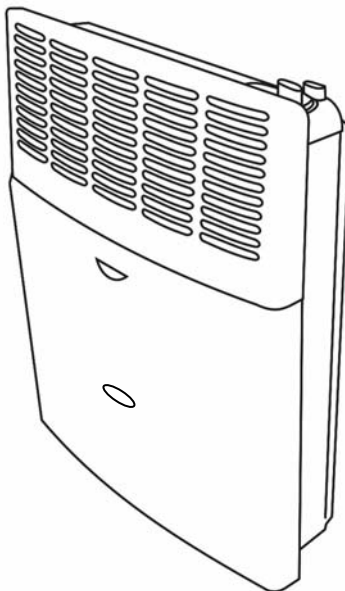


eskabe

Unvented Gas Room Heater



Models:

Manually Controlled

- S21 Mini 3
- S21 Mini 5
- S21 Mini 8

With Thermostat

- S21 Mini 3 TE
- S21 Mini 5 TE

Before installing this heater, read all instructions in this manual carefully. Check all local codes.

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided.

OWNER'S OPERATION 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 Mini 3	S21 Mini 5	S21 Mini 8
Heat Input	3000 Kcal/h (3.49 Kw) Based on Gross Calorific Value.	5000 Kcal/h (5.81 Kw) Based on Gross Calorific Value.	8000 Kcal/h (9.30Kw) Based on Gross Calorific Value.
Burner Orifice	Natural Gas 1.45 mm LPG – Propane 1.00 mm	Natural Gas 1.95 mm LPG – Propane 1.25 mm	Natural Gas 2.45 mm LPG – Propane x 1.65 mm
Type of gas	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane

Model	S21 Mini 3 TE	S21 Mini 5 TE
Heat Input	2000 Kcal/h (2.30 Kw) Based on Gross Calorific Value.	3000 Kcal/h (3.49 Kw) Based on Gross Calorific Value.
Burner Orifice	Natural Gas 1.45 mm LPG – Propane 1.00 mm	Natural Gas 2.10 mm LPG – Propane 1.25 mm
Type of gas	Natural Gas or LPG - Propane	Natural Gas or LPG - Propane

This unit is equipped with an oxygen depletion safety system (O.D.S.). The oxygen depletion safety system allows safe vent-free operation. When the normal oxygen content (20.9%) is reduced to 18%, the pilot and main burner will turn off and cannot be relit. When the pilot flame is extinguished by wind or interruption of gas supply, it will also turn off. Relighting is possible in this condition.

All models, except Mini 8, are fitted with a pressure regulator for Natural Gas.

The thermostat fitted to the models S21 Mini 3 TE and S21 Mini 5 TE, operates from a maximum to a minimum input power of the main burner, as required by the temperature in the room.

Dimensions

Model S21 Mini 3 / S21 Mini 3 TE

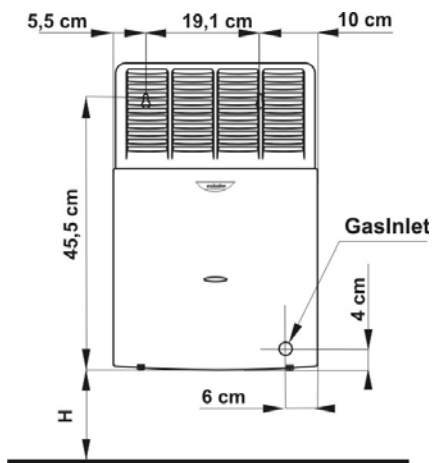


Fig. 1a

Model S21 Mini 5 / S21 Mini 5 TE

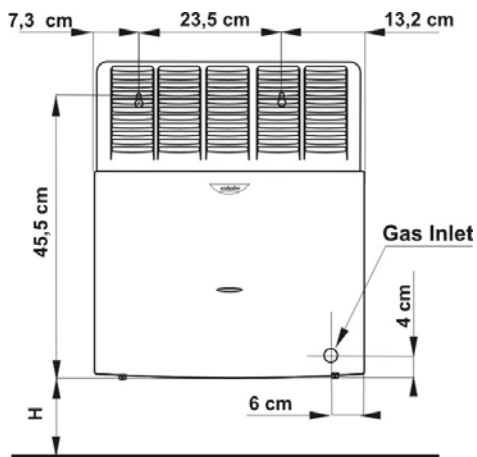


Fig. 1b

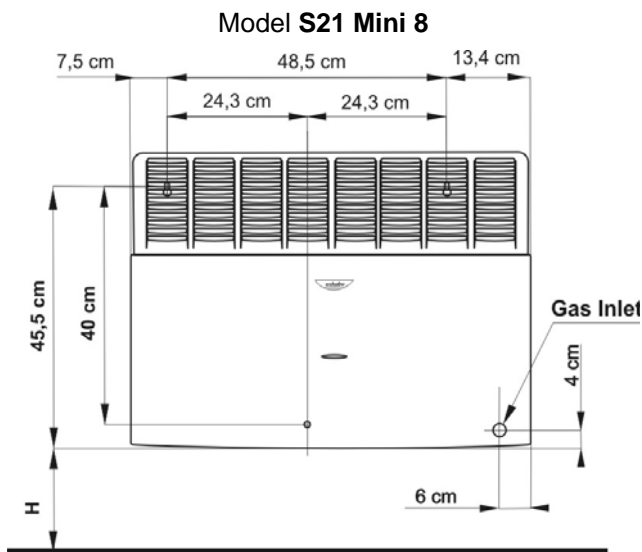


Fig. 1c

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.

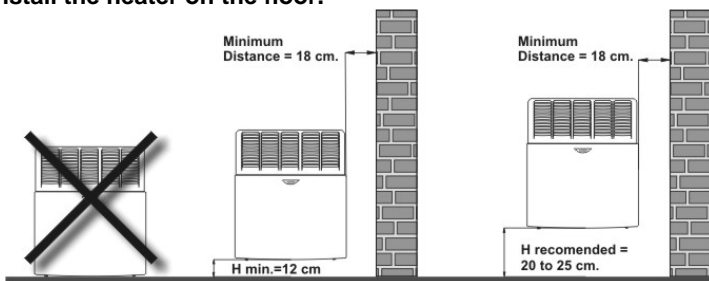


Fig. 2

Locating the Heater

- Define the height H at which the heater will be installed.
- Draw a horizontal line at a height H + 45,5 cm.

- Mark and drill the holes for the fixing anchors. For model Mini 8 a third hole must be done. See figure 1c.
- Screw the upper fixing screws some turns in the anchors.
- Separate the front panel of the appliance by removing the two nuts at the bottom and slide it up. See figure 3
- Hang heater on fixing screws by means of holes provided at the rear of the heater.
- In model Mini 8, place and fix the bottom fixing screw.

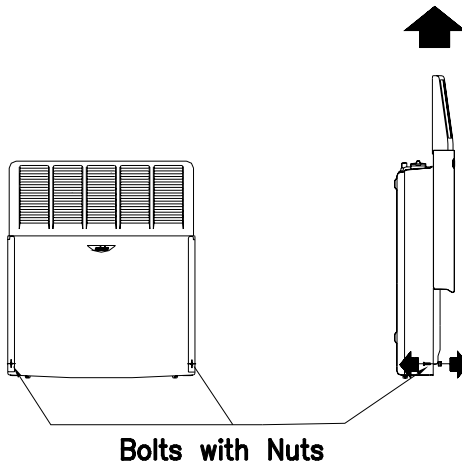


Fig. 3

- 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, slide the front panel through the front edges of the cabinet back as shown in figure 4.
- Place the screws, and fix them.

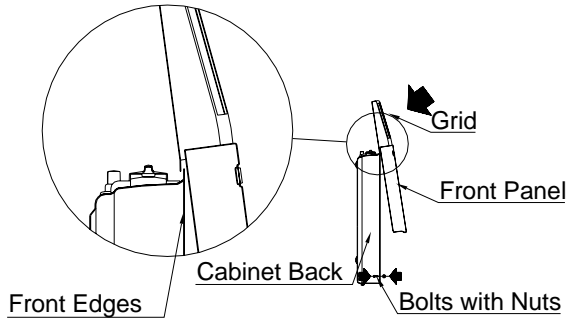


Fig. 4

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. 5) - TE Models (with Thermostat)

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.

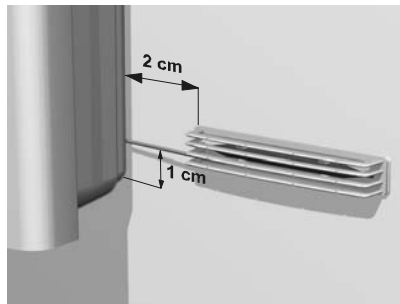


Fig. 5

Lighting Instructions - Standard Models (Fig. 6)

- Open the main gas valve.
- Push in the gas control knob from ● (Off) and turn it to ★ (Pilot) position (Fig. 6).
- 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.

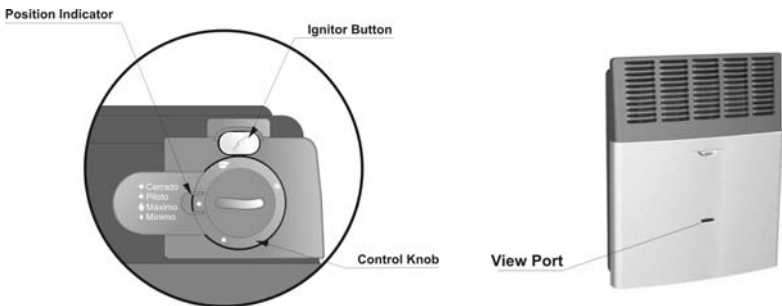


Fig. 6

Lighting Instructions Thermostatic Models (Fig. 7)

- Open the main gas valve.
- Push in the gas control knob from ● (Off) and turn it to ★ (Pilot) position (Fig. 7).
- 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.
- 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 a reference the usual temperatures for home heating are from 20 °C to 24 °C.

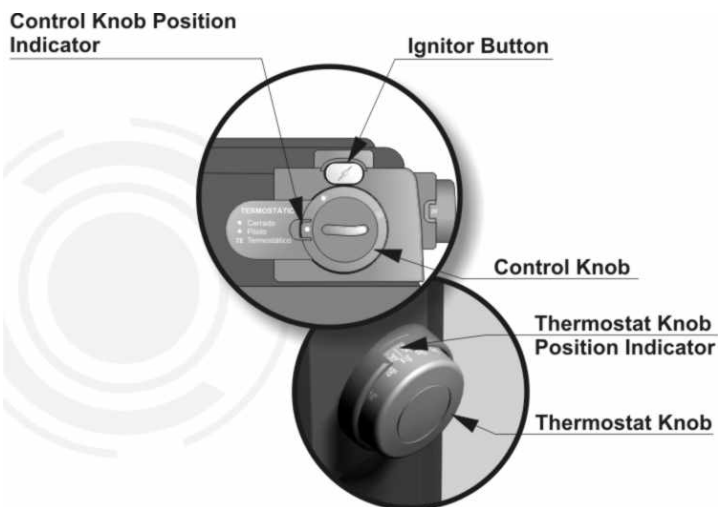


Fig. 7

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 of 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 ODS/pilot	1) Ignitor electrode positioned wrong.	1) Replace ignitor
	2) Ignitor electrode broken.	2) Replace ignitor
	3) Ignitor electrode not connected to ignitor cable.	3) Reconnect ignitor cable
	4) Ignitor cable pinched or wet.	4) Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry.
	5) Piezo ignitor nut is loose	5) Tighten nut holding piezo ignitor to heater cabinet. Nut is located inside heater cabinet at bottom.
	6) Broken ignitor cable	6) Replace ignitor cable
	7) Bad piezo ignitor	7) Replace piezo ignitor
When ignitor button is pressed, there is spark at ODS/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) ODS/pilot is clogged.	5) Clean ODS/pilot (see Cleaning and maintenance, page 16) or replace ODS/pilot assembly.
	6) Gas regulator setting not correct	Replace gas regulator.
ODS/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 ODS/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 loose 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 ODS/pilot	5) a) Contact local gas company. b) Clean ODS/pilot or replace ODS/pilot assembly.
	6) Thermocouple damaged	6) Replace thermocouple
	7) Control valve damaged	7) Replace control valve
Burner does not light after ODS/pilot is lit.	1) Burner orifice is clogged.	1) Clean burner 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 (see Cleaning and maintenance, page 16) or replace orifice.
Burner backfiring during combustion	1) Burner orifice is clogged or damaged.	1) Clean burner (see Cleaning and Maintenance, page 16) or replace burner orifice.
	2) Burner damaged.	2) Replace burner.
	3) Gas regulator defective	3) Replace gas regulator.
Yellow flame during burner combustion.	1) Not enough air.	1) Check burner for dirt and debris. If found, clean burner.
	2) Gas regulator defective	2) Replace gas regulator.
Slight smoke or odor during initial operation	1) Residues from manufacturing processes.	Problem will stop after a while of operation.
Heater produces a whistling noise when burner is lit.	1) Turning control knob to HI position when burner is cold.	1) Turn control knob to LO 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.
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) Heater is burning vapors from paint, hair spray, glues, etc.	1) Ventilate room. Stop using odor causing products while heater is running.
	2) Gas leak.	2) Locate and correct all leaks.
Heater shuts off in use (ODS operates)	1) Not enough fresh air is available.	1) Open window and/or door for ventilation.
	2) Low line pressure	2) Contact local gas company
	3) ODS/pilot is partially clogged	3) Clean ODS/pilot.
Gas odor even when control knob is in OFF position	1) Gas leak.	1) Locate and correct all.
	2) Control valve defective	2) Replace control valve.

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