Installation Guide

BSG 02

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made in germany.

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1 BASIC INFORMATIONS

All instructions delivered with products must be observed. We do not accept any warranty claim or liability for damage resulting from failure to observe these installation instructions!
Improper installation can cause injury and material damage!

The installation may only be carried out by a registered specialist.

Fireplaces equipped with a water boiler must be pressure-tested after hydraulic connection to the heating system. Masonry work may follow only after this pressure test. Ulrich Brunner GmbH does not cover any costs incurred by necessary dismantling of masonry for rework at water boiler installation or replacement of the boiler.

The floor space of the room must have a suitable structure and sufficient dimensions to ensure proper functioning of the fireplace.

Please note that other installation and assembly instructions are included in other packaging units!

Dimensioning of downstream heat accumulator must be according to valid stove-setting rules.

During installation of the fireplace, all dimensions and minimal clearances of the fireplace casing must be held as specified by the manufacturer.

Fireplaces that meet the requirements of DIN EN 13240 or DIN EN 13229 and that can only be operated as intended with closed combustion chamber door or that have a self-closing firebox door are suitable for multiple occupancy.

All binding national or EU standards and local regulations for the installation of fireplaces must be observed.

All valid stove fitting rules and regulations of local construction law must be observed and followed.

Please follow the relevant regulations of your country.

When these instructions are followed and all works are done properly, this will ensure a safe, energy-saving and environmentally friendly operation of the stove. Pictures shown are not to be considered as complete representations of any kind.

Subject to technical and assortment changes.

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Please notify your supplier of any damage which might have occurred during transport.

Please keep these instructions.

2 BASIC INFORMATIONS

Fireplace inserts

The cladding elements of BSG are specially adapted for the respective kits of the masonry heaters of Ulrich Brunner GmbH.

Brunner Masonry stove kit systems	suitable doors
BSG 01	GOT 51-67 side opening door+ GOF 66x42 with frame
BSG 02	GOT 45-67-44 side opening door L/R + GOF 50x35 L/R with frame

The BSO stove fitting kits are designed for particular stove inserts manufactured by Ulrich Brunner GmbH.

BSO	Stove insert to be used	Recomm. load every 2h*)
BSO 01	HKD 2.2 short DR (with door frame R330)	2.5 kg
BSO 02	HKD 2.2 DF and HKD 2.2 D/DF (with mounting frame)	3 kg
BSO 03	HKD 2.2 DF and HKD 2.2 D/DF (with mounting frame)	4 kg

*) When the above loads are exceeded, or if the recommended load is burned in shorter times, cracks on external walls of the stove are possible. Please inform the user about this.
The components of BSO kits fulfil the requirements of exposed concrete class SB2.

Floor

On flammable floors, the fireplace must be placed on a slab made of non-flammable material. This slab must be at least 500 mm long in front and 300 mm wide on both sides of the fireplace.
The base plate must be carefully set to level; please pay attention, that it rests evenly on the entire surface.
It is recommended to use the wall as reference and set the base plate at 90 degrees. The completely assembled accumulation stove cannot be moved or turned afterwards.

Adhesive mortar as filler

Adhesive mortar is used to fill uneven spots or holes on concrete elements' surface.
Mix the adhesive mortar with water (it should remind the consistence of toothpaste). Before you start, wet the concrete surface with a wet sponge. This will help to remove dust and provides for better adhesion.

Acrylic joint seal
Used pointwise for setting of components and to seal any joints < 8 mm (0.31 in). Major outbreaks, gaps or like are touched up with adhesive mortar.

Painting

24 hours after assembly you can paint the stove external casing. Plastered walls must be previously sanded with fine abrasive paper.

Hairline cracks and small defects
Small cracks can appear at the connection points between the components of the cladding, at the connection between the house wall and the cladding and in the event of heavy stress on the component surface. This is normal and no reason for complaint. You can repair small cracks with the optionally available revision set (item no.: 900300). Scrape out the joint with a joint scraper and suck out with a vacuum cleaner. Inject the acrylic joint compound and distribute with a soap wetted finger.
After 24 hours the joint can be painted over.

S

Bigger defects
Transportation damage must be reported immediately to the shipping company. Replacement parts can be ordered from Ulrich Brunner GmbH.
In the case of bigger defects which cannot be repaired with the revision set (item no.: 900300), it is possible to request exchange at Ulrich Brunner GmbH, based on your warranty.

Replacement part requests:
When ordering replacement parts it is necessary to mark the damaged parts on the attached packing list and make a picture of the damage. Then, the printed picture and packing list should be sent back to Ulrich Brunner GmbH. The replacement part will be sent as soon as possible.

Concrete look exterior
Stove casings with concrete look, despite the best practices used during manufacturing and shipping, can show slight irregularities like air inclusions, small cracks or unclean edges. This corresponds entirely with the concrete look design and is not a reason for a claim. Cracked or significantly damaged elements will be replaced as part of your products' warranty.

If any additional components like electronics (EOS) or similar are installed inside the stove casing, the max. allowed ambient temperature must be respected. Electronics must be installed in such a way to provide for rear ventilation.

All safety distances are minimal required distances.

Subject to errors and changes!



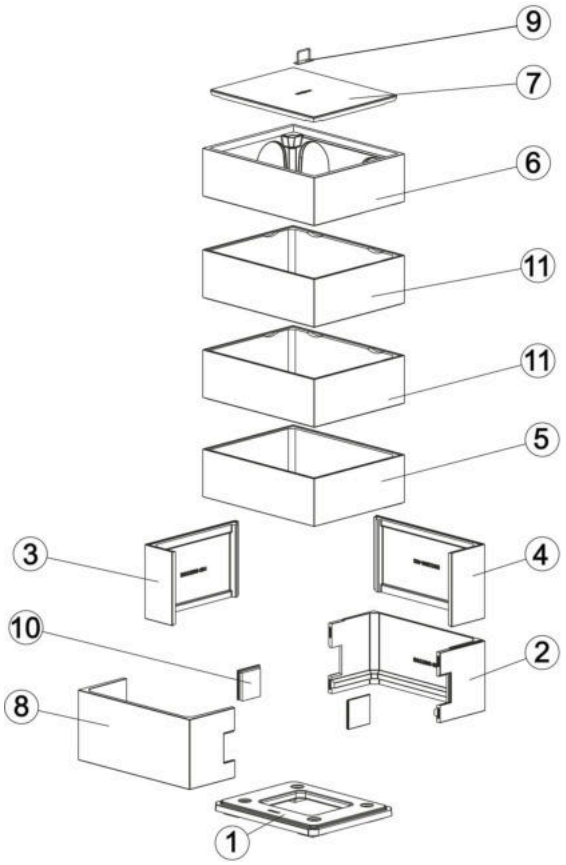
Please follow the separate installation instructions for the stove insert.

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3 COMPONENTS OF THE BSG 02 WITH ATTACHED MSS

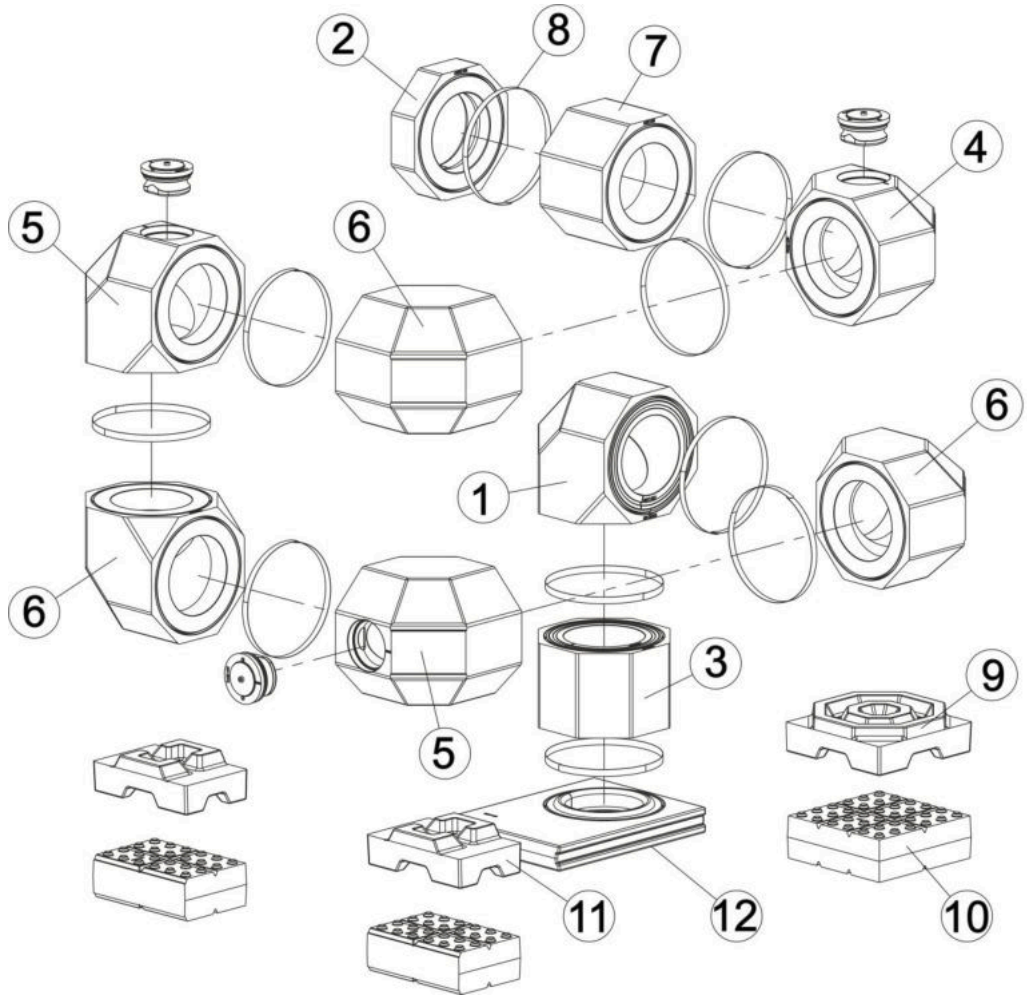
Components of the concrete cladding

Item	Part number	Designation
1	BSG2000-001	Base plate Series 01
2	BSG2000-002	Base ring 1 Series 01
3	BSG2000-004	Side panel A Series 01
4	BSG2000-005	Side panel B Series 01
5	BSK2000-006	Top ring 1 BSK 02
6	BSK2000-008	Upper ring 3 for BSK 02
7	BSG2000-006	Cover series 01
8	BSG2000-003	Base ring 2 Series 01
9	BSG1000-005	Handle for lid removal
10	BSO3000-019	Inspection cover BSO 03
11	BSK2000-007	Top ring height 300 mm



Im. 1: Components of the concrete cladding

Components of the MSS



Im. 2: Components of the MSS

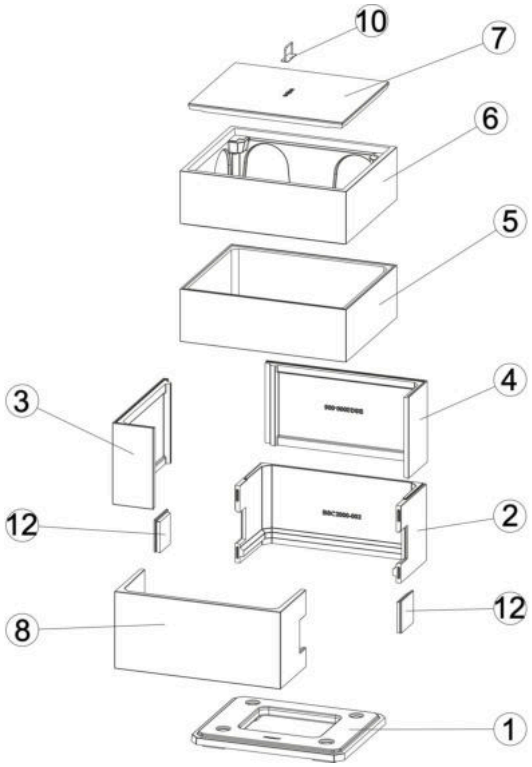
Pos	Part no.	Designation	Item	Part no.	Designation
1	R013061	MSS bend 90° with inner pipe, double-shell	2	R013067	MSS burnout brick d180 with seal
3	R013065	MSS modular brick with inner pipe 20 cm, double-skinned	4	R013017	MSS elbow with plaster cover right
5	R013019	MSS elbow 90° with plaster cover top	6	R013005	MSS bend 90°
7	R013001	MSS module storage block 20 cm	8	R013020	MSS steel band ring
9	R013108	MSSI insulating stone 30x30 cm	10	R013124	MSS Base stone 100 30x30 cm
11	R013107	MSSI insulating stone 20x30 cm	12	G021138	Connecting block GOF/MSS AD corner long side 360x477x60

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4 COMPONENTS OF THE BSG 02 WITH ADJACENT MSS

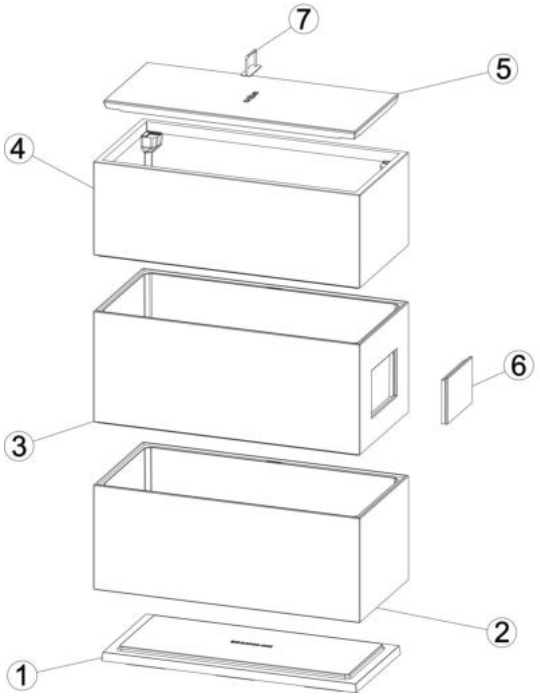
Components of the concrete cladding

Item	Part number	Designation
1	BSG2000-001	Plinth Series 01
2	BSG2000-002	Base ring 1 Series 01
3	BSG2000-004	Side panel A Series 01
4	BSG2000-005	Side panel B Series 01
5	BSK2000-006	Top ring 1 BSK 02
6	BSK2000-008	Upper ring 3 for BSK 02
7	BSG2000-006	Cover series 01
8	BSG2000-003	Base ring 2 Series 01
10	BSG1000-005	Handle for lid removal
12	BSO3000-019	Inspection cover BSO 03



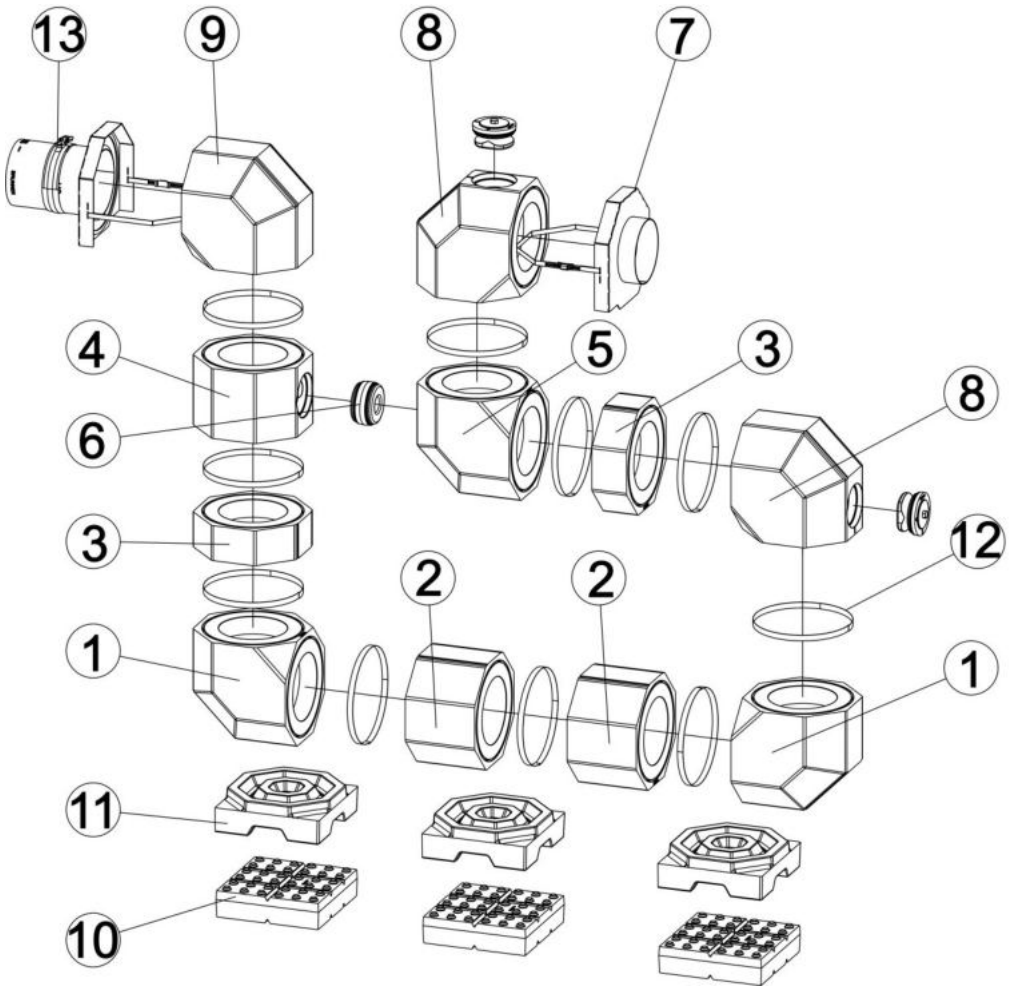
Im. 3: Components of the concrete cladding

Pos	Part number	Designation
1	BSG2000-008	Base plate Series 01
2	BSG2000-009	Base ring 1 Series 01
3	BSG2000-010	Base ring 2 Series 01
4	BSG2000-011	Upper ring 3 Series 03
5	BSG2000-013	Cover 01 series
6	BSG2000-012	Return cover series 01
7	BSG1000-005	Cover removal handle



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Components of the MSS



Im. 4: Components of the MSS

Pos	Part no.	Designation	Pos	Part no.	Designation
1	R013005	MSS bend 90°	2	R013001	MSS module spike 20cm
3	R013002	MSS module storage brick 10cm	4	R013003	MSS module storage stone 20cm with opening
5	R013007	MSS bend 90° with top opening	6	R013074	MSS bypass 40 with seals
7	R013160	MSS burnout adapter with pipe clamp	8	R013019	MSS elbow 90° with plaster cover on top
9	R013061	MSS bend 90° with inner pipe, double-shell	10	R013123	MSS plinth 75 30x30cm
11	R013108	MSSI insulating stone 30x30cm	12	R013020	Steel band ring
13	R013158	MSS adapter single-brand HS with pipe clamp and seal			

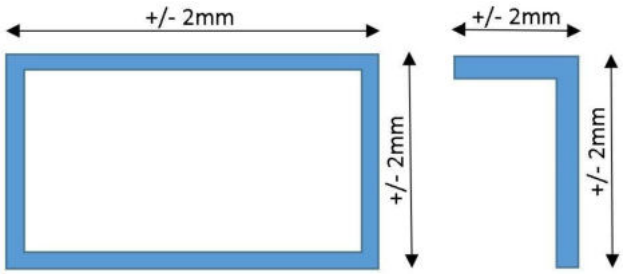
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5 TOLERANCES OF THERMAL CONCRETE PARTS

The following tolerances are valid for all parts of our system fireplace/stove casings. Except where otherwise indicated, all data refer to the nominal dimensions, as found in dimensional drawings.

Length Tolerances

For each part, the indicated tolerances apply.



Height Tolerances

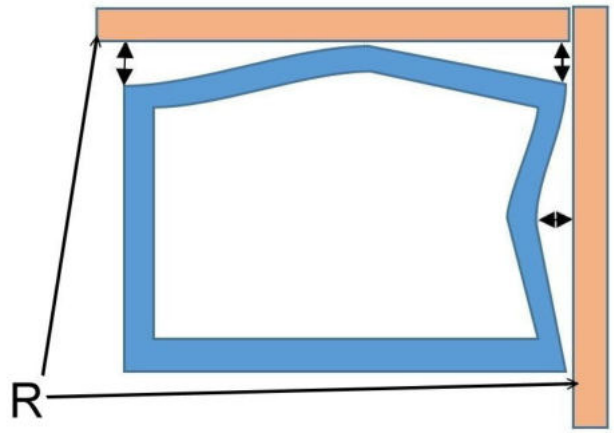
For each part, the indicated tolerances apply.



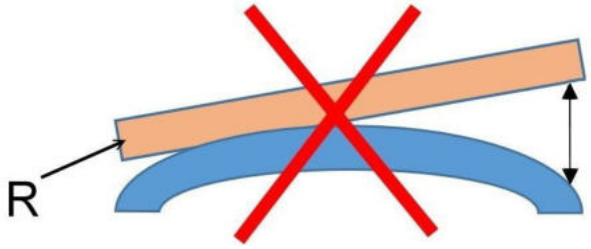
Tolerances of Flatness

For parts with nominal dimensions up to 950 mm, a tolerance of +/- 2.5 mm applies. Above this dimension, a tolerance of +/- 3 mm applies.

These tolerances apply also for the base support and top cover parts. The leveling board (R) must be placed in parallel to the basic body!



Im. 5: Leveling boards placed correctly

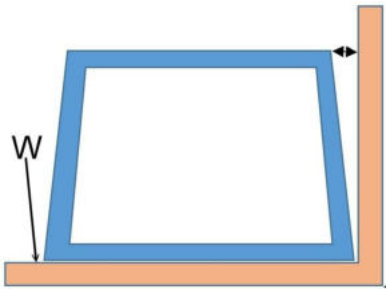


Im. 6: Incorrectly placed leveling board

Tolerances of Angle

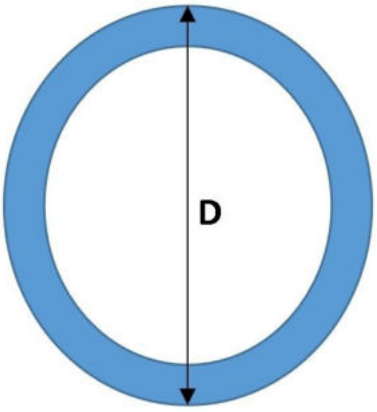
In order to determine the deviations of angles, place the square measuring tool along the long edge!

For nominal dimensions up to 600 mm, a tolerance of 0.28%, i.e. 1.7 mm applies. For nominal dimensions up to 900 mm, a tolerance of 0.30%, i.e. 2.4 mm applies.



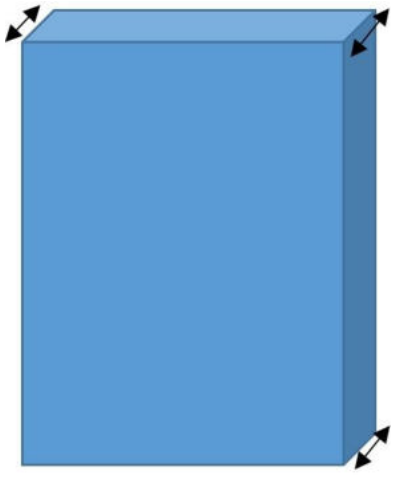
Roundness

Up to a nominal diameter of 650 mm, a tolerance of 0.25%, i.e. 1.62 mm applies. For diameters above this value, a tolerance of 0.28%, i.e. 2.38 mm applies.



Wall thicknesses

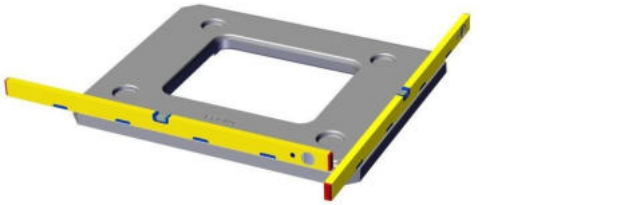
For wall thicknesses, a tolerance of 3.5% applies.



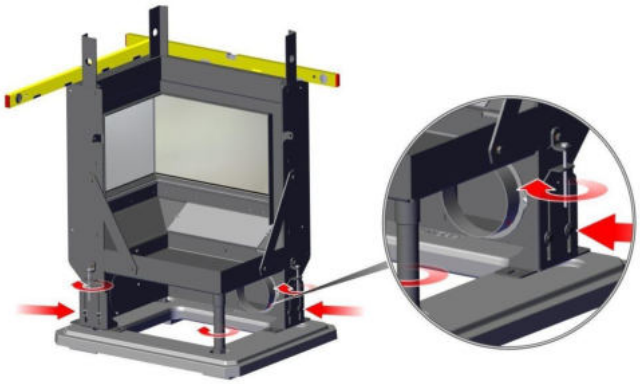
The overall appearance with color shade differences being present or not can be assessed in general only after a longer period of time (several weeks in some cases). The uniformity of color should be assessed from a typical viewing distance.

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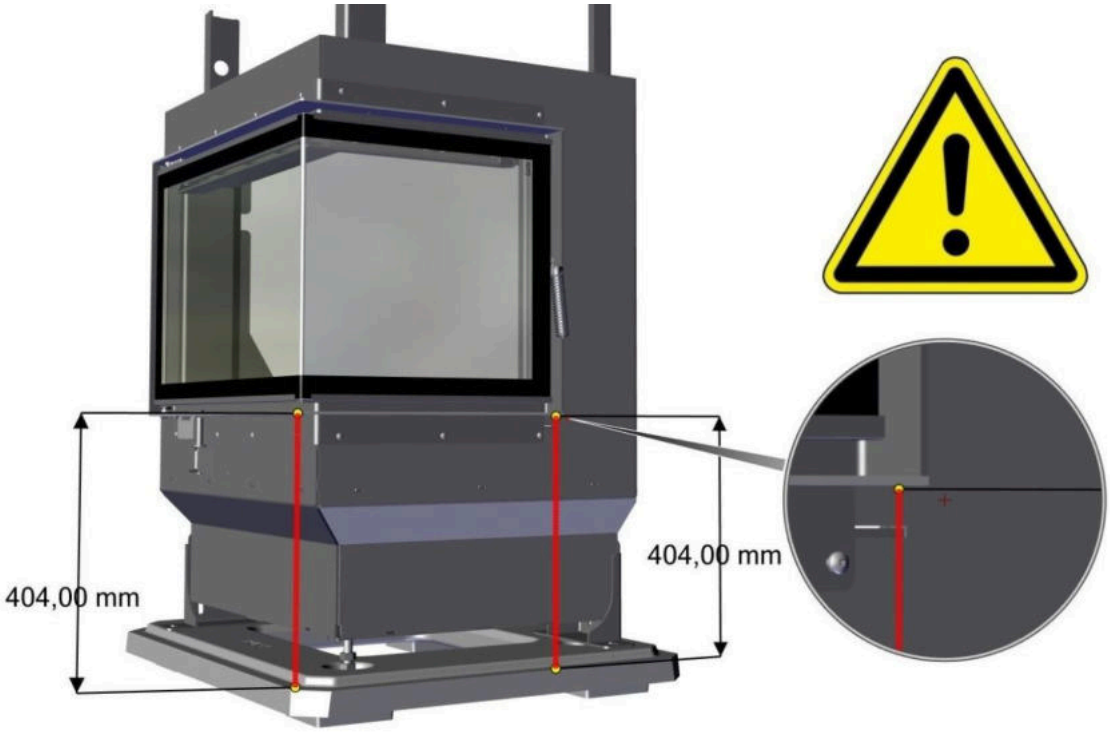
6 ASSEMBLY SEQUENCE WITH MSS IN PLACE



Im. 7: Align the base plate



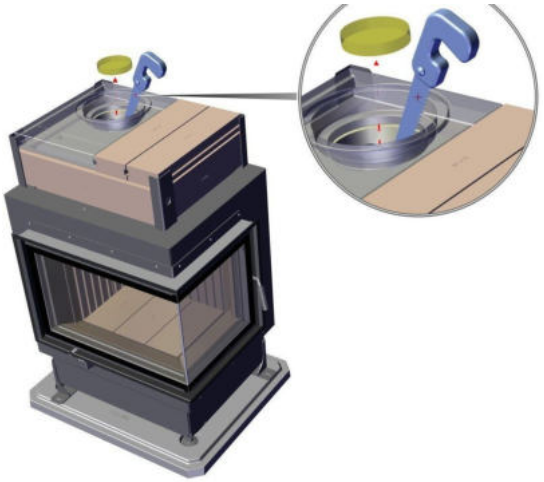
Im. 8: Set up and align base oven door with support frame



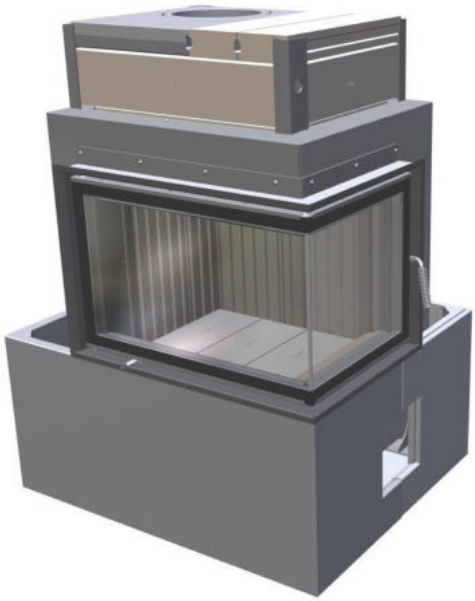
Im. 9: Adjust height



Im. 10: Set the first base ring and align it with the outer frame



Im. 11: Set up the base oven and cut out the burnout



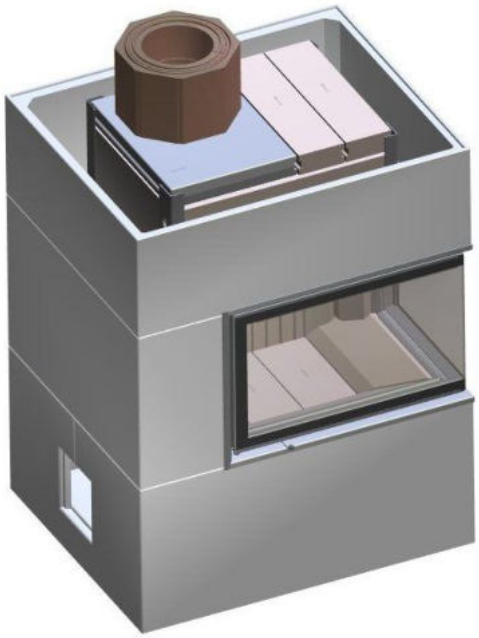
Im. 12: Place and align the second base ring



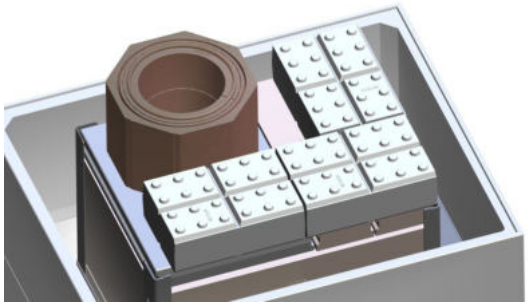
Im. 13: Place side elements

To assemble the MSS components, it is essential to follow the MSS assembly instructions! Installation with adhesive and steel rings is not described in detail here.

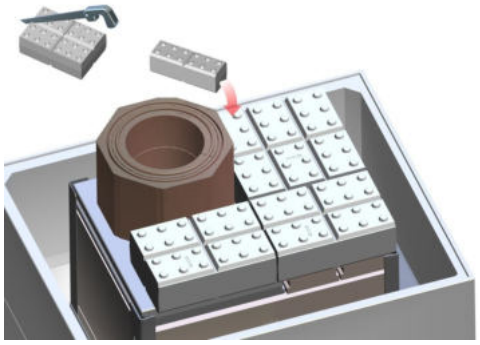
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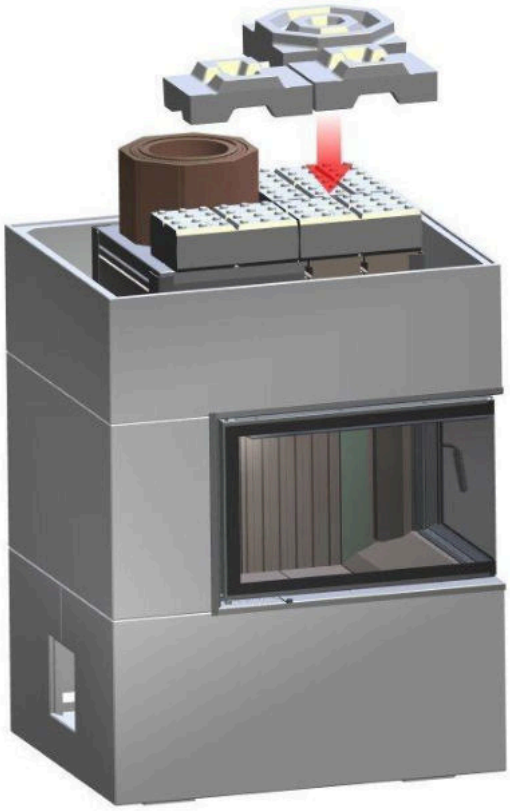
Im. 14: Place top ring 1 and first module block



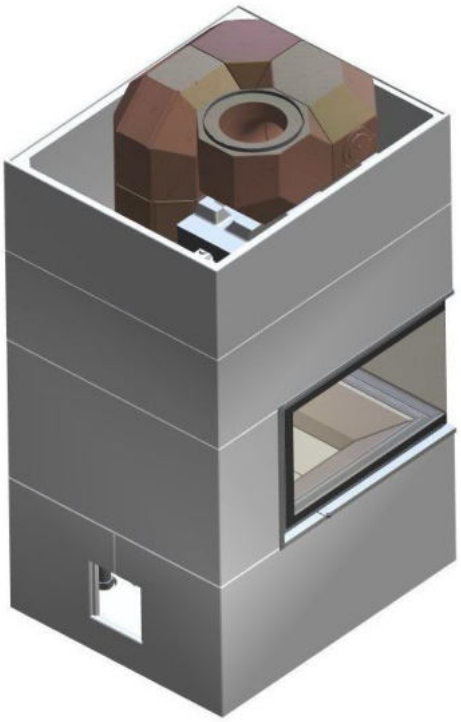
Im. 15: Place 3 MSS base blocks



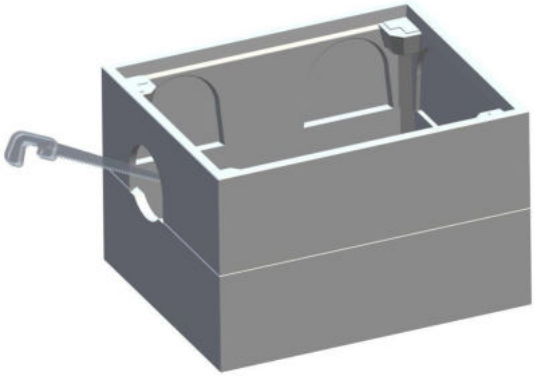
Im. 16: Split the MSS base block and lay it in place



Im. 17: Place MSSI insulating blocks



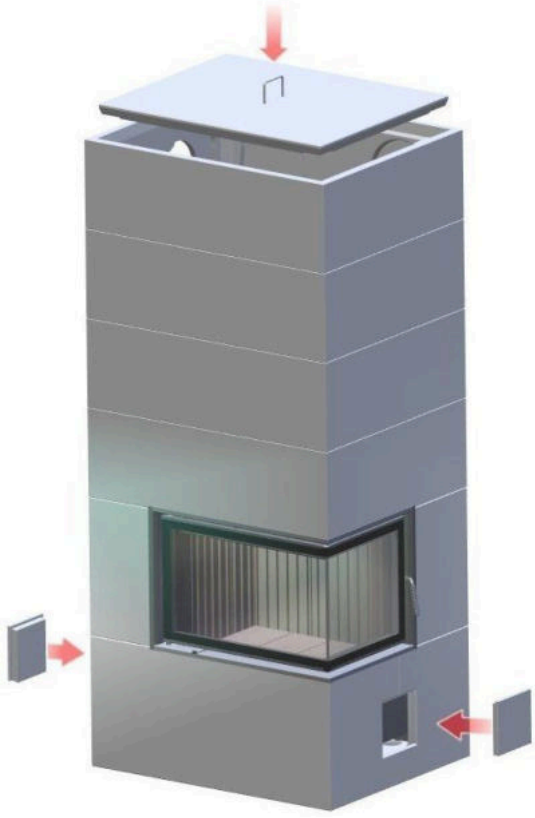
Im. 18: Place first level MSS and first top ring



Im. 19: Cut out burnout



Im. 20: Place second level MSS and second top ring



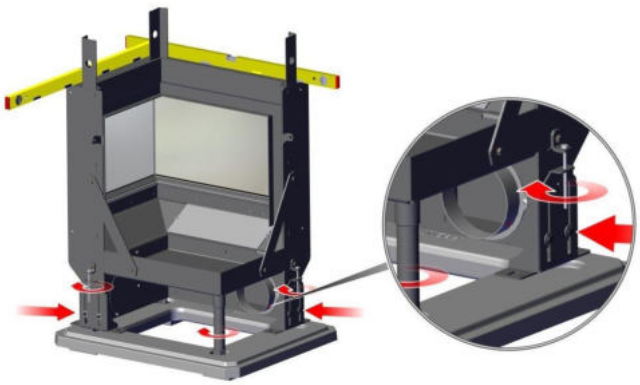
Im. 21: Place top ring 3 and attach cover

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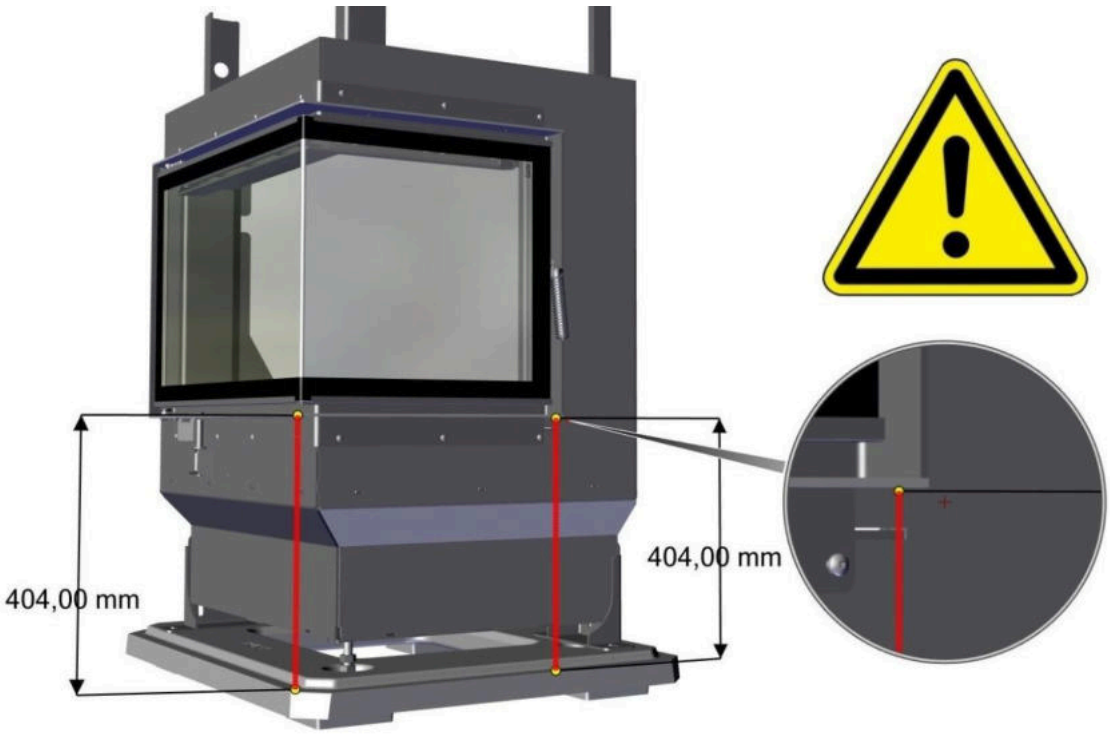
7 ASSEMBLY SEQUENCE WITH THE ADJACENT MSS



Im. 22: Align base plate



Im. 23: Set up and align base oven door with support frame

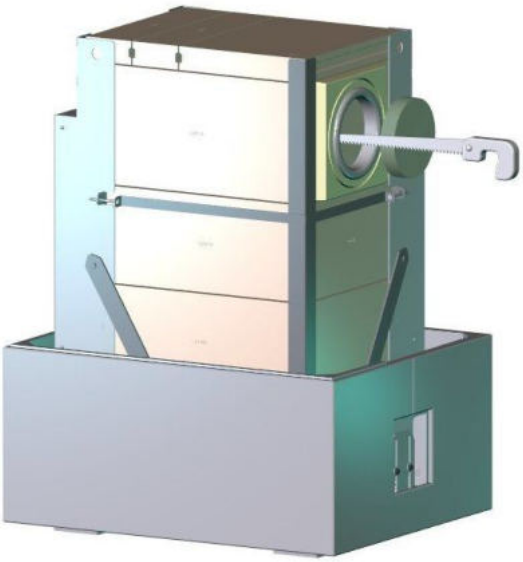


Im. 24: Set height

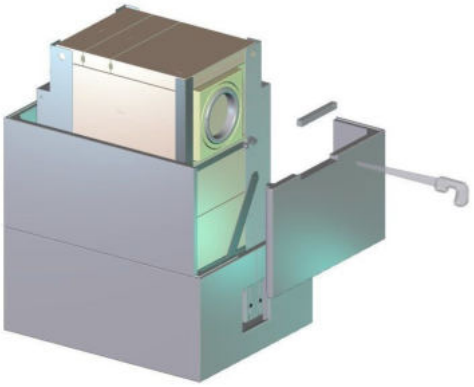


Im. 25: Place the first base ring and align with the frame

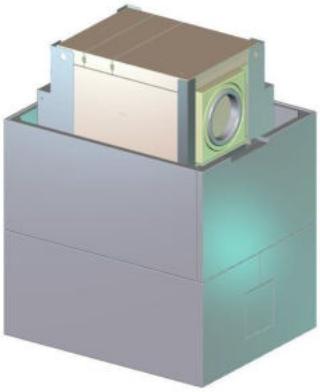
See GOF assembly instructions!



Im. 26: Set up the base stove and cut out the burnout



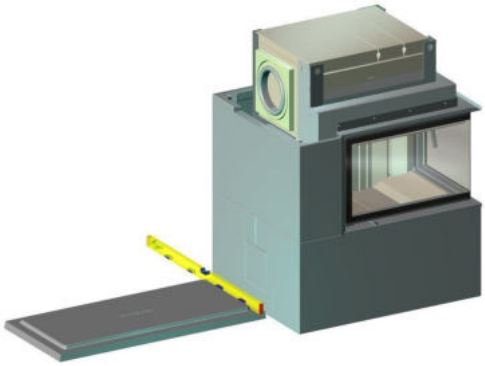
Im. 27: Set and cut out concrete elements for the MSS adapter connection



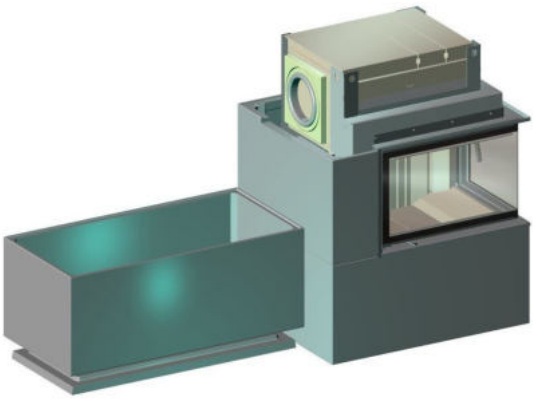
To assemble the MSS components, always follow the MSS assembly instructions!

Installation with adhesive and steel rings is not described in detail here.

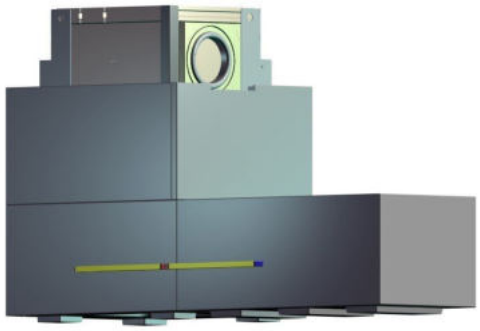
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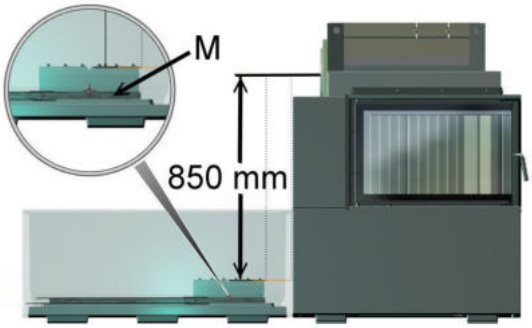
Im. 28: Aligning the base plate for MSS



Im. 29: Place the first ring element for the side storage tank

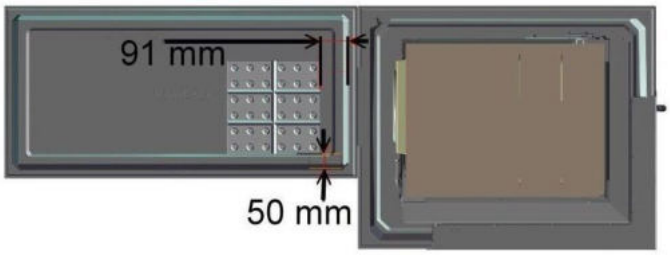


Im. 30: Align ring element

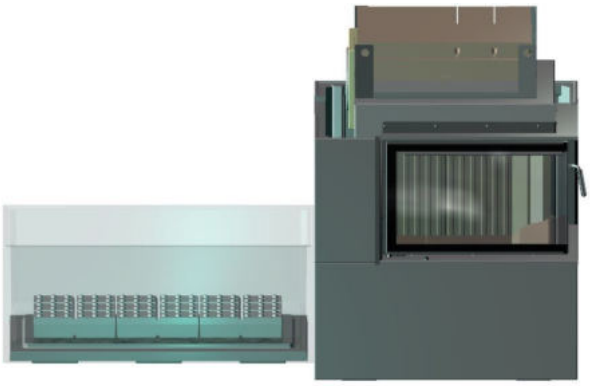


Im. 31: Place the base blocks on the calculated mortar bed

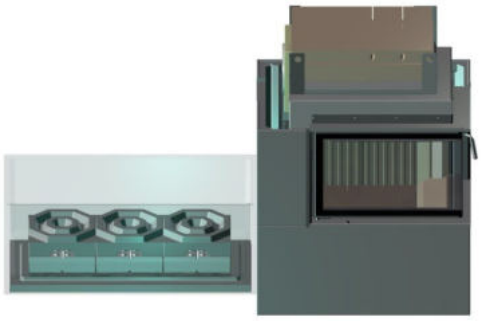
M = mortar layer



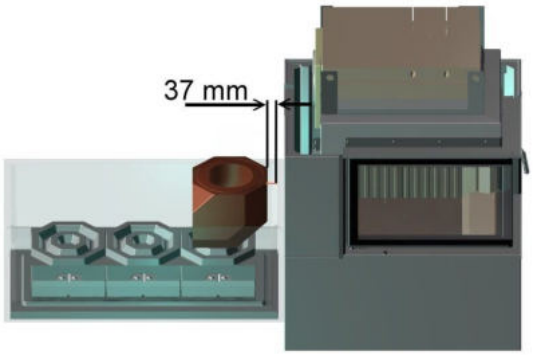
Im. 32: Aligning the base blocks



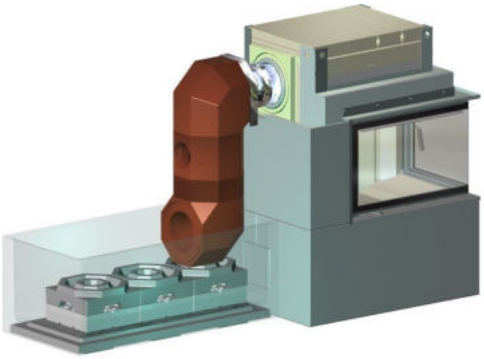
Im. 33: Set dry base stones



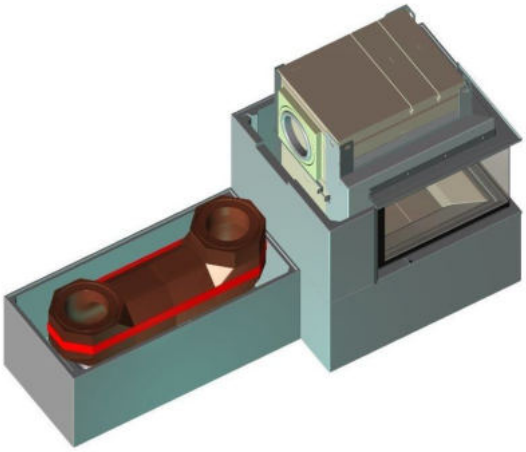
Im. 34: Dry setting the floor insulation blocks



Im. 35: Align first arch

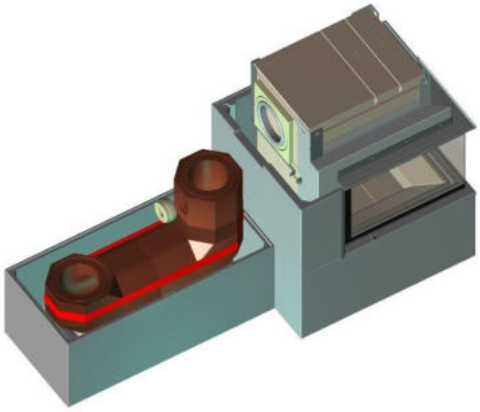


Im. 36: Dry test structure to check connection height

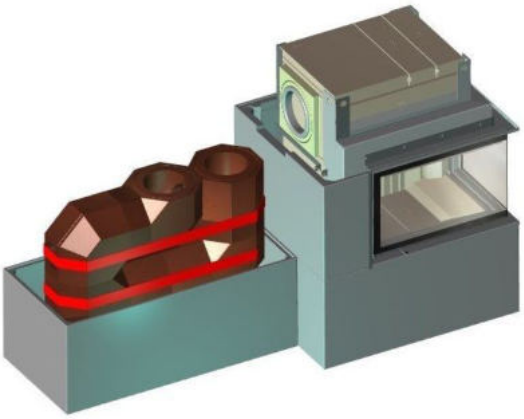


Im. 37: Remove the test structure again and place the bottom row. Secure position with tensioning strap.

The individual rows of MSS elements must be secured with a tensioning strap until the joints are finally set. Remove the tensioning straps again after setting!

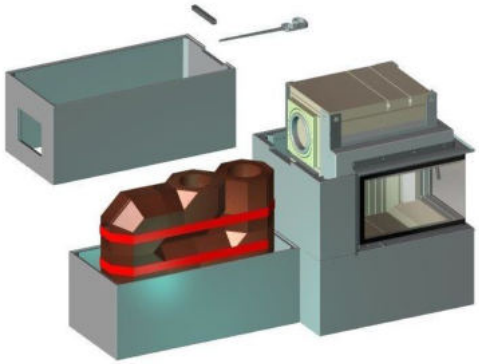


Im. 38: Place the first element of row 2 and insert the bypass element

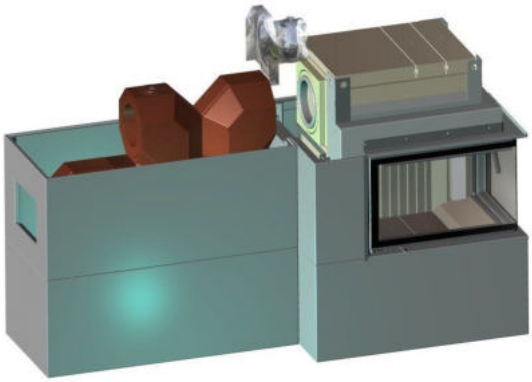


Im. 39: Place the second row and secure the position with a tensioning strap.

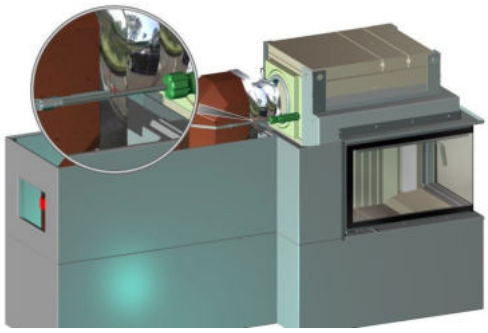
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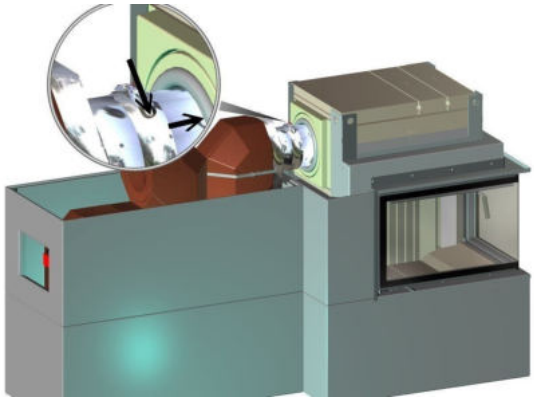
Im. 40: Place second concrete ring and cut out for MSS adapter



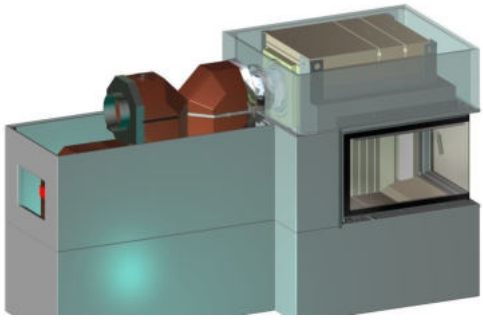
Im. 41: Place MSS two-shell arch and fit MSS adapter



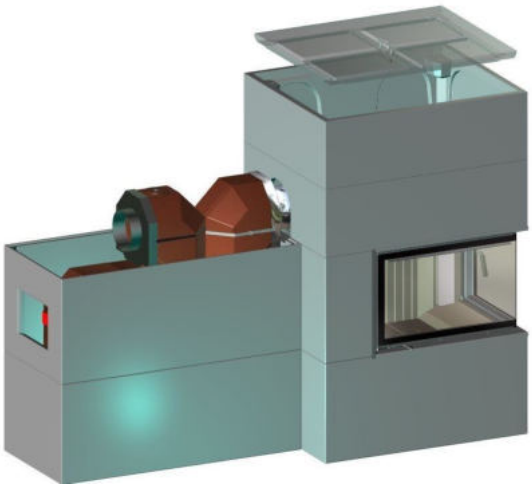
Im. 42: Fit MSS adapter and secure with steel band



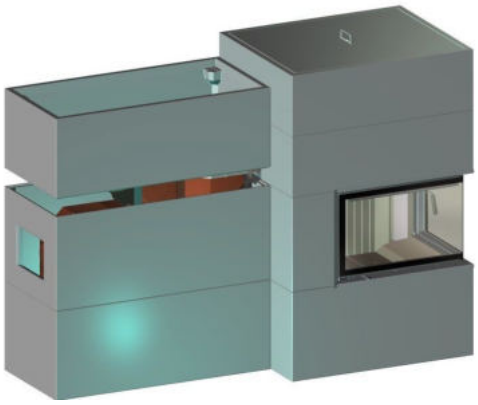
Im. 43: Insert the inner pipe of the MSS adapter into the connecting block, seal with the supplied sealant and close the bracket



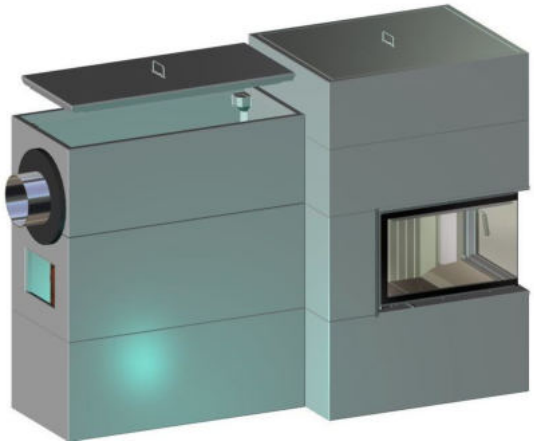
Im. 44: Fit the MSS adapter burn-out and secure with steel band



Im. 45: Place the upper ring on the base stove and fit the cover



Im. 46: Place the upper ring on the storage block



Im. 47: Cut out the chimney connection and fit the cover

8 ASSEMBLY

Sequence of assembly

For sequence of assembly, please follow the instructions in chapter 'Sequence of assembly'. It shows each and every step of assembly.

Always keep to the specified order!

The single elements must be examined closely before installation to ensure correct position. Don't forget the pointwise bonding of elements with acrylic adhesive.

The assembly sequence of protective panels is only an example and can be different in various cases.

Fireplace insert

To compensate for the different thermal expansions between the fireplace insert and casing, a gap of ca. 2-3 mm must be left around the doors.

If the fireplace casing is in direct contact with the fireplace insert, it leads to damage of the fireplace casings, which are not covered by our warranty.



The mounting frame must have an overlap of about 4 mm.

Breakthroughs and breakouts

Breakthroughs for smoke pipe connection, air gratings or other components within the fireplace casing must be created on site. These are to be made with extreme caution to prevent breakage of the components.

Damage caused by improper work is not covered by the warranty.

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The safest way to create the breakthroughs is using a jigsaw.

Setting of the ring elements

The ring elements of the fireplace casings must be lifted over the fireplace insert previously set on the base plate. To avoid damages during setting, it is recommended to place the elements on pieces of wood, and then set down the ring element carefully after pulling out the wood pieces.



Im. 48: Wood pieces as supports

Plastering

Before plastering the fireplace casing, the fireplace should have been heated once. As a result, the fireplace casing can expand and break down the biggest stresses. This prevents or reduces subsequent cracks in the surface of the plastered fireplace.

The surface of the fireplace casing must be cleaned with a damp cloth. A pre-wetting of the surface is not required.

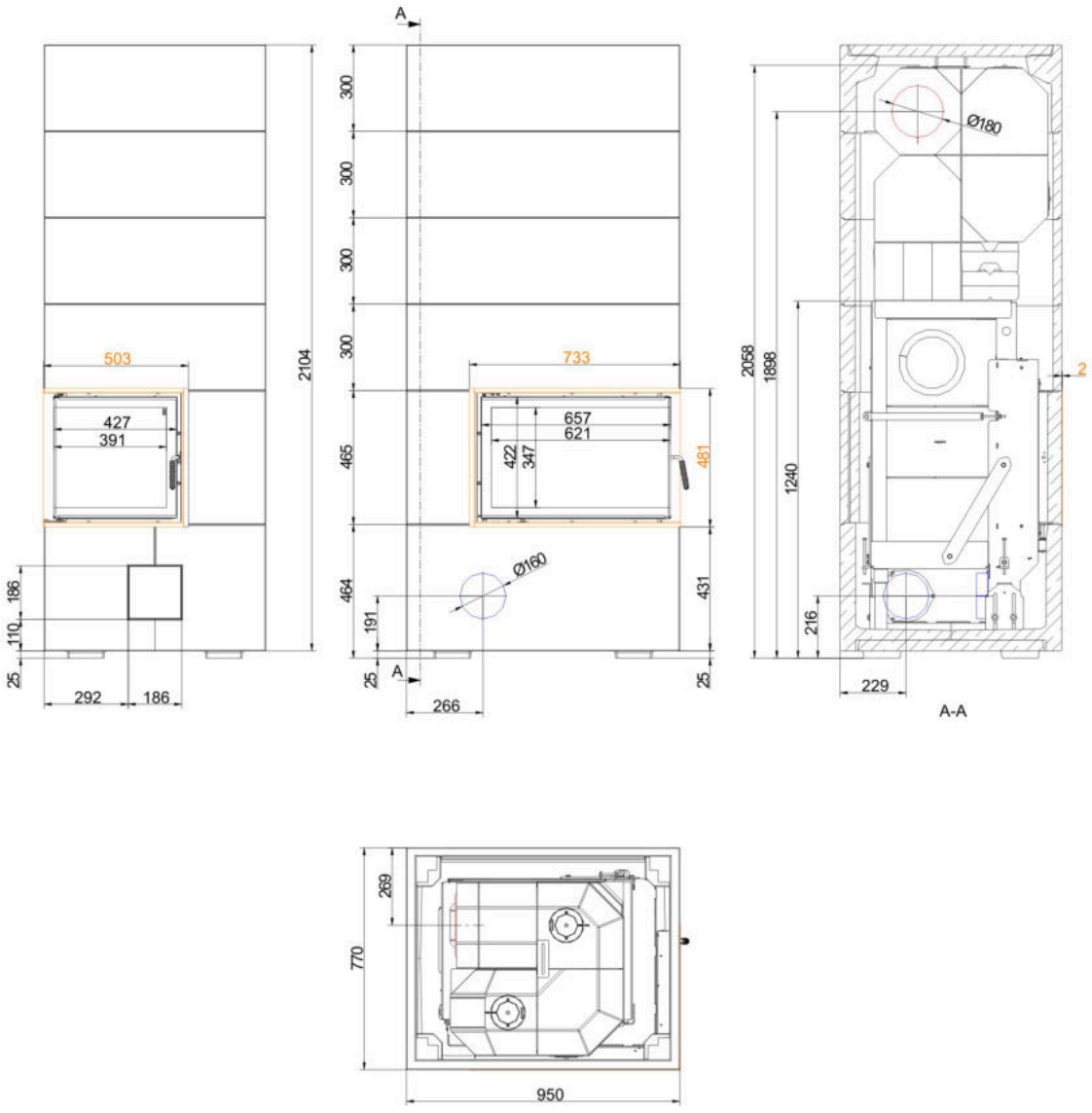
Keep processing temperature above 5°C (41 deg. Fahrenheit).

To avoid stress cracks as much as possible, a fiberglass mesh is applied with adhesive plaster (optional), this is Brunner Universal (Art.Nr.: 900384) or Brunner Spezial (Art.Nr.: 900284) on the fireplace casing.

Depending on the desired texture apply two more layers to get the wished texture.

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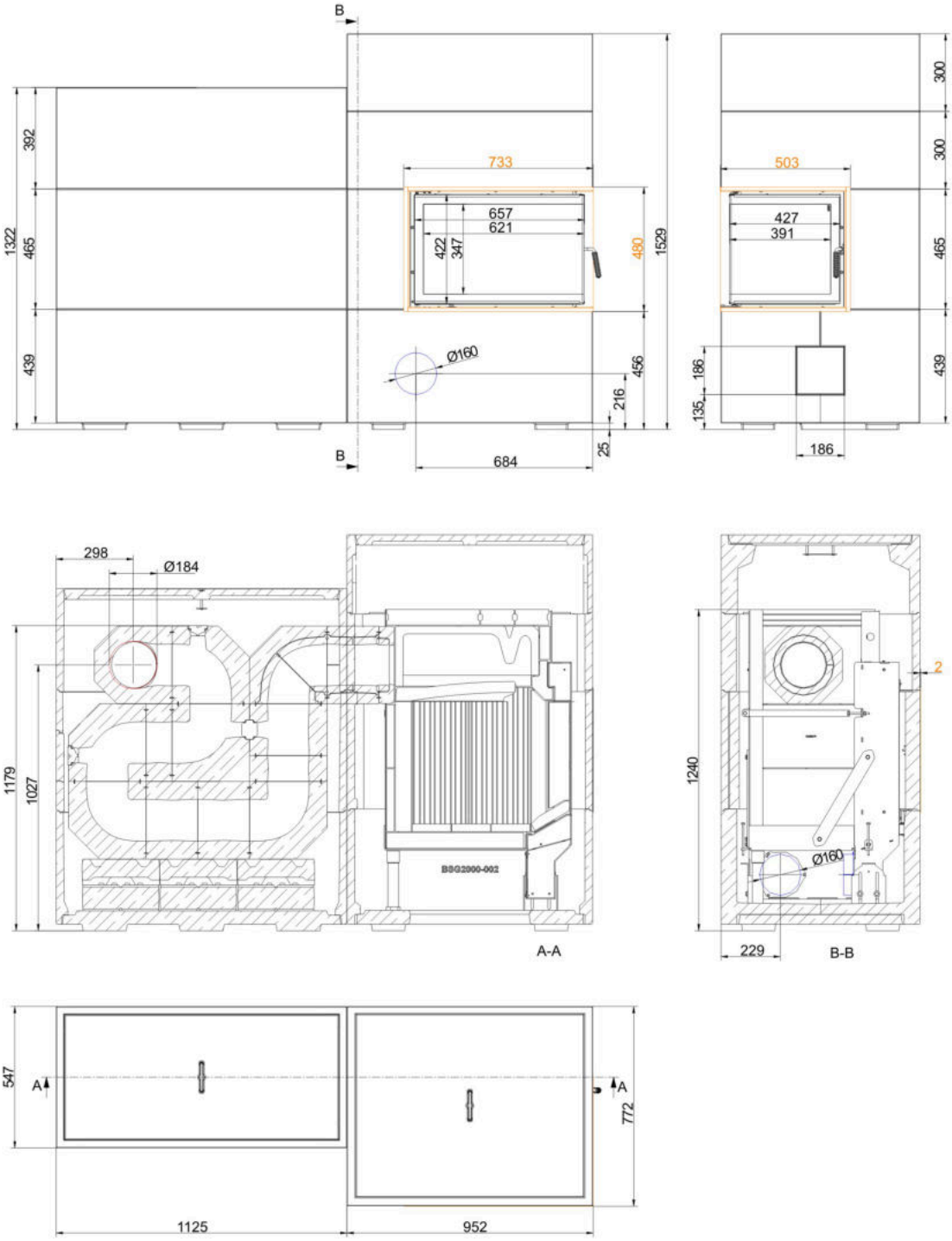
Dimension sheets - BSG 02 with MSS



... top-mount

Stand: 2023-12-18

Dimension sheets - BSG 02 with MSS



... adjacent

We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames/ flue gas outlet connection/ combustion air supply connection/ front variants/ support bearing are marked in color.

Planning and installation - BSG 02 with MSS

Tested according to		EN 15250	EN 15250
Values measured at		top-mount MSS	adjacent MSS
Data for functional demonstration			
System power [1)]	kW	2.5	3.0
Fire wood volume	kg/h	7.9	7.9
Combustion duration	h	2	2
Time of heat release [2)]	h	12	12
Combustion performance	kW	31.6	31.6
Flue gas mass flow	g/s	24.4	24.4
Outlet temperature (before reheating surface)	°C	530	530
Flue gas temperature after:			
accumulation stones (MSS)	°C	210	195
Necessary supply pressure	Pa	13	13
Total fuel load	kg	12.5	13.5
Load of wood 1st/2nd combustion cycle	kg	8 + 4,5	8 + 5,5
Combustion air consumption	m³/h	71	71
Combustion air connection Ø	mm	160	160
Minimal distances			
to mounting wall	cm	5	5
to combustible mounting wall	cm	10	10
from top of fireplace to ceiling	cm	30	30
Heat distribution			
Insert / reheating surface	%	15 / 50	15 / 50
Glass pane (single / double)	%	35 / -	35 / -
Weight			
Combustion chamber / accumulator	kg	415 / 300	415 / 343
Cladding [3)]	kg	467	663
Total weight	kg	1182	1421
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

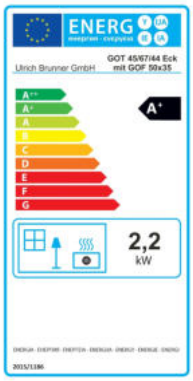
1) Average heating power of the system (heat storage duration) with load of wood 1st/2nd combustion cycle
2) Time from firing star to reaching 25% of the maximum surface temperature against the room temperature
3) Quality features of the cladding components in concrete look (fair-faced concrete class 2-3)

Dimensional tolerances of the casting mold parts
Straightness: +- 2 mm/m
Length/width/thickness: +- 2 mm
Squareness: +- 2 mm
Flatness: +- 2,5 mm

Surface to visible side
Textur: closed and largely uniform; repair areas with color changes and hairline cracks permissible.
Porosity: max. three holes with diameter <10 mm and depth <10 mm (reference area 100x100 mm).
Colour shade: uniform, large-area light/dark discolouration and cement haze permissible; no rust and dirt spots as well as different bulk layers.
Note: deviations in color tone (e.g. extension rings) can be adjusted by applying a glaze-like paint (our recommendation: DecoLasur Matt tinted in the colour shade Schiefer16, Caparol).
With the BRUNNER revision set (Art. No. 900300), touch-up work can be carried out on the cladding components.

Product data sheet according to (EU) 2015/1186:

Supplier's name or trademark	Ulrich Brunner GmbH
Model identifier:	BSG 02 MSS aufgesetzt
Energy efficiency class:	A+
Direct heat output:	2,5 kW
Indirect heat output:	N.A. kW
Energy efficiency index:	108,9
Fuel energy efficiency (at nominal heat output):	%
Fuel energy efficiency (at minimum load):	N.A. %
Special precautions: see supplied product documentation	



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Email: info@brunner.de

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