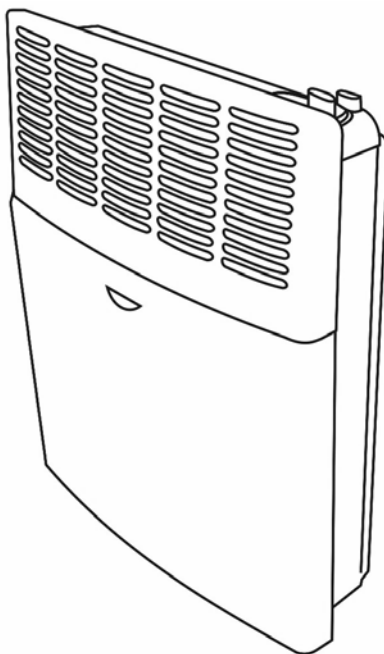


# *eskabe*

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## Direct Vent Gas Room Heater



### Models:

- S21 TB 2
- S21 TB 3
- S21 TB 5
- S21 TB 2 TE
- S21 TB 3 TE
- S21 TB 5 TE

## OWNER'S OPERATON AND INSTALLATION MANUAL

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

## Specifications

Model	S21 TB 2	S21 TB 3	S21 TB 5
Heat Input	2000 Kcal/h ( <b>2.30 Kw</b> ) Based on Gross Calorific Value.	3000 Kcal/h ( <b>3.49 Kw</b> ) Based on Gross Calorific Value.	5000 Kcal/h ( <b>5,81 Kw</b> ) Based on Gross Calorific Value.
Burner Orifice	Natural Gas 1.20 mm LPG – Propane 0.80 mm	Natural Gas 1.50 mm LPG – Propane 1.00 mm	Natural Gas 2 x 1,45 mm LPG – Propane x 0.95 mm
Pilot Orifice	Natural Gas No. 50 LPG – Propane No. 24	Natural Gas No. 50 LPG – Propane No. 24	Natural Gas Ø 0,40 mm LPG – Propane Ø 0,25 mm
Type of gas	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane

Model	S21 TB 2 TE	S21 TB 3 TE	S21 TB 5 TE
Heat Input	2000 Kcal/h ( <b>2.30 Kw</b> ) Based on Gross Calorific Value.	3000 Kcal/h ( <b>3.49 Kw</b> ) Based on Gross Calorific Value.	5000 Kcal/h ( <b>5,81 Kw</b> ) Based on Gross Calorific Value.
Burner Orifice	Natural Gas 1.20 mm LPG – Propane 0.80 mm	Natural Gas 1.50 mm LPG – Propane 1.00 mm	Natural Gas 2 x 1,60 mm LPG – Propane x 0.95 mm
Pilot Orifice	Natural Gas No. 50 LPG – Propane No. 24	Natural Gas No. 50 LPG – Propane No. 24	Natural Gas Ø 0,40 mm LPG – Propane Ø 0,25 mm
Type of gas	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane

## Dimensions

### Model **S21 TB 2 / S21 TB 2 TE**

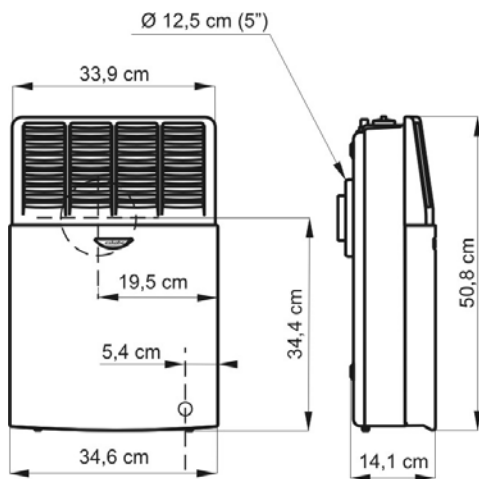


Fig. 1a

### Model **S21 TB 3 / S21 TB 3 TE**

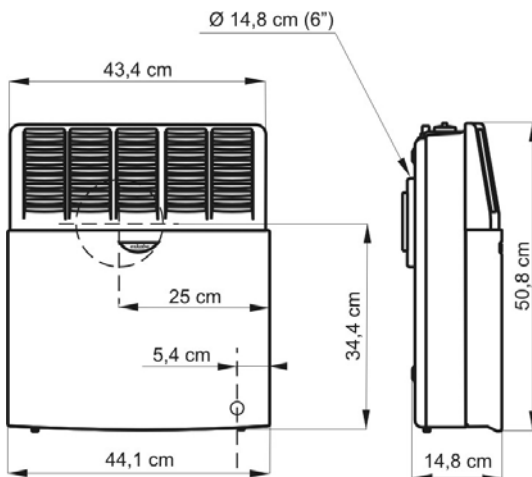


Fig. 1b

## Model S21 TB 5 / S21 TB 5 TE

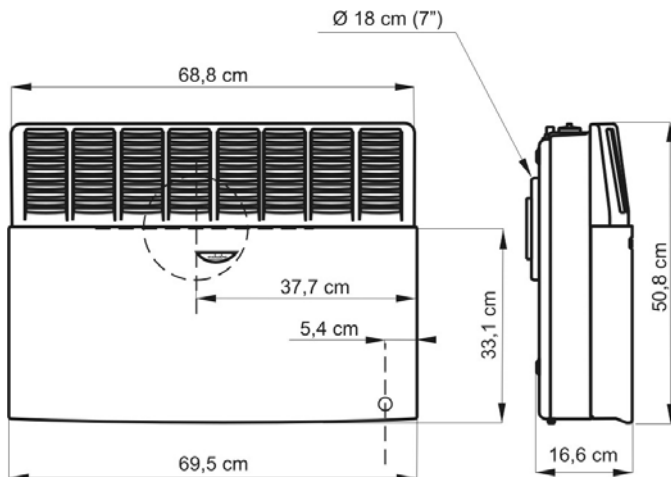


Fig. 1c

## Installation

This appliance is wall mounted. The minimum clearance from the floor to the bottom of the heater is 12 cm. However, for a comfortable operation, it is recommended to install the appliance with a clearance of 25 cm. from floor to bottom.

**Never install the heater on the floor.**

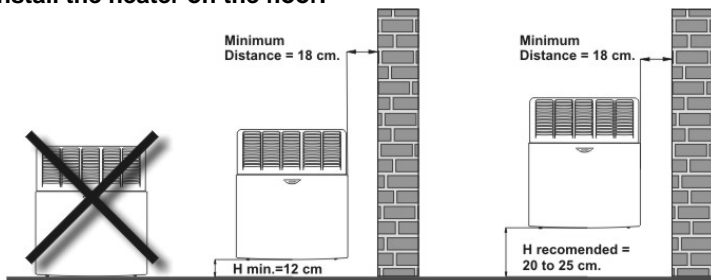


Fig. 2

## Locating the Heater

- Draw a vertical line on the wall that will pass through the center of the flue pipes. Use the references shown in figures 1 a, b or c.
- Mark the position of the hole for the vent air intake pipe, at a height of  $H + 41 \text{ cm}$ . Fig. 3.
- Use the Marking Template to draw a circle for the hole.

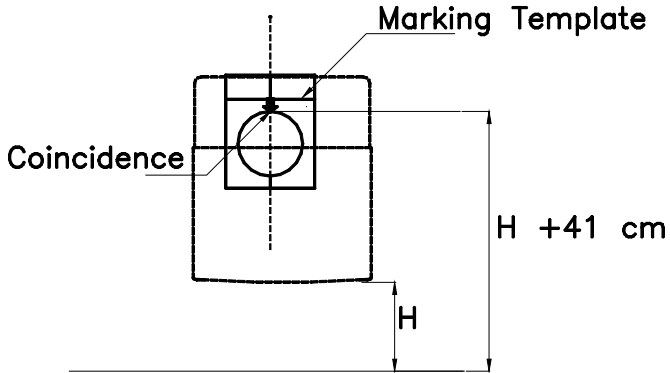
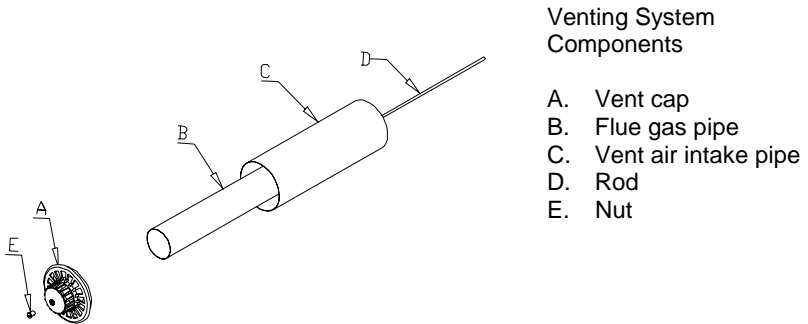


Fig. 3

- Drill the hole through the wall.

### Installing the venting system



Venting System  
Components

- A. Vent cap
- B. Flue gas pipe
- C. Vent air intake pipe
- D. Rod
- E. Nut

Fig. 4

This appliance is supplied with vent pipes for a wall thickness up to 35 cm. These pipes must be trimmed according to the thickness of the wall in which the heater will be installed. See Table.

Vent air intake pipe :	Wall Thickness [cm] + 1,2 [cm]
Flue gas pipe :	Wall Thickness [cm] + 3,3 [cm]
Rod :	Wall Thickness [cm] + 11,0 [cm]

### Important

The vent cap must be flush to the wall. Never use pipes longer than wall thickness, it would cause malfunctions of the heater (Fig 5).

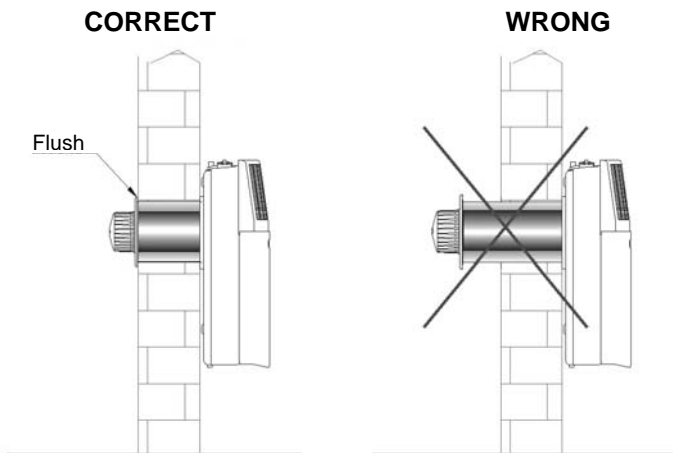


Fig. 5

- Insert the vent air intake pipe into the wall and secure it with cement.
- This pipe must protrude 12 mm indoors and be flush outdoors (Fig. 6).
- The vent air intake pipe must have a slight downward slope to the outside. This downward slope is necessary to prevent the entry of rainwater.

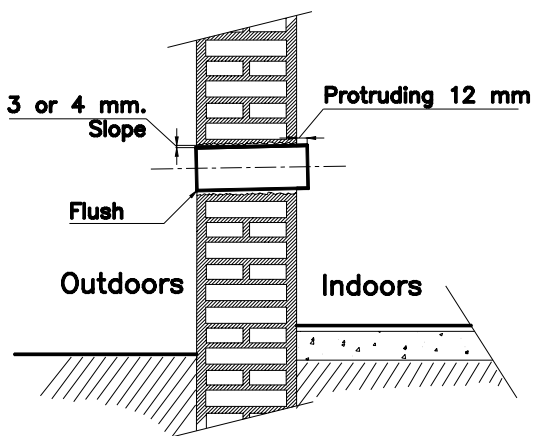


Fig. 6

- Separate the front panel of the appliance by removing the two nuts at the bottom and sliding it up as shown in figure 7.

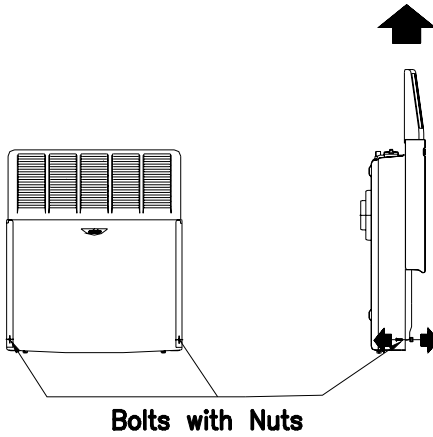


Fig. 7

- Remove the top radiation shield and the lateral shield, unscrewing their screws. (Fig. 8).

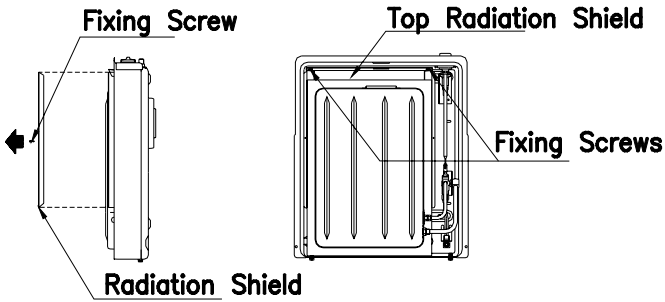


Fig. 8

- Position the heater onto the vent air intake pipe. Making sure that the heater is horizontal, mark the position for the fixing screws. (Fig. 9)

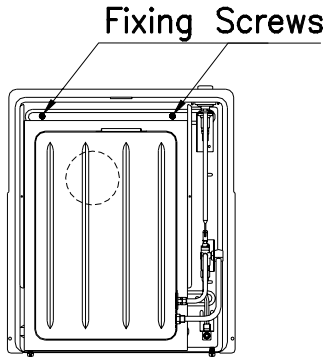


Fig. 9

- Screw the rod some turns in the nut of the flue outlet collar of the heater (Fig. 10) and insert the flue gas pipe 2 or 3 cm in the collar.

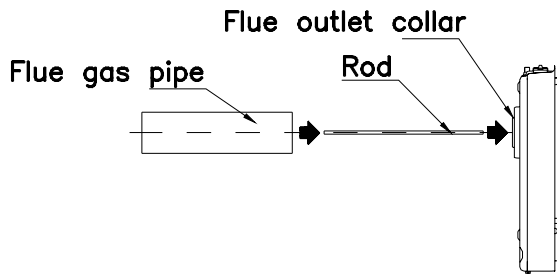


Fig. 10

- Position the heater in the vent air intake pipe, and fix the appliance with the screws (Fig. 11).

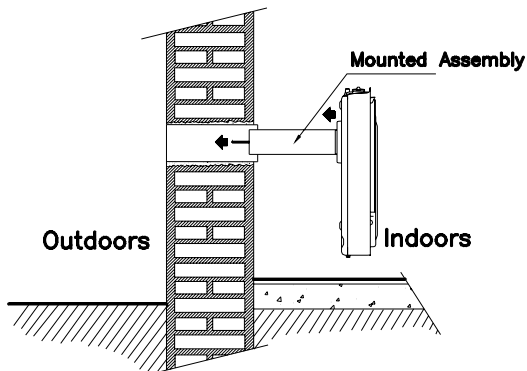


Fig. 11



- From the outside, insert the vent cap in the vent air intake pipe, verifying that the rod passes through the central orifice of the vent cap. (Fig. 12). Place the nut in the rod and screw it. Thus, the venting system will be firmly attached to the heater.

**Important:** Be sure that the rod was cut to the length specified above, if the rod is longer it would damage the combustion chamber when it is fixed to the appliance.

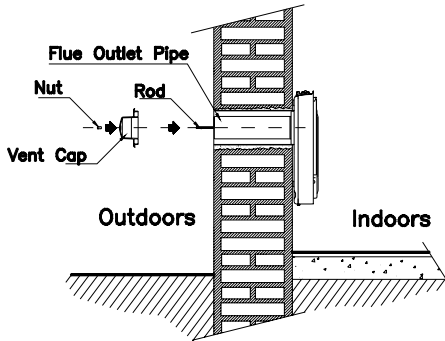


Fig. 12

- Connect the appliance to the gas supply line. The materials used must conform the local codes and standards.
- Once the appliance is connected, check for leaks. Use liquid detergent in all joints. Never use a flame to look for gas leaks.
- Reassemble the heater, positioning the radiation shields and fixing them with its screws.
- Slide the front panel through the front edges of the cabinet back as shown in figure 13.
- Place the screws, and fix them.

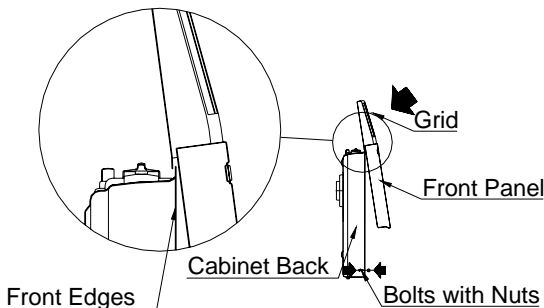


Fig. 13

**NOTE:** It is normal for a new appliance to give off some odor the first time it is lit. This is due to the curing of the paint and any undetected oil from the manufacturing process.

It is recommended to secure a good room ventilation for at least two (2) hours the first time the heater is used.

### Installing the Thermostat Sensor (Fig. 14) – TE Models

Once the heater is installed proceed to install the thermostat sensor bracket. Extract the bulb from the bracket

The bracket must be fixed horizontally to the wall, with the screws provided. It must be placed at 1 cm. Over the bottom of the heater, and approximately 2 cm. From the right side of the heater.

When the bracket is fixed to the wall, place the sensor again in the bracket.

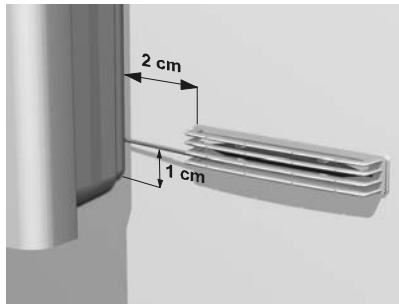





Fig. 14

### Lighting Instructions - Standard Models (Fig. 15)

- Open the main gas valve.
- Push in the gas control knob from ● (Off) and turn it to ★ (Pilot) position (Fig. 15).
- Depress knob and, after five seconds, push in the ignitor button.
- Observe through the view port if the pilot is lit. If not, repeat the previous operation.
- Keep control knob depressed for 20 seconds before releasing. Turn control knob to the desired position  (Maximum) or  (Minimum).
- To turn off the heater, turn control knob to position  (Off) and close the main gas valve.

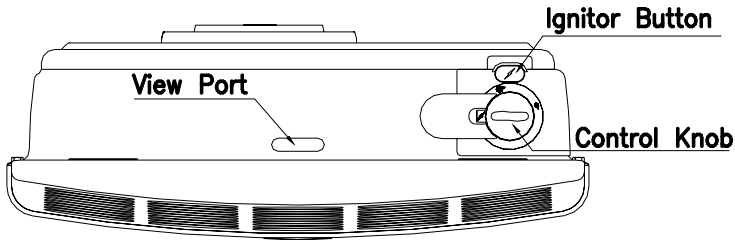


Fig. 15

### Lighting Instructions Thermostatic Models (Fig. 16)

- Open the main gas valve.
- Push in the gas control knob from ● (Off) and turn it to ★ (Pilot) position (Fig. 15).
- Depress knob and, after five seconds, push in the ignitor button.
- Observe through the view port if the pilot is lit. If not, repeat the previous operation.
- Keep control knob depressed for 20 seconds before releasing.
- Turn control knob to the desired position **TE** position.
- To turn off the heater, turn control knob to position ● (Off) and close the main gas valve.

#### Control Knob Position Indicator

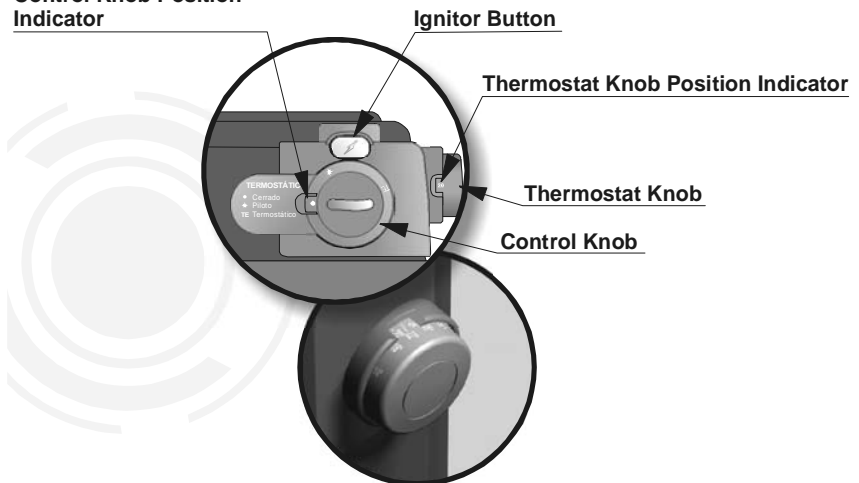



Fig. 16

- Never turn the Control Knob in positions between  (Pilot) and **TE**.

## Thermostat Knob Operation

This knob must be positioned to the desired ambient temperature. As reference the usual temperatures for home heating are from 20 °C to 24 °C.

## Cleaning and Maintenance

**Turn off the heater and let it cool down before cleaning or maintenance.  
Verify proper operation after servicing.**

You must keep control areas and circulating air passageways of heater clean. Inspect these areas of the heater before each use. Have heater inspected yearly by a qualified service person. Heater may need more frequent cleaning due to excessive lint from carpeting, bedding material, etc.

### **CABINET**

#### **Exterior**

Use a soft cloth dampened with a mild soap and water mixture. Wipe the cabinet to remove dust.

#### **Air Passageways**

Use a vacuum cleaner or pressurized air to clean.

#### **Vent Cap**

Use a vacuum cleaner or pressurized air to clean.

#### **Pilot and Burner**

Periodically make a visual check the pilot and burner flames.  
(View flames through view port)

## Troubleshooting

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed, there is no spark at pilot.	1) Ignitor electrode broken.	1) Replace ignitor electrode.
	2) Ignitor electrode not connected to ignitor cable.	2) Reconnect ignitor cable.
	3) Ignitor cable pinched or wet.	3) Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry.
	4) Broken ignitor cable.	4) Replace ignitor cable.
	5) Bad piezo ignitor.	5) Replace piezo ignitor.
When ignitor button is pressed, there is spark at pilot but no ignition.	1) Gas supply is turned off or manual shutoff valve closed.	1) Turn on gas supply or open manual shutoff valve.
	2) Control knob not in PILOT position.	2) Turn control knob to PILOT position.
	3) Control knob not pressed in while in pilot position.	3) Press in control knob while in PILOT position.
	4) Air in gas lines when installed.	4) Continue holding down control knob. Repeat igniting operation until air is removed.
	5) Pilot is clogged.	5) Clean pilot orifice or replace pilot assembly.
	6) Gas regulator setting not correct.	6) Replace gas regulator.
Pilot lights but flame goes out when control knob is released.	1) Control knob not fully pressed in.	1) Press in control knob fully.
	2) Control knob not depressed long enough.	2) After pilot lights, keep control knob pressed in 30 seconds.
	3) Manual shutoff valve not fully open.	3) Fully open manual shutoff valve.
	4) Thermocouple connection looses at control valve.	4) Hand tighten until snug, then tighten ¼ turn more.
	5) Pilot flame not touching thermocouple, which allows couple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: a) Low gas pressure. b) Dirty or partially clogged pilot.	5) a) Clean pilot or replace pilot assembly. b) Contact local gas company.
	6) Thermocouple damaged.	6) Replace thermocouple.
	7) Control valve damaged.	7) Replace control valve.
Burner does not light after pilot is lit.	1) Burner orifice is clogged.	1) Clean burner orifice or replace burner orifice.
	2) Burner orifice diameter is too small.	2) Replace burner orifice.
	3) Inlet gas pressure is too low.	3) Contact local Gas Company.
Delayed ignition of burner.	1) Manifold pressure is too low.	1) Contact local Gas Company.
	2) Burner or pilot orifice is clogged.	2) Clean burner or pilot orifice or replace it.
Burner backfiring during combustion.	1) Burner orifice is clogged or damaged.	1) Clean burner orifice or replace it.
	2) Gas regulator defective.	2) Replace gas regulator.

Yellow flame during burner combustion.	1) Inlet pipe is blocked.	1) Remove the blockage.
	2) Incorrect connections of pipes.	1) Connect pipes according to installation instructions.
	3) Gas regulator defective	1) Replace gas regulator.
Slight smoke or odor during initial operation.	1) Residues from manufacturing processes.	1) Problem will stop after a while of operation.
Heater produces a whistling noise when burner is lit.	1) Turning control knob to Maximum position when burner is cold.	1) Turn control knob to Minimum position and let warm up for a minute.
	2) Air in gas line.	2) Operate burner until air is removed from line. Have gas line checked by local Gas Company.
	3) Dirty or partially clogged burner orifice.	3) Clean burner orifice or replace it.
Heater produces a clicking/ticking noise just after burner is lit or shut off.	1) Metal expanding while heating or contracting while cooling.	1) This is common with most heaters. If noise is excessive, contact qualified service person.
Heater produces unwanted odors.	1) Gas leak.	1) Locate and correct all leaks
Heater shuts off in use.	1) Low line pressure.	1) Contact local Gas Company.
	2) Pilot is partially clogged.	2) Clean pilot.
Gas odor even when control knob is in OFF position.	1) Gas leak.	1) Locate and correct all leaks
	2) Control valve defective.	2) Replace control valve.

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