/4 |
| 175 | 2-1/2 | 1-1/2 | 1-1/4 | 3/4 |
| 200 | 2-1/2 | 1-1/2 | 1-1/4 | 3/4 |
| 225 | 2-1/2 | 1-1/2 | 1-1/4 | 3/4 |

| VAPORIZATION RATES IN BTUH @ 0 DEG. F | | | | | | | |
|---------------------------------------|----------------------------------|---------------------------|-----------|-----------|-----------|-----------|-----------|
| TANK SIZE | NUMBER OF TANKS MANIFOLDED | PERCENTAGE OF TANK FILLED | | | | | |
| | | 10% | 20% | 30% | 40% | 50% | 60% |
| 250 | | | | | | | |
| | 1 | 12,690 | 169,200 | 197,400 | 225,600 | 253,800 | 282,000 |
| | 2 | 279,180 | 372,240 | 434,280 | 496,320 | 558,360 | 620,400 |
| 500 | 3 | 486,027 | 648,036 | 756,042 | 864,048 | 972,054 | 1,080,060 |
| | | | | | | | |
| | 1 | 198,135 | 264,180 | 308,212 | 352,240 | 396,270 | 440,300 |
| 1000 | 2 | 435,897 | 581,196 | 687,066 | 774,928 | 871,794 | 968,660 |
| | 3 | 758,857 | 1,011,809 | 1,180,451 | 1,349,079 | 1,517,714 | 1,686,349 |
| | | | | | | | |
| | 1 | 354,240 | 472,320 | 551,040 | 629,760 | 708,480 | 787,200 |
| | 2 | 779,328 | 1,039,104 | 1,212,288 | 1,385,472 | 1,558,656 | 1,731,840 |
| | 3 | 1,356,739 | 1,808,985 | 2,110,483 | 2,411,980 | 2,713,478 | 3,014,976 |

NOTE: USE FOLLOWING MULTIPLIERS FOR OTHER AIR TEMPERATURES

For -10° F multiply x 0.50
 For + 10°F multiply x 1.5
 For +20°F multiply x 2.0
 For +40°F multiply x 3.0
 For +50°F multiply x 3.5
 For +60°F multiply x 4.0

LPG Kit

The LPG kit allows the above burners, suitable to run on natural gas, to burn LPG.

TECHNICAL FEATURES

The thermal output and working field of burners converted to use LPG are the same as those for the use of natural gas.
(See burner technical instructions).

GAS Family 3:

Net calorific value: 24 - 34 kWh/m³

21,000 - 29,300 kcal/m³

Min. pressure 25 - max. 50 mbar.

LIST OF KIT'S COMPONENTS

| Quantity | Component |
|----------|------------------------|
| 1 | Washer |
| 1 | Diffuser 2 |
| 1 | Adhesive label |
| 1 | Technical instructions |

CONVERSION

On the combustion head of the burners, that natural gas diffuser should be replaced with the one used for LPG, and a washer should be added.

Proceed as follows: (Fig. A)

- Disassemble the ignition electrode and the ionisation probe.
- Take the distributor-diffuser disc off after removing the diffuser.
- Insert the washer, re-assemble the distributor-diffuser disc and fix the diffuser (stamping 2) sent as equipment.
- Reassemble the electrode and the ionisation probe in the position foreseen in the instructions for the natural gas.
- Affix the adhesive label as illustrated in Fig. B.

COMBUSTION HEAD ADJUSTMENT

This is the same as for the burners running on natural gas. (See burner technical instructions).

CORRELATION BETWEEN GAS PRESSURE AND BURNER OUTPUT (Fig. C)

Pressure measured at the pipe coupling of the burner working with LPG (Net calorific value 23,000 kcal/m³), with combustion chamber at 0 mbar.

Fig. A

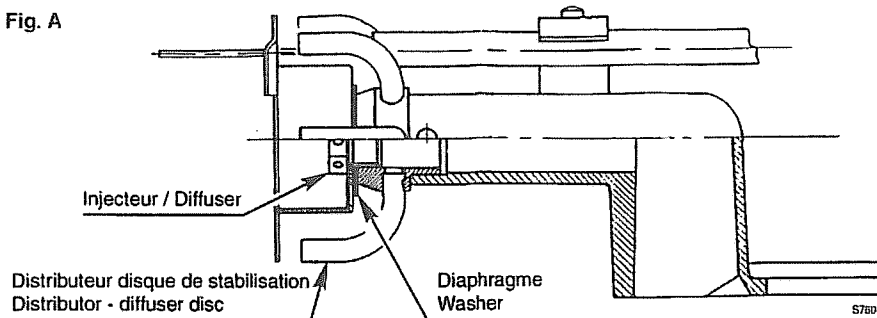


Fig. B

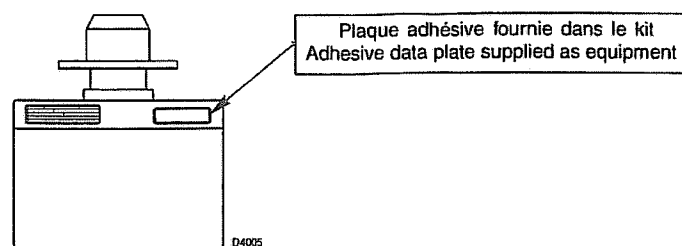
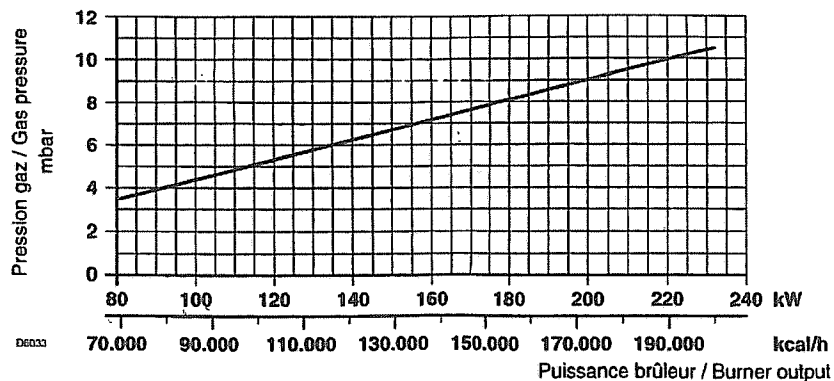


Fig. C



CLEAN DRY HEAT!



NEW FOR 2008

Model VG700 Indirect Fired Gas Heater

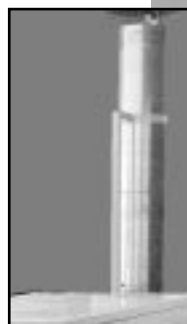
- Versatility of dual fuel - natural gas & propane
- Reliable Riello burner
- Remote thermostat
- Wheels for easy portability
- Long lasting stainless steel combustion chamber
- High performance axial fan
- Ductable to 200 ft.
- 100% dry heat, clean of combustion by-products

Set It And Forget It!

SPECIFICATIONS

| | |
|------------------|----------------------------|
| Input | 700,000 BTU/Hr |
| Fuel | Vapor Propane/Natural Gas |
| Gas Consumption | 7.7 GPH Propane/700 CFH NG |
| Gas Connection | 1" FNPT |
| Electrical | 240 Volts 15 amp circuit |
| Fan | 7,420 CFM 2" W.C. SP |
| Thermostat | Standard On/Off |
| Temp Rise | 120°F @ 0°F Ambient |
| Rated Efficiency | 85% |
| Dimensions | 79"L x 29"W x 51"H |
| Duct Size | 24" (up to 200' straight) |
| Approx. Weight | 550 lbs. |

Shown with
optional
duct adaptor
AR-702
(1x24")



**Chimney
Support Kit
(optional)
AR-714**



**Split Duct
Adaptor (2x20")
(optional)
AR712**



**Stacking and
Lifting Kit
(optional)**

heat wagon

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