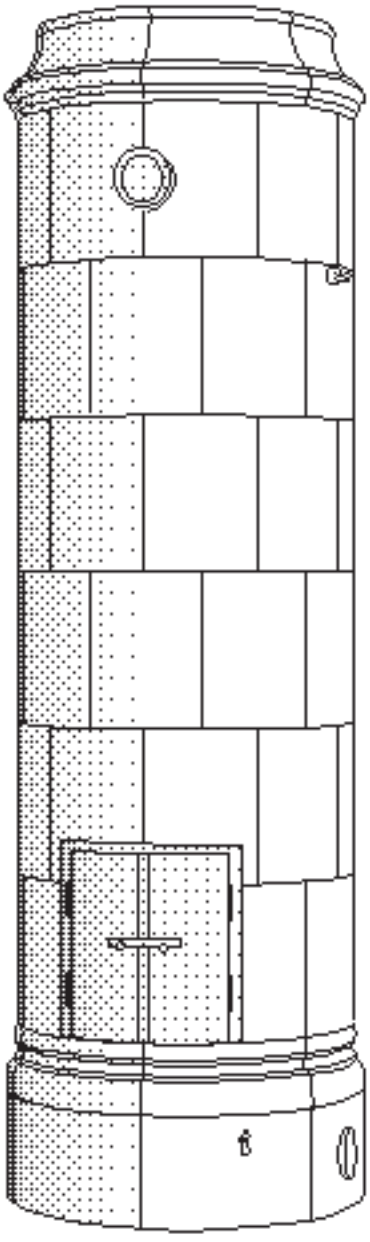
KEDDY

Christineberg

Installation Instructions
Care and firing instructions



CONTENTS

GENERAL INFORMATION

We congratulate you on your choice of tile stove.

Christineberg is a new type of tile stove with a unique design. It has been developed and designed to take advantage of modern combustion and heat accumulation technology. The shape originates from 18th century Sweden.

The Christineberg has been tested by the Swedish National Testing and Research Institute with excellent environmental and efficiency results. These values are directly comparable with today's most efficient heating boilers, see the Technical Specification on page 16.

In order to achieve the same firing results, it is important you follow the Christineberg's care and firing instructions carefully. These can be found at the end of the manual.

Christineberg consists of five main parts:
1. A safety case – consisting of two steel cylinders
2. A heating magazine – consisting of die cast elements
3. A hearth– consisting of hearth plates, inner and outer doors
4. A tile set

The Christineberg's special design, with the safety case encasing the heating magazine, produces a leak-proof design.

The Christineberg is delivered on two loading pallets, one of which contains chiefly the safety case and the heating magazine. The second pallet contains tiles and accessories such as brass doors, damper, gaskets, etc.

IMPORTANT POINTS

- Contact the Planning and Building Committee in your municipality regarding the building permit/building notice.
- It is also recommended that you contact a certified chimney sweep prior to installation.
- Read through all of the installation instructions before beginning the installation.
- In order for the warranty to apply, it is important to follow the care and firing instructions carefully.
- Remember to follow carefully the instructions for the distance to flammable structural units, see p. 2.
- Make sure that you measure the flue correctly, see p. 2.
- Order an inspection of the installation by a certified chimney sweep before you start firing.
- Do not start firing in Christineberg for at least one week after installation, to allow for hardening.

PREREQUISITES

BUILDING NOTICE
When you install a stove and erect a chimney, you need to contact the Planning and Building Committee in your municipality for up-to-date information.

DISTANCE TO FLAMMABLE STRUCTURAL UNITS
Before deciding where to place the tile stove, you must localise the beams in the ceiling and the roof in order to determine whether it is feasible to install a chimney in the desired place.

The distance from the rear of the safety case to a flammable wall in a corner wall installation must be at least 100 mm of ventilated space. For straight wall installation, the distance from the back of tile stove to the nearest flammable wall must be at least 50 mm.

The wall must be provided with fire retardant covering.

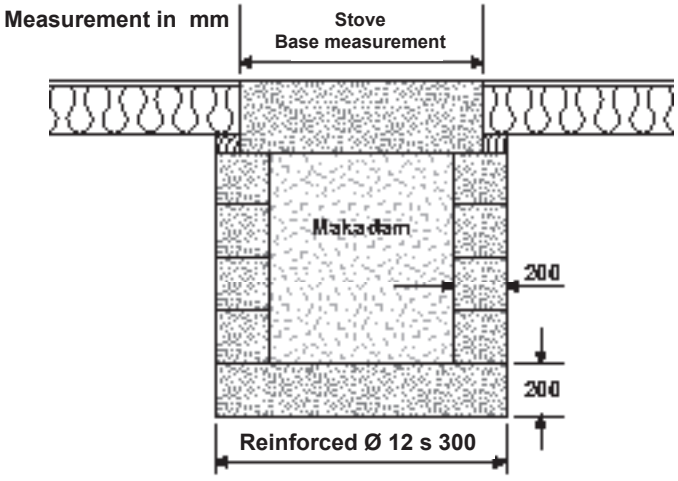
The distance to flammable walls in front of the tile stove must be at least 1 m.

For straight wall installation, the distance to walls at the sides must be at least 300 mm, to allow for soot removal.

The lowest ceiling height with a flammable ceiling is 2350 mm.

LOAD-BEARING SURFACE
The Christineberg must be erected on a sufficiently load-bearing surface.

The Christineberg weighs approx. 600 kg. The surface can constitute a cast concrete slab or a concrete vault or, alternatively, lightweight aggregate concrete. In the case of so-called crawl spaces, the foundations can be made according to the following principal drawing.



FLOOR PLATE
A floor protection must be set in place to protect the floor from flying embers. The floor protection must extend at least 300 mm in front of the tile oven. The width of the floor protection must be equal to at least the width of the hearth opening plus 200 mm on each side of the opening. For the Christineberg, the width of the floor protection is 720 mm.

The floor protection can consist of clinker tiles, natural stone, concrete, brick, or similar. Alternatively, you can use steel plate.

The outer dimensions on the enclosed template, see illustrations 2a and 2b, represent a suitable floor protection.

OUTDOOR AIR SUPPLY
The Christineberg can be supplied with air from the outside. This is particularly suitable if the house has permanent negative pressure.

Preferably, a sheet metal drum, not plastic material, should be used for supplying the outdoor air. This can be a ventilation duct of standard design with a diameter of 100 mm. Outdoor air can be supplied from below or from the rear, see illustrations 2a and 2b. (The tile stove's maximum need for combustion air is approx. 20 m^3/h.)

In heated spaces, the supply air duct must be insulated against condensation.

Do not take the supply air from crawl spaces.

FLUE
Only a steel chimney may be installed on top of the Christineberg. The flue's area should not be less than 177 cm^2 (Ø150 mm).

The Christineberg is also approved for connection to older masonry chimneys with enclosing walls that are only half a brick thick.

Naturally, the Christineberg can also be connected to the rear, to chimneys made of prefabricated elements, e.g. the Heda Chimney.

CHIMNEY CONNECTIONS
Illustrations 1a and 1b show the Christineberg from above and where the flue's placing in relation to the wall, depending on the choice of placement and type of connection.

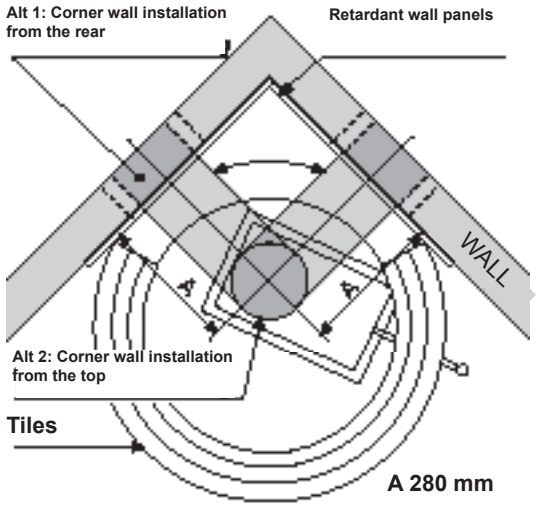
Read the chimney's installation instructions before starting on the preparations for the chimney and its connection.

PREPARATIONS

1a CORNER WALL INSTALLATION

There are two different alternatives for connecting the flue:
- rear installation (turnable)
- top installation (straight up)

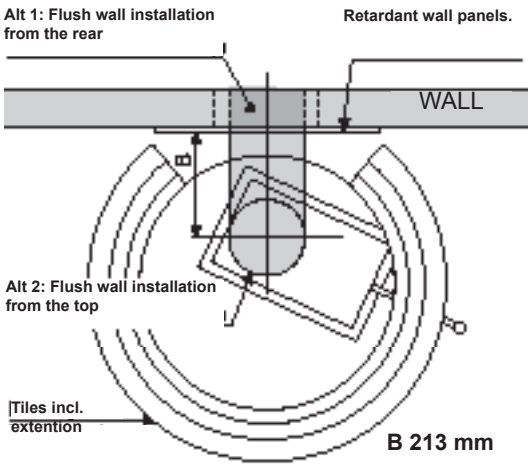
The height from the floor to the centre of the flue at the rear is 1920 mm.



1b FLUSH WALL INSTALLATION

There are two different alternatives for connecting the flue:
- rear installation
- top installation (straight up)

The height from the floor to the centre of the flue at the rear is 1920 mm.



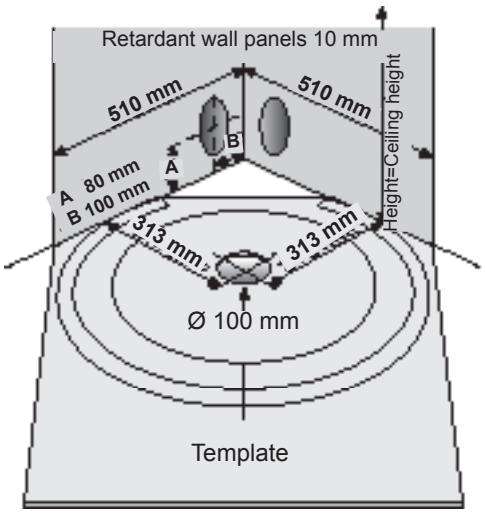
2a CORNER WALL INSTALLATION

If an outdoor air connection is required, a sheet metal drum must be installed according to one of the three alternatives illustrated, i.e. either from underneath or through one of the rear walls.

Push out the middle circle from the cardboard template (Ø100 mm), in order to position the hole for the air intake when making an outdoor air connection from below.

Arrange the floor plate according to the enclosed template or as desired, see page 2 under the heading Floor Plate.

Install the fire retardant wall panels. Paint and finish the whole corner, before you begin installing the tile stove.



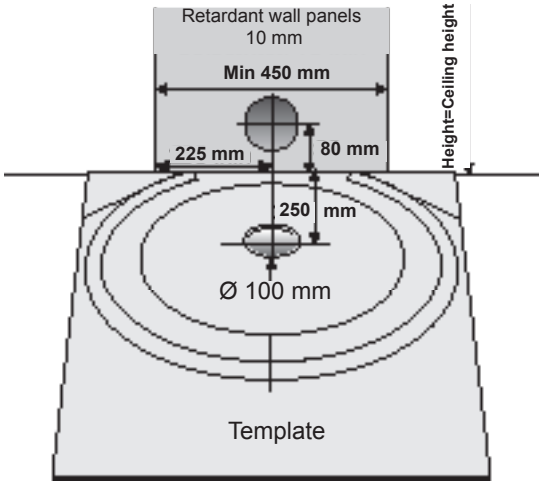
2b FLUSH WALL INSTALLATION

If an outdoor air connection is required, a sheet metal drum must be installed according to one of the two alternatives illustrated, i.e. either from underneath or through the rear wall.

Push out the middle circle from the cardboard template (Ø100 mm), in order to position the hole for the air intake when making an outdoor air connection from below.

Arrange the floor protection according to the enclosed template or as desired, see page 2 under the heading Floor Protection.

Install the fire retardant wall panel. Paint and finish, before you begin installing the tile stove.
An extension of the tile set can be ordered for flush wall installation (optional).



INSTALLATION INSTRUCTIONS

Before starting on the installation of the tile stove, the following steps need to be fully completed:

- **Chimney:** Alternative 1 - An existing chimney prepared for rear connection
  Alternative 2 - A newly installed chimney prepared for rear connection
  Alternative 3 - Prepared for a new top connected chimney.
- **Load-bearing surface**
- **Outdoor air supply** (if so required)
- **Floor protection**
- **Fire retardant wall panels**
- **Painting of wall panels**

SAFETY CASE

1. Push the big middle circle out of the template. Place the template against the fire retardant wall at the rear, see illustrations 2a and 2b on page 3.

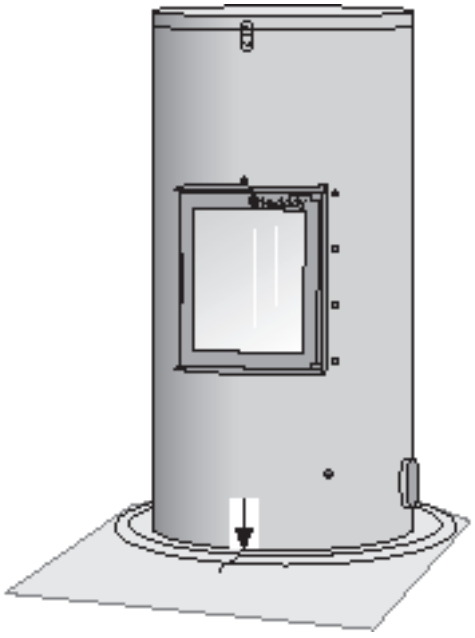
Secure the template firmly with tape. It should remain as protection until the installation of the tile stove is completed.

For outdoor air connection from below, close the rear hole in the bottom safety case with the plug supplied.

Put a substantial silicone sealant (transparent) round the bottom hole in underside of the bottom safety case. Place the safety case in the hole punched into the template.

Adjust the safety case before the silicone hardens so the arrow marking agrees with the centre marking on the template.

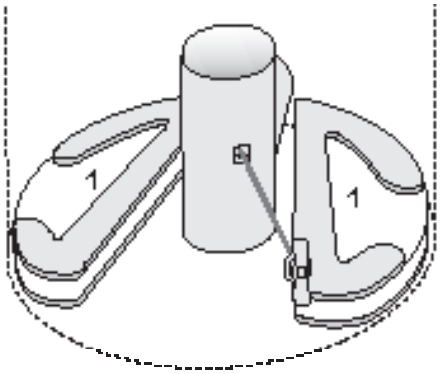
If a rear outdoor air connection is required, connect it now.



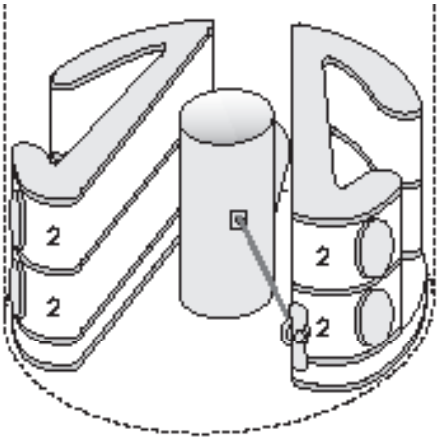
HEATING MAGAZINE AND HEARTH

The installation of the heating magazine and the hearth can now be started inside the safety case. They are both installed from above, and via the cast iron door.

2. Insert the two bottom elements, marked with **1**, centred against the gaskets at the bottom of the safety case. Put the two matching gaskets on top.



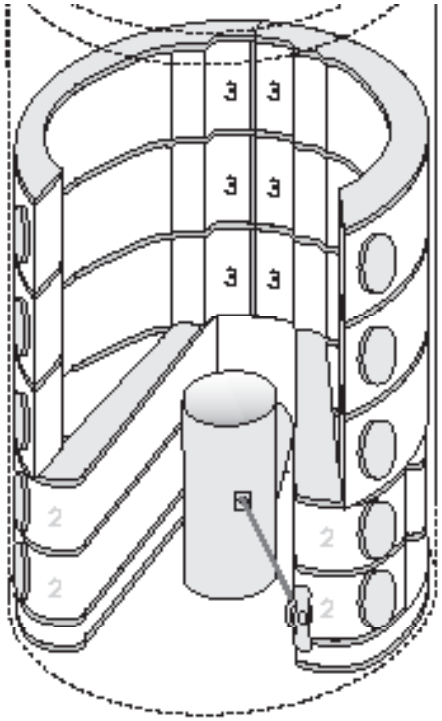
3. Place four **element 2** pieces with matching gaskets on top of the bottom elements.
Place round gasket spacers evenly distributed on all sides, four spacers per course, eight pieces in total.
Push the elements outwards against the safety case, so the spacers are kept in place.



4. Put in six **element 3** pieces with matching gaskets, note the vertical gasket.

Place round gasket spacers evenly distributed on all sides, four spacers per course, twelve pieces in total.

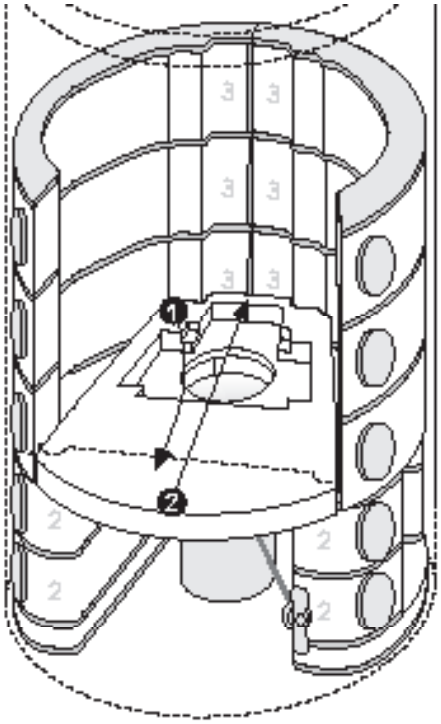
Push the elements outwards against the safety case, so the spacers are kept in place.



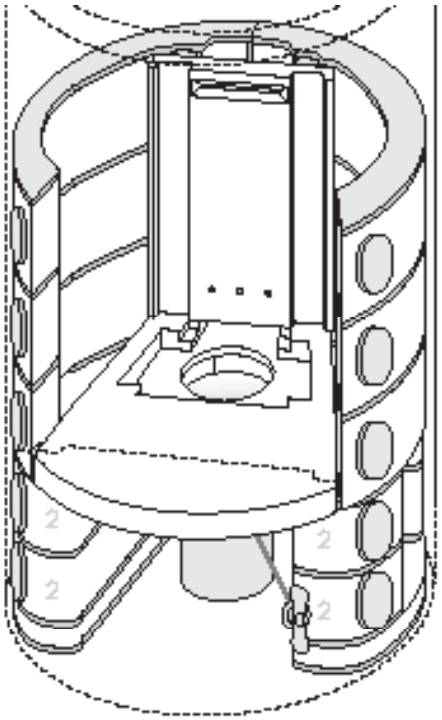
5. Insert the hearth's bottom plate.

Arrow 1. Push the bottom plate's front edge under the lower edge of the cast iron door.

Arrow 2. Push the bottom plate backwards until it makes contact.



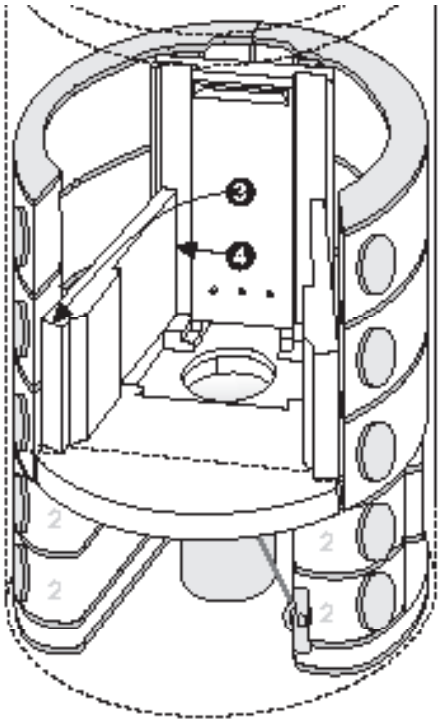
6. Put in the hearth's rear wall. Push it backwards and centre it against the bottom plate.



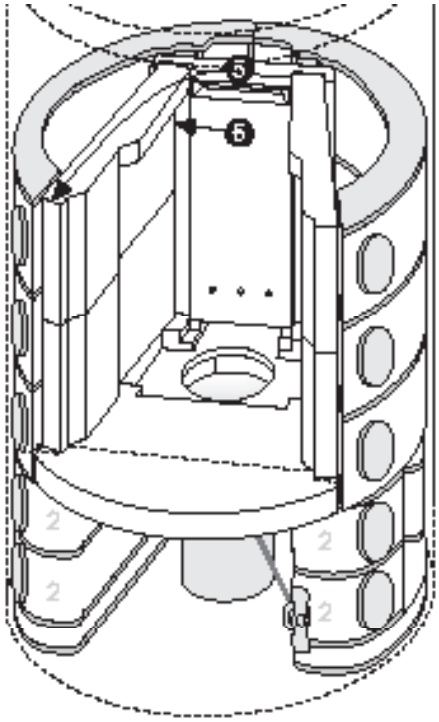
7. Put in the two lower horizontal side walls on each side in the hearth.

Arrow 3. Push the side walls forwards from behind, into the U section in the cast iron frame.

Arrow 4. Push the rear edges of the side walls outwards, so that they meet the rear wall's stop edge. Push the side walls backwards so that they meet the rear wall.



8. Install the two upper horizontal side walls on each side of the hearth, in the same way as the lower ones.



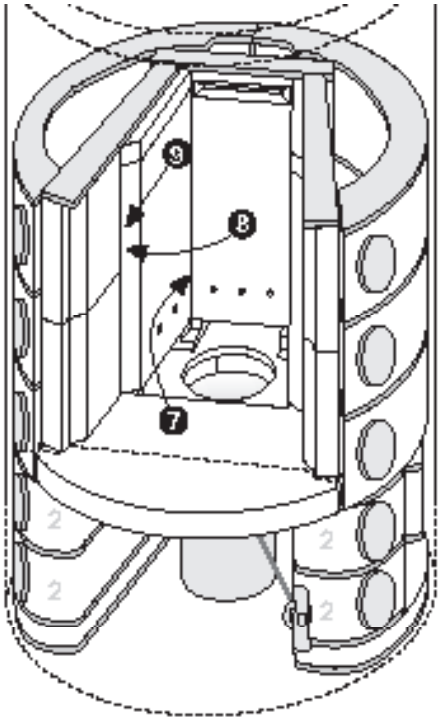
9. Put in the two vertical side walls, with the two holes downwards and the chamfer facing forward.

Arrow 7. Push them backwards, into the groove, until they make contact.

Arrow 8. Turn them outwards, so the chamfers are in a straight line.

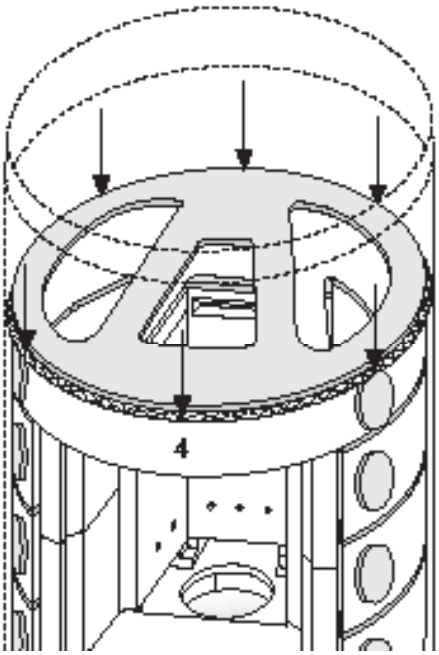
Arrow 9. Push them forward.

Then glue the gasket strips in place, one short and two long ones (red silicone). Take care to seal against the hearth and the rear air duct.



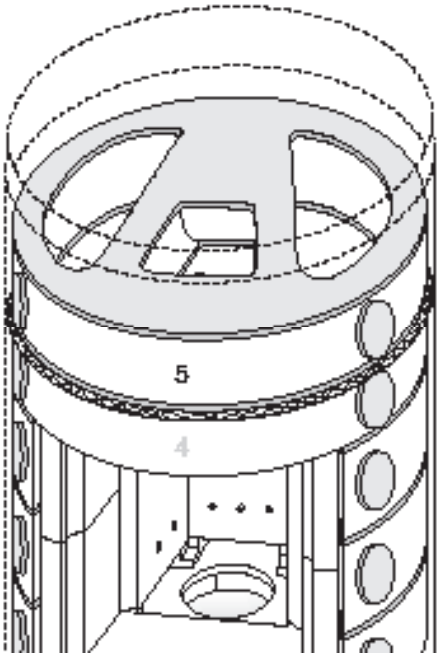
10. Carefully install **element 4** with the figure 4 right way round and to the front. Take care to centre the part and fit it in against the previously installed element so it doesn't "tooth". Push down four round gasket spacers evenly distributed around element 4.

Push down one of the two thick (Ø15 mm) fireproof rope seals around element 4, so it is sealed. Put the matching gasket on top.



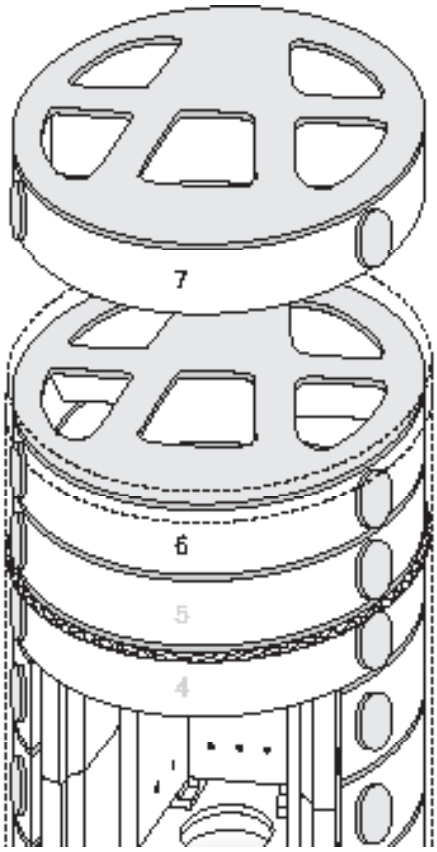
11. Install **element 5** with the figure 5 right way round and to the front. **Push the part down a couple of times so the gaskets underneath are pressed together.** Take care to centre the part and fit it in against the previously installed element so it doesn't "tooth".

Push down four round gasket spacers evenly distributed around element 5. Put the matching gasket on top.

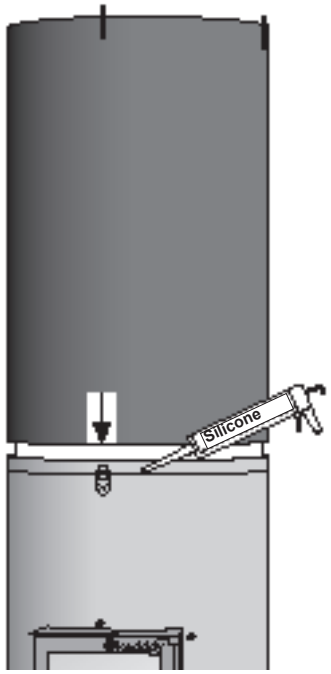


12. Install **element 6** right way round with matching gasket and four gasket spacers, in the same way as element 5.

Also install one **element 7** right way round with matching gasket, but wait with the gasket spacers. They are installed first in step 14.



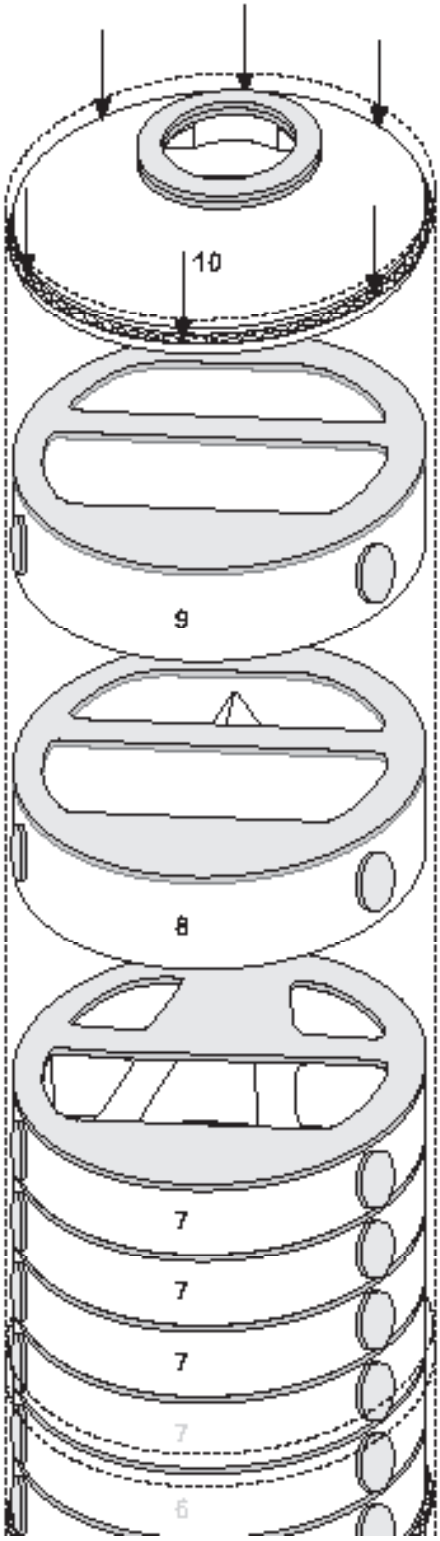
13. Apply a string of silicone (red) around the top join of the bottom safety case. Assembly the top safety case on top of the bottom one. Lock the safety cases together, with the three fasteners. Check the joint is sealed all round.



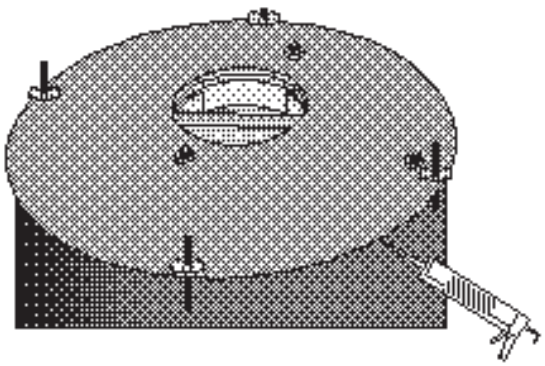
14. Push down four round gasket spacers evenly distributed around element 7.

Install three additional **element 7** pieces, one **element 8** piece, and one **element 9** piece, the right way round, with matching gaskets and spacers, in the same way as for element 5.

Install **element 10**. Push down the last of the two thick (Ø15 mm) fireproof rope seals around element 10, so it is sealed. Place one or more sealing rings on top, until you are at the same level as the upper edge of the safety case.

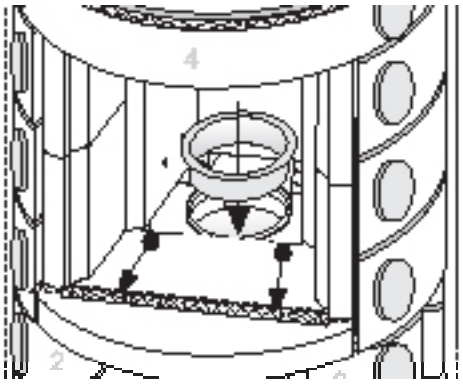


15. Install the plate cover with silicone (red) in between. Check the joint is sealed all round.

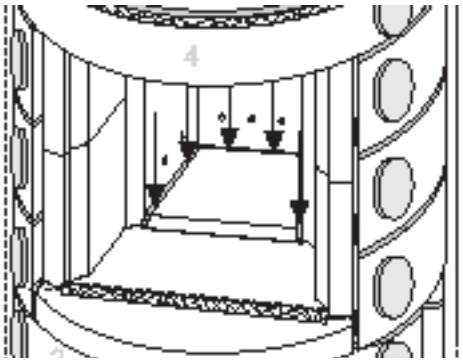


16. Press in the short thick fireproof rope seal between the hearth's bottom plate and the lower edge of the cast iron frame.

Apply a string of silicone (red) around the hole for the air intake in the bottom of the hearth plate. Push down the connection sleeve. Make sure it is sealed and remove any excess silicone.



17. Carefully put the small hearth plate down. Seal around the hearth plate using the thin fireproof rope seal, but not at the front edge.



ASSEMBLING THE TILES

It is now time to assemble the tiles. Each course of tiles is shown below by three illustrations.

- The right illustration shows the Christineberg diagonally from the front.
- The two illustrations on the left, **A** and **B** respectively, are overview illustrations showing the course of tiles in question from above:
  A illustrates the Christineberg **without the extension tiles.**
  B illustrates the Christineberg **with the extension tiles.**

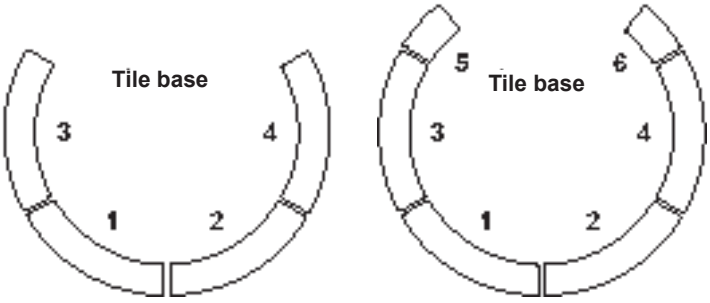
The tiles must be assembled in the numerical order shown on the overview picture. Take due notice here of the different component tiles.

Setting the tiles:

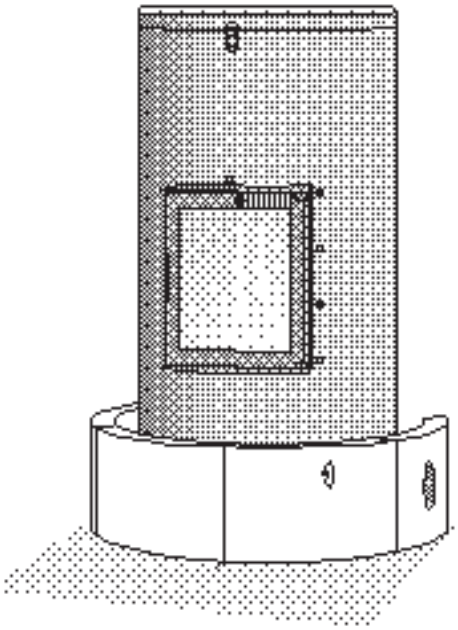
1. Mix the tile adhesive to a smooth consistency.
2. Apply adhesive on the bottom of each tile and on the side that will be joined to any tiles which have been installed before.
3. Then set the tile in place.
4. Adjust to produce a finished joint of approx. 1 mm between the tiles, both horizontally and vertically.
5. Check with a spirit level to ensure that the tiles are not sloping.
6. Fix the tiles temporarily with masking tape or similar.

18. Carefully push out the half-arc-shaped cardboard strip from the template, in which the tile base is to be assembled.
Assemble the base on some blobs of silicone (transparent) and with adhesive between the tiles in the numerical order shown in the overview. Make sure that the joints between tiles 1 and 2 are in line with the template's centre marking. Fix using tape.

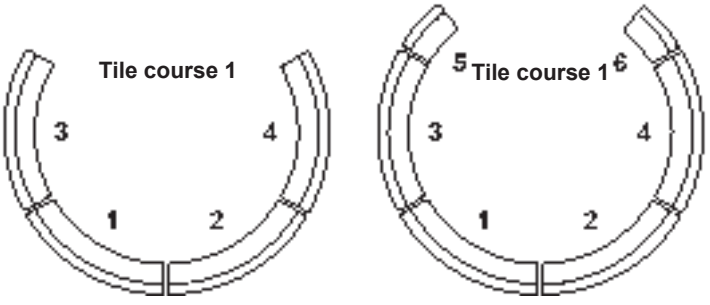
Once the tile base is assembled, carefully tear away the template in front of the tiles and the safety case. Also test that the shaft for the air supply fits and is working properly.



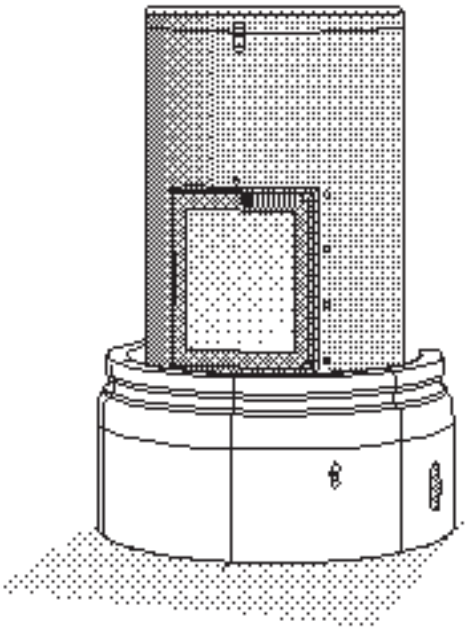
A B



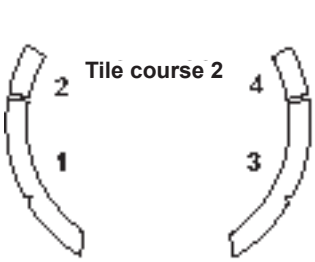
19. Assemble **tile course 1** (the wide, lower, tile moulding) in adhesive, in the numerical order shown in the overview. Make sure that the joints between the tiles are in line with the joints in the tile base. The outside of the tiles must be in line with the outside of the tile base.



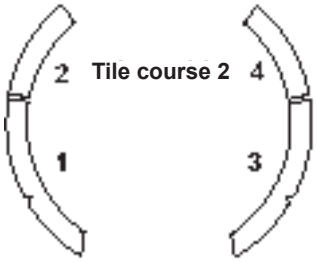
A B



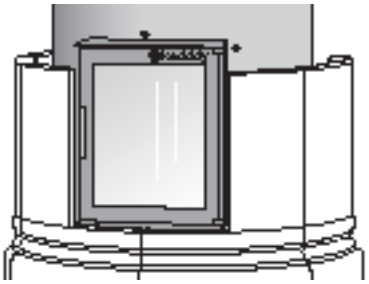
20. Assemble **tile course 2** in adhesive. The middle joint for tiles 1 and 3 must line up with the tile moulding's joint. The inside of the tiles must be in line with the inside of the tile moulding. Fix using tape. Note that tiles and 1 and 3 have chamfered front edges. (*specially cut to fit the door*)



A



B



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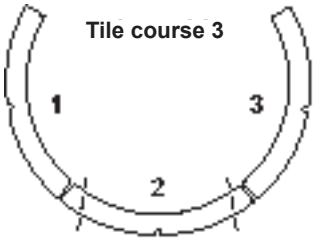
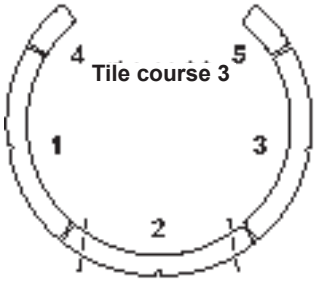
21. Assemble **tile course 3** in adhesive. Pay attention to tile 2, which has an indentation in the bottom for the cast iron door.



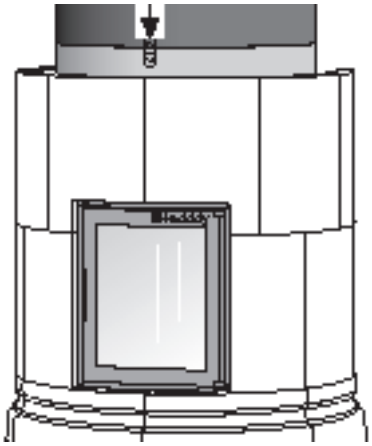
NB! Indentation in the bottom for the cast iron door

A



NB! Indentation in the bottom for the cast iron door

B



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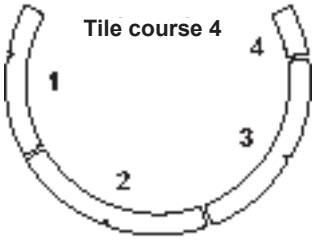
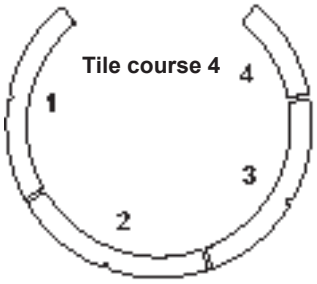
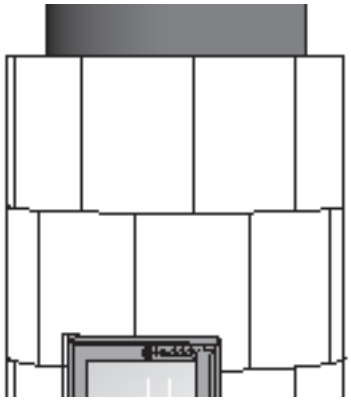
22. Assemble **tile course 4** in adhesive.



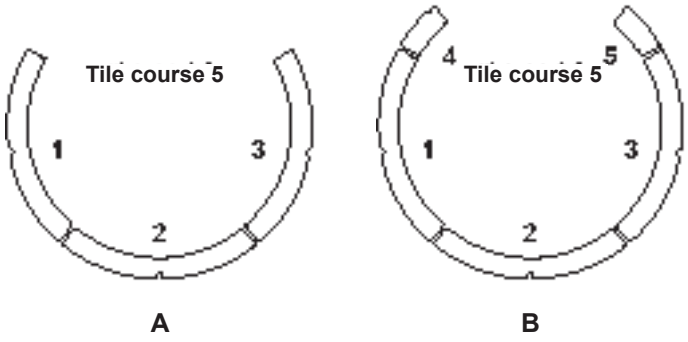
A

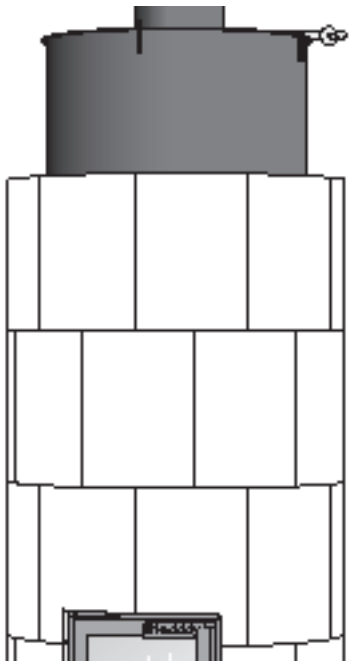


B

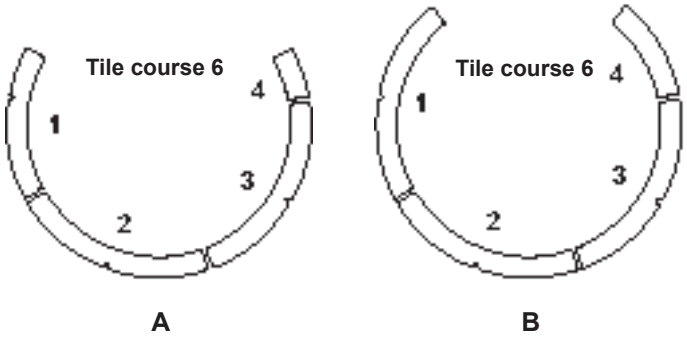


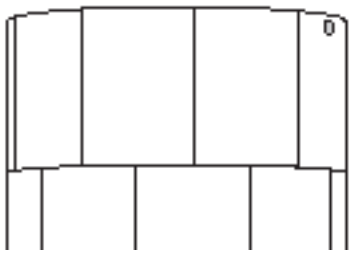
23. Assemble **tile course 5** in adhesive.





24. Assemble **tile course 6** in adhesive. Make sure that the hole for the damper shaft is in the right place.





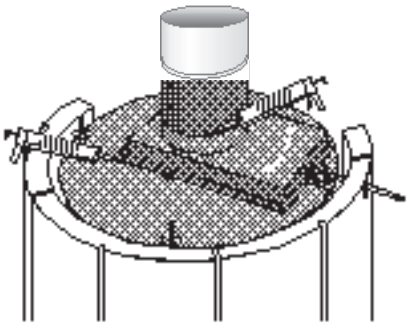
25. Now the flue gas damper (consisting of a damper box and a damper blade) and the chimney connection sleeve have to be installed.

Begin by applying silicone (red) around the edge of the damper box's underside. Then assemble the damper box, including damper blade, on top of the plate cover. The damper blade must stand on its three edges inside the damper box. Check the joint is sealed all round.

Also check that the damper shaft is unobstructed in the tile hole and that it is possible to open and close the damper.

For top connection, install the chimney connection sleeve with silicone (red). Check the joint is sealed all round. Then follow the chimney's installation instructions.

For rear connection, see step 26.



REAR CONNECTION TO THE CHIMNEY

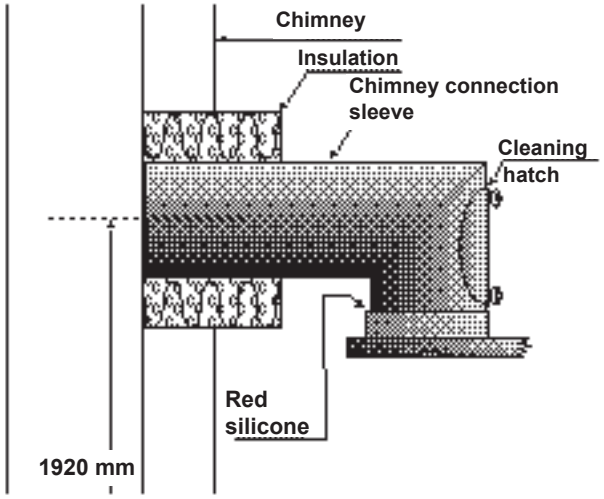
26. Connect the chimney connection sleeve to the chimney, either at the rear to an existing chimney or, alternatively, to a new chimney (element chimney).

Read the chimney's installation instructions if a new chimney has been installed.

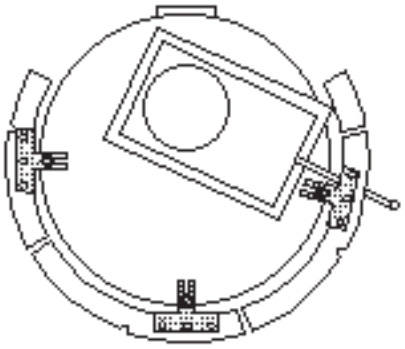
When connecting to an existing chimney, it is important that the flue connection does not reach farther into the chimney than the beginning of the flue. Make sure that the insulation provides a good seal between the connection sleeve and the hole in the chimney.

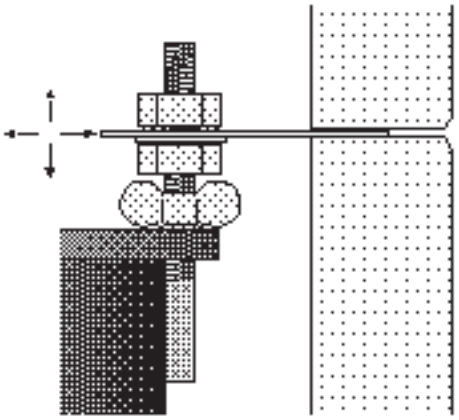
If there is no cleaning hatch in the existing chimney, a bottom must be cast in the flue at the same height as the bottom of the chimney connection sleeve. Fill up with sand and finish with about 5 cm of plaster.

NOTE! The flue connection must not be bricked in place!

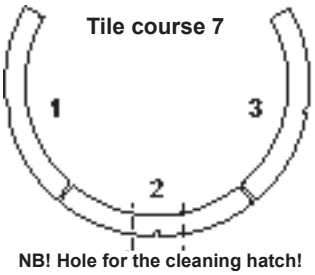


27. Screw a nut on top of the wing nut on the three front stud bolts that keep the cover down and add washers. Adjust the nuts so the top edge of each washer is at the same height as the course of tiles. Then thread on the three plate brackets and adjust them so that they cover approximately half the tile thickness. Lock each plate bracket with a locking washer and nut. The brackets are thus fitted into the tile joint when the next course is assembled, thereby contributing to greater stability.





28. Assemble **tile course 7** in adhesive. Pay attention to the hole for the cleaning hatch in tile 2.



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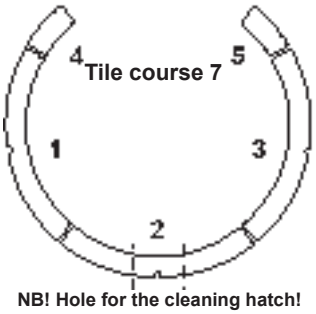

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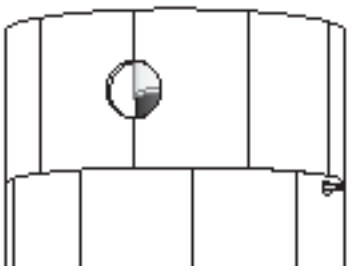
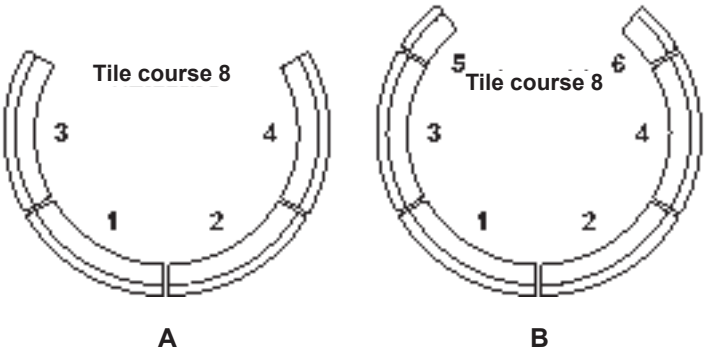


29. Assemble **tile course 8** (the wide, upper, tile moulding) in adhesive. The joint between tiles 1 and 2 must be in line with the tile joint in the course below.



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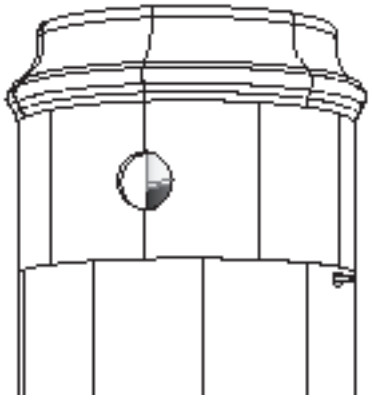


FINAL INSTALLATION AND GROUTING

30. Install the upper cleaning cover connection sleeve by applying a string of silicone (transparent) on the connection sleeve's rear end and pushing it from the inside and out through the hole in the tiles, so the space between the connection sleeve and the tiles remains free of silicone along the front edge. The connection sleeve must protrude approx. 1 cm from the outside of the tiles (so that the cleaning cover can be pressed in place later). Fix temporarily using tape.

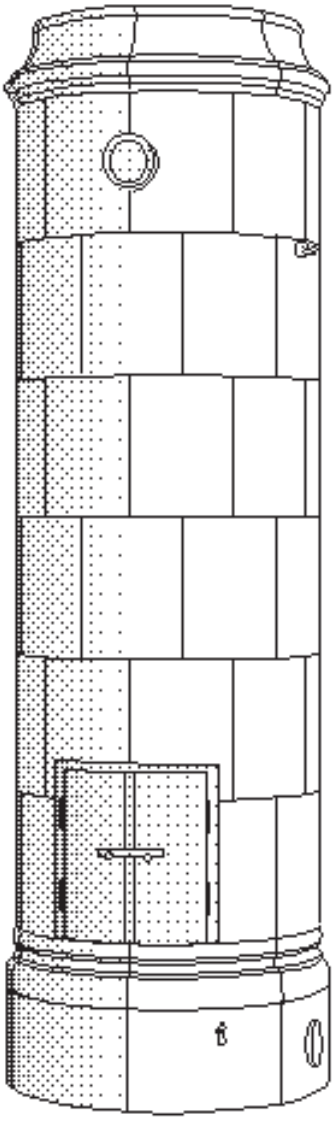
31. Also install the lower cleaning cover connection sleeves by applying a string of silicone (transparent) on the inner end of each connection sleeve and pressing the connection sleeve against the lower safety case sleeve connection. Fix temporarily using tape.

32. Mix the grout with water to a smooth consistency. Grout the tiles with the rubber spatula. Wash off any excess grout from the tiles, using a wet sponge when the grout begins to set (dry). Dry the tile stove with cotton pulp a couple of hours after grouting.

33. Install the brass door and the damper feedthrough against the tiles using silicone (transparent). Fix temporarily using tape. Screw the damper knob in place.

34. Assemble the damper feedthrough and the knob for the air supply using silicone (transparent).

35. Once the silicone has hardened (after approx. one week), press the three brass cleaning covers, two at the two bottom and one at the top, into their respective locations.



Do not fire your Christineberg for at least one week after completing the installation to allow for the hardening times.
The first ten fires should be calm, to give the tile stove the opportunity to stabilise and dry. Therefore, fire these ten first fires in damper position NORMAL and with only half the recommended amount of wood, see also the Care & Firing Instructions on the following pages.

CARE & FIRING INSTRUCTIONS

The Christineberg has been tested by the Swedish National Testing and Research Institute. **The test results show a very pure combustion and a useful efficiency of not less than 86%.**

Both the useful efficiency and the environmental results make the Christineberg directly comparable with the best optimised heating boilers on the market.

For the Christineberg to work optimally and to give you the maximum return, it is of the greatest importance that you follow the care and firing instructions below. **Non-compliance will invalidate the warranty.**

FUEL

The Christineberg must to be fired with wood. Most types of firewood can be used. The most suitable ones are birch, beech, ash, and elm, but conifers and oak can also be used if they are mixed 50/50 with another type of hardwood. Oak contains acids, which may affect the materials in the stove during combustion.

Coal and briquettes are unsuitable fuels. They develop high temperatures, which may damage the hearth.

The firewood must be dry, i.e. with a maximum moisture content of 15 to 20%. If the firewood is moist, an unnecessary amount of energy is used to dry it before it starts burning normally. Moreover, this forms large amounts of soot and tar, which are deposited on the walls of the hearth and chimney, which in turn significantly increases the risk of a chimney fire.

Moist firewood also results in poor combustion, which leads to greater smoke generation with sooty glass and deterioration of the local environment as a consequence.

To be certain that you will have dry wood when the heating season begins, the wood should be cut in the winter. The wood is then stored in a ventilated place under a roof and left to dry during the spring and summer. Before using the wood, you should keep it indoors for a couple of days so there is time for the surface moisture to evaporate.

WARNING! It is absolutely forbidden to fire the stove with painted, glued (e.g. chipboard or hardboard), or pressure-impregnated wood.

It is also forbidden to burn plastic and other waste in the tile stove. The combustion of such fuels and substances releases acids and heavy metals, which are very harmful to the environment.

FIRING

It is important to fire with the right amount of wood in the tile stove; otherwise, there is a risk of overheating resulting in damage to the stove and chimney. The wood amounts stated below are for firing with hardwood.

At maximum firing for longer periods of time the stove's service life is reduced and, if the maximum permitted amount of wood is exceeded, the tile stove and the chimney may be damaged.

Suitable firewood size and quantity for the Christineberg are, as follows:

Kindling

Length	approx. 30 cm
Diameter	2 - 5 cm
Amount	approx. 1.7 kg

Split logs

Length	approx. 30 cm
Diameter	6 - 10 cm
Amount	approx. 1.7 kg per load
Maximum amount	2.5 kg per hour

To see how much space 1.7 kg of kindling and 1.7 kg of split logs occupy, it is a good idea to weigh the wood before the first couple of firings. This will gradually become routine, and weighing will become unnecessary.

However, pay attention if the wood suddenly feels abnormally heavy. This may be caused by too high a moisture content, which will necessitate additional drying.

FIRING AND REFILLING WITH WOOD

Open a window near the tile stove, if there is negative pressure in the house. Leave the window open, until the fire starts to burn normally.

Open the flue gas damper completely.

Light the fire in the following way:

1. Open the glass door and put in some crumpled newspaper.
2. Put in about 1.7 kg of kindling, standing vertically against the hearth's rear wall.
3. Open the air supply control completely, i.e. in the position **MAX** (see illustration below).
4. Light the fire.
5. Close the glass door, once the fire has started burning properly.
6. Once the kindling has burnt and formed an ember bed, it is time to add some wood. Open the door carefully, to prevent smoke from entering the room. Put in approx. 3 logs (equivalent to approx. 1.7 kg of chopped wood). Close the door, once the fire has started burning properly and small flames appear.
7. Switch the air supply control to the **NORMAL** position (see illustration below).

NOTE! The brass outer doors must be completely open during firing – otherwise, they may be discoloured by the radiant heat from the fire.

DAMPER POSITIONS

REMOVAL OF SOOT AND MAINTENANCE

Soot must be removed at least once per season.

The cleaning covers are placed at the bottom on each side of the tile stove. They make it possible to clean the front and rear flue on each side using a suitable flue brush. To prevent soot from spreading into the room, you should cover the soot door with a cloth or the like during soot removal.

For removal of soot from a chimney connection sleeve with rear connection, remove the upper cleaning cover as well as the chimney connection sleeve's soot door. If, in addition, the chimney lacks its own cleaning cover, the chimney's soot must be raked out the same way as above.

The soot from the chimney and the connections should be removed by a chimney sweep.

If the glass becomes sooty, it is best to use a stove cleaner or a special soot remover, which are available for purchase from your local stove dealer. Never use detergents containing abrasive materials. This will damage the glass.

TIP! Soot stains on glass are easily removed as follows:
1. Moisten a piece of soft kitchen paper with water.
2. Rub some ash from the hearth onto the kitchen paper.
3. Remove the soot stain by rubbing with the kitchen paper.

When removing ash, take care to place the ash in a metal container. Check very carefully that there are no embers left in the ash before you throw it away.

Empty the ash at least once a week during daily firing.

IMPORTANT! In the event of a chimney fire, the hearth doors and the air supply controls must be closed. If necessary, call the fire brigade.

After a chimney fire, the chimney must be inspected and approved by a certified chimney sweep before the tile stove can be put into use again.

Also read our warranty terms, which were included in the delivery.
If you have questions, you are welcome to contact us.

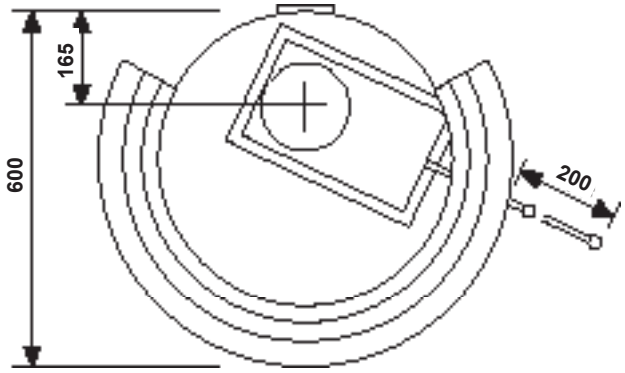
We wish you many pleasant and rewarding years with your Christineberg tile stove
- an investment that combines use with pleasure.

TECHNICAL SPECIFICATION

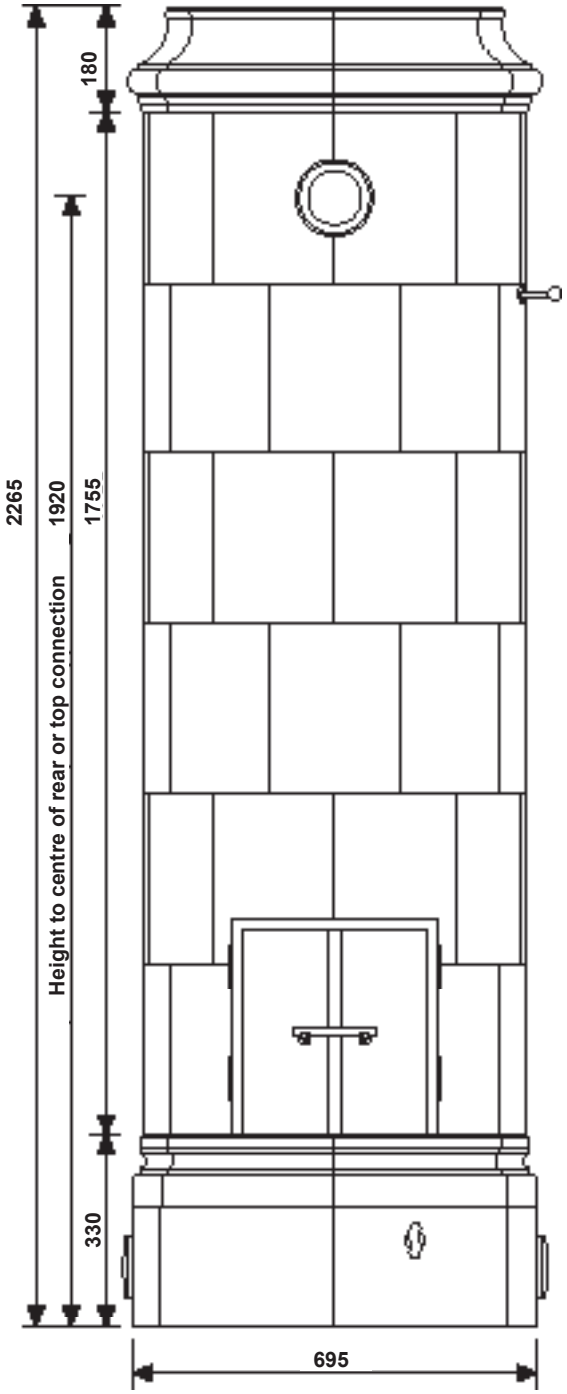
DIMENSIONS AND PERFORMANCE

• Height	2265 mm
• Width	695 mm
• Depth	600 mm
• Weight	600 kg
• Height to centre of rear connection	1920 mm
• Height to centre of top connection	1920 mm
• Output	Over 10 KW
• Efficiency	86%
• Cooling time	Up to 24 hours

THE CHRISTINEBERG FROM ABOVE



THE CHRISTINEBERG FROM THE FRONT



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01/03/2012