Installation Manual

BSO 05

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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.

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

Please keep these instructions.

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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 HKD 7 SK Tunnel Hinged door/hinged door	see user manual
BSO 06	HKD 2.2 SK and HKD 2.2 SK DHT 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
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.

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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.

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!

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Please follow the separate installation instructions for the stove insert.

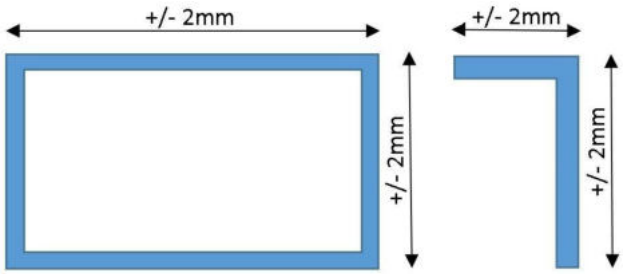
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3 TOLERANCES OF THERMAL CONCRETE PARTS

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

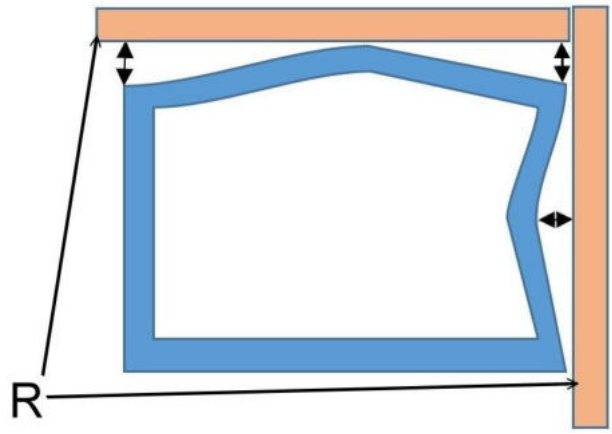
For each part, the indicated tolerances apply.



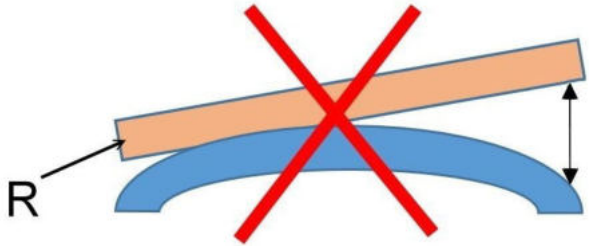
Tolerances of Flatness

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

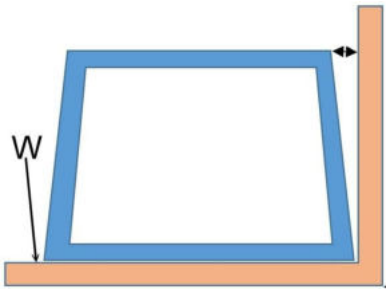


Im. 2: Incorrectly placed leveling board

Tolerances of Angle

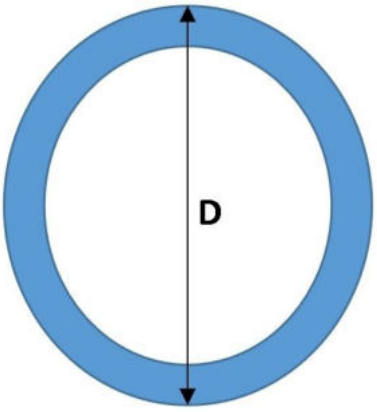
In order to determine the deviations of angles, place the square measuring tool along the long edge!

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.



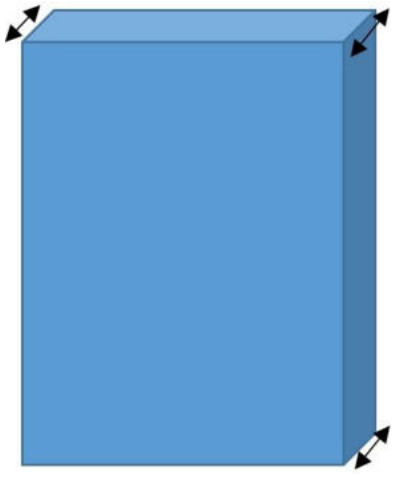
Roundness

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.

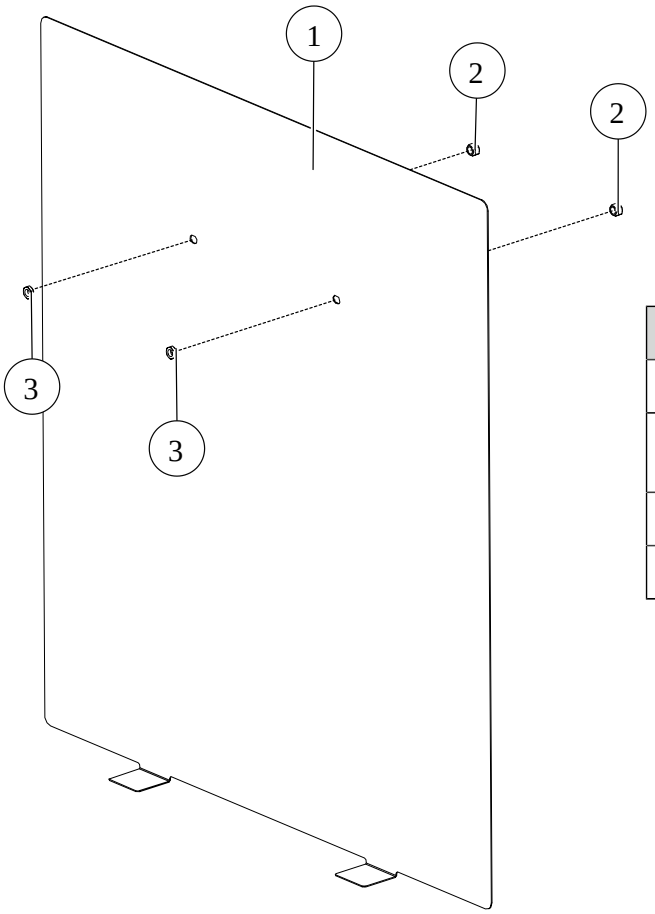


The overall appearance with color shade differences being present or not can be assessed in general only after a longer period of time (several weeks in some cases). The uniformity of color should be assessed from a typical viewing distance.

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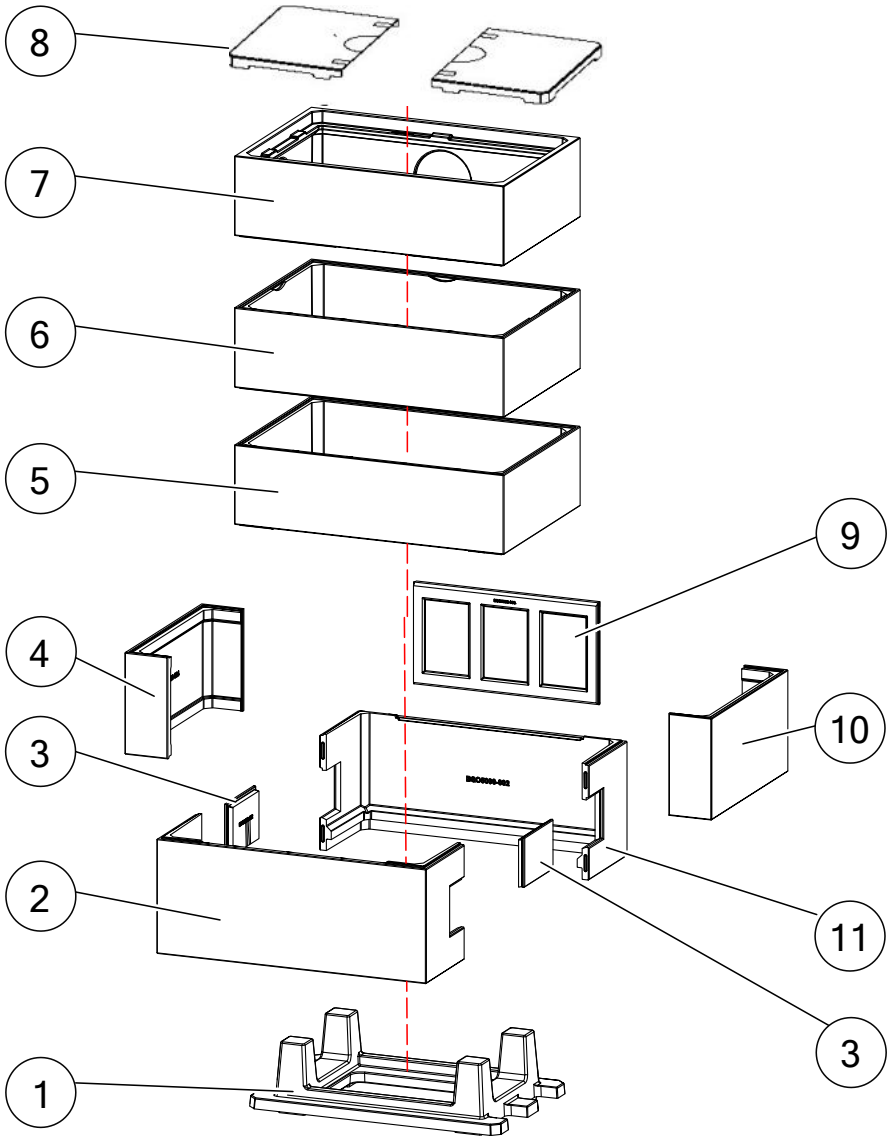
4 DESCRIPTION OF PARTS

4.1 HEAT PROTECTIVE PANEL



Pos.	Teilenr.	Bezeichnung	Stk.
1	BSO5000-128	heat protective panel	1
2	800157	Hex nut with clamping part M8	2
3	800130	Hex nut M8	2
2 + 3	N008034	Accessory kit	1

4.2 BSO 05 MOLDED BRICK SET WITH COVER (BSO5000-101)



Pos.	Part no.	Designation	Pos.	Part no.	Designation
1	BSO5000-001	Base plate	2	BSO5000-003	Base ring 2
3	BSG2000-012	Inspection cover	4	BSO5000-004	Left side panel
5	BSO5000-006	Top ring 1	6	BSO5000-007	Upper ring 2
7	BSO5000-008	Upper ring 3	8	BSO5000-011	Cover plate
9*	BSO5000-010*	Back panel*	10	BSO5000-005	Side panel right
11	BSO5000-002	Base ring 1			
*Not required for the tunnel variant					

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5 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.

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.

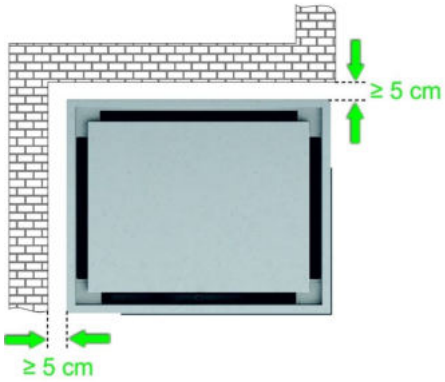
Depending on the desired texture apply two more layers to get the wished texture.

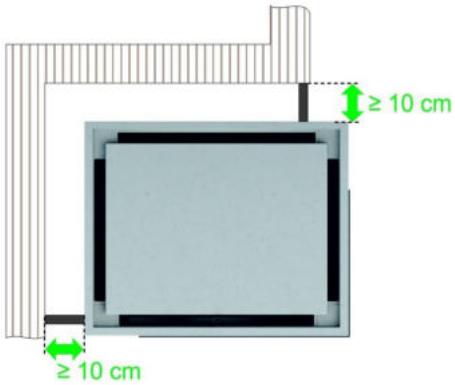
5.1 MINIMAL DISTANCES

Minimal distances to adjacent walls

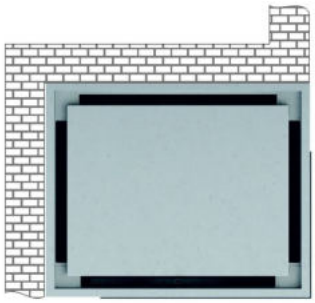
Depending on wall type (flammable or non-flammable wall), the minimal distances are different. With installed heat protection screen it is possible to minimize the distance to adjacent wall.

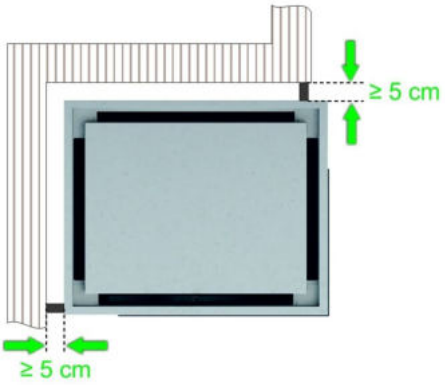
Without heat protection screen:





With installed heat protection screens:





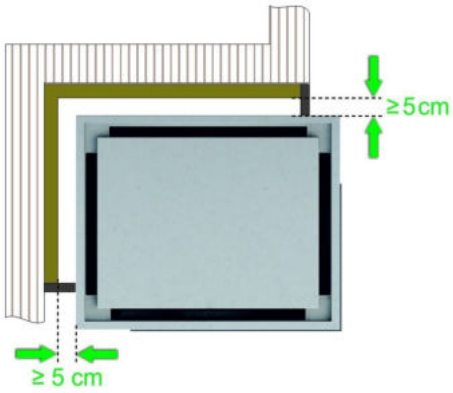
Other walls:

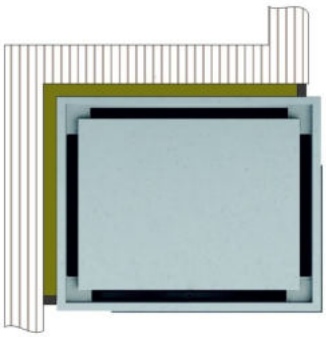
- aerated concrete
- ceramic bricks
- sand-lime bricks
- mineral building materials with wall thicknesses > 10 cm

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)

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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

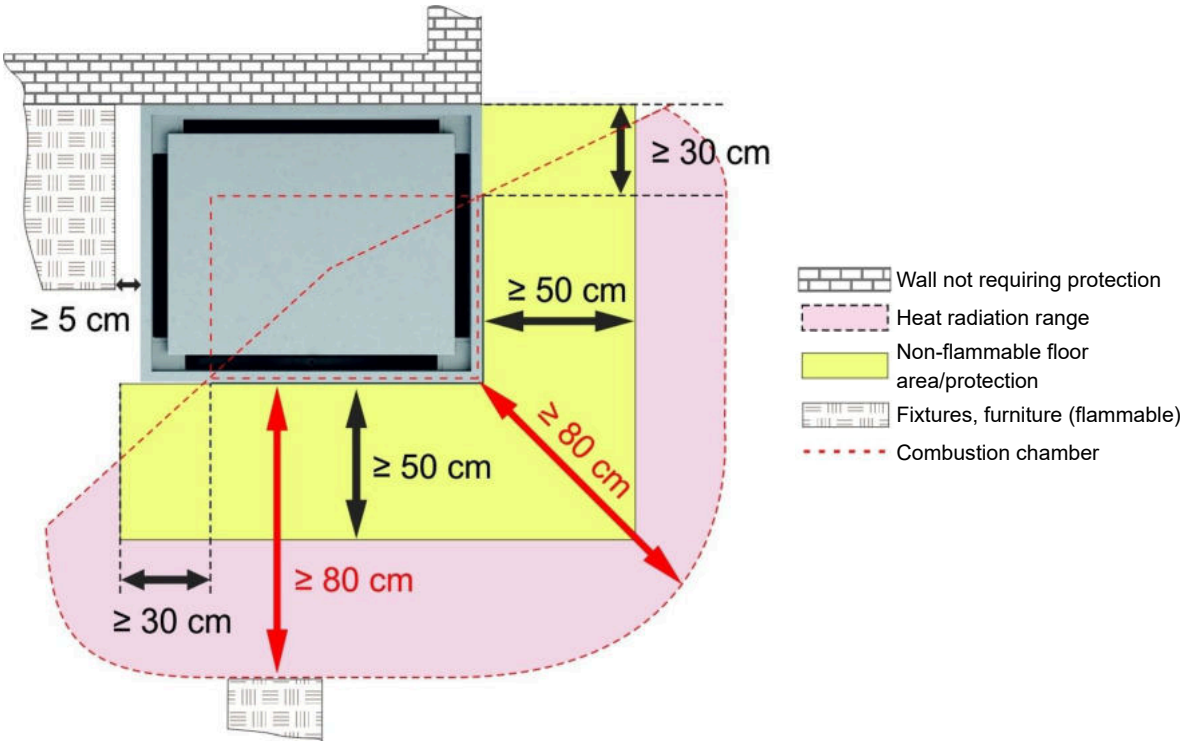
Brick lining or equivalent alternative insulation material, insulating panel

5.2 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.

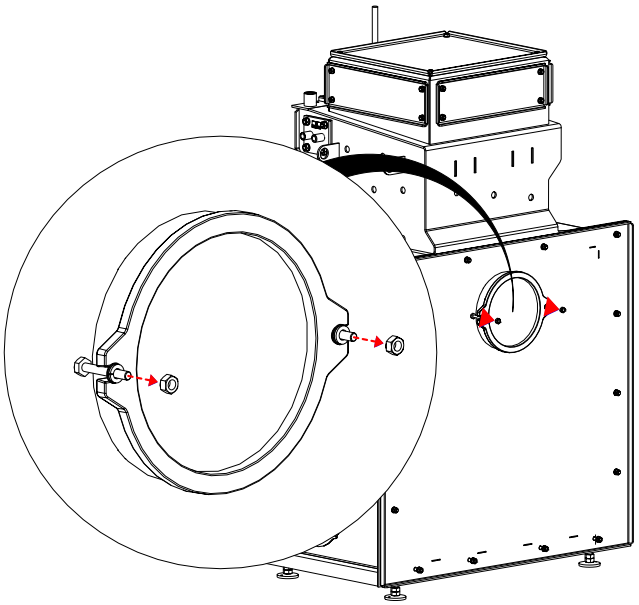
Outside the heat radiation range, any flammable fixtures cannot be exposed to temperatures above 85°C. Large-dimensioned parts from flammable materials or built-in furniture must have a clearance of at least 5 cm to external fireplace cladding. In this clearance, the room air must be able to circulate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

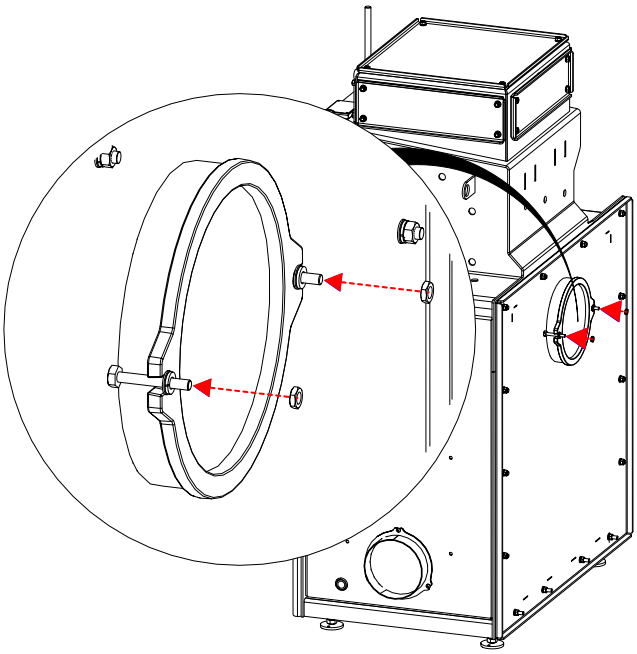
In general, parts of external fireplace cladding are allowed to be installed without any clearances, if such parts are not exposed to temperatures above 85°C under any circumstances.

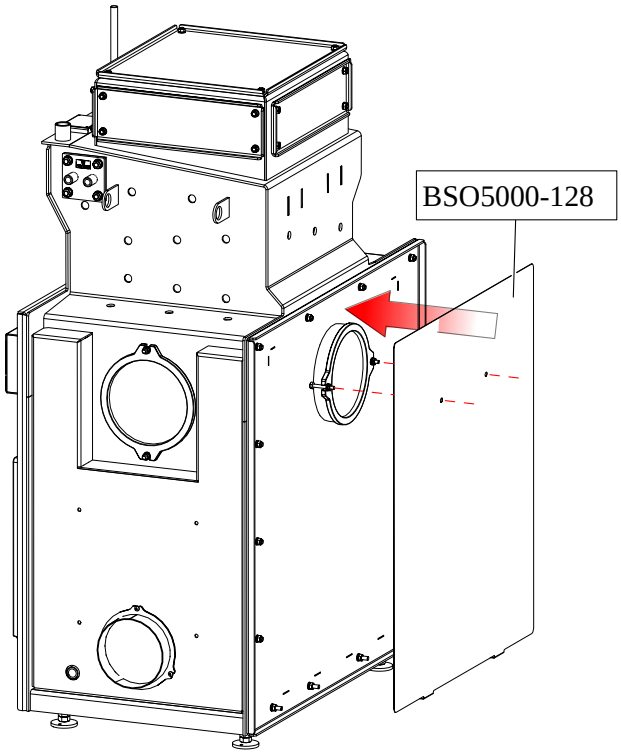


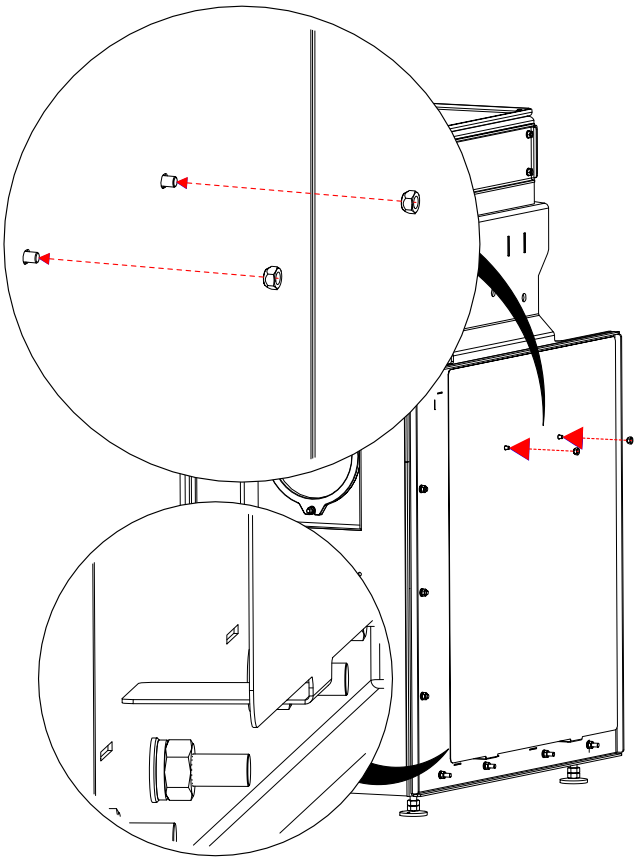
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5.3 SEQUENCE OF ASSEMBLY: HEAT PROTECTIVE PANEL BSO 05





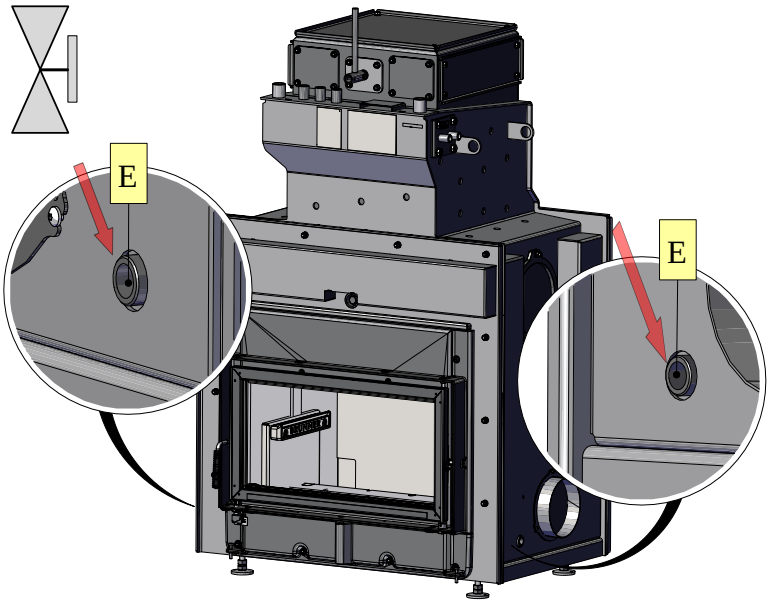


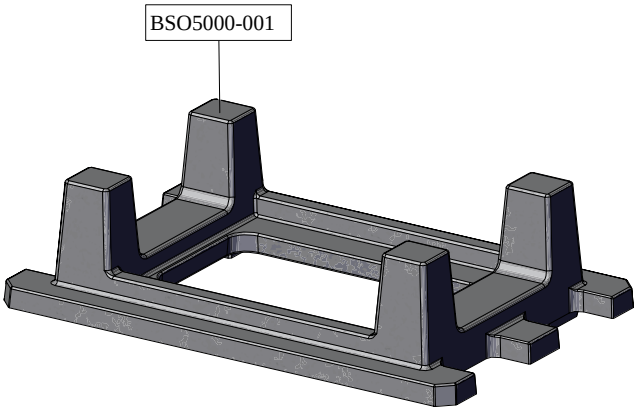


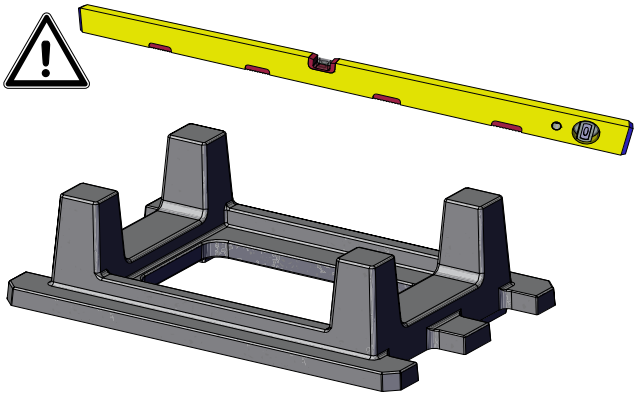
Only tighten one nut firmly. Mount the other nut so that the metal sheet can still move -> thus tension is avoided.

5.4 SEQUENCE OF ASSEMBLY: COMPONANTS OF BSO 05

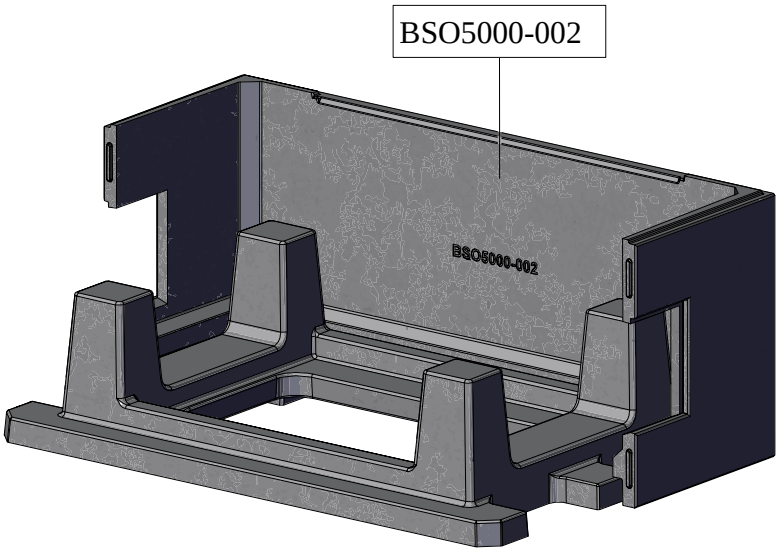
Close drainage
nozzle with taps or plugs 2x:

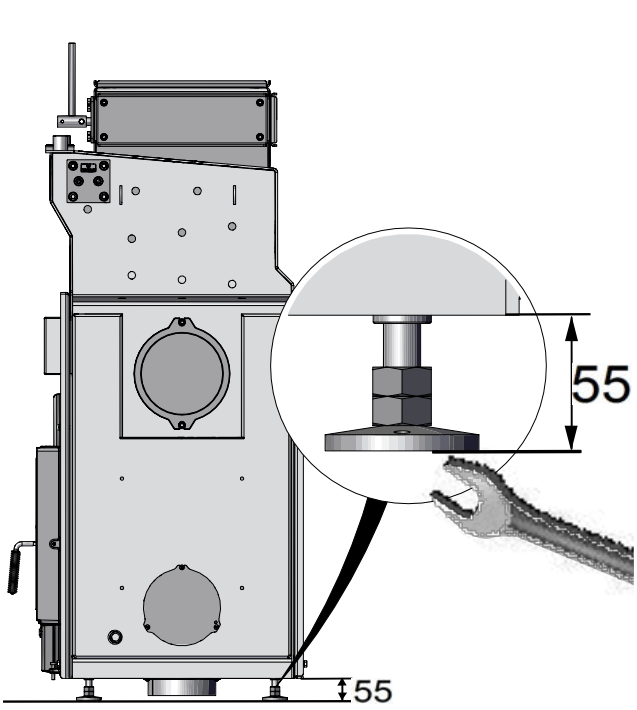


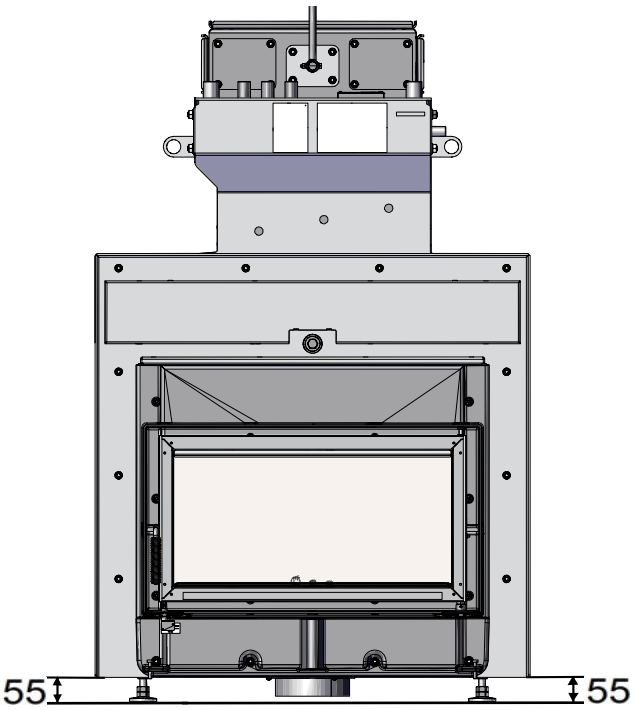


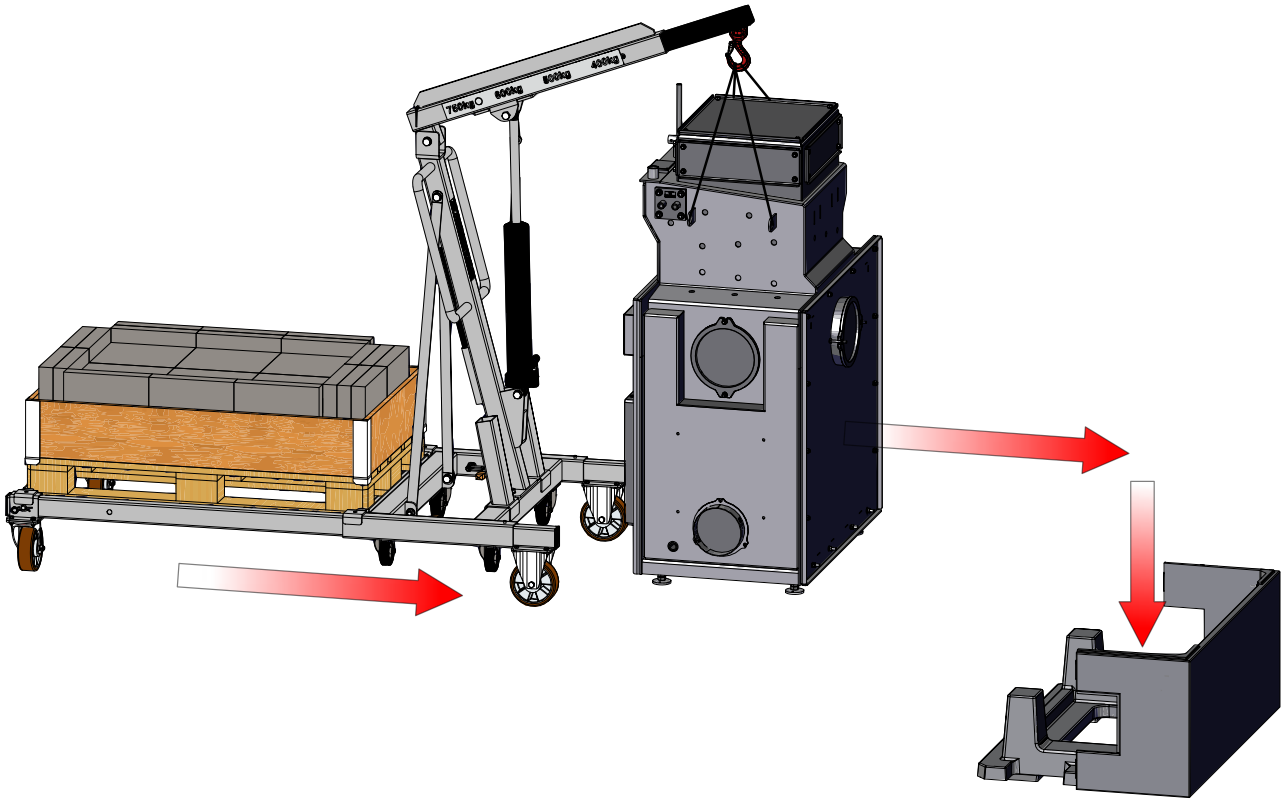


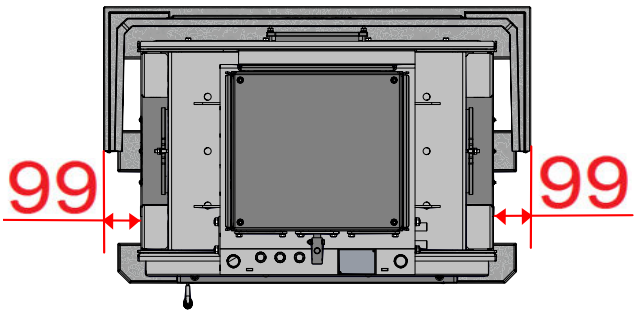
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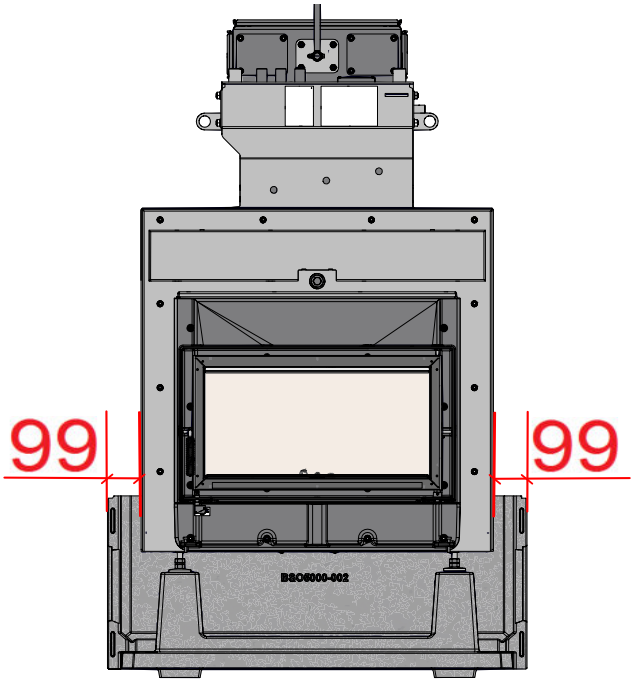

BSO5000-002
BSO5000-002


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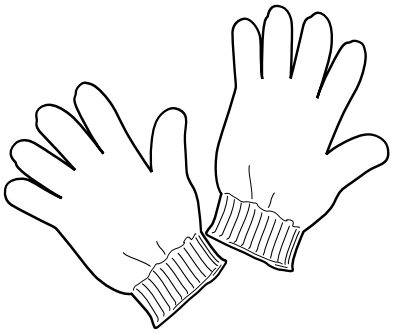


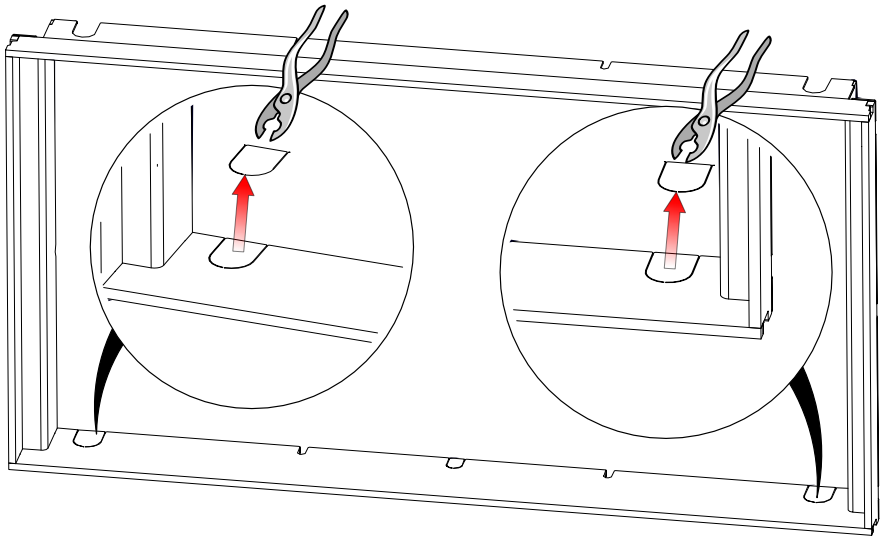


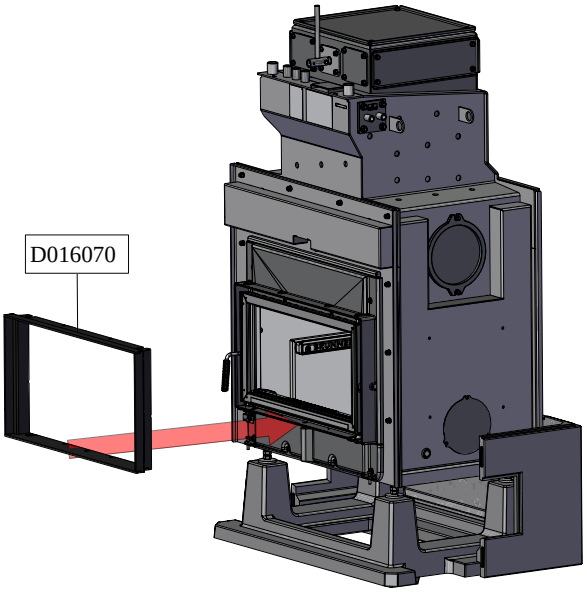


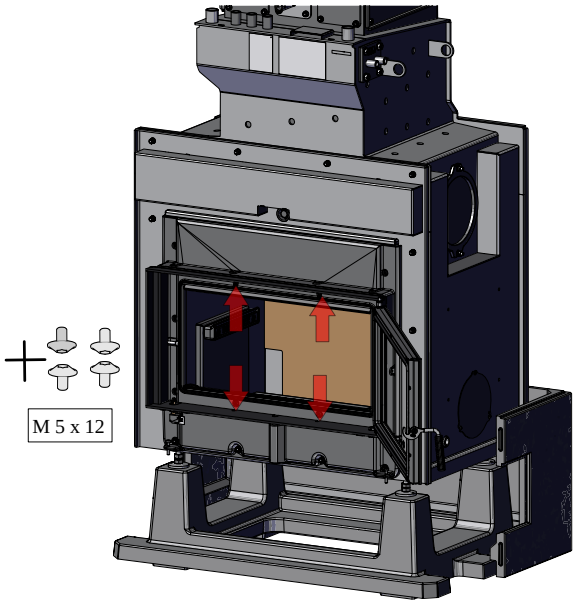
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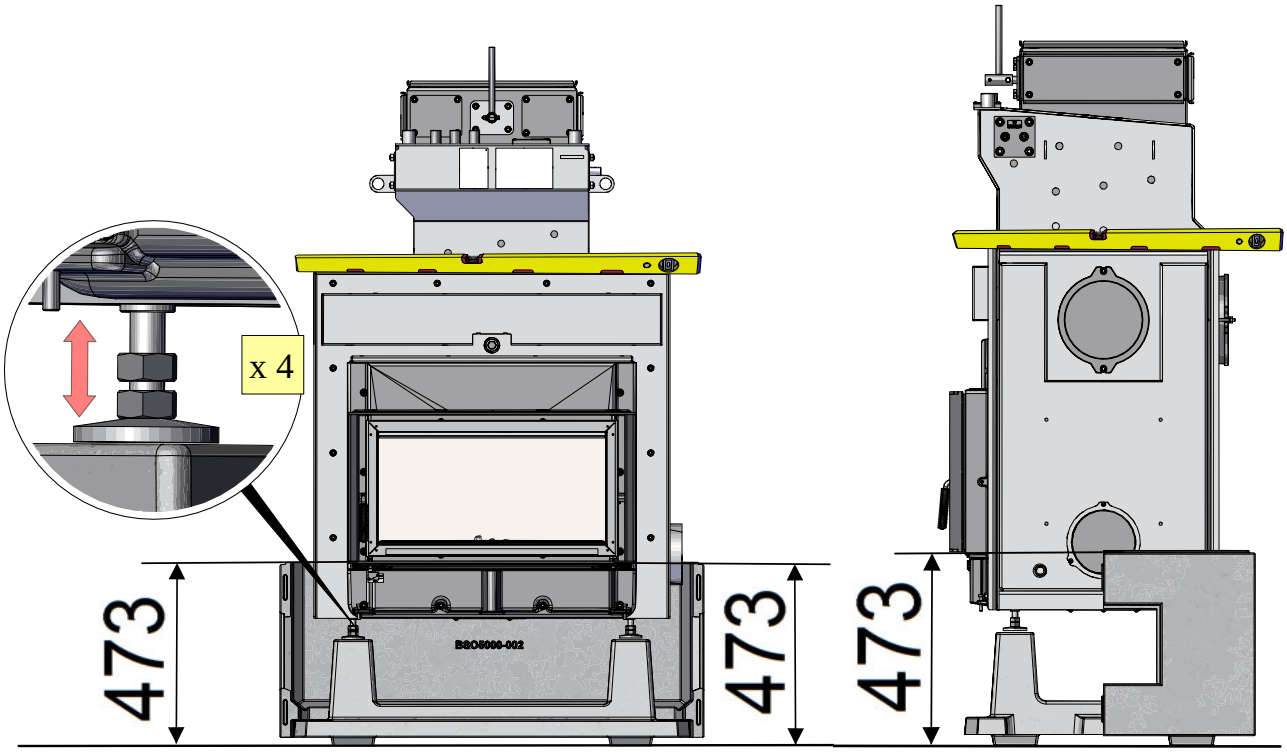
Attaching the frame





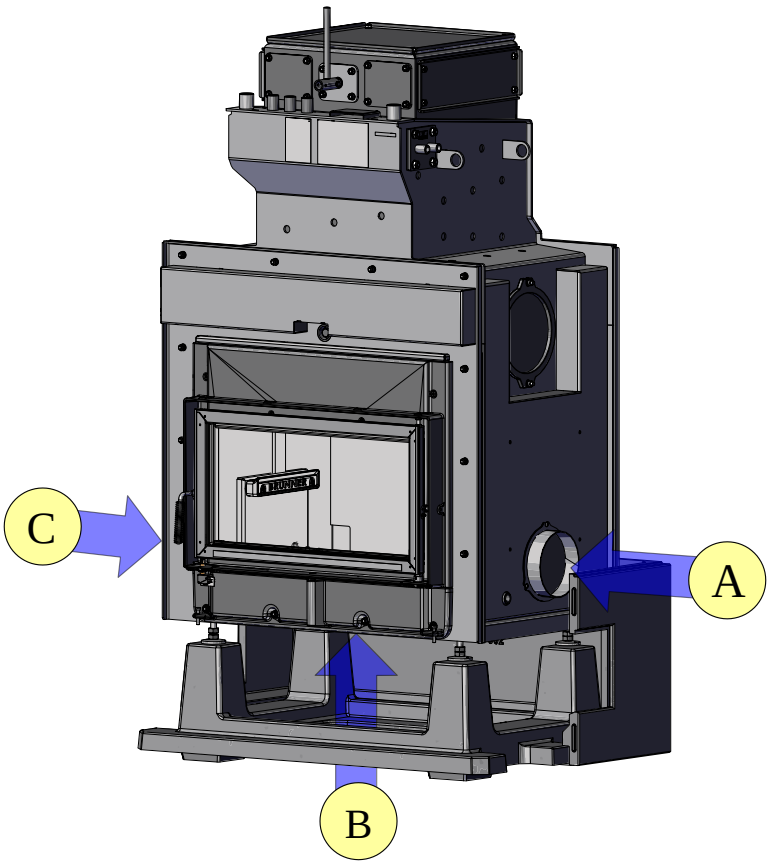






Supply air connection possible
in position A, B oder C.

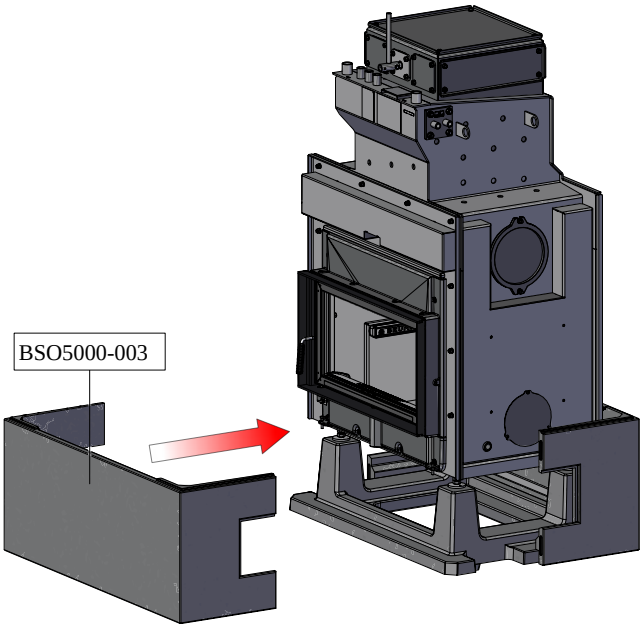
A = delivery status

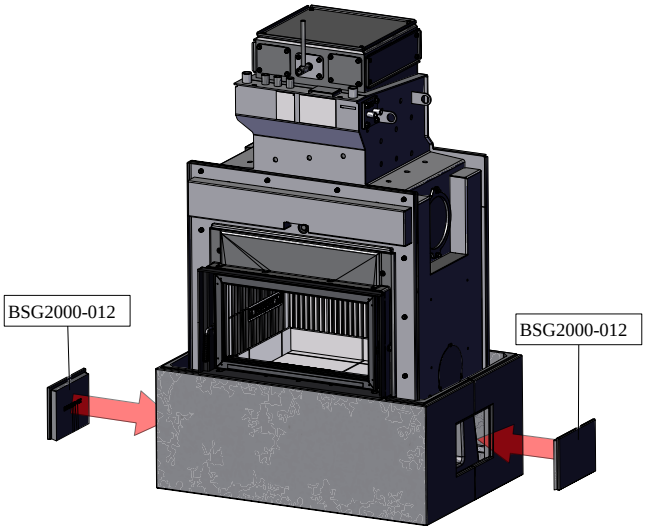


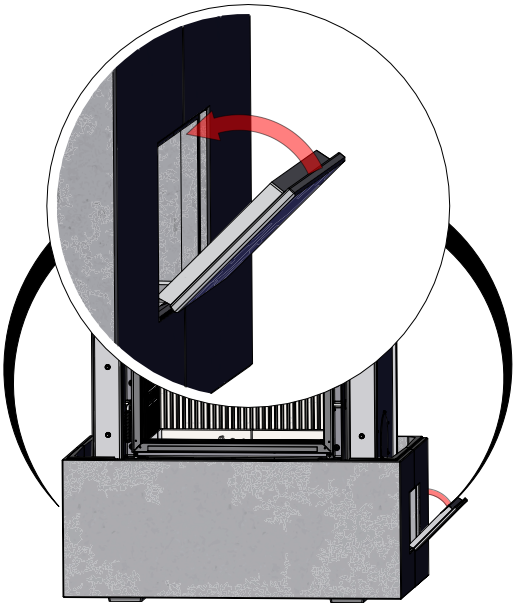
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When joining the bricks together, we recommend spot bonding with the acrylic cartridge (900107) from the accessory pack.





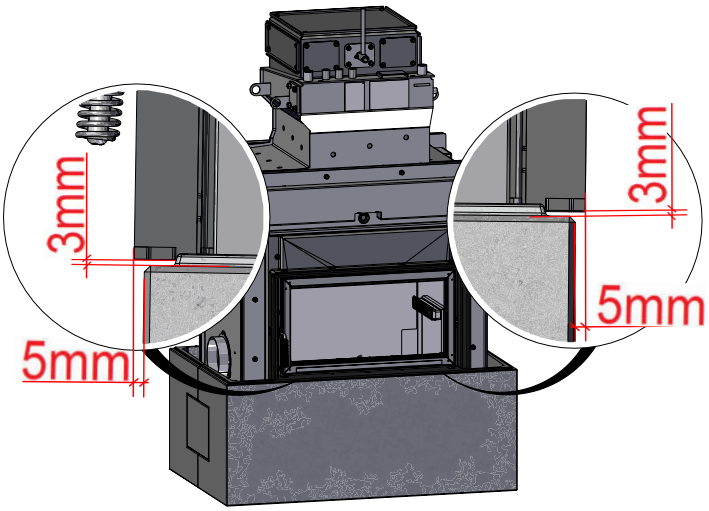




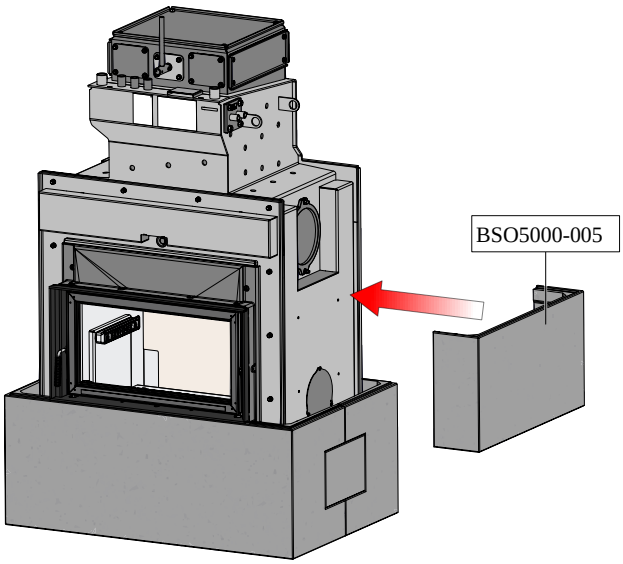
The projection to the concrete parts of the mounting frame must be 5 mm throughout.

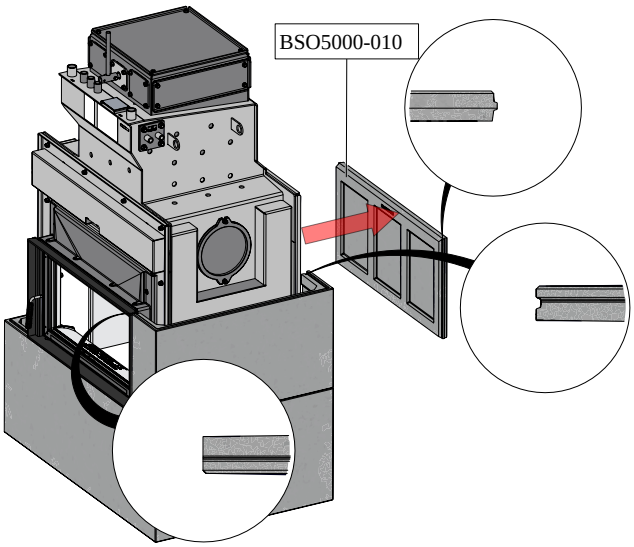
There must be a continuously gap width of 3 mm between the mounting frame and the shaped bricks.

Falling below these dimensions may cause damage to the system oven.

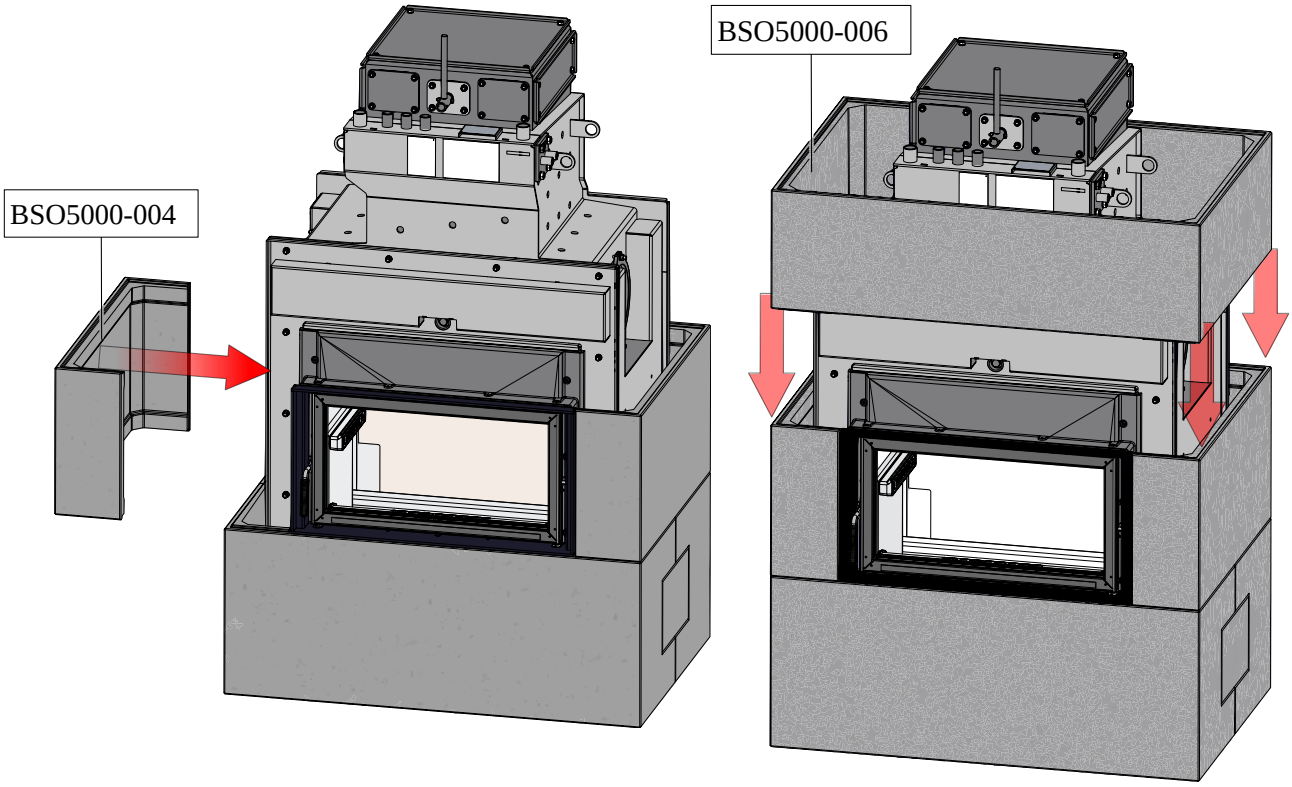


Now make the water-sided connections!

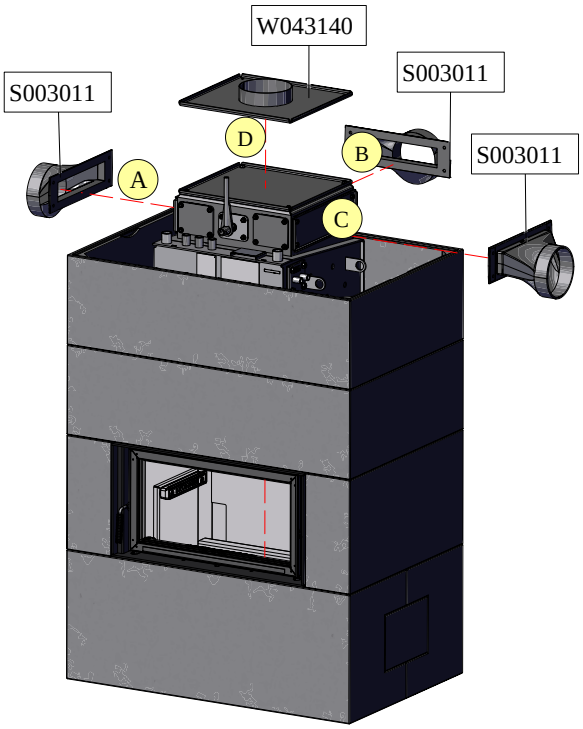


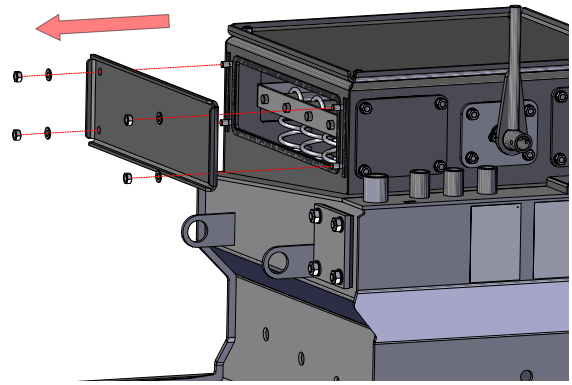


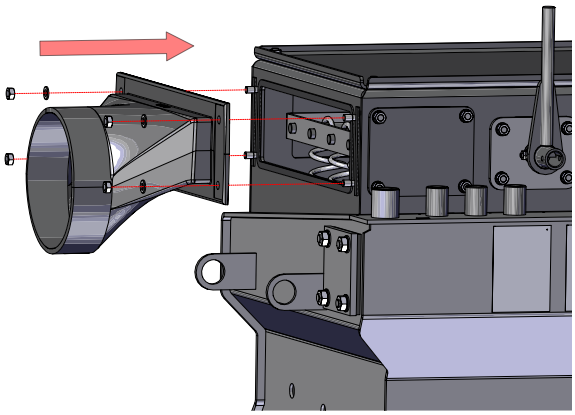
© 2024 Brunner GmbH

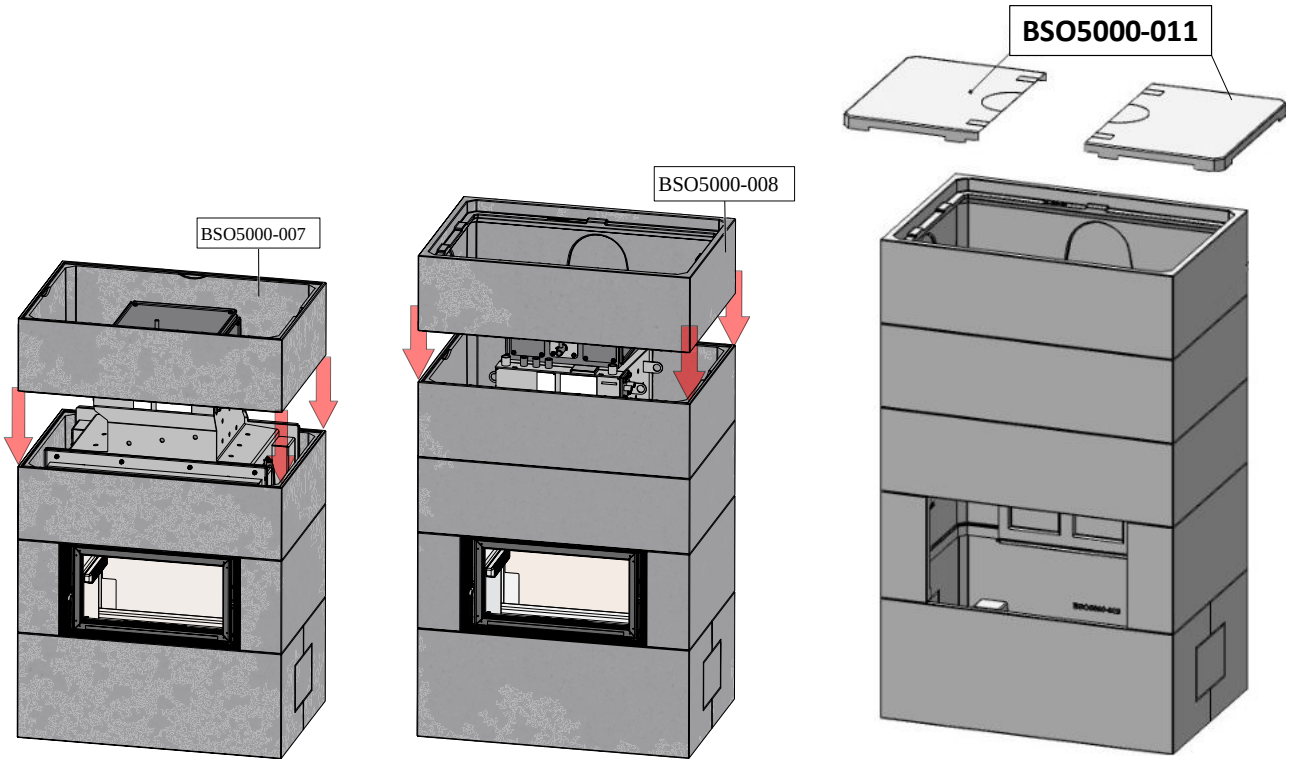


Now set the flue gas outlet and connect.Possibilities in position A, B, C oder D.



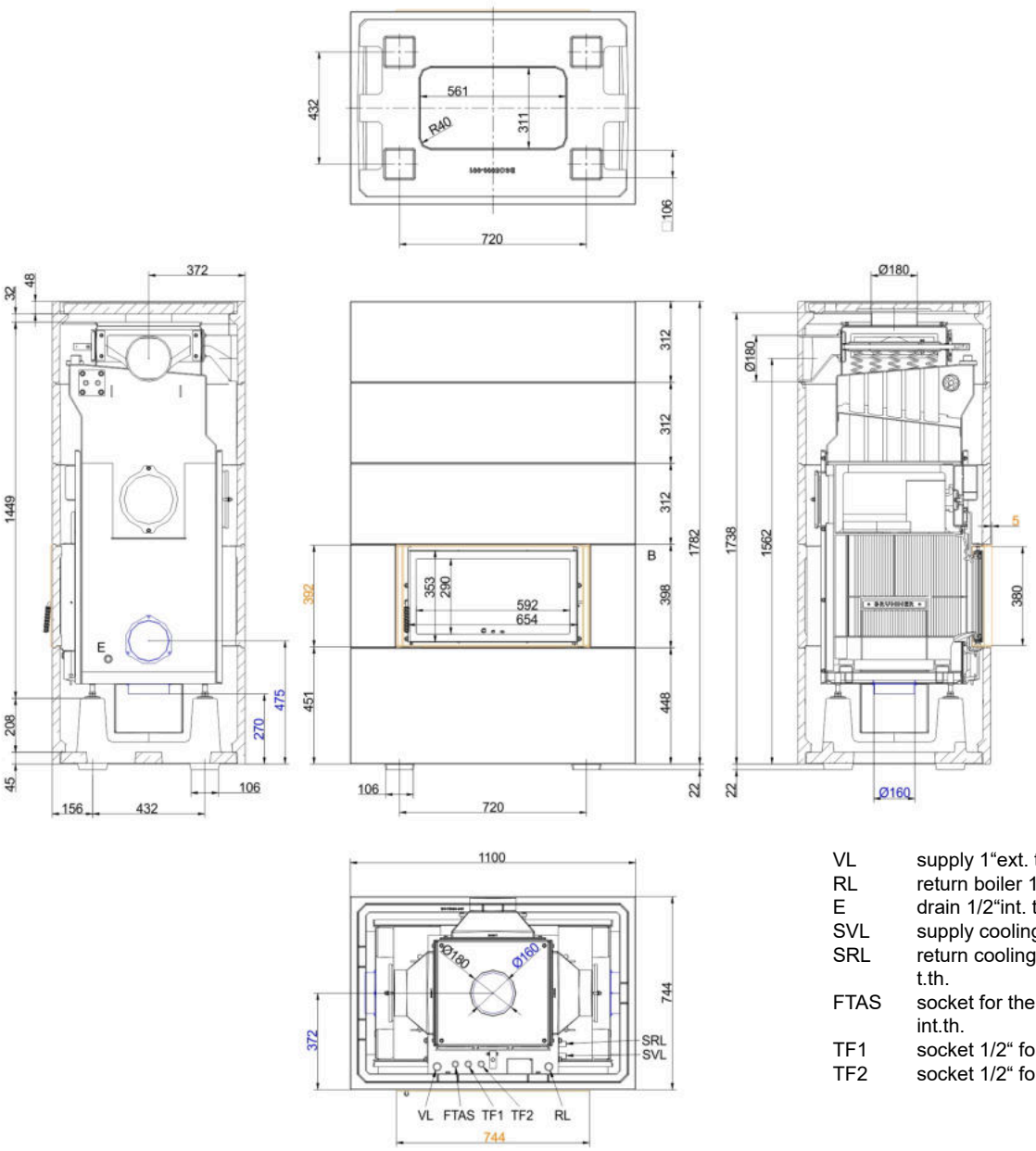






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Dimension sheets - BSO 05 with HKD 7 SK



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.

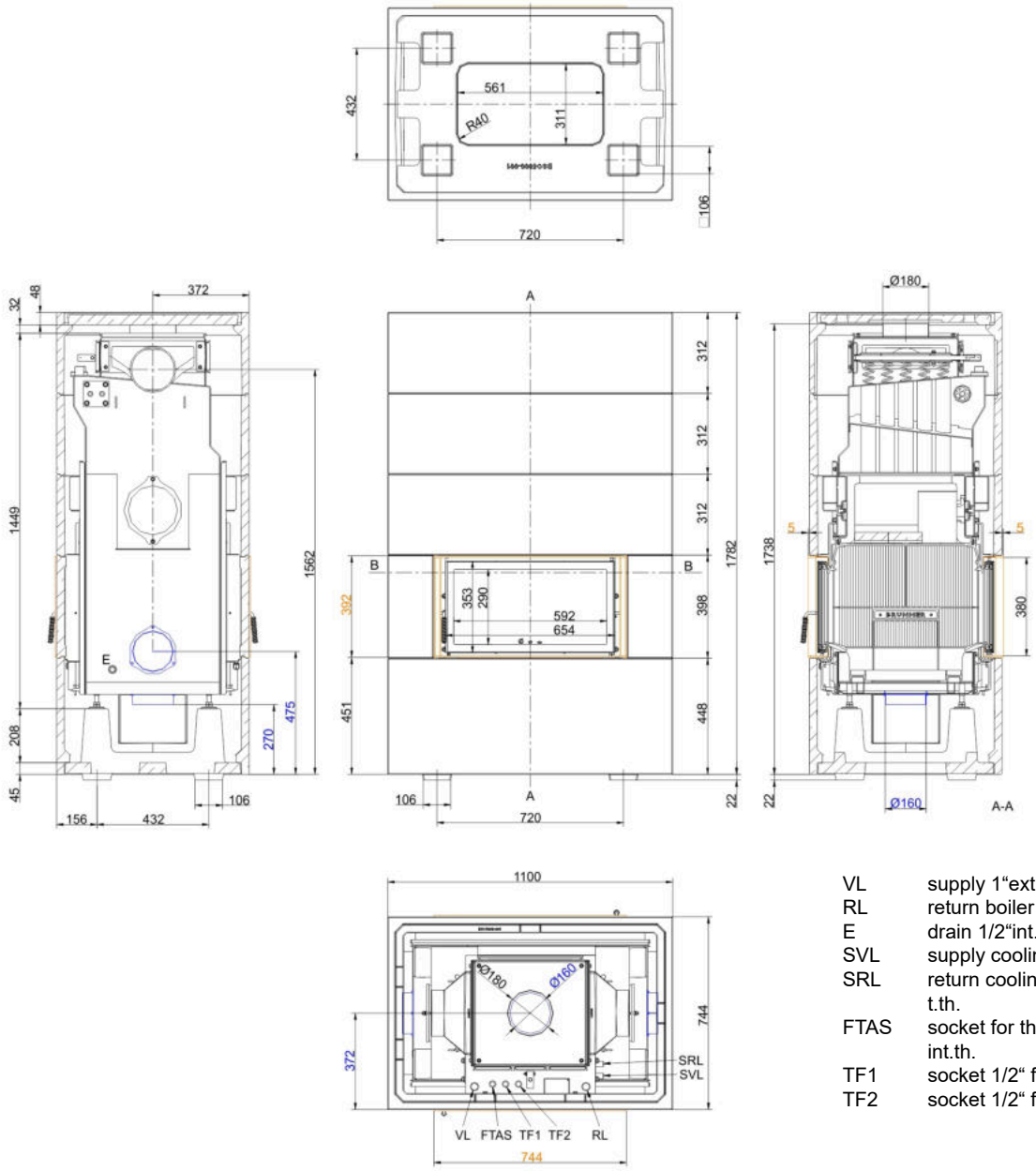
Stand: 2024-04-05

Planning and installation - BSO 05 with HKD 7 SK

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	-	4.5
Water heating power	kW	-	7.5
Fire wood volume	kg/h	7.0	3.6
Flue gas mass flow	g/s	23	11
Flue gas temeperature	°C	220	175
Necessary supply pressure	Pa	15	12
Combustion air consumption	m^3/h	60	35
Combustion air connection Ø	mm	160	160
Cladding components [1)]			
Foot print (W x D)	mm	1100 x 744	1100 x 744
Overall height	mm	1804	1804
Height of extension ring	mm	312	312
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	445	445
Recirculation air	cm^2	752	752
Weight			
Total weight	kg	877	877
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / 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 05 Tunnel with HKD 7 SK Tunnel



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.
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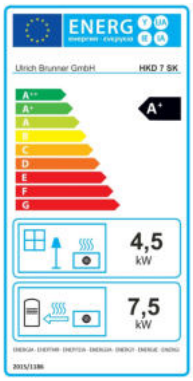
Stand: 2024-04-05

Planning and installation - BSO 05 Tunnel with HKD 7 SK Tunnel

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Practical avg.	Rated power
Data for functional demonstration			
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Height of extension ring	mm	312	312
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	445	445
Recirculation air	cm^2	752	752
Weight			
Total weight	kg	892	892
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

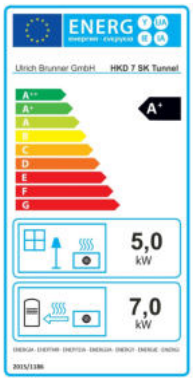
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2) Existing convection air openings. If the construction differs from the supplied system kit (e.g. construction up to the ceiling or closed construction), the information in the data sheet is decisive for carrying out the cross section of the convection air openings.

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



Supplier's name or trademark	Ulrich Brunner GmbH
Model identifier:	HKD 7 SK
Energy efficiency class:	A+
Direct heat output:	4,5 kW
Indirect heat output:	7,5 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 7 SK Tunnel
Energy efficiency class:	A+
Direct heat output:	5,0 kW
Indirect heat output:	7,0 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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