

ANNA

User guide

NOTE BEFORE USING THE FIREPLACE

- Always when using a fireplace, the replacement air must be taken care of. 1 kg of firewood needs approx. 8-10m³ of air for combustion.
- Let fireplace get dry with fireplace door and smoke damper open at least 2-3 weeks. Drying can be faster when using a fan heater. Make sure before igniting first batch of woods that fireplace's flue channels are dry. If there's moisture in channels, drying must be continued without fire.
- Before burning the first batch of wood, must be ensured that sweeping hatches are in right places. These places can be found for example from the layer pictures of the installing manual.
- Start heating using very small batches of firewood (approx. 0.5 kg) once a day for a week. First batch must be burned with ignition plate open (only top connection model). After 7 days amount of wood can be added approx. 1 kg once a day. At the drying phase leave the smoke damper open, so all moisture can exit freely.
- Fireplace's too fast heating may damage the fireplace and shorten its working life.
- Notice that if a fireplace has been long time without usage, the heating must be started carefully, so the moisture that has accumulated to elements won't harm the appliance.
- In any case, the moisture cannot be condensed to inner surfaces of the fireplace while heating!
- Remember CO-danger. Do not close the smoke damper too soon.
- Fireplace is not suitable for shared flue. There must always be flue for each fireplace.

Compensation air

Compensation air must be taken care of, so that good draught can be ensured. Extractor hood and central vacuum cleaner are not recommended to be used while using a fireplace, if ventilation system does not include pressure leveling system (for example ventilator's fireplace switch). Ventilator's fireplace switch adds room's excess pressure only temporarily.

If necessary, a window can be opened for the time of ignition. After woods have ignited, the draught usually improves so much, that window can be closed.

Make sure that ventilation holes of the fireplace stay clean. It is recommended to test the motility of the ventilation holes at times.

Beginning

Let fireplace get dry with fireplace door and smoke damper open at least 2-3 weeks. Drying can be faster when using a fan heater. Make sure before igniting first batch of woods that fireplace's flue channels are dry. If there's moisture in channels, drying must be continued without fire.

Before burning the first batch of wood, it must be ensured that sweeping hatches are in right places. These places can be found for example from the layer pictures of the installing manual.

Start heating with very small batches of firewood (approx. 0.5 kg) once a day for a week. First batch must be burned with ignition plate open (only top connection model). After 7 days amount of wood can be added approx. 2 kg once a day. Leave the smoke damper open at the drying phase, so all moisture can exit freely.

Fireplace's too fast heating may damage the fireplace and shorten its working life.

Notice that if fireplace has been long time without usage, heating must be started carefully, so the moisture that has accumulated to elements won't harm the appliance.

In any case, the moisture cannot be condensed to inner surfaces of the fireplace while heating!

Permitted fuels

Use most preferably as dry wood as possible. Burning trashes (card board, paper, burnable packaging materials) in the fireplace is not recommended. Do not burn coal, briquettes or other materials incl. liquid fuels that may include toxic gases in the fireplace. Wooden briquettes and pellets are allowed in small quantities.

Any national or local regulations, and codes of practice, shall be complied with.

Find maximum wood quantities for each fireplace from the table below.

FIREPLACE	WOOD AMOUNT (max./d) (kg)	WOOD LENGTH (cm)	MAXIMUM HEIGHT OF BATCH (cm)
Maria (REG)	2+2+2	25	20
Juhana	4,5+3+3	30	25
Kulma-Juhana	4,5+3+3	30	25
Iso-Juhana	7+3+3	33	28
Aino	6+2,5+2,5	30	25
Anna	6+4+4	33	28
Anna tunnel model	6+3+3	33	28
Johannes	2,5+2,5+2,5+2,5	33	25
Iso-Johannes	6+3,5+3,5	33	28

FUEL	HEAT VALUE (kWh/kg)	ENERGY DENSITY (kWh/loose-m ³)	ENERGY DENSITY (kWh/pile-m ³)
Pine	4,15	810	1360
Spruce	4,10	790	1320
Birch	4,15	1010	1700
Alder	4,05	740	1230
Aspen	4,00	790	1330
Wood pellet (moist < 10 p-%)	4,8	3,1	
Wood briquette (moist < 10 p-%)	4,8		

Never use wet wood or too small draught, because flue channels can get dirty and as a result can be dangerous chimney fire. In case of chimney fire, the local fire department must be called immediately.

Chimney fire

Too wet or low-quality wood as a fuel can send sparks through the appliance all the way to the chimney. These sparks can influence a chimney fire. (With regular sweeping this kind of cases are very uncommon.)

If the chimney is on fire, can it be seen in flames, in chimney's blaze, in sparkles with heavy smoke through chimney and harsh smell of a smoke. Also chimney's sides feel hotter than normal.

In the situation mentioned above it is important to react right. Call fire department and report for a fire. Inform also the chimney sweeper. Take flammable objects away from around the chimney. Before the fire department has arrived do not throw any water on the appliance. Temperatures in chimney fire can rise up to 1300 °C. The water thrown to the flames would evaporate immediately and for example 10 liters of water were to become 17 m³ of steam. The pressure that would be formed could tear the whole chimney.

Storing firewood

Woods are recommended to be stored in wintertime. Woods are suggested cut to logs, so drying is faster. It may take even 2-3 years before woods have dried to the level where the moisture content has dropped to 15-20%. Logs from fresh wood are not to be maintained for example in the basement or in the garage. Do not even wrap woods with plastic, for example tarp, because air cannot run through the logs at then. Store logs in an area that has a good air conditioning and is protected from the rain.

Using the fireplace

Begin with opening a smoke damper and an ignition damper if necessary (in cases when chimney is cold or fireplace hasn't been used in a long time.)

Lay logs and primers sparsely to the backside of the fire nest so, that they leave clear gap between a fireplace door. Open lower air control unit at least 3 cm and air control slides over the fireplace door according to "*Burning guide*"(page 8). It is recommended to ignite the batch from the top center. This way fine particle emissions are smaller. Bringing woods near to the fireplace one day before burning is also recommended.

For creating a draught the fireplace door must be closed right after ignition. After woods have ignited and draught has been created, the ignition plate may be closed.

When there are only embers left, adding second batch is possible. Check recommended wood amounts for your fireplace from the table upon. Remember to open door slowly when adding woods. When door is opened quickly, especially bigger doors may leave smoke to the room. Ignition plate can be opened for a few moments when door is opened, so possible negative pressure do not make easily problems for draught. Ignition plate must be closed right after closing the fireplace door.

The most stable final heating result can be reached with burning one batch by morning and one by evening.

Close the damper after embers have turned from red to black.

When the fireplace will not be used for a long time the damper, lower air control unit and air control slides over the fireplace door must be closed. When usage of the fireplace continues it must be checked that flue is not blocked by for example birds nest. If there is a very bad weather, flues of the fireplace can be heated with for example hairdryer or paper so the draught is better.

Cleaning the ash

The ash box must be cleaned at times so burning air can get through the grating. Air makes grating colder and it can be damaged if the air is not given. Clean glass doors from the appliance according to manufacturer's guide.

How to clean ash box:

Detach lower air control by pulling carefully from both sides of the air controls cover. After approx. 5 cm long air control is detached the ash box can be seen. Pull ash box out and carry ashes to the metallic bin. After two days ashes can be moved to the place designed for ash. It is recommended to clean ashes before igniting next batch in the fireplace.

Put ash box back to the same place and position. Ash box must be pushed against the back of the ash layer so the air gaps between ash box and inner element won't be closed. Take care that there's no bigger embers left under the ash box. Now the air control unit can be attached back to its place by pushing or tapping it carefully.

Draught of the flue

Modern fireplaces require more from the flue compared to old fireplaces. If flue is wrong size of or seedy, draught can suffer very much. Draught consists of flue gas temperature, of exterior temperature, of

weather, of brought air amount and measurements of the fireplace. Connection to the flue must be tall enough compared inner measures of the flue. CE shield demands that draught of the flue is 12-25 Pa.

The draught of the flue gets better when height of the flue grows, flue gets warmer or more air is guided to the fire nest from the room.

If flues diameter is too big or flue has wrong height take contact to a professional. Take always care that fireplaces temperature class do not cross flues temperature class.

Cleaning and handling the fireplace

Sweeping of fireplace must be done at least once a year. Sweeping hatches can be found behind the ash box. Detach air control unit and ash box from the fireplace before sweeping. Sweeping of fireplace and flue must always be done by professional.

Clean nest from the ash always before igniting the next burning. Make sure that air can flow freely from every air gap to the fire nest. This way fire reaction stays as clean as possible.

It is recommended to maintain installation and usage manuals with layer pictures for sweeper.

Sweeping guide:

The cheek flue channels and back flue channels are to be swept through sweeping hatches on sides of ash nest. It is recommended to use pipe cleaner with spring made of nylon. More specific pictures of the structure is found installation manual of the fireplace.

Guide for sweeping the flue can be found flue's manufacturer's user guide.

Cleaning the glass door:

Soot must be swept off the glass often enough, so it won't burn into the glass. The easiest way to clean door's glass is to dip wet newspaper in the ashes in the nest and swipe the soot off carefully with it.

Safety

Never use the fireplace with another fireplace attached to the same flue at the same time.

Fireplace heats up through the burning period and even after it. When burning bigger batches even the plaster surface can become hot. Glass door becomes burning hot while woods are burning. Glove belongs in to the fireplace delivery. Use this glove always when using the fireplace.

If it feels that fireplace is overheated, close air holes in glass door and slide air control unit to the left (close it). Open the ignition plate and leave the damper plate open. This way all heat runs straight to the flue and out through it. When combustion does not have any oxygen it will weaken. Let logs burn until the end.

Pay attention to safety distances to igniting materials incl. furniture and fire woods when using the fireplace. All igniting materials at immediacy of the fireplace must be protected from the fire. Obey local laws and orders.

Do not leave the fireplace alone whilst burning or close the damper before all the embers are flamed out. This case can cause carbon monoxide poisoning.

Keep the glass door of the fireplace generally closed, so smoke does not pervade into the room. The glass door can be opened during adding wood and during cleaning the ash.

Handling packaging waste

Deliver packaging waste of the fireplace to the dump's waste burning point. This way all material will be recycled in the form of new energy. The EPS material and cover plastics may not be burned in the fireplace.

Tightening the glass door

Screws of the glass door must be tightened at times. Tighten screws with a screwdriver after burning few batches. Make sure at the same time that the screws tightening nut's arm is still attached to outer element's inner surface. If the nut is not fastened properly, it drops out from the gap between inner and outer element and glass door gets loose. In this case turn nut's arm back to the gap and help it staying in the right place and direction through tightening. Tighten glass door at least twice per half year.

Terms of guarantee

Do not make any changes to the capacitive fireplace without manufacturer's approval. Changes in the fireplace may lead lapse of the guarantee. Faulty parts must be replaced with parts approved by the manufacturer.

FAQ

The glass door gets black quickly and uneven?

If this problem has not appeared from the beginning, pay attention to following questions:

- Have you used appropriate fuels?
- Is there windy/stormy weather outside?
- Can't you handle compensation air / is the lower air control box open?
- Does the door soot quickly/in a half hour?

If you answered "Yes" to all of these questions, take contact to your fireplace supplier/manufacturer.

Batch catches fire poorly and very slowly?

If this problem has not appeared from the beginning, pay attention to following questions:

- Have you used appropriate fuels?
- Is there windy/stormy weather outside?
- Can't you handle compensation air / is the lower air control box open?
- All the air control switches are as open as possible?
- Is there a 0.5-1 cm gap between an inner element and the ash boxes upper side?

If you answered "Yes" to all of these questions, take contact to your fireplace supplier/manufacturer.

Smoke comes inside the room when burning the fireplace?

If this problem has not appeared from the beginning, pay attention to following questions:

- Have you used appropriate fuels?
- Is there windy/stormy weather outside?
- Can't you handle compensation air / is the lower air control box open?

- Have you opened the glass door slowly?
- Is the glass door loose? How about the sealing of the glass door?

If you answered “Yes” to all of these questions, take contact to your fireplace supplier/manufacturer.

Is the wood consumption too high?

If this problem has not appeared from the beginning, pay attention to following questions:

- Have you reduced the amount of the compensation air?
- Is the glass door closed properly?
- Do you burn right amount of wood?
- Are logs dry enough? (Moisture under 20%.)

If you answered “Yes” to all of these questions, take contact to your fireplace supplier/manufacturer.

More information

For more information, take contact to your fireplace supplier/manufacturer.

Anna burning guide

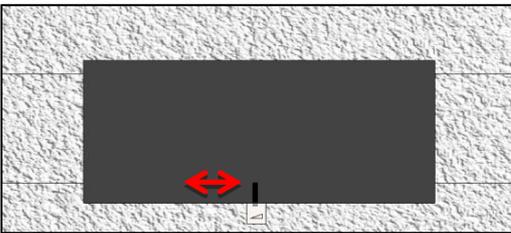
Open the damper and in some cases the ignition plate too. (If flue hasn't been used for a long time, only in models with top and upper connection.)



Referred amount of fire wood:

- 1st batch 6.0 kg (<0.5 kg/wood)
- 2nd batch 4.0 kg (<1.0 kg/wood)
- 3rd batch 4.0 kg (<1.0 kg/wood)

Lay all woods lengthwise to the nest's bottom. Woods of the first layer should have weight of 500 g at max. Size of these woods should be approx. 6 x 5 x 30 cm.



Lay rest of the first batch lengthwise as evenly as possible. The top of the wood pile should be at the centre of the fire nest. Lay heavier woods to the bottom and lighter woods to the top.

Smallest woods, approx. 1 x 1.5 x 30 cm, should be at the top.

Primer or birch bark can be used to ignite the first batch. Put primer over the wood pile and ignite the nest with a lighter. (If the ignition plate is open, close it after few minutes.)



Adjust the air control over the glass hatch fully open. By doing this the glass stays clean longer.

Adjust the air control under the ash box if wanted.

- The more air is given under the ash box, the faster woods burn and waste heat is formed.
- The less air is given under the ash box, the more ash and bigger embers are left.
- Linnatuli recommends that the air is fully open under the ash nest. (Black lines touch each other) So more air can enter to the nest and toxic gases will burn in the burning chamber.

Adding wood:

- Add the 2nd (and the 3rd) nest when the former nest has been burning approx. 58 minutes (3rd nest 35 minutes after adding the 2nd nest). Try to add all wood to the center of the fire nest. Woods must be added so that they leave about 5 cm air gap for old flames either to the left or to the right side (see picture).
- Open the glass hatch carefully and add 4.0 kg wood.
- Close the hatch as fast as possible.

Heat storing:

- When embers are red-hot, the air control under the ash box should be turned fully open to the right, if not yet done.
- When red coals turn black, close the air control under the ash box and close the air control over the glass hatch.
- Close the damper.