

Maintenance

The Invincible RS is designed to need little maintenance mechanically.

AS NEEDED

- * Fill hopper with pellets and remove ashes.
- * Clean burn pot (scrape carbon loose with scraper), fig. 14. If the fire is pushing out more in the middle of the burnpot than before or pushing partially burned pellets off the edge, these are indications that the burnpot needs to be cleaned.

- * Remove, clean, and inspect flame guide for warpage and replace as needed, fig. 15. The flame guide is an expendable part and may need to be replaced in a few years.

- * Open burn pot clean-out slide plate by loosening the two thumb screws and rotating the slide plate clockwise, fig. 15. Remove fly ash and replace slide plate.

- * Clean glass. A dry paper towel will do the job in most cases. If a cleaning fluid is used, do not allow fluid to run down into the slots at the bottom of the corner glass. Always keep these slots clean. (Always wear gloves).

ANNUALLY (or as needed)

Clean Heat Exchanger

- * Remove side panels by pulling out on the lower front corner to unsnap the retainer snap. Next slide the panel to the rear which will disengage the other corners from their slots. The rear panel can be removed by loosening the two bolts at the bottom and lifting up and out of its slots. See fig. 15A.
- * Unbolt vent collar. This can be done by removing three bolts. This is not always

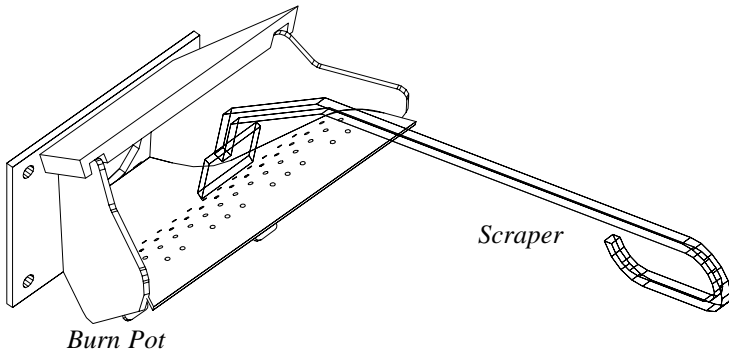


Fig. 14

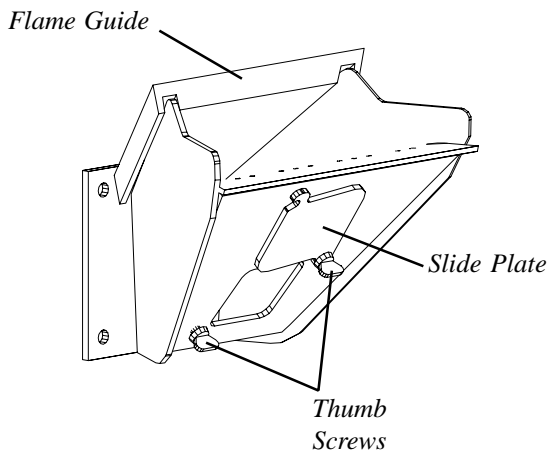


Fig. 15

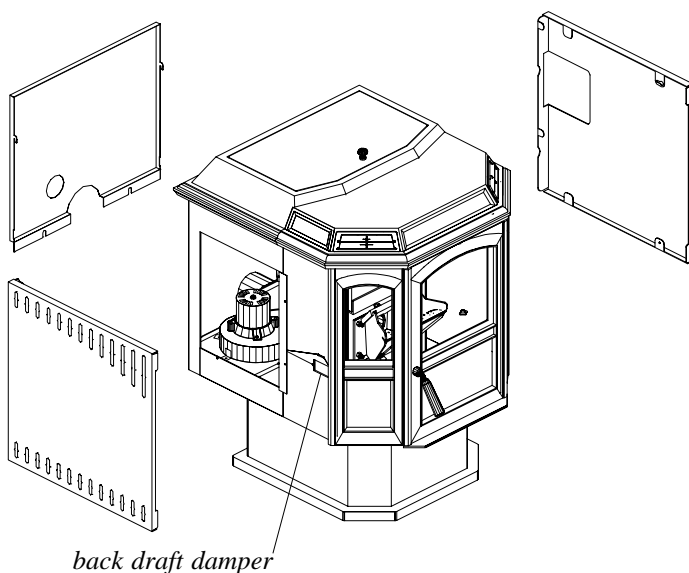


Fig. 15A

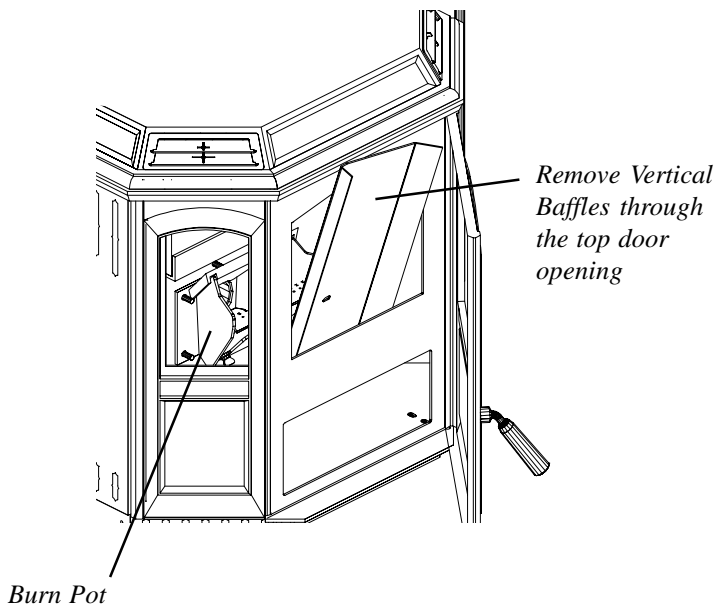


Fig. 16

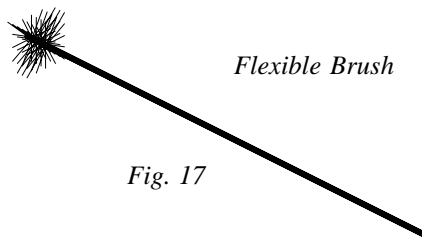


Fig. 17

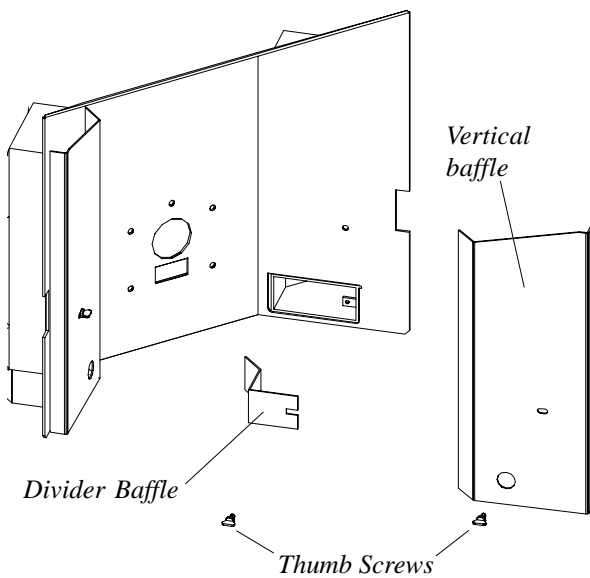


Fig. 18

necessary but it does make it easier to clean the vent pipe. It also allows you to move the stove for better access in a corner installation.

* Remove vertical baffles from firebox by first removing the thumb screws. Next rotate the baffles around to the front and remove through the door opening, fig. 16. This exposes the divider baffles which can be removed by first removing the thumb screws, fig. 18.

* There are two vertical tubes and a side tube on each side. Clean fly ash from heat exchanger tubes with flexible brush as shown in fig. 17. The right side tube has a bend in it so be sure to push the brush all the way through to the collector box.

After the fly ash is brushed loose, use a vacuum cleaner to extract the residue.

* Clean combustion blower by first disconnecting the power and then removing the six screws that hold the motor assembly in place. Lift the blower motor assembly out of the housing trying not to tear the gasket. Clean the fan blades with a brush. If for any reason the fan blades are removed be sure to have the set screws aligned with the flat spot on the shaft Fig.19A. Vacuum any fly ash from the blower housing and collector box. Reassemble in reverse order installing a new gasket if the old one was damaged.

* Clean dust and lint form backdraft dampers 1 on each side of unit and 1 on feeder body.

* Clean ESP probe. This can be done by removing the probe and cleaning it with a rag or brush fig. 19.

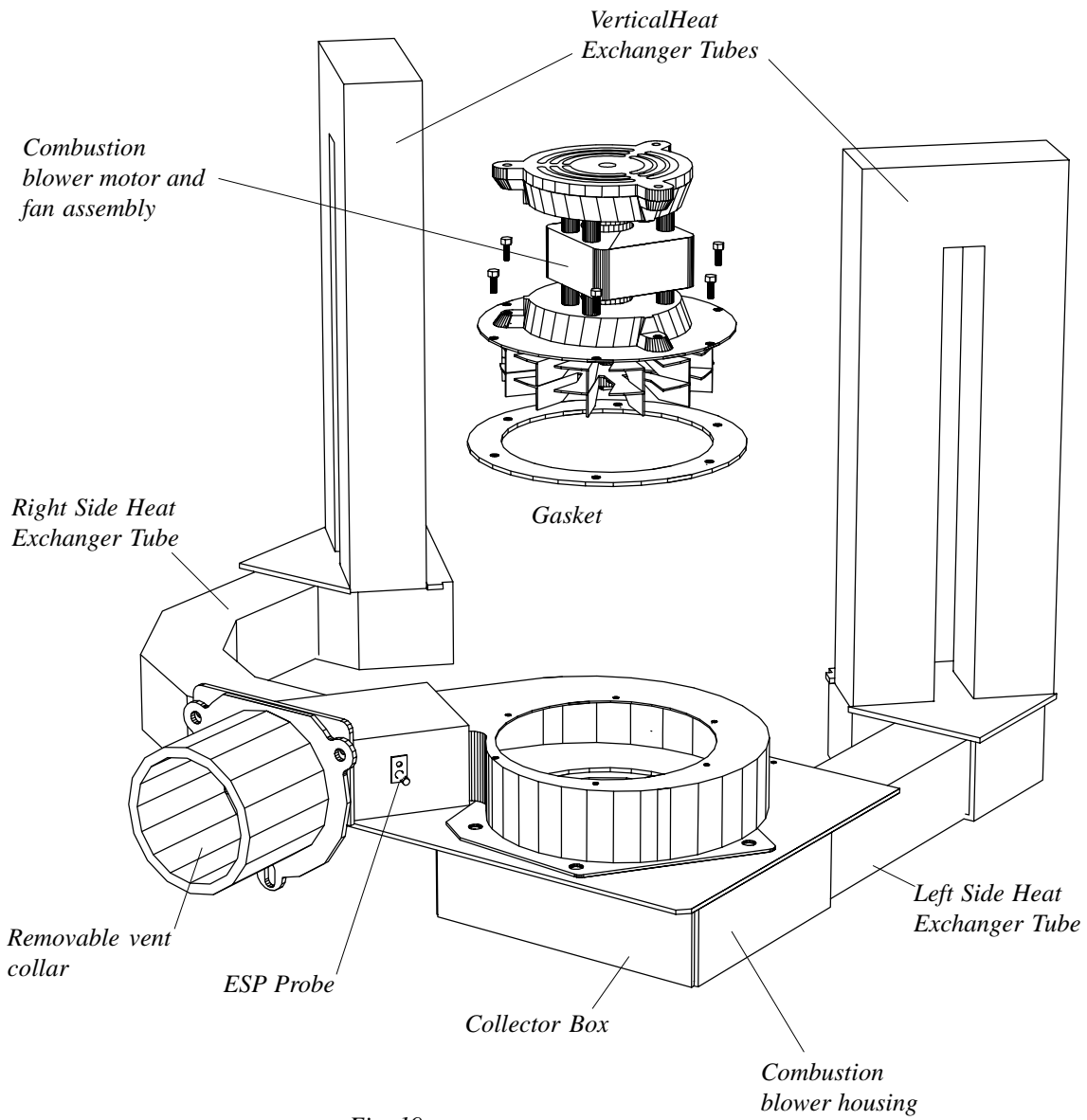


Fig. 19

Wiring Diagram

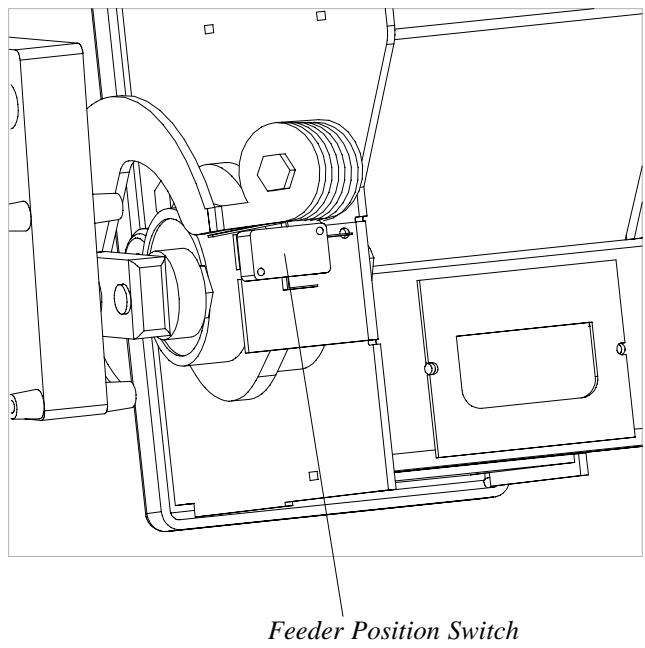
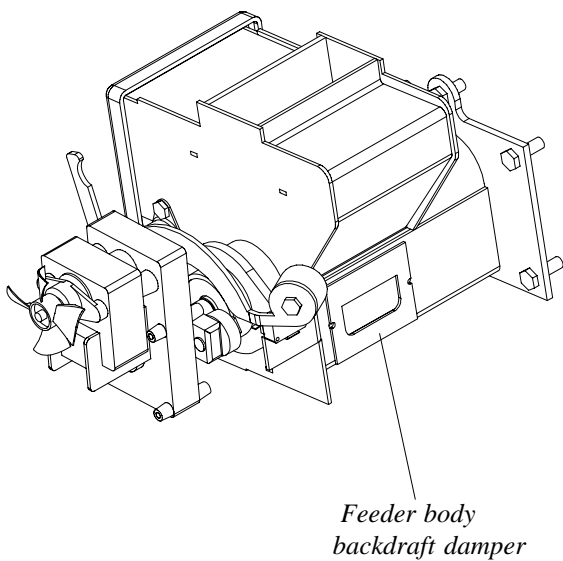
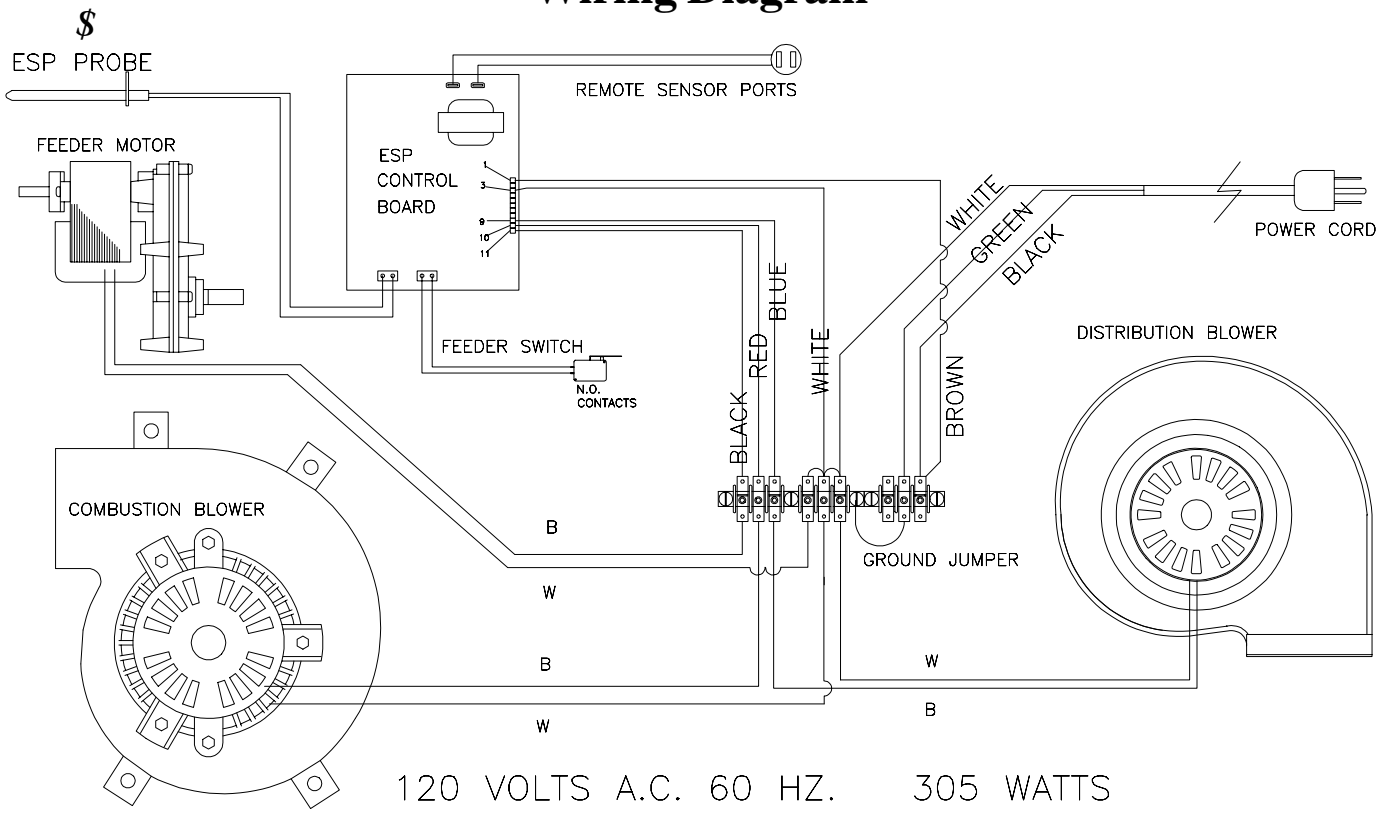


Fig. 20

Invincible RS Feeder

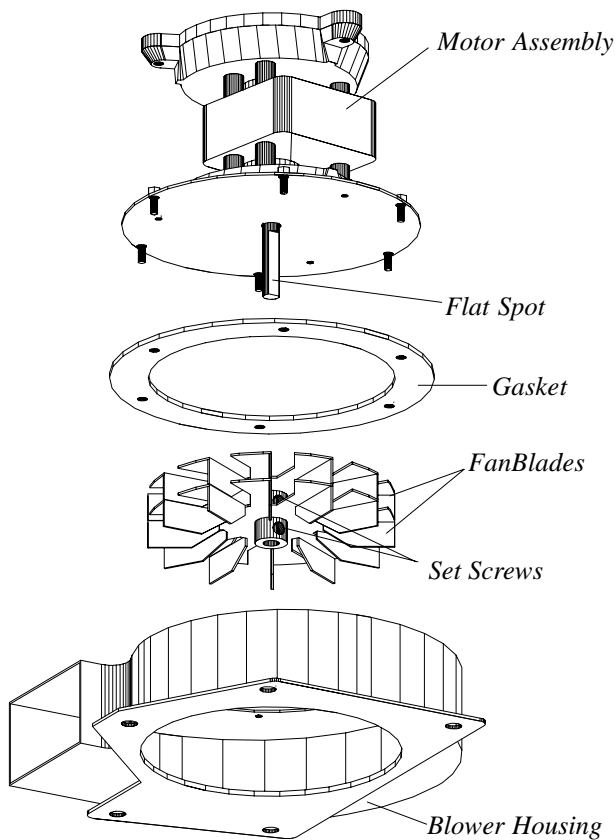
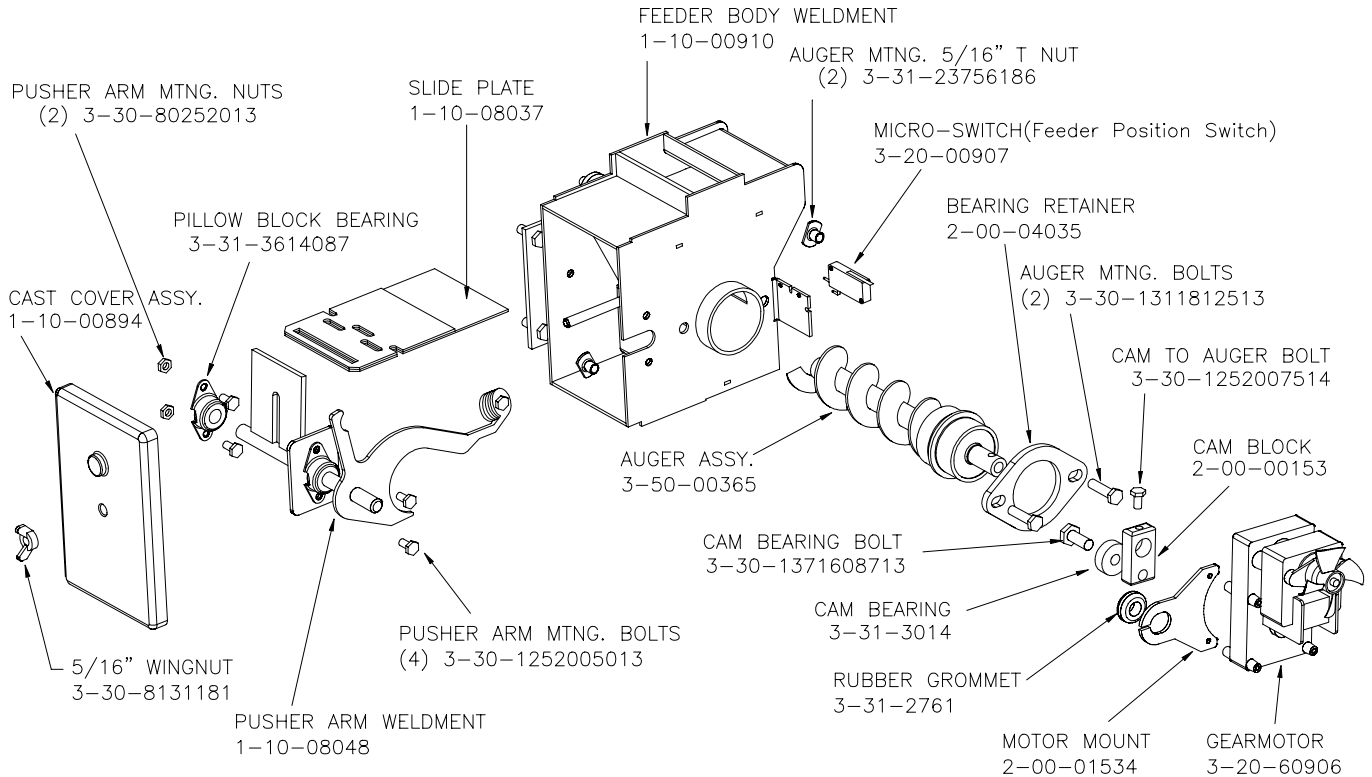


Fig.19A

Trouble Shooting

FEEDER DOES NOT FEED

1. No pellets in hopper.
2. Feed motor will not run until ESP senses 165 deg. F. Maybe you did not put enough pellets in the burn pot before lighting the fire.
3. Feed motor has failed.
4. Something is restricting flow in the hopper or causing the slide plate to stick.

PARTIALLY BURNED PELLETS

1. Feed rate too high.
2. Draft too low. (check burn pot clean- out slide and door gasket).
3. Burn pot or heat exchanger tubes may need to be cleaned.
4. Combination of all the above.

SMOKE SMELL

Seal the vent pipe joints and connection to stove with silicone.

FIRE HAS GONE OUT

1. No pellets in hopper.
2. Feed rate too low.
3. Something is restricting fuel flow.
4. Feed motor or draft motor has failed.
5. Power failure.

SMOKE IS VISIBLE COMING OUT OF VENT

1. Air-fuel ratio is too rich.
 - A. Feed rate too high.
 - B. Draft too low caused by a gasket leak.

LOW HEAT OUTPUT

1. Feed rate too low
2. Draft too low because of gasket leak.
3. Poor quality or damp pellets
4. Combination of 1. and 2.

STATUS LIGHT ERROR MESSAGES

Refer to page 10.

Helpful Hints

Cleaning Burn Pot

Whenever your stove is not burning, take the opportunity to scrape the burn pot to remove carbon buildup. A vacuum cleaner is handy to remove the residue. Be sure the stove is cold if you use a vacuum.

Carbon buildup can be scraped loose with the fire burning using the special tool provided with your stove. Scrape the floor and sides of the burn pot. The carbon will be pushed out by the incoming fuel. Always wear gloves to do this.

Removing Ashes

Turn the Stove Temp Dial to number 1 ap-

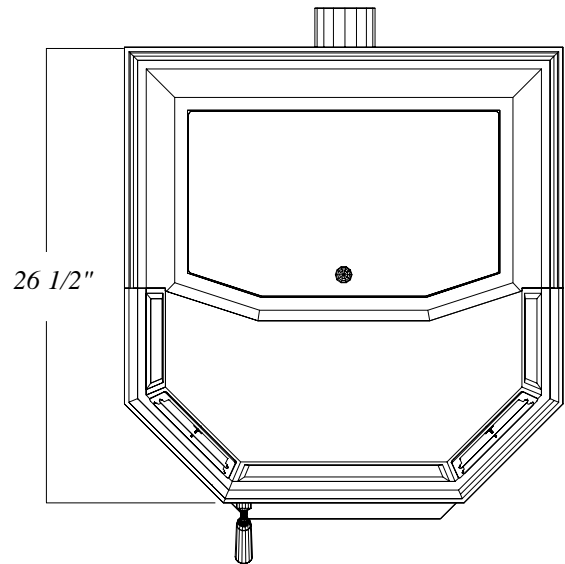
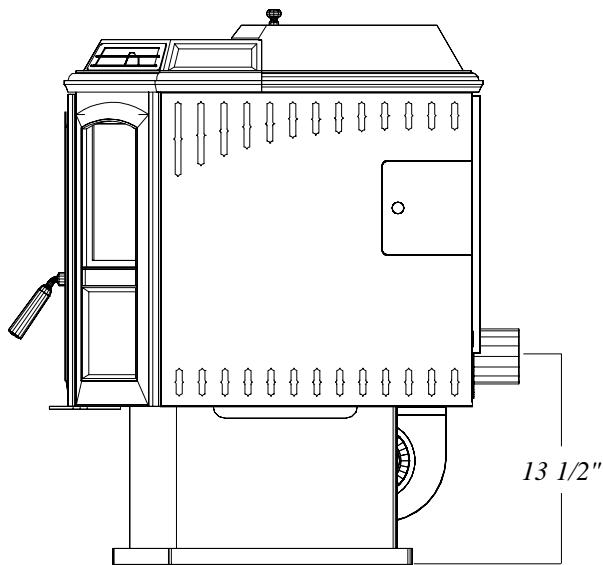
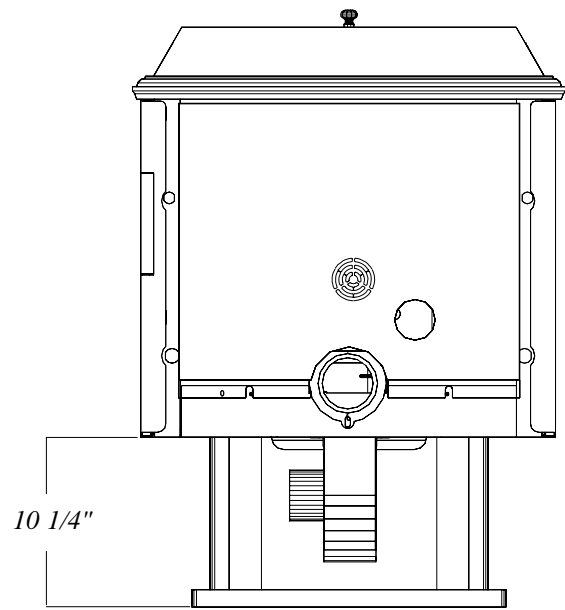
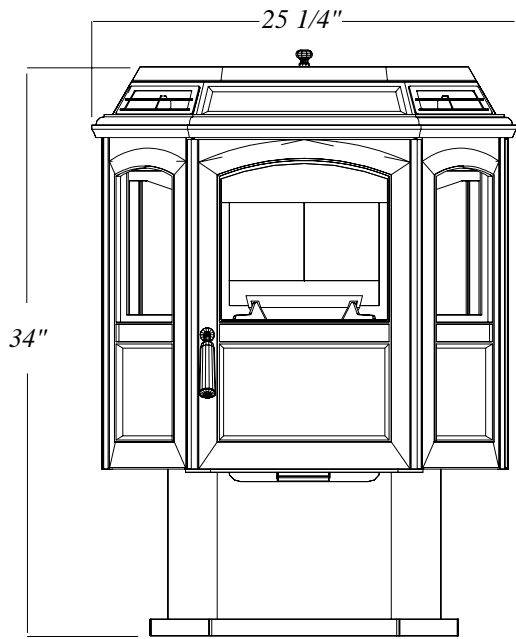
proximately 30 minutes before removing ashes. This will result in a cooler stove and ash pan.

Maximum settings are not needed in most cases. Always remember the maximum feed rate and do not exceed. Too high a feed rate will push partially burned fuel off the end of the burn pot, wasting fuel and causing the glass to get dirty. Using a lower feed rate than maximum is recommended when maximum heat output is not required.

Keep the stove free of dust and dirt.

Fuels

All wood pellets
Cardboard pellets
Walnut shell pellets
75% Corn, 25% Wood pellets



Specifications

Weight	365 lbs. (without crate)
Blower Size	135 cfm
Hopper Capacity	60 lbs.
BTU Range	7000 to 53000
Heating Capacity	1800 Square Feet
Fuel	Wood Pellets
Flue Size	3" Round
Fuse Rating	5 AMP

Warnings

The INVINCIBLE INSERT operates at varying sound levels and types of sounds depending on the mode of operation. This is normal and is not a problem.

This unit has been designed and tested to be operated with the door closed. The door should only be opened to remove ashes. Normally the door open time to remove the ashes is less than 10 seconds and does not pose a problem. Keep hopper lid closed except for loading.

**NEVER PULL THE PLUG
TO KILL THE FIRE**