

Installation Guide

BSO 01

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CONTENTS

1	Basic informations.....	3
2	General Information.....	4
3	Tolerances of thermal concrete parts.....	6
4	Cladding components BSO 01.....	8
5	Sequence of assembly.....	9
6	Assembly.....	11
7	Assembly.....	12
8	Minimal distances.....	15
9	Heat radiation range.....	16
10	Drawings and technical data.....	

1 BASIC INFORMATION



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.

2 GENERAL INFORMATION

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 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 short SK (water bearing with mounting frame)	see user manual
BSO 05	HKD 7SK side opening door HKD 7SK Tunnel side opening/side opening door	see user manual

*) 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.

Acrylic joint seal

Used pointwise for setting of components.

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

Hairline cracks

Joints between the elements of stove casing or between the house wall and the stove casing can tend to form small cracks. This is normal and no cause for concern. Small cracks can be repaired with the optionally available rework kit (item no.: 900300).

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 optionally available rework kit (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!



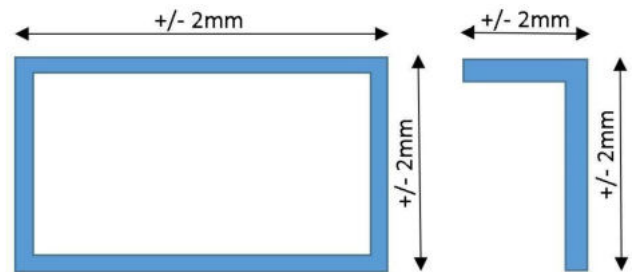
Please follow the separate installation instructions for the stove insert.

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.

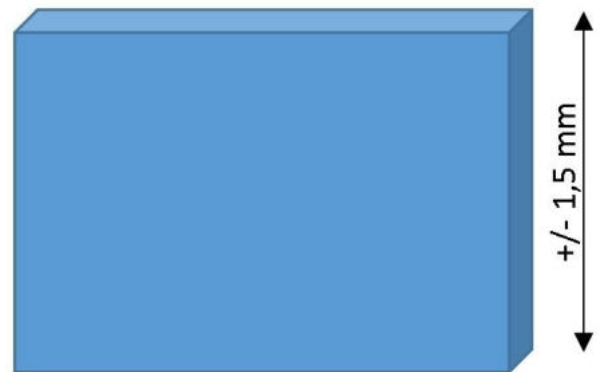
Length Tolerances

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 $\pm 2.5\text{ mm}$ applies. Above this dimension, a tolerance of $\pm 3\text{ mm}$ 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!

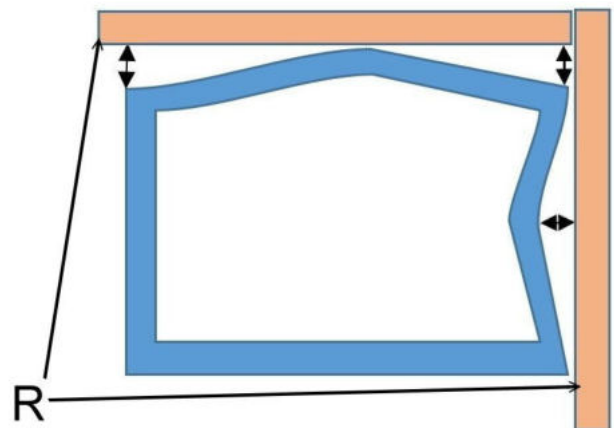


Illustration 1: Leveling boards placed correctly

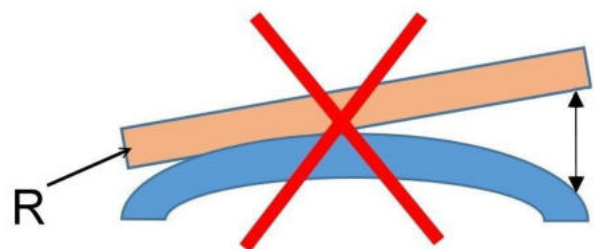
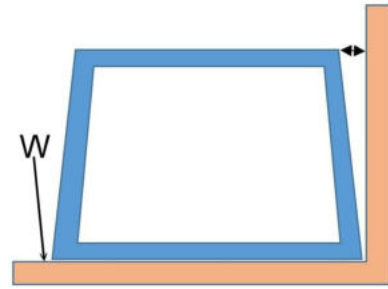


Illustration 2: Incorrectly placed leveling board

Tolerances of Angle

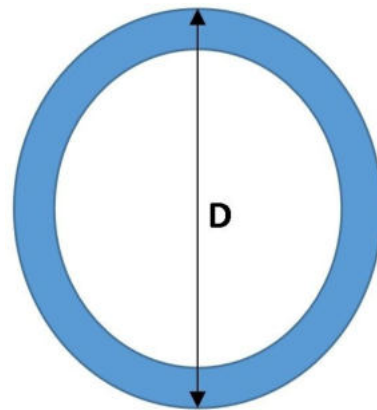
In order to determine the deviations of angles, place the square measuring tool along the long edge!

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.



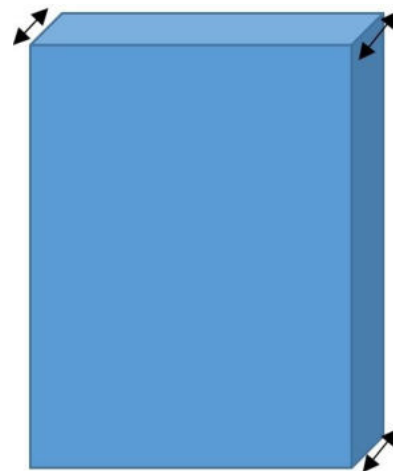
Roundness

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

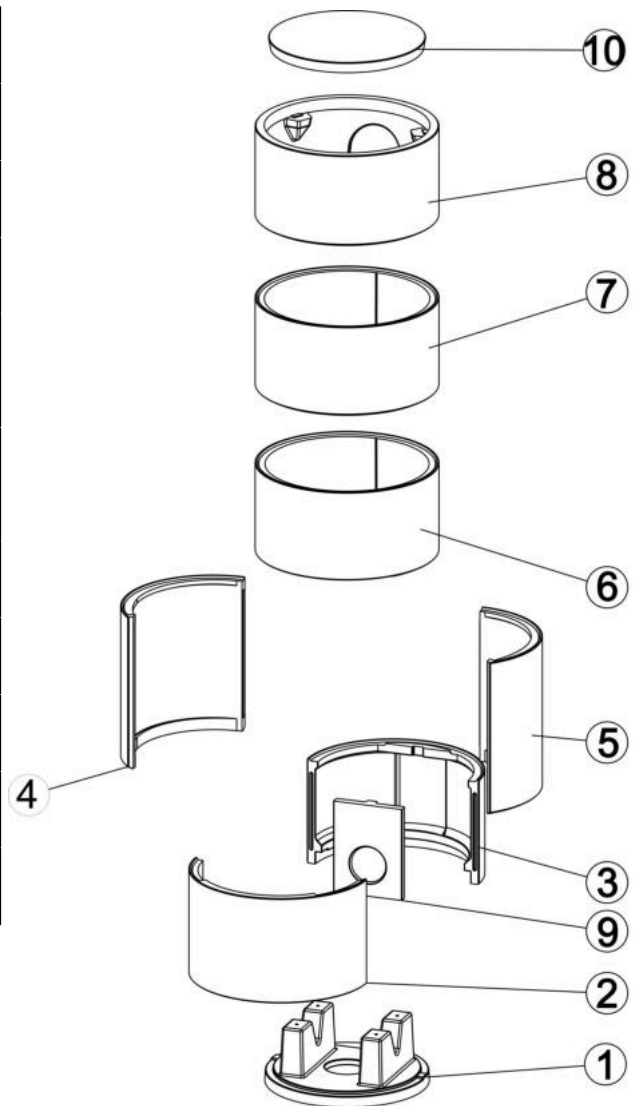
For wall thicknesses, a tolerance of 3.5% applies.



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.

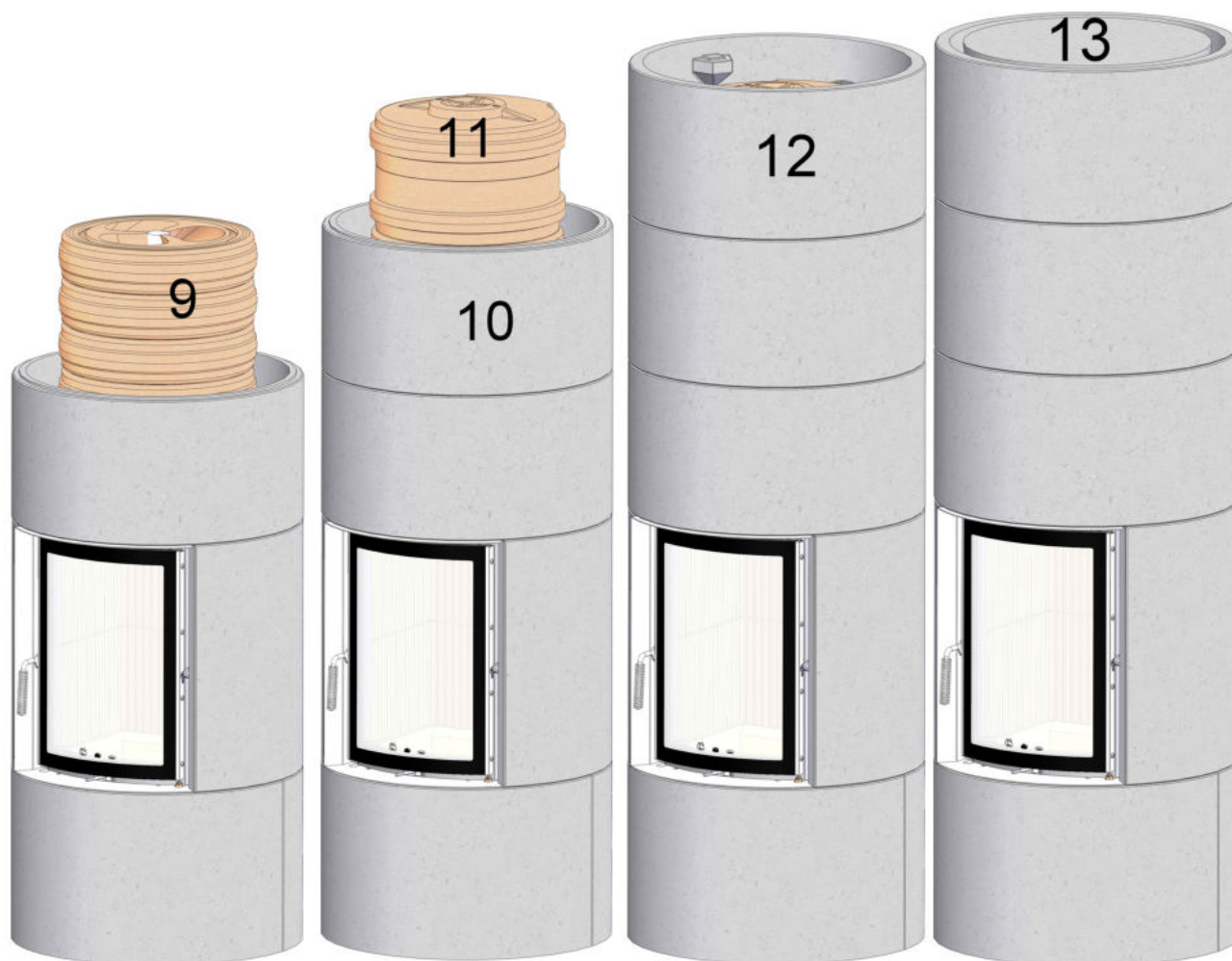
4 CLADDING COMPONENTS BSO 01

Pos.	number	name
1	BSO 1000-001	bottom plate
2	BSO 1000-002	base ring 1
3	BSO 1000-003	base ring 2
4	BSO 1000-004	side component left
5	BSO 1000-009	side component right
6	BSO 1000-005	top ring 1
7	BSO 1000-010	top ring middle
8	BSO 1000-006	top ring 2
9	BSO 1000-007	T-piece
10	BSO 1000-008	cover



5 SEQUENCE OF ASSEMBLY





6 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.



Illustration 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) Brunner Universal (Art.Nr.: 900384) or Brunner Spezial (Art.Nr.: 900284) on the fireplace casing.

The actual plaster layer is then drawn with adhesive plaster over this layer.



Please note the processing instructions for the adhesive plaster.

Excerpt from the processing instructions: Mix dry mass before removal of processing volumes in a clean container. Set small quantities in a mason pan with a spatula or trowel with clean tap water into application-specific consistency and process quickly; for large-area coating, stir with a mortar agitator in low speed intensively, allow to soak, stir again and then process quickly.

7 ASSEMBLY

The first step of assembly shows the base plate with pre-assembled bolts. These bolts are used to adjust the height and level of HKD 2.2.

The HKD 2.2 is placed on these bolts.



Illustration 4: Bolt in base plate

Before the stove casing is assembled, the HKD 2.2 inner linings should be installed.

In steps 3 and 4, the combustion air inlet is provided on the rear wall of BSO 1.



Illustration 5: Combustion air inlet

Set the lower front part of casing and bring the stove insert to level.

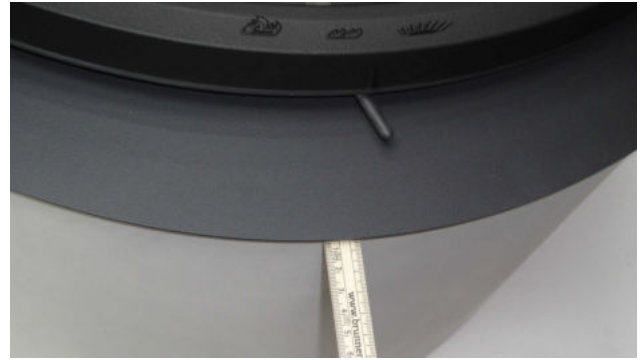


Illustration 6: Levelling of HKD 2.2

Before the modular accumulator parts are assembled, the mounting ring must be placed (assembly step 7) on top of HKD 2.2.

Now the remaining parts can be assembled as shown. Please note that the last part for assembly is the one with supports for top cover.



Illustration 7: Mounting ring

ASSEMBLY INSTRUCTIONS FOR DOUBLE-LAYERED MAS



Risk of injury! Wear gloves during assembly of MAS!

The double-layered structure of the MAS is characterized by extreme temperature resistance. To fulfil these characteristics during stove operation, it is necessary to respect the following assembly instructions.

Safe assembly is ensured by the use of a mounting ring, which is designed especially for the given type of stove. First, on top of this mounting ring is laid the inner ring with its cone and the circular protrusion facing downwards (the bigger outer diameter facing down, see Figure).

Now the outer ring must be laid with the bigger inner diameter (or: the side with the attached sealing) facing down.

Between the inner and outer ring there must be a gap; the inner and outer rings cannot touch themselves!

We recommend to use a MAS without cone as a first ring (not shown).

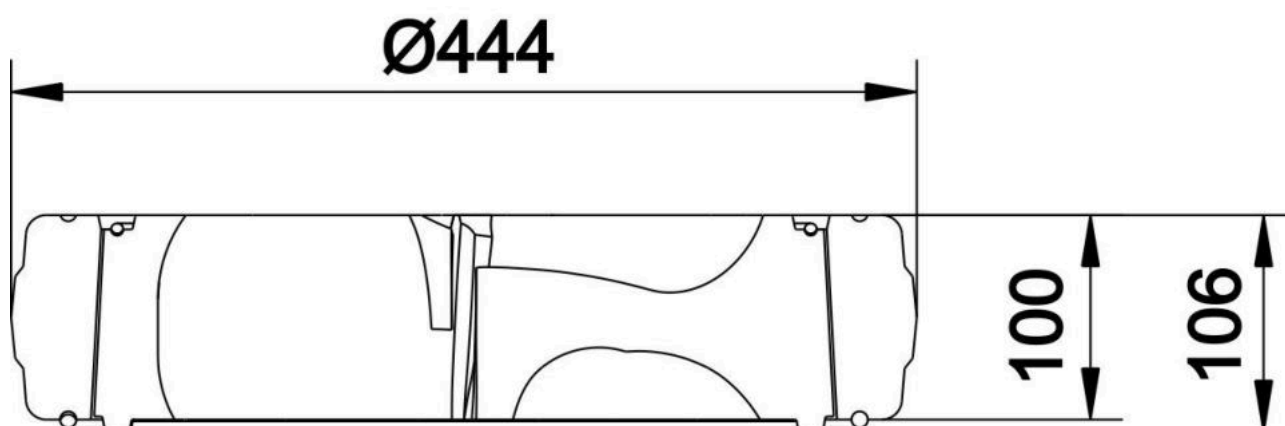


Illustration 8: Section of MAS with cone (3)

The components of MAS are assembled properly, if the cone (3) does not fall out, but remains inside the inner ring.

Note: The components must heat up slowly and have to be brought to operating temperature first. After this initial tempering process, the components receive their final and optimal properties.

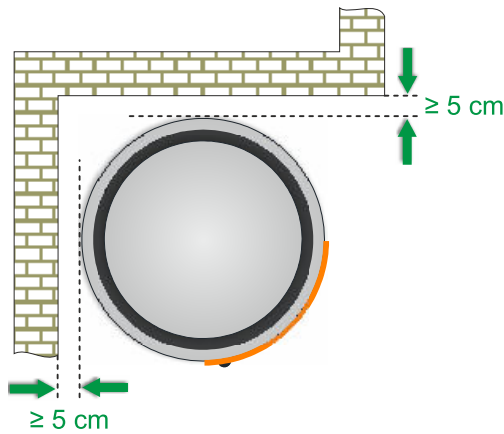


Ensure proper ventilation inside the room during tempering!

8 MINIMAL DISTANCES

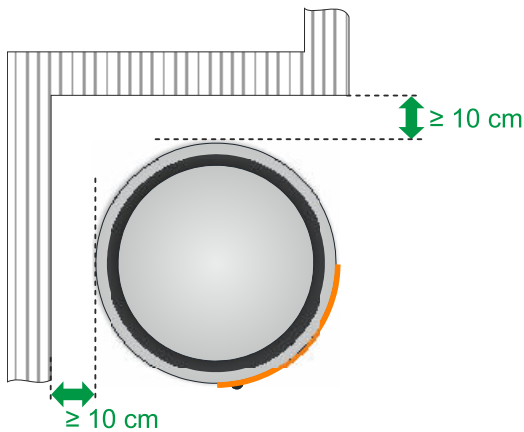
Minimal distances to adjacent walls

Depending on wall type (flammable or non-flammable wall), the minimal distances are different.



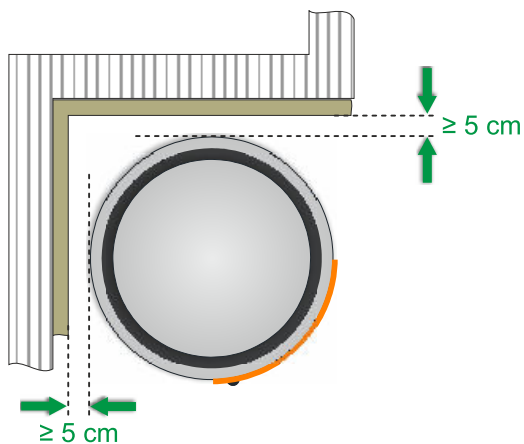
Other walls:

- ▶ 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)



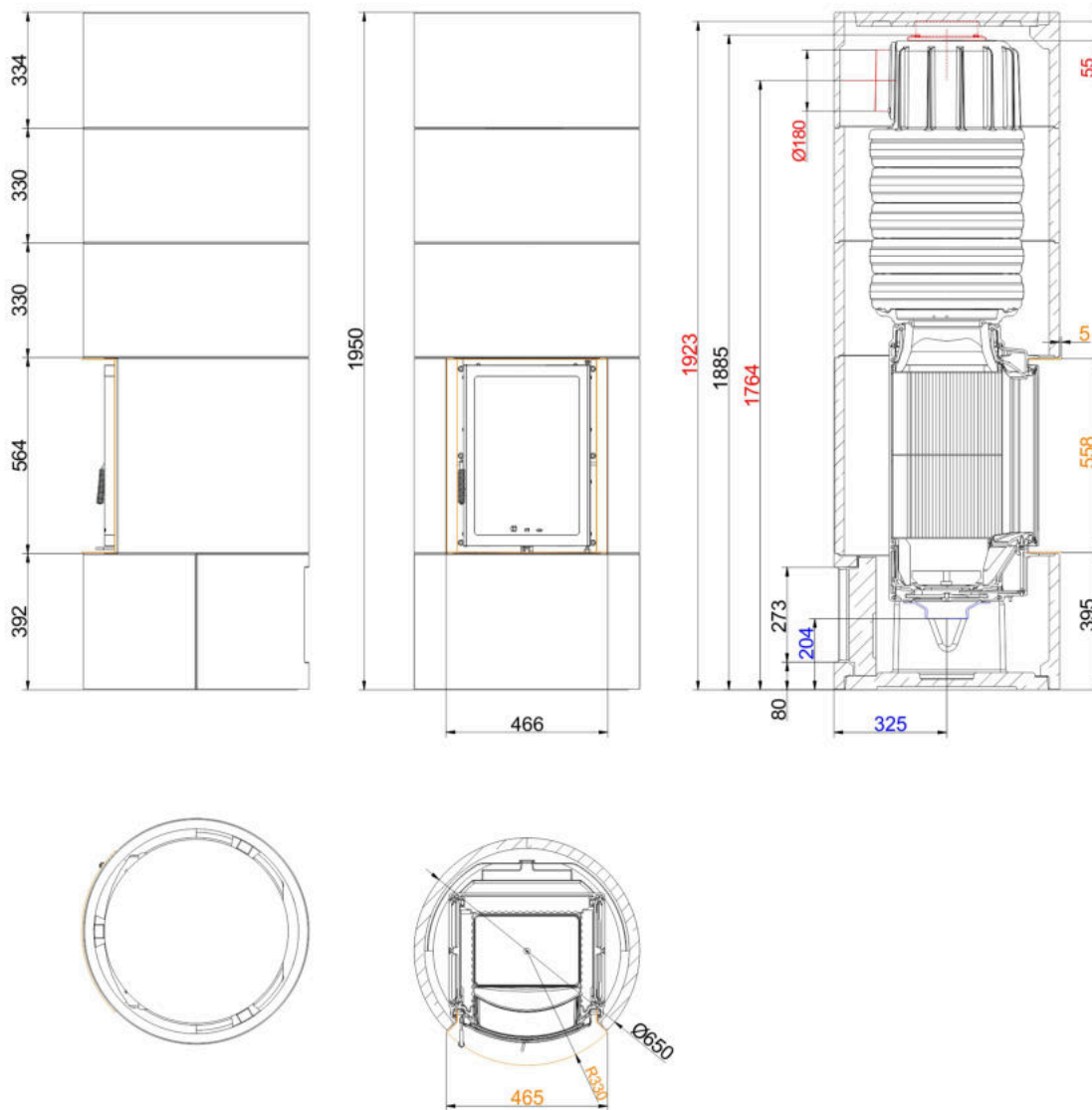
Walls requiring protection with 10 cm brick lining or alternative insulation

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

 Flammable walls requiring protection

 10 cm brick lining or alternative insulation material, insulating panel

Dimension sheets - BSO 01 with HKD 2.2k round



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 - BSO 01 with HKD 2.2k round

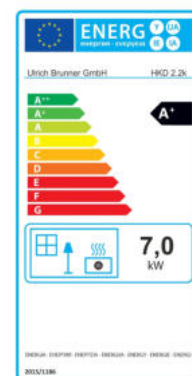
Tested according to		EN 13229
Data for functional demonstration		
Rated heat power	kW	7
Fire wood volume	kg/h	2.5
Flue gas mass flow	g/s	7.5
Flue gas temperature	°C	220
Necessary supply pressure ¹⁾	Pa	12
Combustion air consumption	m ³ /h	25
Combustion air connection Ø	mm	125
Cladding components		
Foot print (Ø)	mm	650
Overall height	mm	1950
Height of extension ring	mm	330
Minimal distances		
to mounting wall	cm	5
to mounting wall with heat protection panels	cm	-
to combustible mounting wall	cm	10
to combustible mounting wall with heat protection panels	cm	-
from top of fireplace to ceiling	cm	40
Cross-section of gratings ²⁾		
Convection air	cm ²	260
Supply air	cm ²	400
Weight		
Total weight	kg	550
Meets requirement/limit values for:		
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -

1) Damper flap recommended

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 2.2k
Energy efficiency class:	A+
Direct heat output:	7,0 kW
Indirect heat output:	N.A. kW
Energy efficiency index:	108
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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Art. No.: 19772