# **Installation** manual

BSO 06

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*made in germany.*

# CONTENTS

**1 Basic informations..... 2**
**2 General information..... 3**
**3 Tolerances of thermal concrete parts..... 6**
**4 Description of parts..... 8**
4.1 Shape block set BSO 06..... 8
4.2 Heat protection panel..... 9
**5 Minimal distances..... 10**
**6 Heat radiation range..... 11**
**7 Assembly..... 11**
7.1 Assembly sequence..... 13
7.2 Fitting the heat protection plate..... 20
**8 Drawings and technical data..... 21**

# 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.

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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.

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

Please keep these instructions.

# 2 GENERAL INFORMATION

**Heating insert**

The BSO claddings are specially adapted to the respective heating inserts from Ulrich Brunner GmbH.

| BSO | Usable heating insert | Recomm. Filling quantity per 2 h*) |
|---|---|---|
| BSO 01 | HKD 2.2 short DR (with mounting 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 |
| BSO 04 | HKD 2.2 k-SK (with mounting frame) | see user manual |
| BSO 05 | HKD 7 SK Hinged door<br>HKD 7 SK Tunnel Hinged door/hinged door | see user manual |
| BSO 06 | HKD 2.2 SK and HKD 2.2 SK DHT<br>HKD 2.2 SK Tunnel | see user manual |

*) If more firewood is laid or the recommended amount is burned at shorter intervals, cracks may form.
The components of the BSO meet the requirements of exposed concrete class SB2.

**Stove insert**

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 |

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| BSO | Stove insert to be used | Recomm. load every 2h*) |
|---|---|---|
| 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.

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**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.

**Built-in components**

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.

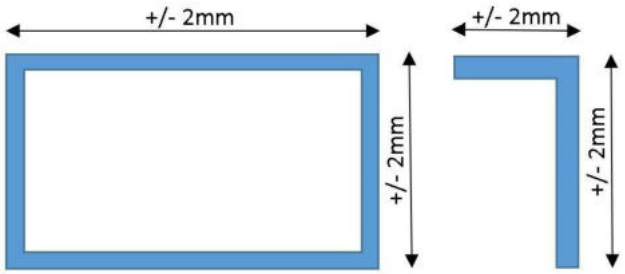
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# 3 TOLERANCES OF THERMAL CONCRETE PARTS

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**

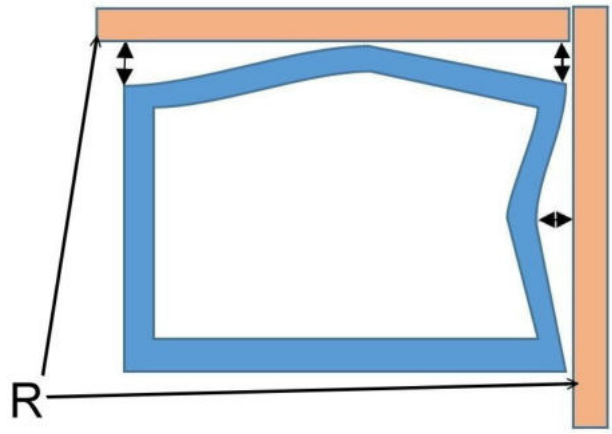
For each part, the indicated tolerances apply.



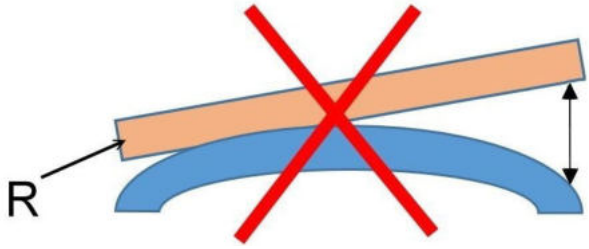

**Tolerances of Flatness**

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. 1: Leveling boards placed correctly*



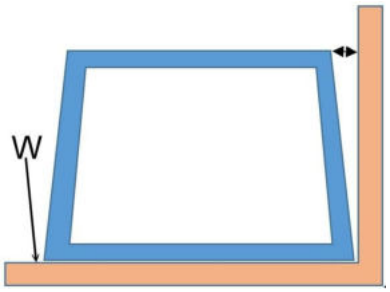

*Im. 2: Incorrectly placed leveling board*


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### Tolerances of Angle

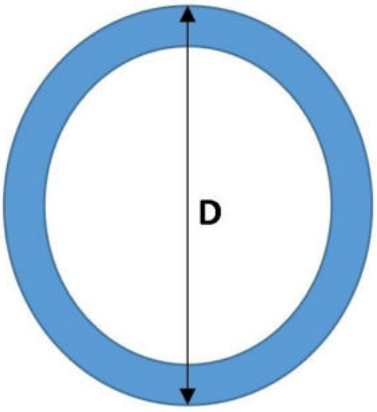
In order to determine the deviations of angles, place the square measuring tool along the long edge!

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.



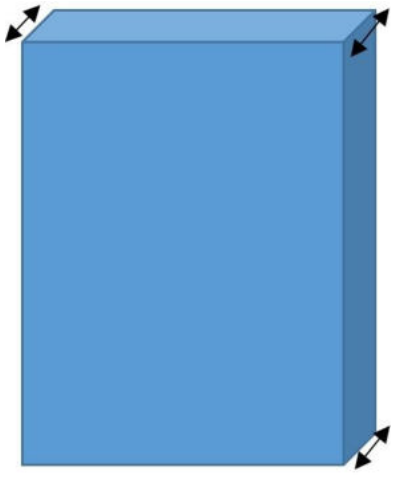

### Roundness

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.

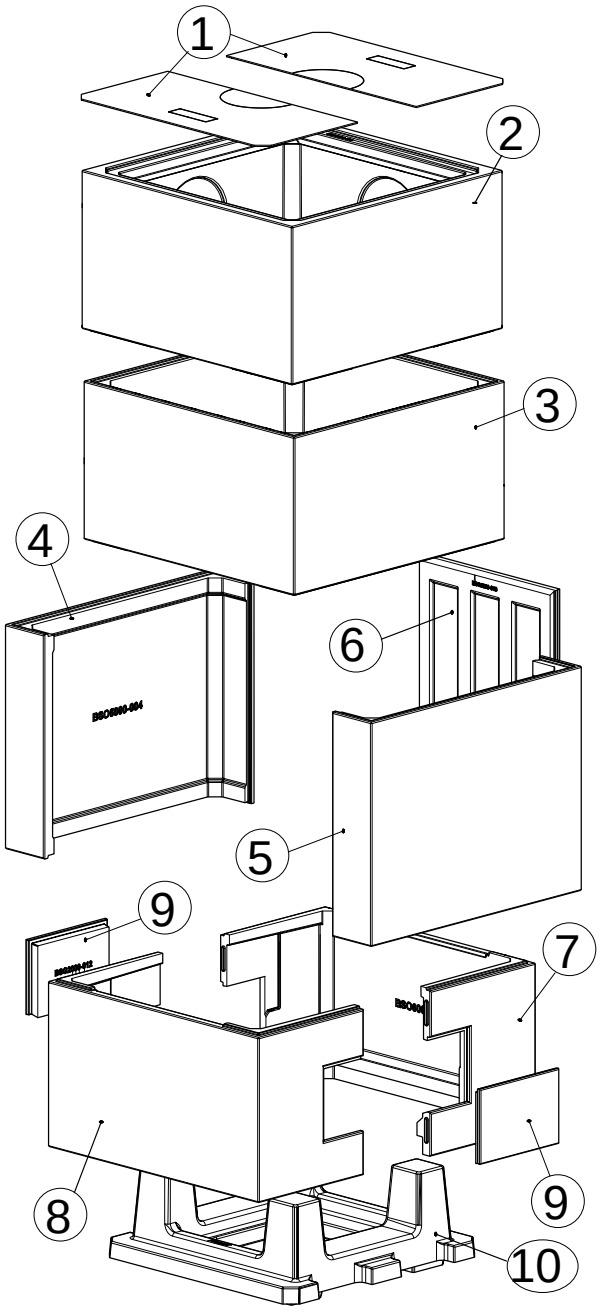


The overall appearance with color shade differences being present or not can be assessed in general only after a longer period of time (several weeks in some cases). The uniformity of color should be assessed from a typical viewing distance.

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# 4 DESCRIPTION OF PARTS

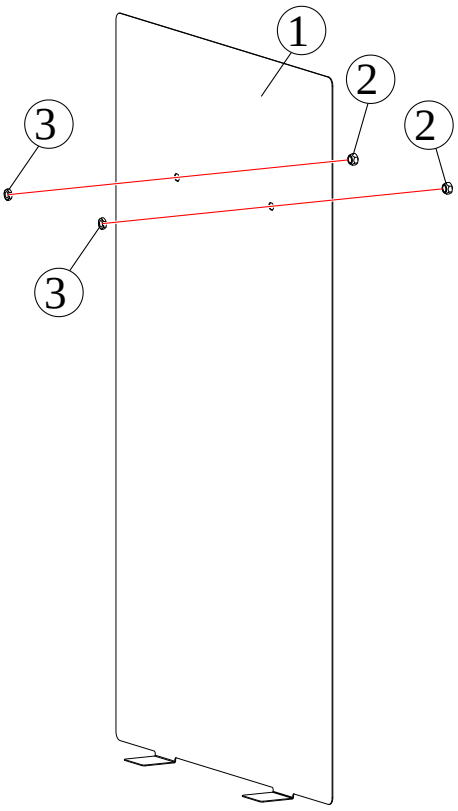
## 4.1 SHAPE BLOCK SET BSO 06




| Pos. | Part number | Designation | Pos. | Part number | Designation |
|---|---|---|---|---|---|
| 1 | BSO6000-120 | Cover plate | 2 | BSO6000-008 | Top ring 2 |
| 3 | BSO6000-006 | Upper ring 1 | 4 | BSO6000-004 | Left side |
| 5 | BSO6000-005 | Right side | 6 | BSO6000-010 | Rear panel |
| 7 | BSO6000-002 | Outside 1 | 8 | BSO6000-003 | Outer ring 2 |
| 9 | BSG2000-012 | Inspection cover | 10 | BSO6000-001 | Base plate |


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## 4.2 HEAT PROTECTION PANEL




| Pos. | Part no. | Designation | Pcs. |
|---|---|---|---|
| 1 | BSO6000-122 | Heat protection panel | 1 |
| 2 | 800157 | Hexagon nut with clamping part M8 | 2 |
| 3 | 800130 | Hexagon nut M8 | 2 |
| 2 + 3 | N008034 | Seperate package | 1 |

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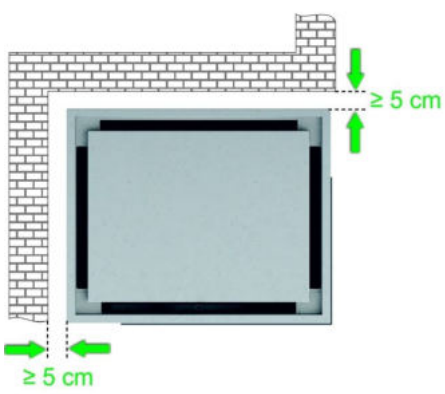
# 5 MINIMAL DISTANCES

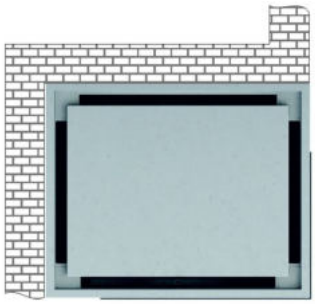
### Minimal distances to adjacent walls

Depending on wall type (flammable or non-flammable wall), the minimal distances are different. With installed heat protection screen it is possible to minimize the distance to adjacent wall.

**Without heat protection screen:**

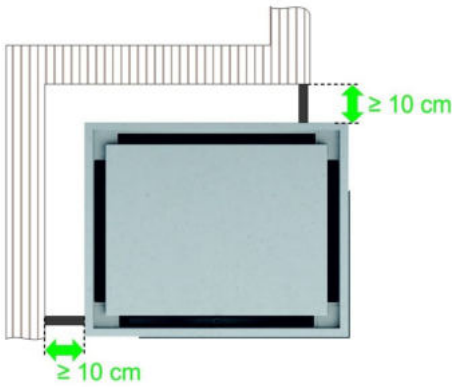
**With installed heat protection screens:**

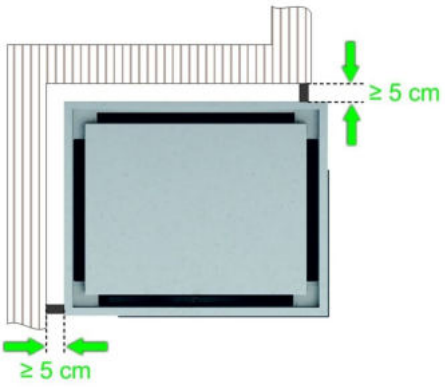


**Other walls**:

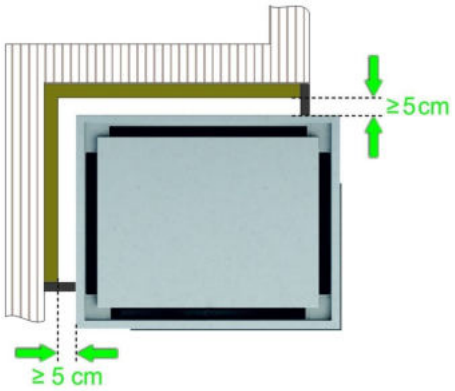
- aerated concrete
- ceramic bricks
- sand-lime bricks
- mineral building materials with wall thicknesses > 10 cm

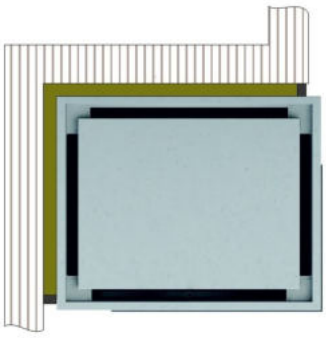



**Walls requiring protection:**

- flammable walls and wall structures
- load-bearing reinforced concrete walls
- other walls up to 10 cm thickness
- walls with built-in furniture behind them (heat accumulation)



**Walls requiring protection with 10 cm brick lining or alternative insulation**

Thermal concrete slabs (assembled by craftsman, with exposed joints)

Non-flammable wall, not requiring protection (other walls)

Flammable walls requiring protection

Brick lining or equivalent alternative insulation material, insulating panel

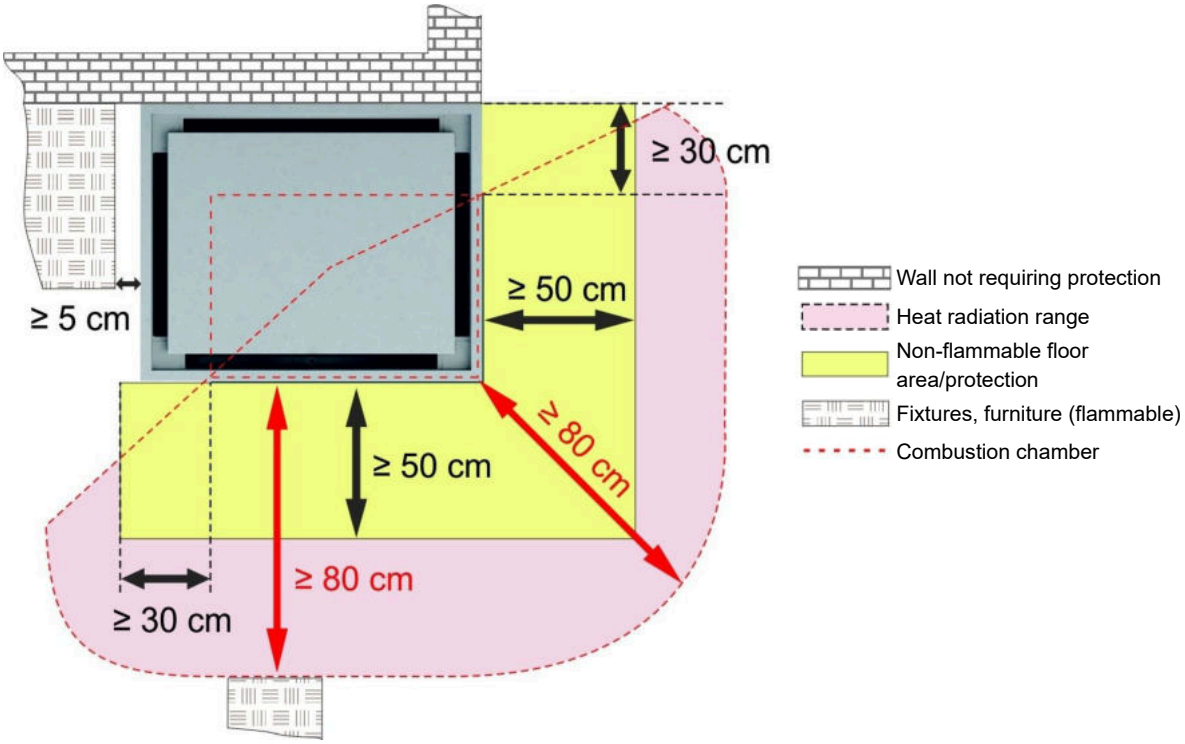

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# 6 HEAT RADIATION RANGE

Within the range of heat radiation through the fireplace door (glass pane) there must be a minimal distance to all flammable parts (e.g. built-in furniture, fixtures) of at least 80 cm.

Outside the heat radiation range, any flammable fixtures cannot be exposed to temperatures above 85°C. Large-dimensioned parts from flammable materials or built-in furniture must have a clearance of at least 5 cm to external fireplace cladding. In this clearance, the room air must be able to circulate without any obstacles.

In general, parts of external fireplace cladding are allowed to be installed without any clearances, if such parts are not exposed to temperatures above 85°C under any circumstances.




# 7 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.

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**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.

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. 3: 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.

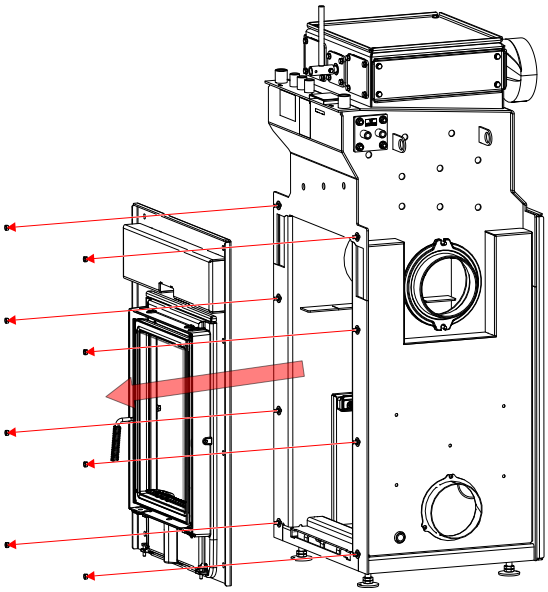
Depending on the desired texture apply two more layers to get the wished texture.

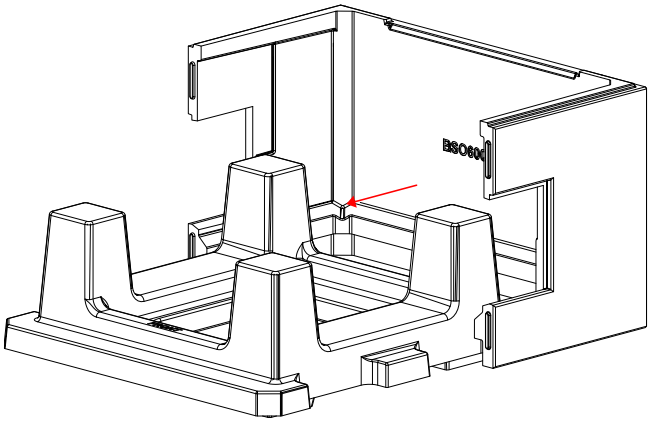

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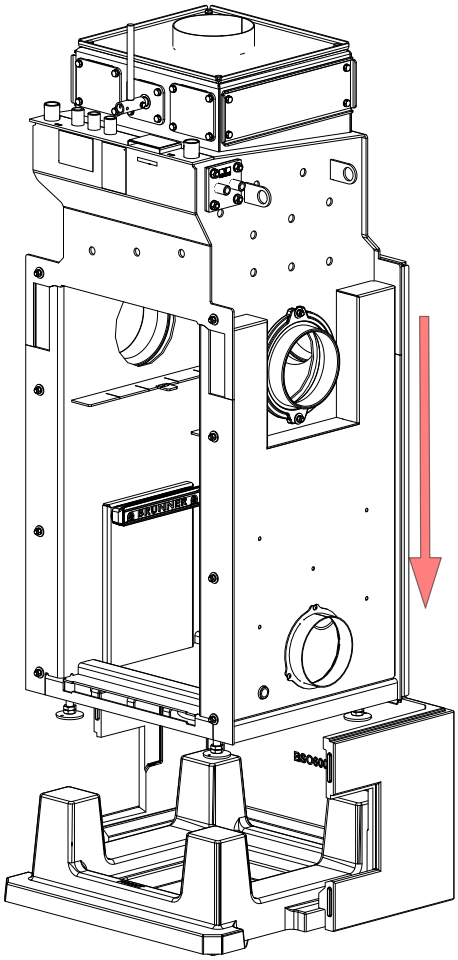
## 7.1 ASSEMBLY SEQUENCE

**Remove front:**

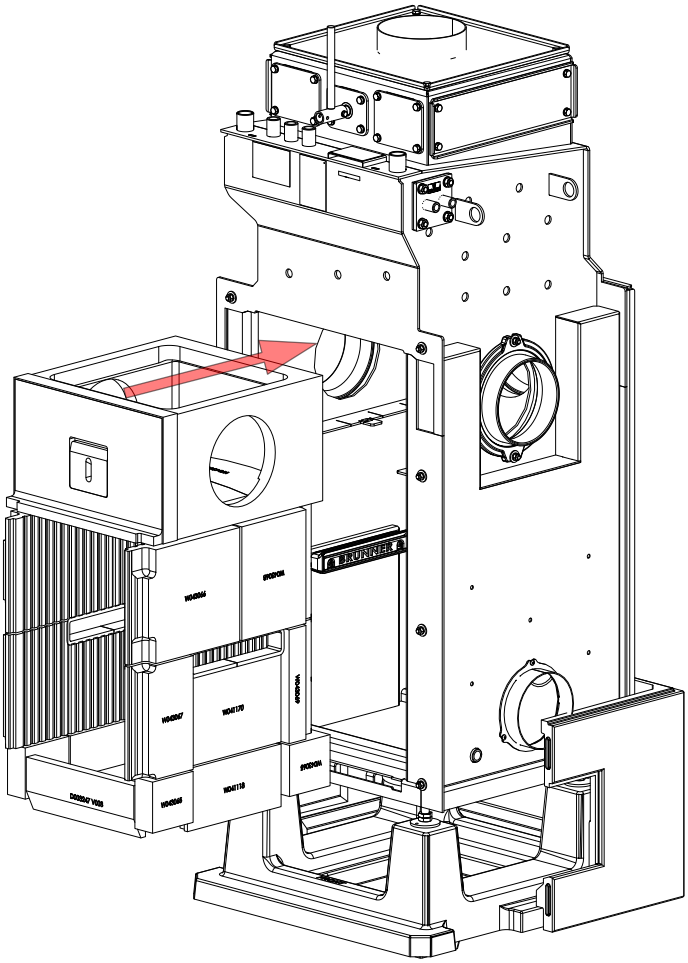









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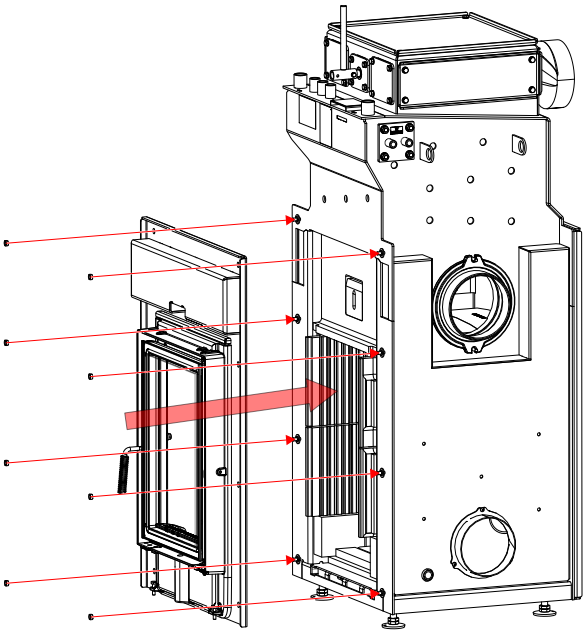


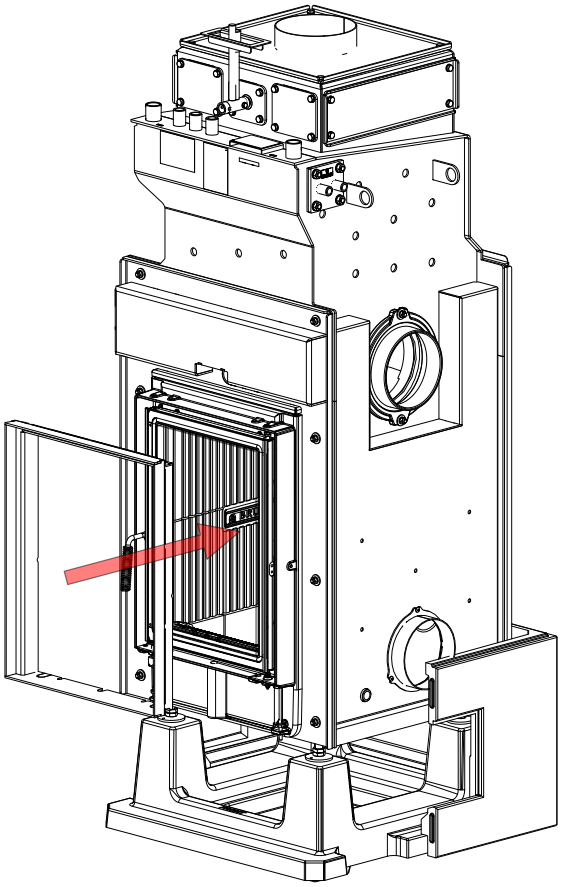
Follow the instructions enclosed with the ISO hood and the fireclay set!

**Put on the front:**



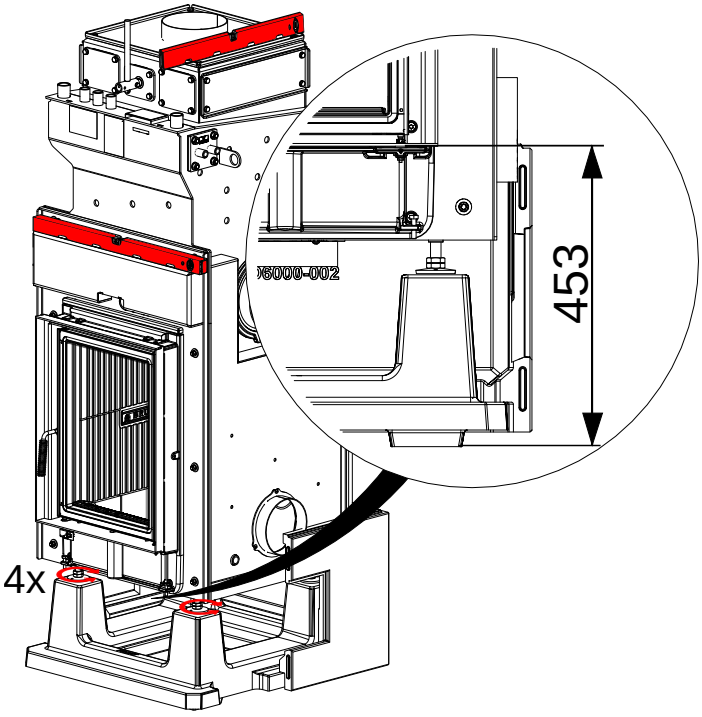


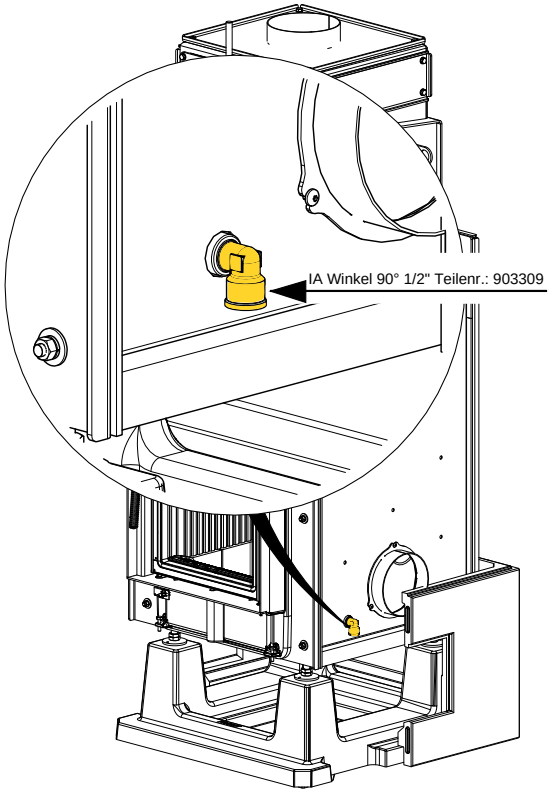




Follow the instructions enclosed with the cover or mounting frame!

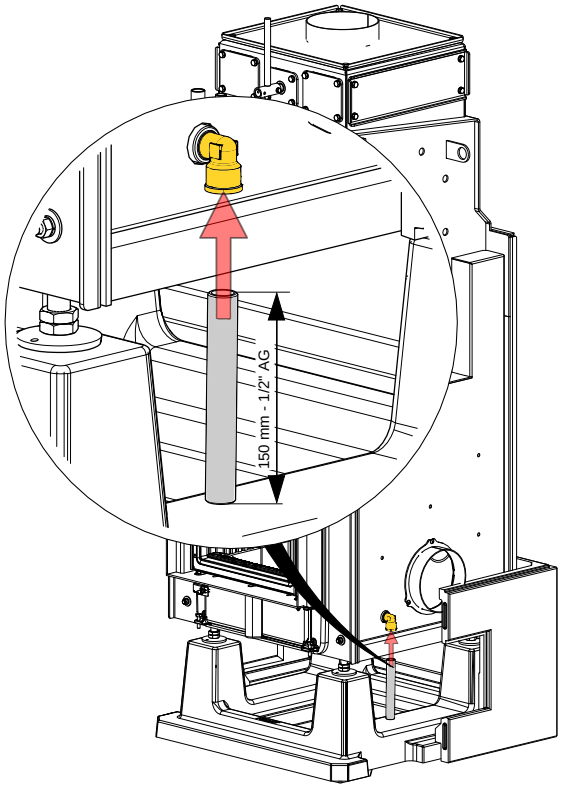
If you plan to fit a heat protection plate, follow the instructions in chapter "Fitting the heat protection plate"!



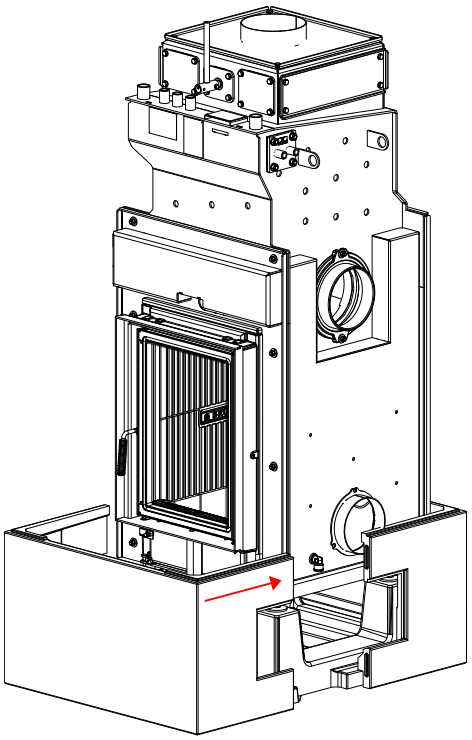



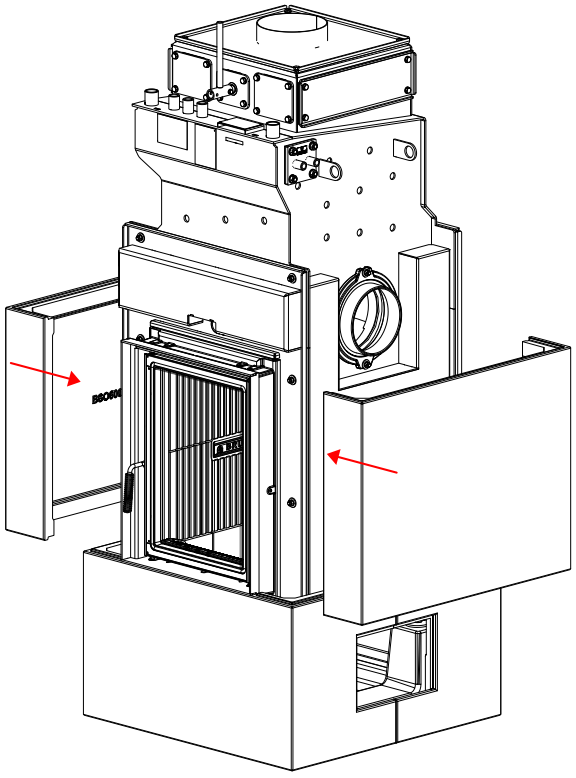

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Tip!

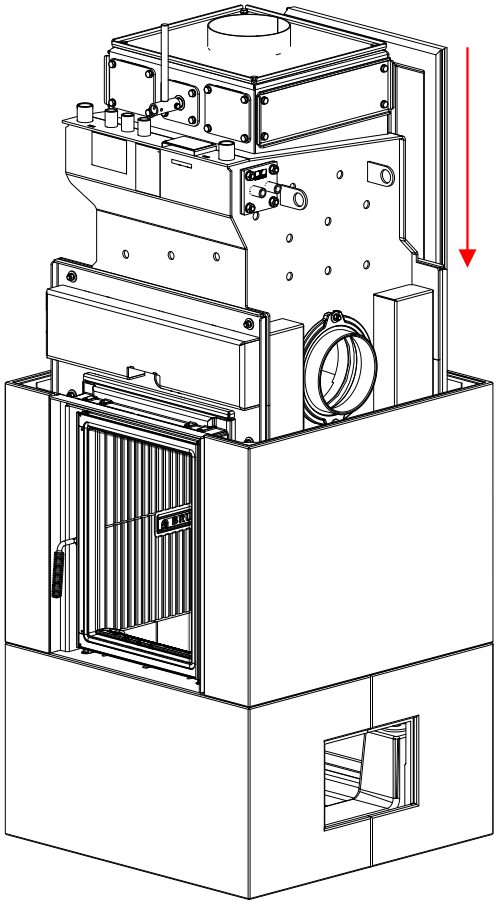


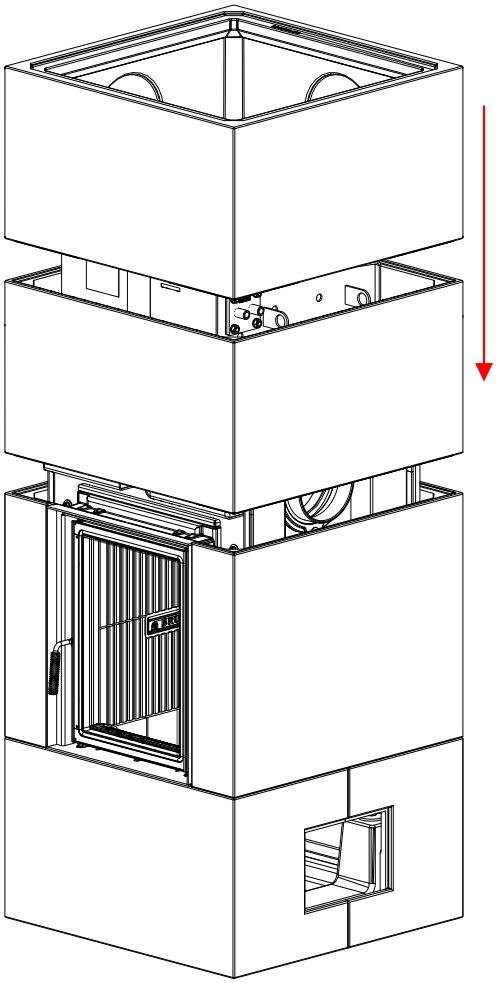

Establish water-side connections / hydraulic connection!
Follow the assembly and installation instructions for the boiler appliance!





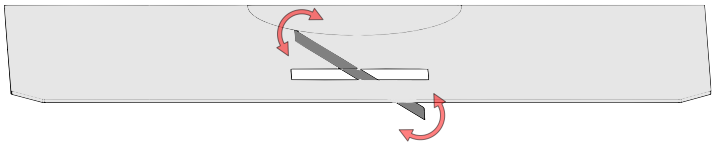
This work step is not required for the BSO 06 tunnel!

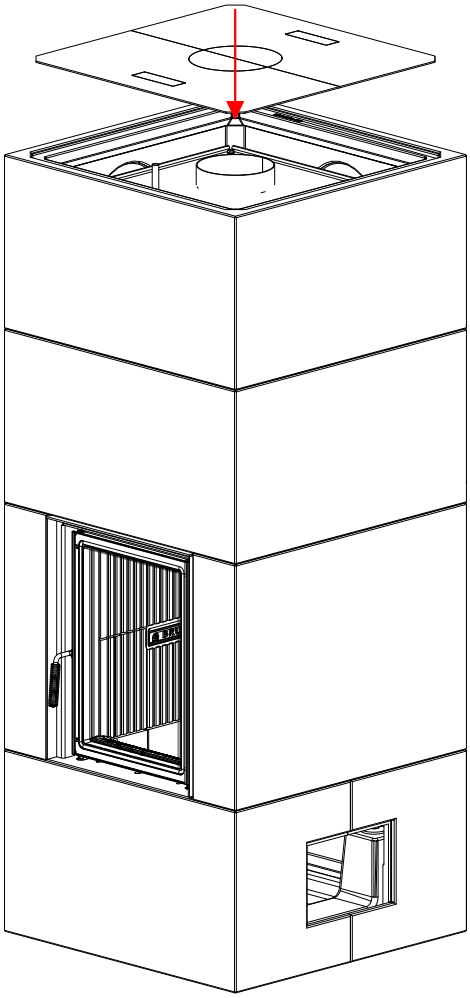


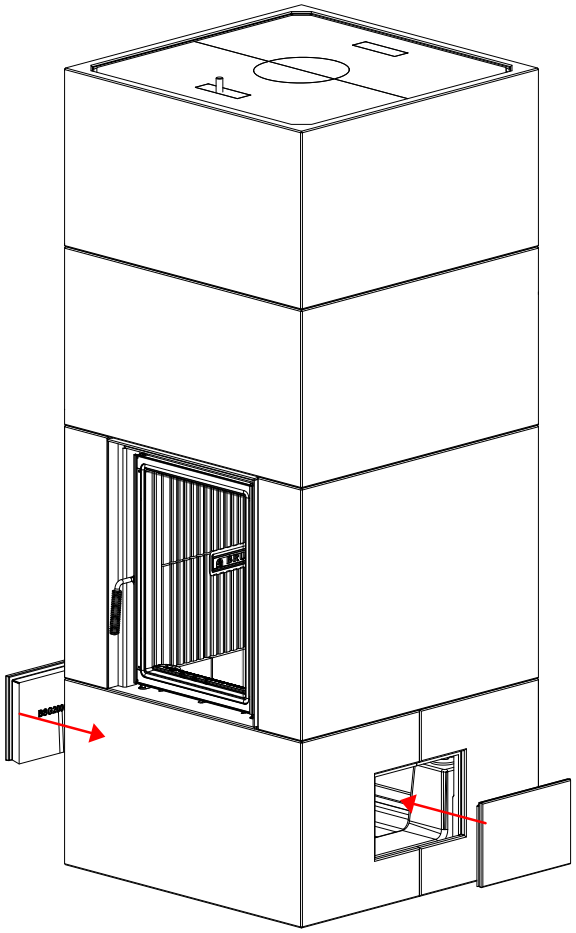



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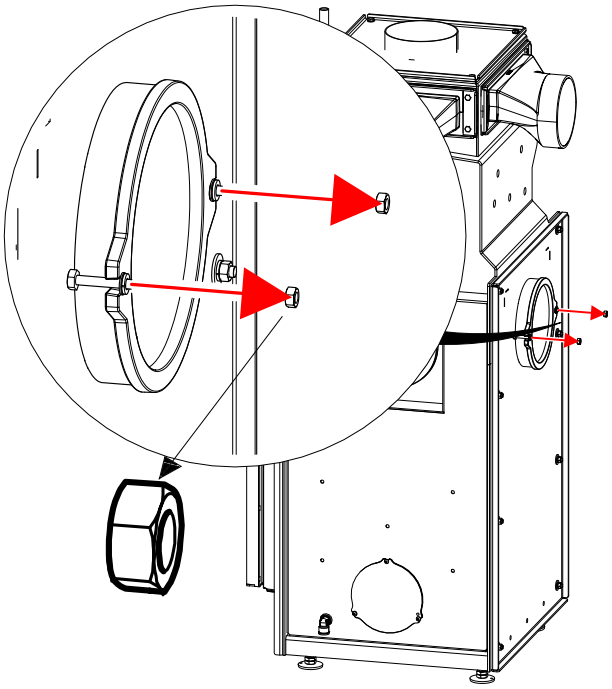
Break-out in cover plate!
Only when operating the cleaning mechanism from above!

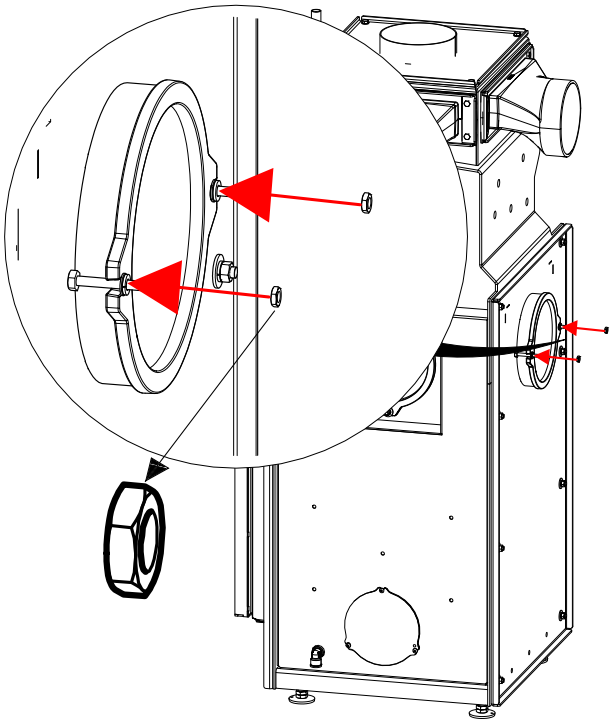


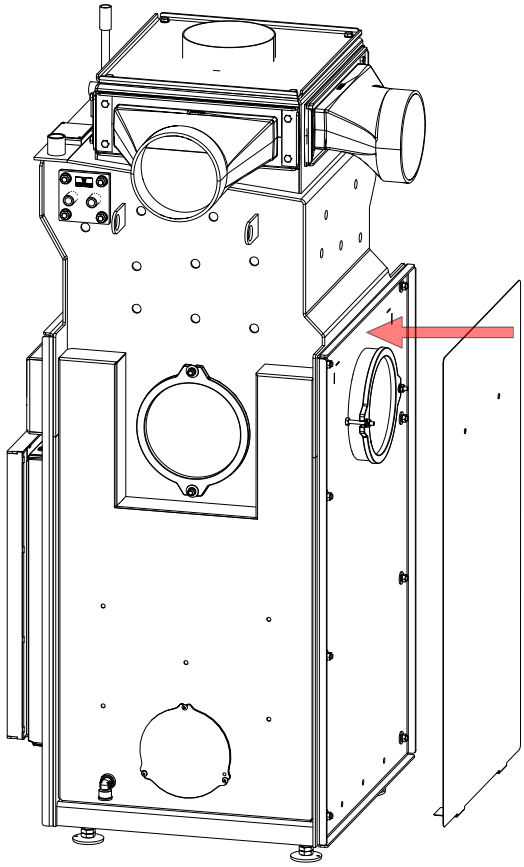


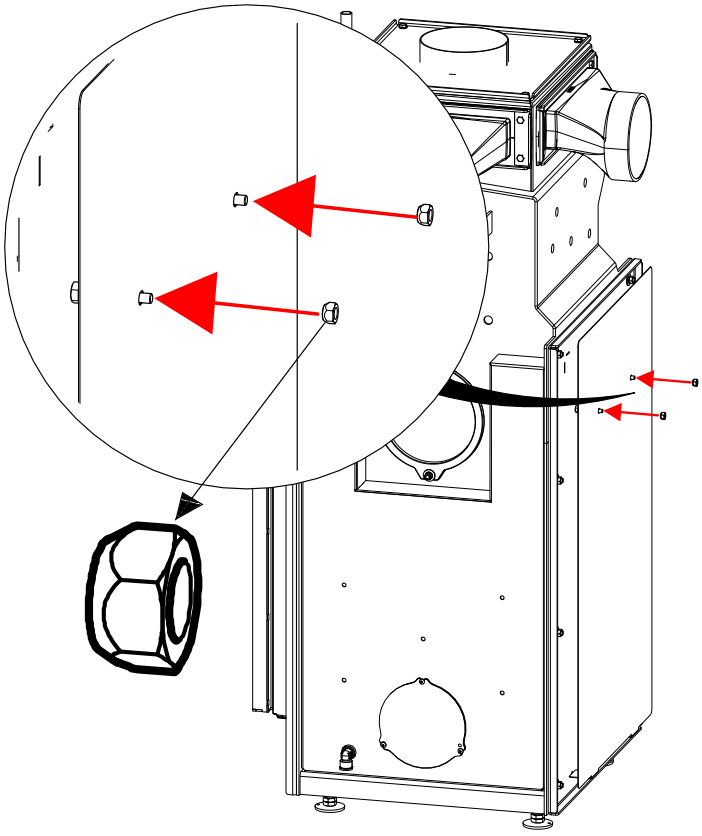


## 7.2 FITTING THE HEAT PROTECTION PLATE





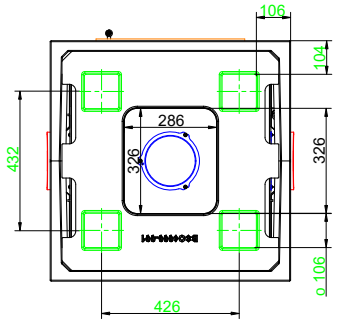


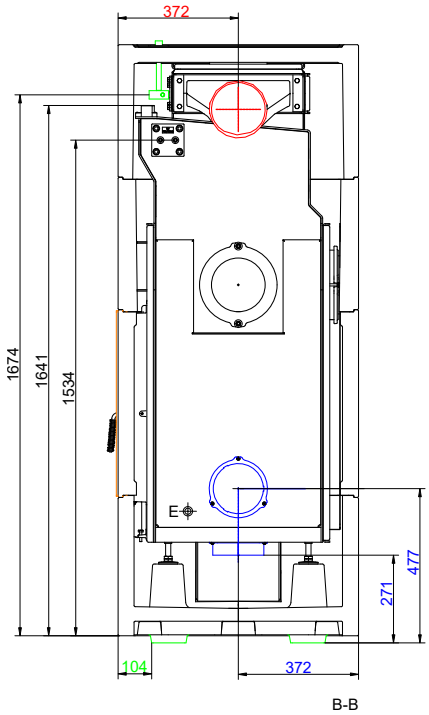


Only tighten one nut firmly. Fit the other nut so that the plate can still move; this prevents tension.

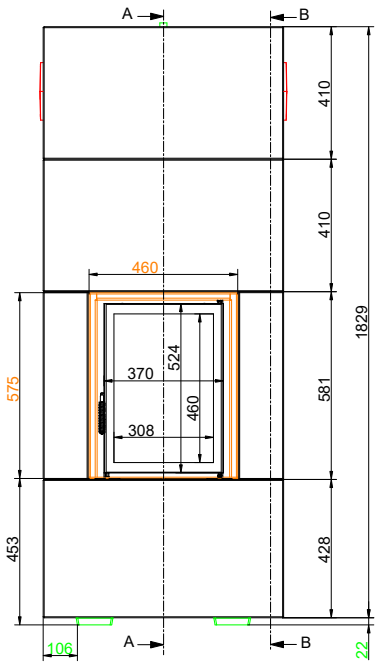

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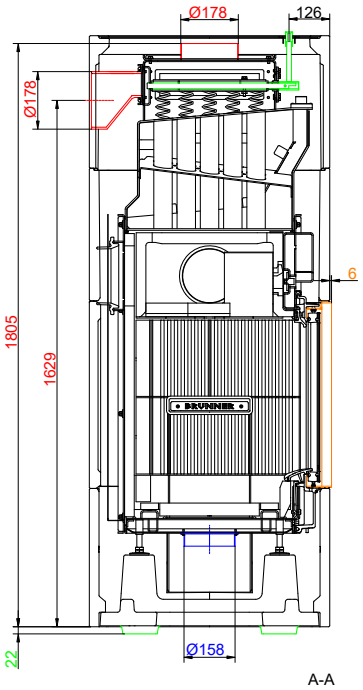
# Dimension sheets - BSO 06 with HKD 2.2 SK with cleaning mechanism



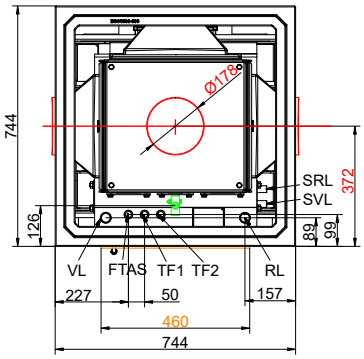




B-B




A-A




| | |
|---|---|
| VL | supply 1“ext. th. |
| RL | return boiler 1“ext.th. |
| E | drain 1/2“int. th. |
| SVL | supply cooling pipe outlet ext.th. |
| SRL | return cooling pipe outlet 1/2“ext.th. |
| FTAS | socket for thermal safety sensor int.th. |
| TF1 | socket 1/2“ for sensor int.th. |
| TF2 | socket 1/2“ for sensor int.th. |

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.

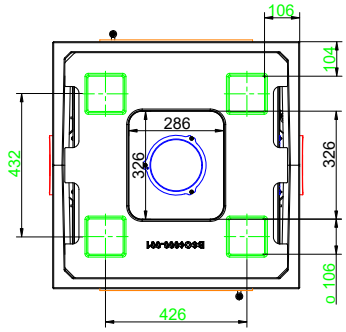
Stand: 2024-02-02

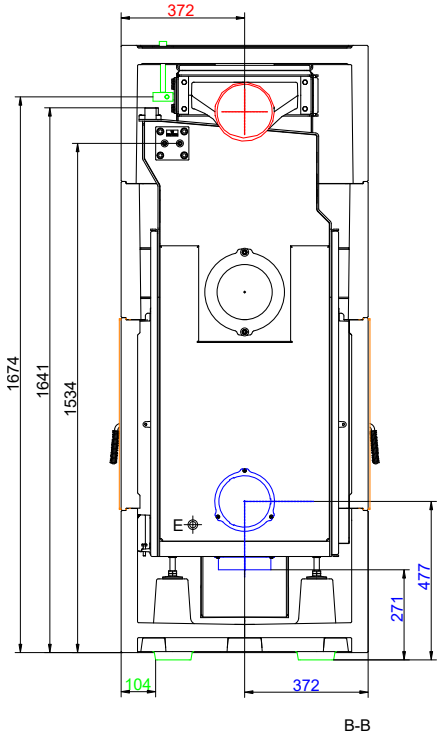
# Planning and installation - BSO 06 with HKD 2.2 SK with cleaning mechanism

| Tested according to | | EN 13229 W | EN 13229 W |
|---|---|---|---|
| Values measured at | | Practical avg. | Rated power |
| **Data for functional demonstration** | | | |
| Rated heat power | kW | - | 12.0 |
| Room heating power | kW | - | 3.6 |
| Water heating power | kW | - | 8.4 |
| Fire wood volume | kg/h | 5.0 | 3.4 |
| Flue gas mass flow | g/s | 21 | 10 |
| Flue gas temeperature | °C | 210 | 125 |
| Necessary supply pressure | Pa | 15 | 12 |
| Combustion air consumption | $m^3/h$ | 50 | 34 |
| Combustion air connection Ø | mm | 160 | 160 |
| **Cladding components** [1)] | | | |
| Foot print (W x D) | mm | 744 x 744 | 744 x 744 |
| Overall height | mm | 1851 | 1851 |
| Height of extension ring | mm | 410 | 410 |
| **Minimal distances** | | | |
| to mounting wall | cm | 5 | 5 |
| to mounting wall with heat protection panels | cm | 0 | 0 |
| to combustible mounting wall | cm | 10 | 10 |
| to combustible mounting wall with heat protection panels | cm | 5 | 5 |
| from top of fireplace to ceiling | cm | 40 | 40 |
| **Cross-section of gratings** [2)] | | | |
| exhaust warm air | $cm^2$ | 0 | 0 |
| Recirculation air | $cm^2$ | 600 | 600 |
| **Weight** | | | |
| Total weight | kg | 750 | 750 |
| **Meets requirement/limit values for:** | | | |
| Germany/ Austria / Switzerland / Norway | | 1.BImSchV (Stufe 2) / Ökodesign (EU) / LRV / - | |

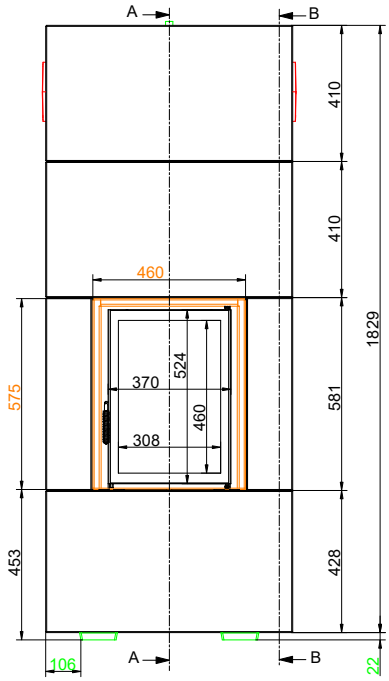
1) Quality features of the cladding components in concrete look (fair-faced concrete class 2-3)
   **Dimensional tolerances of the casting mold parts**
   Straightness: +- 2 mm/m
   Length/width/thickness: +- 2 mm
   Squareness: +- 2 mm
   Flatness: +- 2,5 mm
   **Surface to visible side**
   Textur: 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.
2) Existing convection air openings. If the construction differs from the supplied system kit (e.g. construction up to the ceiling or closed construction), the information in the data sheet is decisive for carrying out the cross section of the convection air openings.

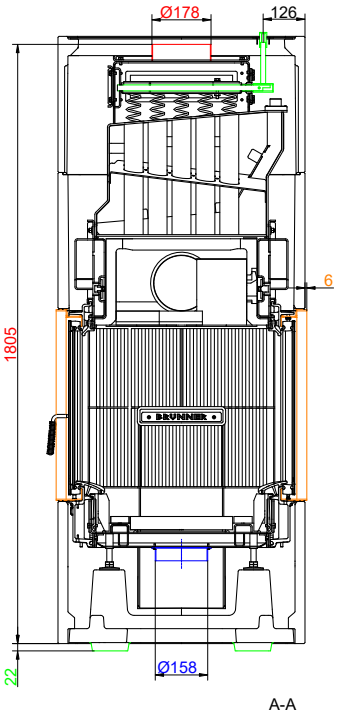
# Dimension sheets - BSO 06 with HKD 2.2 SK Tunnel with cleaning mechanism



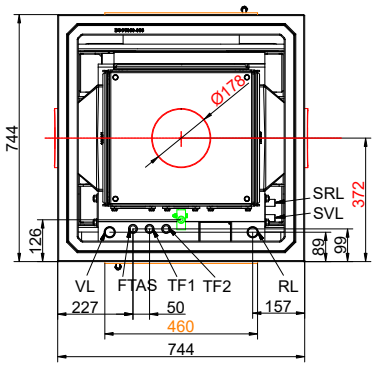




B-B




A-A




| | |
|---|---|
| VL | supply 1“ext. th. |
| RL | return boiler 1“ext.th. |
| E | drain 1/2“int. th. |
| SVL | supply cooling pipe outlet ext.th. |
| SRL | return cooling pipe outlet 1/2“ext.th. |
| FTAS | socket for thermal safety sensor int.th. |
| TF1 | socket 1/2“ for sensor int.th. |
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We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
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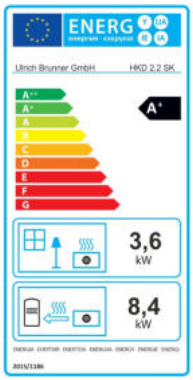
Stand: 2024-02-02

# Planning and installation - BSO 06 with HKD 2.2 SK Tunnel with cleaning mechanism

| Tested according to | | EN 13229 W | EN 13229 W |
|---|---|---|---|
| Values measured at | | Practical avg. | Rated power |
| **Data for functional demonstration** | | | |
| Rated heat power | kW | - | 12.0 |
| Room heating power | kW | - | 3.6 |
| Water heating power | kW | - | 8.4 |
| Fire wood volume | kg/h | 5.0 | 3.4 |
| Flue gas mass flow | g/s | 21 | 10 |
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| Combustion air connection Ø | mm | 160 | 160 |
| **Cladding components** [1)] | | | |
| Foot print (W x D) | mm | 744 x 744 | 744 x 744 |
| Overall height | mm | 1851 | 1851 |
| Height of extension ring | mm | 410 | 410 |
| **Minimal distances** | | | |
| to mounting wall | cm | 5 | 5 |
| to mounting wall with heat protection panels | cm | 0 | 0 |
| to combustible mounting wall | cm | 10 | 10 |
| to combustible mounting wall with heat protection panels | cm | 5 | 5 |
| from top of fireplace to ceiling | cm | 40 | 40 |
| **Cross-section of gratings** [2)] | | | |
| exhaust warm air | $cm^2$ | 0 | 0 |
| Recirculation air | $cm^2$ | 600 | 600 |
| **Weight** | | | |
| Total weight | kg | 753 | 753 |
| **Meets requirement/limit values for:** | | | |
| Germany/ Austria / Switzerland / Norway | | 1.BImSchV (Stufe 2) / Ökodesign (EU) / LRV / - | |

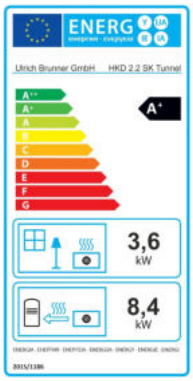
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   Colour shade: uniform, large-area light/dark discolouration and cement haze permissible; no rust and dirt spots as well as different bulk layers.
   **Note:** deviations in color tone (e.g. extension rings) can be adjusted by applying a glaze-like 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.
2) Existing convection air openings. If the construction differs from the supplied system kit (e.g. construction up to the ceiling or closed construction), the information in the data sheet is decisive for carrying out the cross section of the convection air openings.

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




| | |
|---|---|
| Supplier's name or trademark | Ulrich Brunner GmbH |
| Model identifier: | HKD 2.2 SK |
| Energy efficiency class: | A+ |
| Direct heat output: | 3,6 kW |
| Indirect heat output: | 8,4 kW |
| Energy efficiency index: | 109 |
| Fuel energy efficiency (at nominal heat output): | 82,0 % |
| Fuel energy efficiency (at minimum load): | N.A. % |
| Special precautions: see supplied product documentation | |

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




| | |
|---|---|
| Supplier's name or trademark | Ulrich Brunner GmbH |
| Model identifier: | HKD 2.2 SK Tunnel-DHT |
| Energy efficiency class: | A+ |
| Direct heat output: | 3,6 kW |
| Indirect heat output: | 8,4 kW |
| Energy efficiency index: | 109 |
| Fuel energy efficiency (at nominal heat output): | 82,0 % |
| 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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