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## Operating Instructions for Finnish Fireplace

Important Note: Do not operate your Finnish Fireplace until you have read and understood these instructions

### A) In Brief:

- 1) Open chimney damper.
- 2) Open combustion air control.
- 3) Stack wood load with the kindling to the side (see photo).
- 4) Light, close doors.
- 5) When fire is down to a charcoal bed, push coals onto grate.
- 6) When fire is completely out (no coals) close damper and combustion air control.

**CAUTION:** Do not close the chimney damper until the fire is completely out. When there are still coals, carbon monoxide is being produced. It is odorless and potentially lethal. Make sure that this is understood by anyone who operates the heater.

A CO detector should be installed in any house with a combustion appliance, and we strongly urge you to do so. The most reliable brand is “Nighthawk”, available in several models at Home Depot and Walmart. The battery operated model with LCD readout costs about 60.00 CDN.

### B) In Detail:

#### Stacking Wood:

- Scrape ashes from previous fire into the grate.
- Maximum wood load per fire is 50 lbs. Maximum wood load per day is 100 lbs. (2 fires)
- Stack layers of wood, log cabin style, towards one side of the firebox (see illustration, next page), to leave room for kindling on the side. Firewood pieces shown could be somewhat larger.
- Crumple 4 full sized sheets of newspaper into balls and lay them next to the wood pile
- Pile about 2 lbs of dry kindling on top

Optional: After 60-90 minutes, the fire is changing from long flames (volatiles) to a charcoal fire, which requires less air. You may cut back the chimney damper by about 1/2 (the fire will burn noticeably slower).

Towards the end, when there are coals, they will burn up faster if you push them onto the grate at the back.



**Fuel Load with Kindling stacked to side**

### **C) Firewood Notes:**

You may use any type of cordwood, provided it is dry. If you use scrap wood, such as hardwood pallets, be careful - the wood can be over dry and burn too hot and damage the heater. If using small, very dry wood, stack it tighter and mix in some wetter wood to slow things down.

For hardwood, ideal wood size is about 6" diameter. An 8" log should be halved.

For softwood, ideal size is about 7". These sizes are not critical.

It is advantageous for the wood to be fairly even in size. If you have one big piece in there, it will be the last to burn and you will have to wait much longer for the fire to be out.

The wood should have about 20% moisture. This means that it has been split and stacked inside for 6 months, or split and stacked outside, with a cover, for 8 - 10 months. If it has been stacked outside but not covered (even for years) it is NOT dry. Two pieces of dry wood will make a characteristic ringing sound when struck together.

## D) Glass Maintenance

Keep wood towards the back, and avoid piling it too close to the glass. In normal use, the glass will burn clean, but will leave a hazy residue. This should be wiped clean with a damp sponge before every burn.

## E) Curing a New Heater

When your heater has just been built, it contains large amount of water. A lot of the water that went into the mortar is still in there.

Before you can use the heater, it must be completely dried out. Otherwise, steam could form inside the masonry materials and damage the heater.

As soon as the heater is finished, start lighting several small fires in it. This can be done several times a day, but fires must be at least six hours apart. Start by burning about 5 lbs of wood. Gradually increase the size of the load, about 3 lbs. each time. When the load is up to 20 lbs., maintain a 12 hr interval between fires.

If the glass becomes black and does not wipe off easily, it is best to wait until the fire is hot enough to burn off the glass. In normal use, the deposits will burn off the glass, leaving a slight hazy film that is easy to wipe off with a damp sponge. In normal operation with a full load, the firebox should burn clean inside.

**Smoking:** When the heater is uncured, and during attempts to light a cold heater in warm weather, you may experience a chimney draft reversal that will cause smoke spillage. The easiest way to prevent this is to have propane plumber's torch handy. If smoking starts, remove a cleanout door and aim the torch into the chimney or a base channel to get the draft going.

To check for chimney draft on a cold heater, open one of the cleanouts at the base of the heater, and hold a lit match there. The flame should be pulled sideways into the cleanout opening. If there is no draft, prewarm the flue. If there is weak draft, either have a plumber's torch handy in case of smoke spillage, or prewarm the flue. You can also prewarm the flue by aiming a blow dryer into the cleanout opening for about 10 minutes.

**IMPORTANT:** During the curing period, do NOT close the chimney damper. This allows the moisture to escape up the chimney. The heater won't store much heat. The heatOnce the heater is cured, you can start heating with it.

Play it safe, break it in gradually, and your heater will provide you with many years of trouble free comfort.

- Please store these instructions in a safe place for future reference.