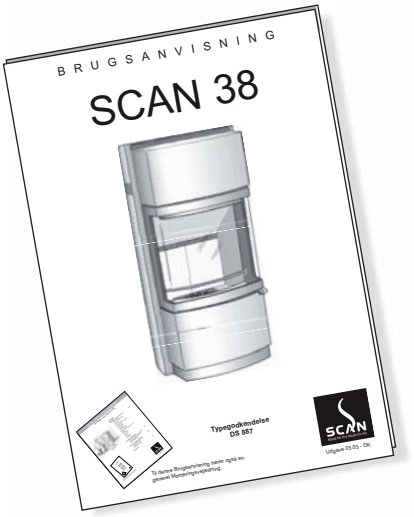
INSTRUCTIONS FOR INSTALLATION

Including Directions for Use and Stoking

Contents:



We recommend that you read this manual as well as the *instructions for your specific model* before beginning the installation.

SCAN
Made for fire Made for life

Edition 09/05 - GB

We welcome you to the SCAN family

You have chosen a product from one of Europe's leading manufacturers of wood-burning stoves. We are convinced that your stove will be to your full satisfaction and give you many hours of pleasure if you follow the advice and instructions of this manual.

We ask you please to read this manual as well as the *instructions for your specific model* before beginning the installation.

Warranty conditions for SCAN wood-burning products

All SCAN wood-burning stoves and inserts are made of first-class material and are subject to a strict quality control before they leave the factory. However, if an error should occur, we back all SCAN wood-burning stoves and inserts with an extensive, five-year limited warranty.

The warranty covers all parts that may require replacement from a failure that is considered, in the judgment of Krog Iversen & Co. A/S, to be a defect in material or workmanship.

This warranty is given to the first retail purchaser only (other than for the purposes of resale) and is not transferable. This warranty does not cover damage resulting from other than defects in material or workmanship.

Specifically this warranty does not cover:

- Wearing parts such as firebricks, ceramic smoke deflector, shaking grate, glass panes, tiles, and gaskets (other than damages that are visible at the time of delivery).
- Defects caused by outer chemical and physical actions during transport, in stock, during the installation, or later.
- Sooting caused by a bad chimney draught, humid wood, or wrong service.
- Costs caused by extra heating in connection with repair.
- Transport costs.
- Costs in connection with dismounting and mounting of the unit.

The warranty is invalid:

- If the installation or service is performed by someone other than an authorised installer, or if the installation is not in conformity with installation instructions and/or local fire and building regulations.
- With the misuse of the stove and use of disallowed fuel or non-original spare parts (see Instructions for Installation).
- If the serial number has been removed or defaced.
- If service for defects covered under this warranty is performed by other than an authorised SCAN dealer or contrary to Krog Iversen & Co. A/S instructions.
- At any change in the original condition of the SCAN product or its accessories.

This warranty applies only to SCAN stoves or inserts sold in the country in which it was originally delivered and only on presentation of the invoice from an authorised SCAN dealer. The date of delivery must appear on the invoice.

Settlement of the complaint

The settlement of the complaint is done by the responsible dealer. You should only use original spare parts or parts recommended by the manufacturer.

Approvals

Most SCAN stoves are tested and approved according to the world's strictest standards concerning environment and combustion, among others DIN 18891 and EN 13240.

Before the installation

Before beginning the installation of your stove, contact your local authorities to obtain the existing fire and building regulations regarding the installation of wood-burning stoves, or ask your local experts in that field, e.g. the chimney sweep, to install your stove.

We recommend that you do not remove the plastic bag until the installation has been completed.

Please note that all stoves with counterweights must stand 100% vertically in order not to damage the door.

Accessories

A number of practical accessories are available for your wood-burning stove. For instance, there are base plates in steel or glass, shaped base plates made especially for the individual stove models, glazed tiles of many different colours, soap-stones, companion sets, baking doors, wood carriers, etc. Contact your authorised dealer in order to know the exact accessories available for your stove model.

Mounting of tiles and soapstones

If your stove is equipped with lateral tiles or soapstones, the special mounting instructions for these are delivered together with the tiles/soapstones.

Quality control

All products have undergone a thorough quality control ensuring that they are in accordance with all specifications.

Inspection

We recommend that you have your chimney inspected by the chimney sweep before you start installing the stove. He can also advise you concerning a possible renovation of your chimney.

Connection to the chimney

Sometimes it might be necessary to obtain permission to connect your stove to the chimney if other stoves are already connected. The stove should not be connected to a chimney of which the inside diameter is smaller than that of the flue collar. The flue pipes must be at least 2 mm thick, and we recommend the installation of a damper.

From the factory the stove is prepared for top-mounting of the flue collar, but most SCAN stoves have an optional smoke outlet, wherefore the smoke collar can be fitted either on the top or at the rear as required.

You will find a description of the connection on pages 4-6 in this manual.

Bearing foundation

All of our stoves are considered as light fireplaces, and it is normally not necessary to reinforce the foundation.

Security distances

The SCAN stoves are double-skinned convection stoves which means that the temperature at the rear of the stove is reduced. This makes it possible to place your stove next to non-combustible materials without any distance needed. However, we recommend that you leave enough space in order to facilitate cleaning at the rear of the stove.

If the stove is to be placed at a wall of combustible material, we recommend a minimum security distance of 20 cm. However, you should always consult your local rules.

You can see the recommended security distances for your stove model in the ***Specific Installation Instructions*** delivered with your stove.

Requirements of flooring

The stove is to be placed on a noncombustible surface, e.g., an original SCAN base plate, floor tiles, or the like. We recommend that the base plate extends at least 150 mm from the sides and at least 500 mm from the front of the stove to prevent any sparks from ruining your carpet or floor. The floor plate will also ease the daily cleaning and maintenance of the stove.

For some models, there is a shaped floor plate specific to the individual model that is placed in front of the stove. See the ***Specific Installation Instructions.***

Distribution of the heat

All SCAN stoves (except SCAN 4) are double-skinned convection stoves. This means that the air circulates around the combustion chamber, where it is warmed up and then introduced into the room as comfortable heat.

Self-closing doors

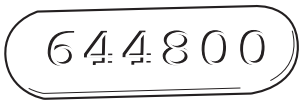
Most SCAN stoves are delivered with a self-closing device on the doors. In order to activate this function, see the ***Specific Installation Instructions*** delivered with the stove.

Adjustment screws

Most SCAN stoves are equipped with two adjustment screws on the bottom that can be used for levelling the stove. This is particularly important for stoves with lifting doors and counter weights.

Number plate

All SCAN stoves are equipped with a number plate. We ask you please always to indicate this number in case of questions.



Number plate

Service bag

In the SCAN stove you will find the following:

- Flue collar with fittings
- Plastic coverings for the transport holes in the wood compartment
- Various screws and hexagon spanners
- Fire lighters for the first lighting
- One oven mitten
- 2 manuals (general and specific)

Connection to an existing brick-built chimney

Before starting the installation, it is important that you have your chimney inspected by the chimney sweep. This ensures that the chimney is dense and has the appropriate diameter for your stove.

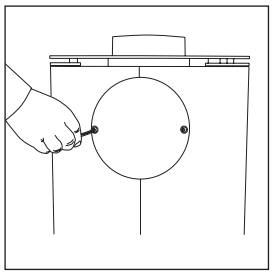
Proceed as follows:

1. Mark out the point where the centre of the pipe touches the wall and cut out a hole of the same diameter as the pipe. The distance from the floor to the centre of the stove's flue outlet appears from the drawing in the specific instructions for your stove. If the stove is to be connected on the top with an elbow, please do not forget to take the height of the elbow into account when measuring out the position of the hole. You should also remember to take the thickness of a possible base plate into consideration.
2. We recommend that you build a wall sleeve into the wall. The elbow is to be fitted onto the stove's collar, and the clean-out door of the elbow is to be positioned on the vertical section of the elbow. The elbow has to fit completely into the wall sleeve (but not into the chimney!). We recommend that you check that the distance from the floor to the wall sleeve is correct before the masonry has dried completely.
3. When the masonry is dry, you can continue the installation. **Important!** If you wish to mount a cover ring to cover the passage between the pipe and the wall, you have to do this now, before you connect the stove. Mount the pipe on the flue collar of the stove. Push the stove with the pipe towards the wall so that the pipe goes into the wall sleeve. The pipe must never penetrate into the chimney. If the pipe is too long, you can shorten it. If you want, you can put a thin, ceramic packing cord around it at the wall sleeve.
4. Mount the cover ring - if any - on the wall.
5. The installation is ready for approval by the chimney sweep.

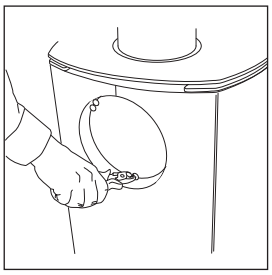
Preparation of the stove for rear discharge to a brick-built chimney

SCAN 60 and 61: we refer to the specific instructions for these stoves.

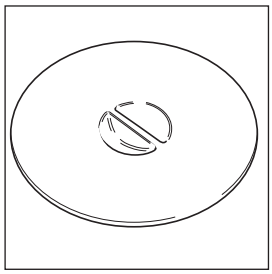
Fig. 1 (1-4)



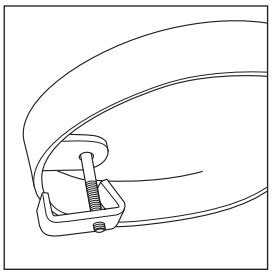
1. Remove the cover plate on the rear of the stove.



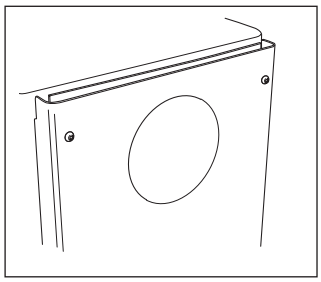
2. Cut free the inner plate with a pair of nippers



3. Remove the inner cover plate (cooking ring) with the hexagon spanner. The cooking ring is to be put in the top outlet (for models with a double-steel top plate, you must first mount an intermediary ring). Remove the ceramic gasket from the cooking ring and place it in the top outlet without fixing it).



4. Fit the flue collar from the outside into the discharge hole of the combustion chamber in such a way that the bracket is located on the inside. Tighten the screws.



SCAN 4 and SCAN ANDERSEN stoves are equipped with a heat shield at the rear (Fig. 2). The rear outlet is punched in the plates. Remove the two punched plates and continue on fig. 1, ill. 3-4.

Fig. 2

Top outlet and elbow

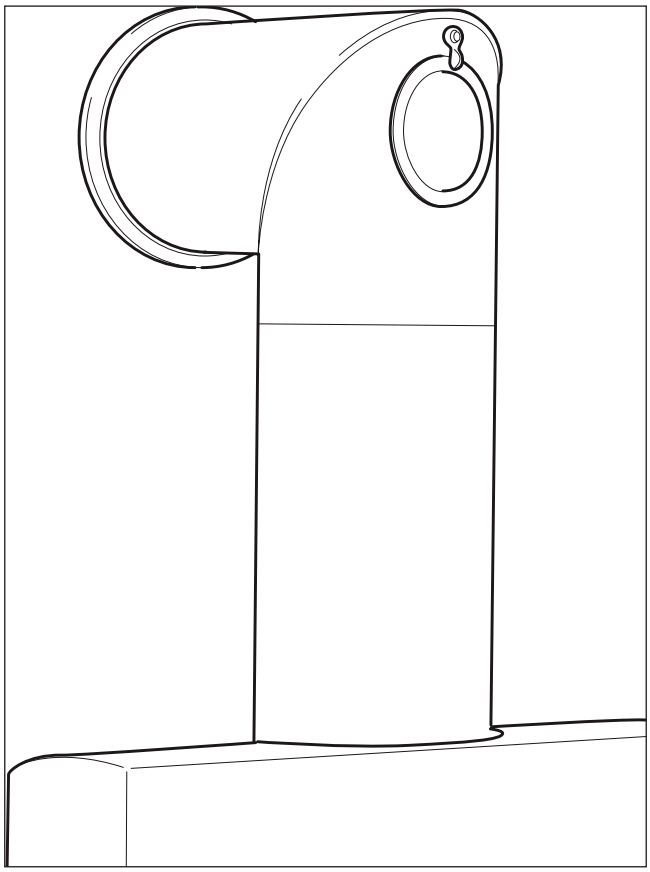


Fig. 3

You can also connect your stove with a top outlet and a 90-degree elbow into the chimney.

The stove is prepared in the same way as a direct connection to a steel chimney (see page 6).

Top discharge with direct connection to steel chimney

If the steel chimney is installed directly on top of the stove, we recommend the use of a connection piece/adaptor fitting into the inside of the stove's flue collar to lead condensation and rain into the stove, instead of on the top plate. A wrong choice of length or dimension of the chimney can cause a malfunctioning of the stove.

The diameter of the flue collar appears from the specific instructions delivered with your stove.

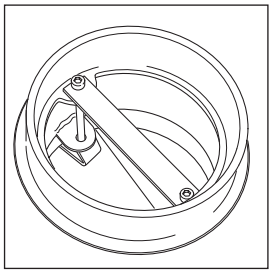


Fig. 4

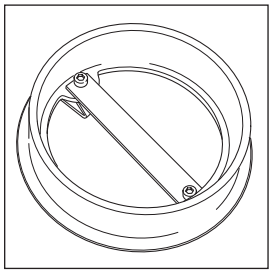


Fig. 5

Mounting of the flue collar with intermediate ring (fig. 4).

Mount the flue collar with the intermediate ring in the flue outlet of the stove using the special angle-fittings and long screws in the service bag. At the same time, you can mount the safety fitting in order to prevent the chimney sweep's tools from destroying the ceramic smoke deflector.

Mounting of the flue collar without intermediate ring (fig. 5).

Mount the flue collar in the flue outlet of the stove using the special angle-fittings and short screws in the service bag. At the same time, you can mount the safety fitting in order to prevent the chimney sweep's tools from destroying the ceramic smoke deflector.

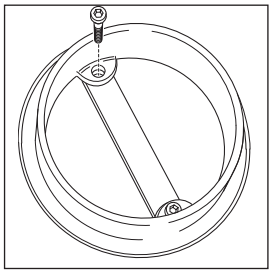


Fig. 6

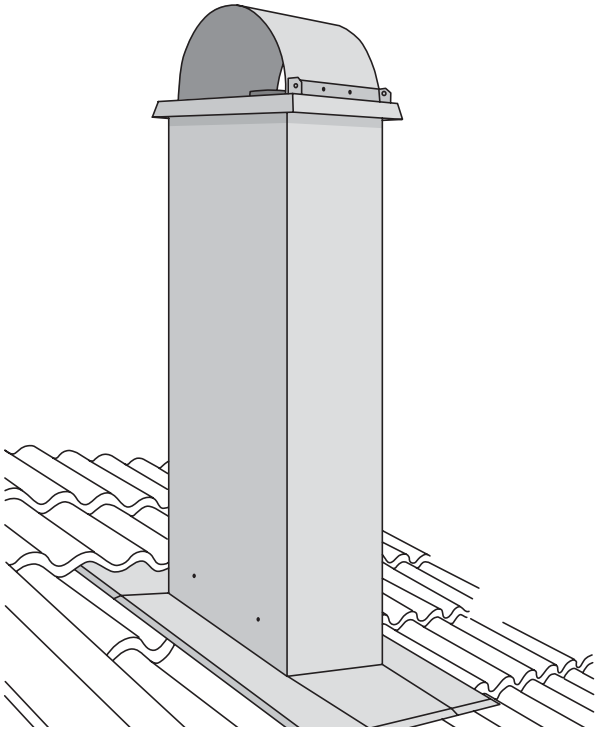
Mounting of the flue collar with safety fitting (fig. 6).

Mount the flue collar in the flue outlet of the stove using the special transversal fitting in the service bag. The safety fitting's function is to prevent the chimney sweep's tools from destroying the ceramic smoke deflector.

SCAN 60 and SCAN 61:

We refer to the specific instructions for these stoves.

Read carefully the instructions from the chimney manufacturer before beginning the mounting.



External fresh-air supply

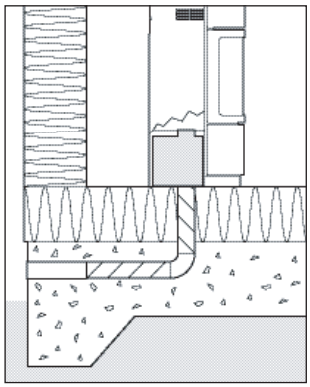
During the combustion, oxygen taken from the room air is used. In order to get sufficient air supply for the combustion, leave the windows half-open in well-insulated rooms or have a fresh-air intake installed. It is very important that the air is introduced in the room where the stove is installed. This can be done in various ways. For instance, you can mount a damper in the external wall as close to the stove as possible. The damper must be so constructed that it can be closed when not in use.

Most of the SCAN stoves are prepared for an indirect external air supply. The cover plate at the rear of the stove is to be removed and replaced by the connection branch with damper (Ø 100 mm - special accessory) that is mounted by means of the self-tapping screws. Thereafter you can connect it with a flexible tube.

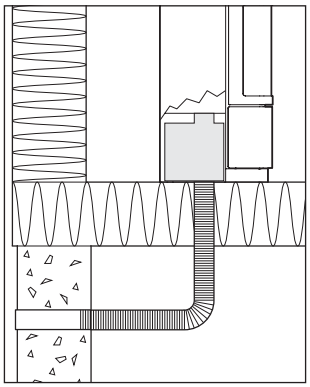
Several SCAN stoves are also available with a special air container (accessory) that takes the external air and introduces it directly into the combustion chamber. On certain models, this container can be mounted afterwards.

The air channel must have a diameter of at least Ø 100 mm and must be insulated for condensation reasons.

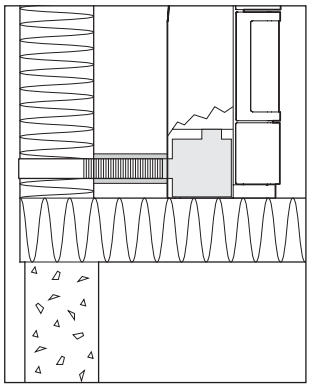
Direct air supply to the combustion chamber



Direct air supply from the bottom of the stove through a concrete floor. Only possible on certain models and not to be mounted afterwards.

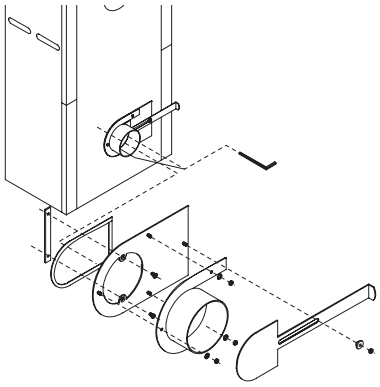


Direct air supply from the bottom of the stove through a cellar. Only possible on certain models and not to be mounted afterwards. Max. length ca. 3 m.



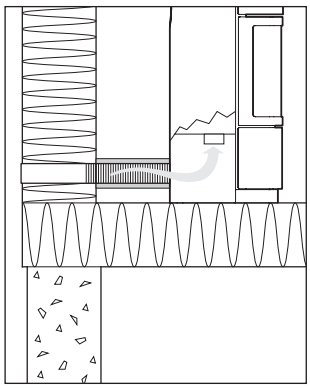
Direct air supply from the rear of the stove through an external wall. Can be mounted afterwards on certain models.

Mounting of the connecting piece/damper for fresh-air intake

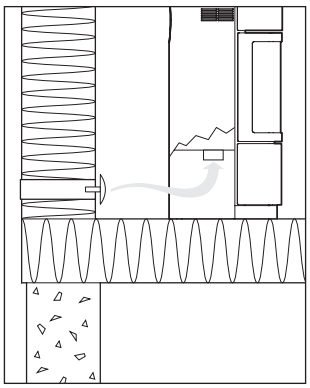


The connecting piece/damper for fresh-air intake from the back of the stove is mounted as shown above.

Indirect air supply

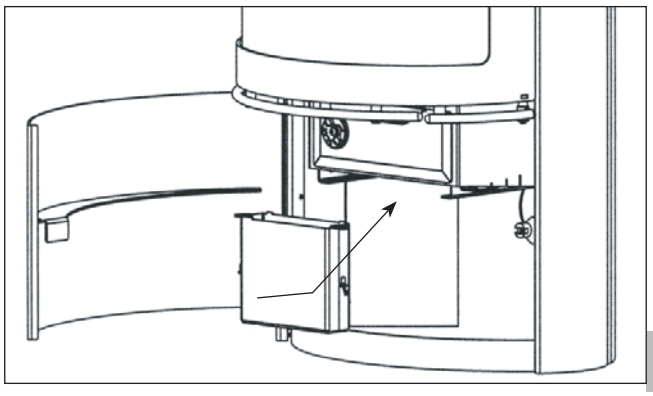


Indirect air supply from the rear of the stove through an external wall (by means of a flexible tube).



Indirect air supply to the room through a damper in the external wall.

Container for external air directly into the combustion chamber



On certain models, this container can be mounted afterwards if you need a direct external air supply into the combustion chamber.

Maintenance of the stove

Lacquered surfaces

The stove is cleaned with a moist cloth. Spray lacquer is available for repair of possible damages/scratches. Your dealer has the right spray in the right colour. As there may be minor colour differences, it is recommended to repair larger areas with natural borders. You will get the best result if the stove is repaired while it is hand-warm (remember to ensure good ventilation during repair). A possible change of colour to grey is caused by over-firing, i.e. you have used more wood than recommended (see specific instructions for your model).

Glazed tiles

We recommend that you always use a dry cloth when cleaning the tiles as moistness worsens the existence of cracks. Tiles are a natural material, and in time small cracks may occur which is perfectly normal.

Soapstone

The soapstones are cleaned with fine sandpaper or a dry sponge.

Firebricks

Little cracks may arise in the firebricks because of a minor content of water, especially if the stove is overheated during the first firing. These cracks do not influence the efficiency of the stove and are not covered by the warranty. However, if the bricks begin to crumble and fall out of the stove, they must be changed. Firebricks are wearing parts and are not included in the warranty conditions.

Gold or chrome doors

Always use a moist cloth or glass cleaner to clean your gold or chrome door. **Please note that you must NEVER use metal cleaner.** If you exceed the maximum amount of fuel previously specified, the colour of the gold- or chromium doors may change a little.

Cleaning of glass

Our stoves are constructed so that the glass is kept optimally clean from soot. However, by burning wet wood or lighting with closed dampers, the doors may become sooty. The glass is easily cleaned by use of a special cleaning fluid available at your dealer. Or you may wipe the glass as follows: Dip a moist cloth or old newspaper in the ashes and use this to clean the glass. Important! The ashes should not get into contact with your skin! Wipe with a dry cloth. The ceramic door joint must not get wet.

For models with lifting door, please refer to the Specific Instructions for your model.

Ceramic packing cord

All SCAN stoves are equipped with ceramic packing cord to ensure the tightness of the doors and the glasses. This packing cord is a wearing part and must be changed from time to time. Please consult your authorised dealer in this case.

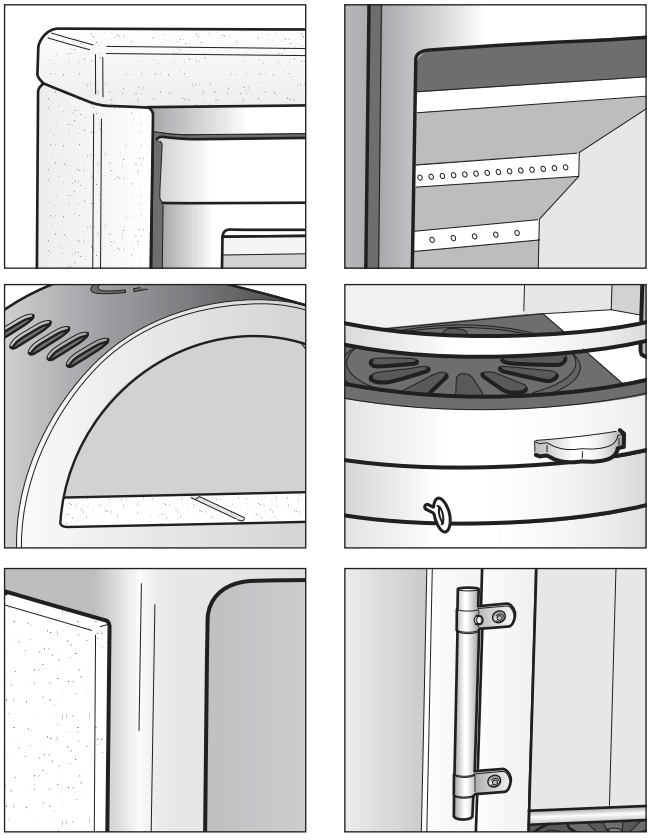
Ceramic smoke deflector

We recommend that you treat the ceramic smoke deflector (Skamol) with caution as it is a delicate material (not included in the warranty). It is extremely heat-resistant. See also the specific instructions for your stove model.

Baking-compartment tiles

Never place pastry or the like directly on the baking compartment tiles. These are too hot, and the liquid/fat will be absorbed by the tiles and thus cause nasty marks.

Some models are equipped with a valve in the baking compartment. This valve can be opened when you use the compartment as a baking oven in order to remove the steam.



Handling of wood

Preparation

You obtain the best fuel if you cut down, saw, and chop the wood before the 1st May (Northern hemisphere). Do not forget to adapt the length of the logs to the combustion chamber of your stove. We recommend a diameter of 6 - 10 cm and a length that is approximately 6 cm shorter than the combustion chamber in order to give space for the air circulation. If the diameter is larger, you should chop it. Chopped wood dries better.

Storage

The correct storage of the wood is one of the main conditions of an environment-conscious combustion. Only then are you guaranteed optimal combustion values, and that the environment is not unnecessarily polluted.

* The wood should be stored in an airy, sunny, and dry place (ideal: south side).

* There should be about a hand's breadth distance between each layer.

* Poplar and spruce should be stored at least one year before being used as fuel.

* Lime, alder, and birch should be stored at least 1½ years before being used as fuel.

* Beech, ash, and fruit tree should be stored at least two years before being used as fuel.

It is a good idea to keep the wood at room temperature several days before use as the wood absorbs humidity from the air in the autumn and in the winter.

Humidity

In order to avoid environmental problems and to obtain a better heat economy, you should only use dry wood (max. 21% humidity). You will get the best efficiency at a humidity of 15 to 18%. A simple way to determine the humidity of the wood is to clack the ends of the logs against each other - if the sound is dull, the wood is dry.

If you use wood that is too humid, a large part of the heat is used for evaporating the water. As a consequence, the temperature of the stove does not rise, and the room is not heated sufficiently. This is, of course, inefficient and you risk soot on the glass, in the stove, and in the chimney. Furthermore, the environment is polluted.

It is absolutely prohibited to fire with

painted or chemically treated wood, or driftwood from the sea. Nor should you fire with plastic or prepared paper, as the content of this is bad for the environment, for your stove, and for your chimney. In short - you should only fire with wood.

Your stove is not constructed for the use of coal. However, it is possible to use lignite briquettes if you use a special coal insert of cast iron (accessory).

The thermal value of wood

The thermal value of wood differs from one type of wood to another. This means that you must use more wood of some types than of others in order to obtain the same heat quantity. In our firing instructions we use beech, which has a very high thermal value, as a starting point. If you use beech or oak, you should keep in mind that they have a higher thermal value than other types of wood, so you should use a smaller quantity. Otherwise, you risk damaging your stove. See table below.

Type of wood	Dry wood, kg/m^3	Compared to beech
Hornbeam	640	110%
Beech/oak	580	100%
Ash	570	98%
Maple	570	93%
Birch	510	88%
Mountain pine	480	83%
Spruce	390	67%
Poplar	380	65%

Lighting and stoking

Please refer to the specific installation instructions concerning the recommended quantities of wood and the position of the regulation handles on your stove.

First, some information about the different regulation possibilities of your stove.

Primary air

The primary air is used when lighting the stove and in order to get the stove going when refuelling. The primary air should always be closed when the stove is functioning continuously. The handle is often placed on the ashtray, but it can also be located on the stove itself.

Choke

Some models are equipped with an ashtray with a separate choke. As long as the choke is kept open, you supply the stove with supplementary air. When you let go of the choke, the air is automatically closed.

Combustion air

The combustion air is preheated in canals around the combustion chamber, from where it is led in front of the glass and then into the fire. Apart from providing oxygen to the combustion, the combustion air contributes to keeping the glass clean. If you close the combustion air too much, the risk of getting sooty glass is increased. You can regulate the desired heat quantity with the combustion air.

CB-technique (Clean-Burn)

Stoves equipped with a Clean-Burn technique have a separate canal that leads extra combustion air (tertiary air) into the combustion chamber. This air is introduced in the combustion chamber through the small holes in the stainless-steel rail right beneath the ceramic smoke deflector.

Ceramic smoke deflectors

There can be one or more ceramic smoke deflectors that are placed in the upper part of the combustion chamber. Their function is to lower the temperature of the smoke before it goes up into the chimney, so the stove gives off more heat. After the chimney has been swept, you should remove or rock the ceramic smoke deflector(s) in order to remove the resulting soot (see the specific instructions delivered with your model). We recommend that you treat the ceramic smoke deflector with caution. They are made of a porous material (Skamol) and are not included in the warranty (they are, however, extremely heat-resistant!).

The first lighting

For lighting use pieces of crumbled paper (newspaper) and/or fire lighters, which are placed on the grate in the bottom of the combustion chamber. **Never use alcohol or other flammable liquids!**

Put 2-3 small bags of fire lighters in the bottom of the combustion chamber. Then place about two kgs wood (small pieces) on top of the fire lighters. Open the primary and the secondary air 100%. Light the fire lighters and leave the door ajar the first 10-15 minutes. By doing this, the glass is preheated and you avoid soot building on the glass. You can also open the shaking grate or the ashtray 1-2 cm if you need supplementary air. However, the primary air and the shaking grate must always be closed when firing continuously. When the layer of embers is well developed, the stove is ready for the first portion of wood.

Please note that the paint will harden the first time the stove is used. This will result in a burned smell, which disappears when the room is thoroughly aired.

We also refer to our special lighting-procedure DVD on our homepage (www.scan.dk).

Continuous firing

It is important to obtain a high temperature as fast as possible in the combustion chamber. Thereby the stove and the fuel are exploited in the best possible way, and you will get a clean combustion. You will also avoid a sooting of the firebricks and the glass. When the stove is in use, the smoke should only be faintly visible as a movement in the air.

After about 10-15 minutes, when you have a well-developed layer of embers, the stove is ready for the first portion of wood. Use the amount of fuel specified in the specific instructions delivered with your stove. Do not pack the wood too closely - this is important in order to obtain an optimal airflow in the combustion material.

Note! It is very important that the wood is lit quickly. Do not close the door before this. You can use the primary air or the choke in order to light the wood rapidly. If the stove burns without flames, you may risk - in the worst case - a lighting of the flue gases, which can ruin your stove.

When you refuel, you should open the door cautiously in order to avoid letting smoke out of the door. Never refuel while the stove is burning well.

Cleaning

Be careful when you remove ash from the stove. There may be embers left as long as 24 hours after the stove was last used. The ash may, when it is cold, be placed in a garbage bag

Chimney draught

The chimney draught depends on the weather conditions. In stormy weather, you may reduce the chimney draught by closing the damper in the smoke pipe (if a damper has been installed). If the chimney draught is strong, the combustion air supply must be reduced additionally.

Stoking during spring time and autumn

At outdoor temperatures of more than 15°C, the stove may be under-fired, and a so-called "cold" combustion will take place. The result will be an increasing formation of soot in the smoke ducts of the stove, in the chimney connector, and in the chimney. To avoid the soot buildup, we recommend that you clean the smoke ducts more frequently and increase the supply of combustion air. Small pieces of wood should be used, and fuel should be added more frequently.

General advice for your safety

A wood-burning stove has an intermittent burning.

Please be careful! The stove and in particular the exterior surfaces get hot when in use!

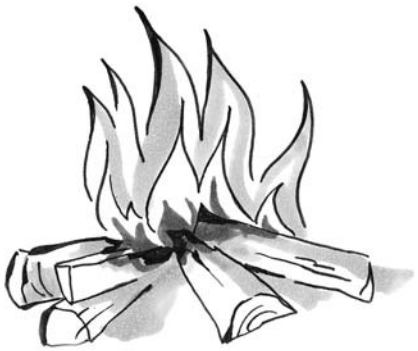
Chimney fire

In case of a chimney fire, close the door, the ash tray, and all air valves on the stove. If necessary, call the fire service.

Open fireplace

If the stove is used as an open fireplace with open doors, you must use a spark guard of wire mesh or glass. If you leave the room in which the stove is installed, remember to close the doors of the stove.

Burning with open doors reduces the efficiency.



TROUBLESHOOTING

Smoke

- Is the wood dry?
- Insufficient chimney draught.
- Check if the chimney has the right dimension.
- Check if the smoke pipe or chimney is blocked.
- Check if the chimney has the right height compared to the surroundings.
- By rear outlet, check that the tube does not enter into the chimney.
- Is there an under-pressure in the house?

If the above is OK, the chimney draught may be increased by decreasing the smoke deflector plate (max. 2 cm at a time).

The wood burns too fast

- Are the air valves adjusted correctly according to the instructions?
- Is the smoke-deflector plate placed correctly?
- Bad fuel (see "Handling of wood").

Sooted glass

- Is the combustion air valve adjusted according to the instructions?
- Is the wood dry?
- The door is closed too fast when refuelling.
- The logs are too large.

Polluted chimney

- Incorrect combustion (add more air).
- Is the wood dry?

The shaking grate is stuck

- Check if a piece of wood, a pin, or the like is stuck.
- Is the bar placed/mounted correctly?

The stove's surface turns grey

- Overheating - please refer to the firing instructions.

The stove does not heat

- Use of moist wood. The energy is used to dry the wood.
- Too small quantity of wood.
- Bad wood with a low thermal value.
- The smoke-deflector plate is placed incorrectly.

The stove smells

- The paint will harden the first time the stove is used. This will result in a burned smell, which disappears when the room is thoroughly aired.