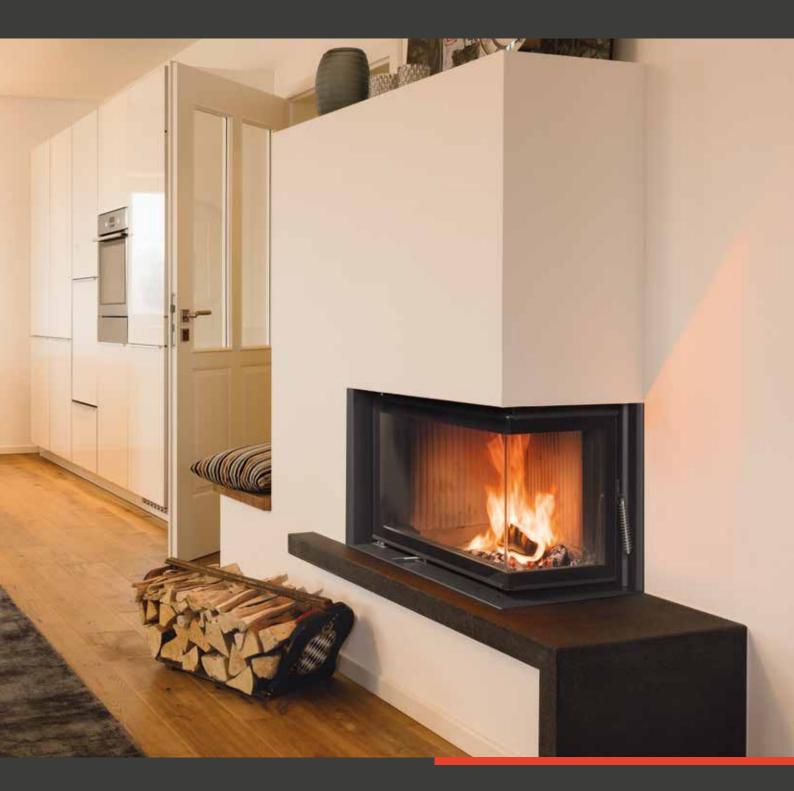
HKD Wood burner



BRUNNER

heizen auf bayerisch.



heizen auf bayerisch.

Tiled stoves built by a skilled craftsman are no consumer goods and incomparable to cheap wood stoves. Keeping this in mind, BRUNNER develops and manufactures wood combustion devices which comply to the requirements of longevity and high durability. These robust iron castings fulfil the highest demands in terms of efficiency and emissions. A group of specialists in Eggenfelden, Lower Bavaria, has been working on this with great success for the last 30 years, and keeps on working to provide for a perfect experience with tiled stoves and wood-based heating.



We are BRUNNER.

Hubertus Brunner

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THE INGENIOUS IDEA

OF Wood HEATING

THE STORY OF FIREPLACES AND TILED-STOVES - OR HOW THE BRUNNER HKD CAME TO BE.

Open fire is something very beautiful, but rather unreasonable. The valuable warmth provided by fire is not given off into the living spaces, but mostly pops outside through the chimney. A classic tiled-stove is indeed giving off the usable heat optimally to its surroundings, but the view of flames is not present at all or only trough a small glass door.

To have the best of both worlds without their major disadvantages – this would be great!

BRUNNER has implemented this idea already in 1991.

As a result: A new generation of tiled-stove inserts with big glass door instead of the traditional cast iron front with small hearth door.

With the HKD series it was first possible to combine the beauty of well visible fire with the heating power of a tiled-stove insert. It was made possible through a special combustion chamber geometry, ensuring a clean combustion process in high temperatures. The hot combustion gases do not go straight into the chimney from here, but instead they are supplied to a reheating device. This reheating device is used to collect the heating energy of combustion gases and to give it off through the external stove cladding into the room. This special feature ensures high efficiency of such stove systems. The handcrafted construction of the reheating device and the external stove cladding decides about the heat dissipation behaviour (ref. to overview of stove systems on page 40).



THE HKD SERIES

Off course, there are different applications and demands to be satisfied by a wood burner for the stove-building craft. Therefore, the various stove inserts differ in terms of their construction and optical design, and have different wood capacity and glass sizes. There are stoves with minor capacity, where the fire looks pretty much the same as in normal fireplaces, or combustors with big capacity, which are used for heating up ceramic storage masses. But what is common for all HKD models:

THEY ARE DURABLE, EASY TO OPERATE AND DISTINGUISHED FOR THEIR CLEAN COMBUSTION.





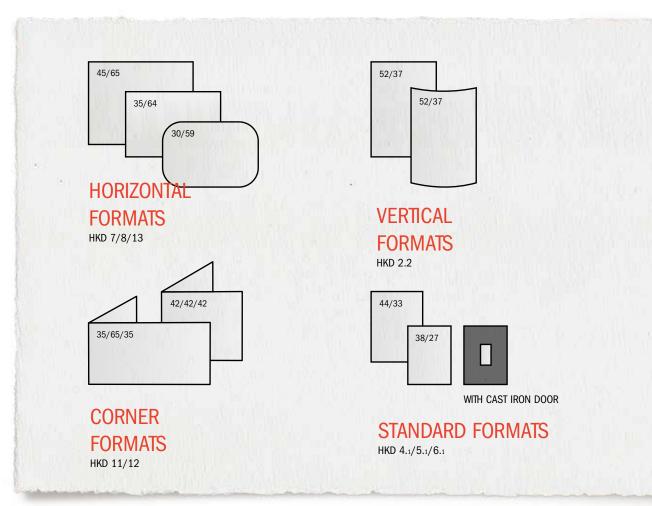
WOOD BURNERS WITH

BIG glass door

THE SIZE AND FORM OF THE GLASS DOOR DETERMINES THE LOOK OF TILED STOVES.

- The corner and horizontal formats, in tune with todays' architecture and room planning. Not too extravagant, but with a fresh approach and in harmony with contemporary design.
- The vertical formats for tiled stoves with fireplace look, in flat or round glass versions.
- The standard formats for the traditional tiled stoves.

 Cast iron door with a small inspection window, when the stove is loaded with wood from a corridor or adjacent room.



GLASS FORMAT: height/width(s) in cm



THE SECOND GLASS

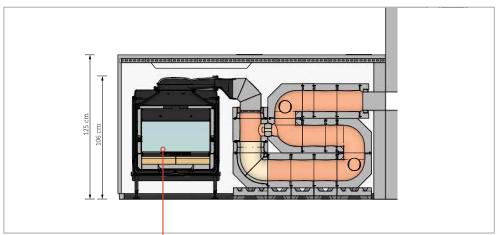
FOR transparency

TUNNEL VARIANTS

Tiled stove inserts with front and rear doors are refered to as double-sided or tunnel devices. The version with two identically dimensioned glass panes is used often in case of stoves which are acting as room dividers.

Accumulation stove as room-dividing structure with low height (visualisation)



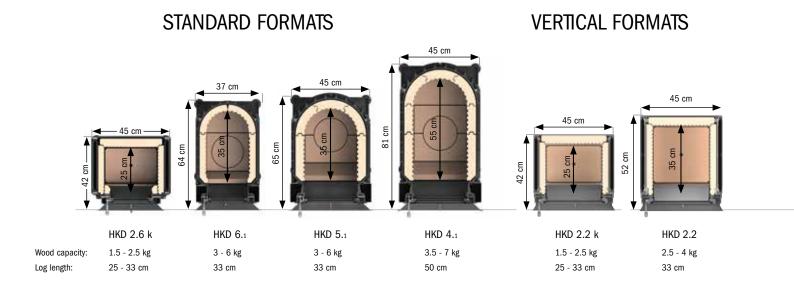


HKD 7 Tunnel with low cast iron dome and heat protection screen in ceiling area. Ceramic storage mass with BRUNNER MSS heat storage blocks



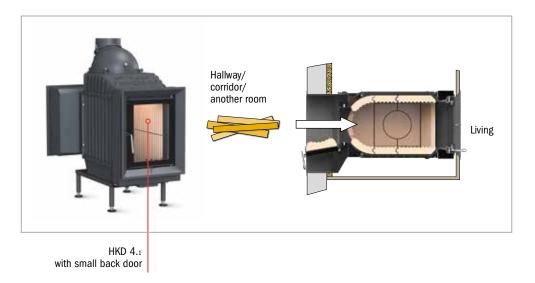
The COMBUSTION CHAMBER SIZES

The combustion chamber sizing depends on the heat demand, the weight of installed storage mass in case of radiant heaters, and the expected number of combustion cycles per day. Of course, the preferred length of wood or a certain construction depth can be also taken into account. The actual priorities are considered during planning and agreed individually with the stove builder.



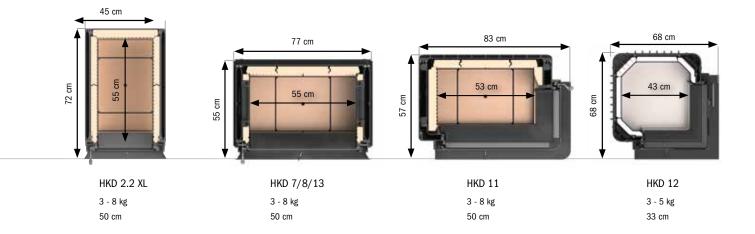
A SMALLER BACK DOOR

This version with a 2nd small back door is used, when access for loading wood from another room is needed.



The powerful combustors HKD 2.2 XL, HKD $4.\mathrm{_{1}}$ and HKD 7 are also available as water-heating versions. A perfect way to provide for heating in other rooms via the central heating system.

HORIZONTAL FORMATS CORNER FORMATS



Wood capacities adjusted for calculation of chimney and storage mass dimensions. In case of radiant heaters with heavy storage mass it is allowed to exceed the recommended filling volume. The calculation rules of the Austrian tiled stove building association include design cases for combustion chambers for 50 cm logs with a wood capacity up to 20 kg.





THE horizontal formats

WITH A CAST IRON BODY IN TWO COMBUSTION CHAMBER HEIGHTS AND VARIOUS SHAPES OF DOORS IT IS POSSIBLE TO CREATE MODERN STOVE STRUCTURES.

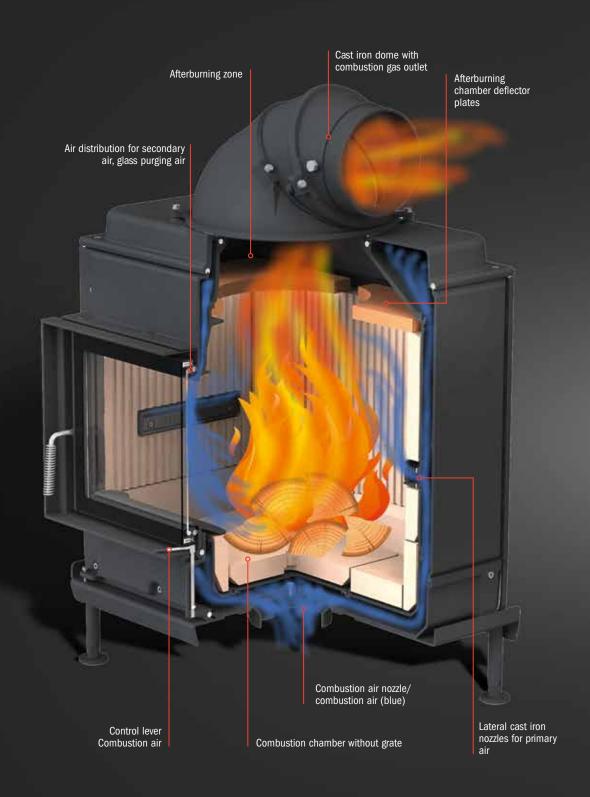
A variety of forms, which stimulates imagination.



HKD 7 Tunnel with mounting frame, low cast iron dome and adjacent heat storage mass Cladding: BRUNNER fireplace construction plates Surface finish: Glattspachtel 200 / Coloured structural putty

THE SECRET OF CLEAN GLASS

The air supply and geometry of the combustion chamber have been optimized through simulations and experiments to ensure optimal afterburning of combustion gases. When the stove is used as intended, the combustion chamber geometry ensures that the glass stays clean for much longer than usual. External combustion air supply is possible in case of all tiled-stove inserts.



HKD 7
COMBUSTION CHAMBER DETAILS

THE HORIZONTAL FORMATS

TYPES AND variants

TWO DOOR FORMATS - TWO DOOR SHAPES.

Combustion chamber and side-opening door in two different heights.



Wood capacity: 3
- 8 kg
Log length: 50 cm

Variants with double doors: Tunnel versions



Wood capacity: 3 - 8 kg Log length: 50 cm





HKD 7 Tunnel with EOS combustion control

THE HORIZONTAL FORMAT WITH

quality LEVEL

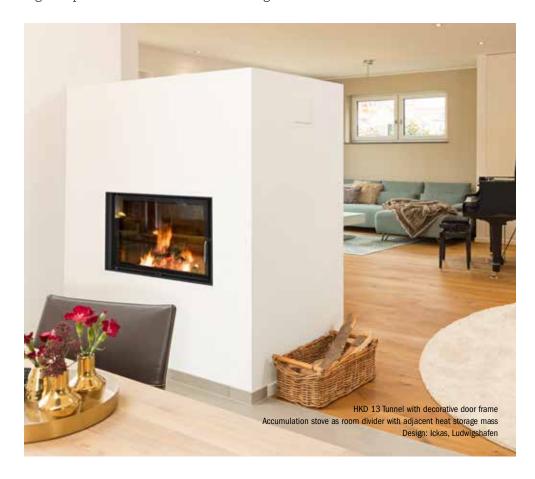


MAKING GOOD EVEN BETTER

The high combustion chamber with extended afteburning zone is a basic requirement for low emissions. With the comfortable operation and reliability of a combustion control system it is possible to reach the emission level even in practical use.

It is still up to you, if you decide in advance for a catalytic converter, or if you want to upgrade your stove system later.

Regardless of your decision, you can be sure that it is still possible to react, if the legal requirements and limits will change sometime in the future.





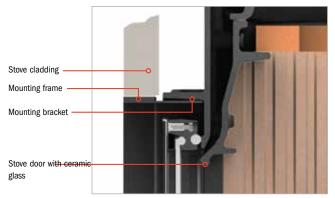
one stove insert with two faces

THE DOOR FORMATS

Two different door styles: conservative and subtle or intentionally emphasized by the protruding, rounded shape of door frame.



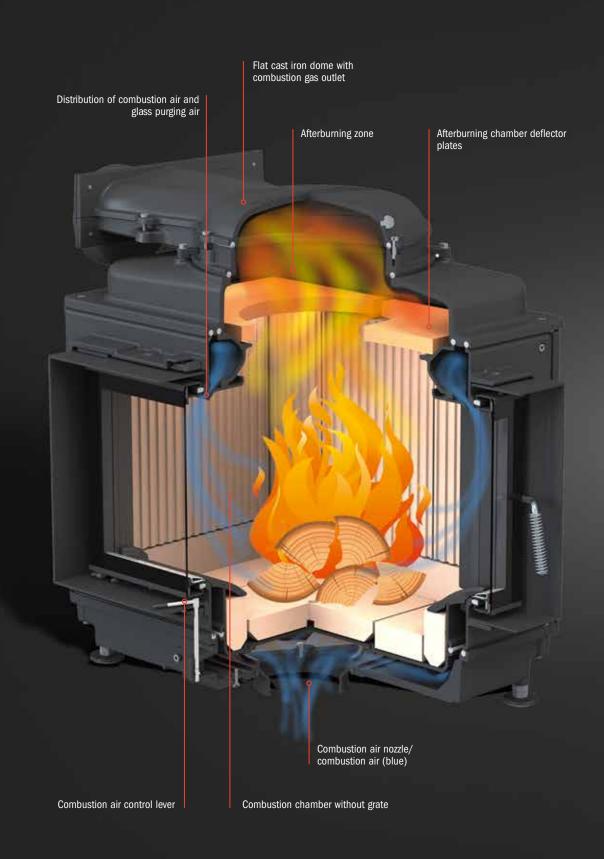
 $\ensuremath{\mathsf{HKD}}$ 7: Door flush with stove cladding, with angled bracket



HKD 8: Door protruding from stove cladding, with mounting bracket







HKD 11 COMBUSTION CHAMBER DETAILS

THE HKD CAST IRON BODY WITH

Corner glass

The HKD series with corner door formats makes possible, what was once reserved for fireplaces and hand-crafted masonry heaters: a great view of fire from both sides, without compromise. And it all in a cast iron wood-burning insert, suitable for accumulation stoves with greatest heating efficiency.



NOT VISIBLE, BUT OF GREAT VALUE.

The combustion air supply above the corner glass and the combustion chamber geometry are developed and designed for calm and steady burning process. A prerequisite for minimizing stains, which are typical in the corner areas.

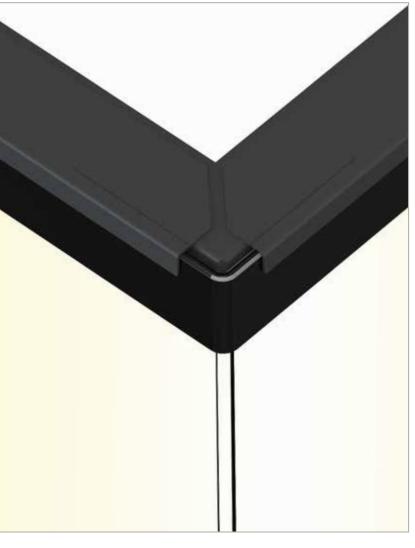


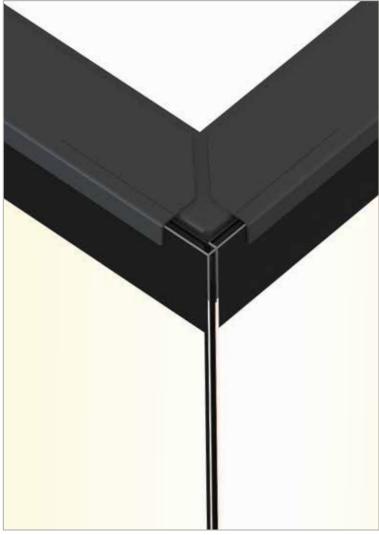


Corner Glass Detail

The ceramic glass of both corner variants is offered also in a twopiece version. Here you will find a clearly defined, rectangular edge.

One-piece corner glass panes will always have a minimal bending radius.





one-piece corner glass (minimal bending radius)

two-piece corner glass (rectangular; with butt joint)



Doors so unusual

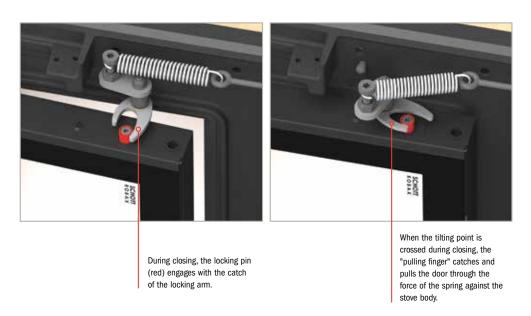
HKD 12 - PRACTICAL AND BEAUTIFUL.

Door handle as a reling made of stainless steel - small and minimalistic in its design.



DOOR LOCK WITH RETAINING SPRING - EASY TO USE AND RELIABLE.

During closing, the door frame is catched and pulled against the stove body by a pretensioned spring. The door pulling mechanism at the top and the bottom presses the door with sustainable force against the sealing faces.





THE VERTICAL FORMAT WITH ALL ITS POSSIBILITIES

HKD 2.2

A CAST IRON FIREBOX WITH THE LOOK OF A FIREPLACE, FOR ALL KINDS OF HANDCRAFTED TILED STOVES.

What is unique, is not just its design with the compact dimensions, but also the various construction forms and possibilities of composition.



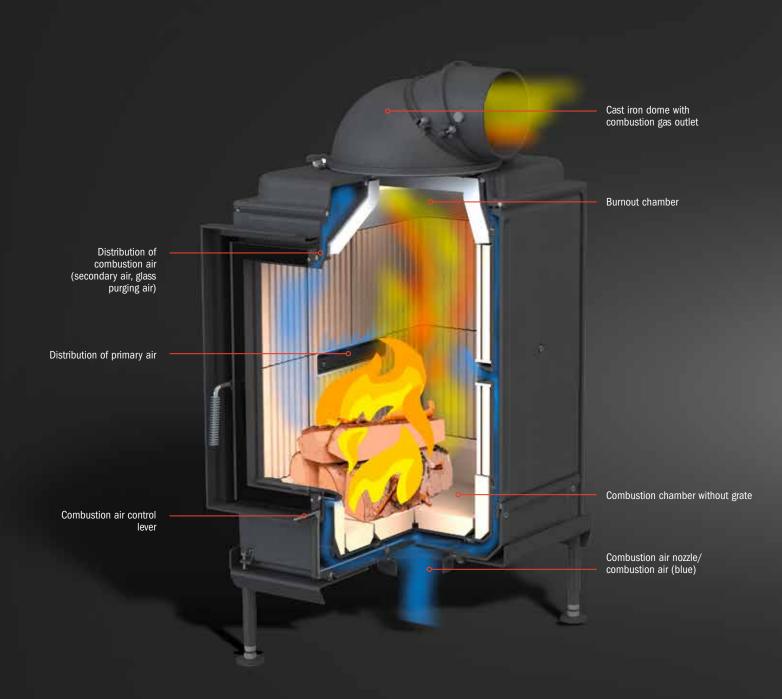
HKD 2.2 with mounting frame, EAS combustion control and ceramic heat storage mass

Stove cladding made of steel, by Ofenbau Rogmans

THE CONSTRUCTION DESIGN FOR CLEAN COMBUSTION

The concealed combustion air ducts in the double cast iron side walls and inside the cast iron top cover allow for unrivalled cleanliness of glass panes through many combustion cycles.

At the bottom, there are connections for external combustion air supply.



HKD 2.2 XL COMBUSTION CHAMBER DETAILS

THE VERTICAL FORMAT

TYPES AND variants

CAST IRON BODY WITH THREE COMBUSTION CHAMBER SIZES FOR THE VERTICAL FORMATS OF THE HKD 2.2 SERIES.



HKD 2.2 k - the short one The smallest firebox with reduced depth for limited space conditions.

Wood capacity: 1.5 - 2.5 kg Log length: 25 - 33 cm



HKD 2.2 - the standard one The compact wood burner with standard dimensions.

Wood capacity: 2.5 - 4 kg Log length: 33 cm



HKD 2.2 XL - the big one The big firebox for 50 cm logs and heavy storage masses.

Wood capacity: 3 - 8 kg Log length: 50 cm

VARIANTS WITH TWO DOORS AND WITH FLAT OR ROUND GLASS PANES.

Firebox with two doors (Tunnel variants)



Flat and round glass panes



Flat or round side-opening door options.

with a second door instead of back wall.



Standard FORMATS

FOR TRADITIONAL TILED STOVES

DOOR AND GLASS PANE FORMATS FOR THE CLASSIC STOVE-BUILDING CRAFT.

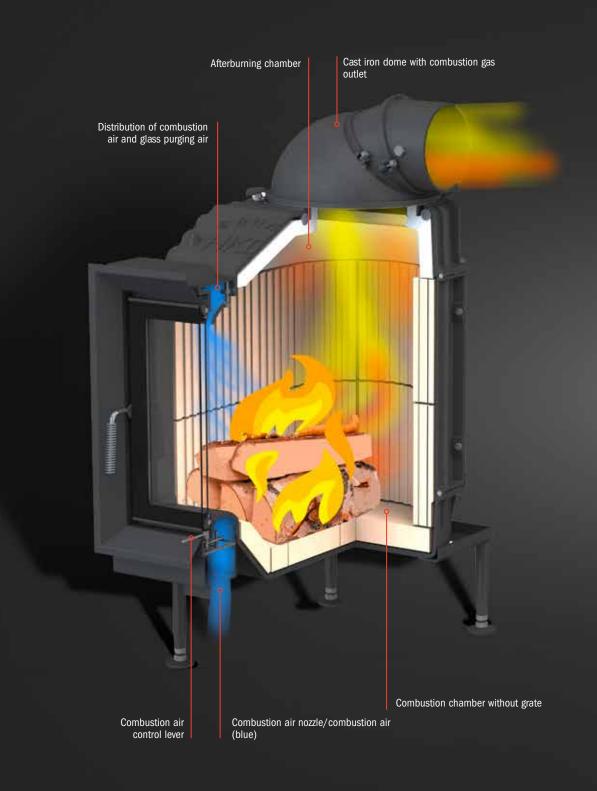
Originally installed behind a big front plate. For modern-style stoves surrounded by a decorative frame.

The standard formats are available in three firebox sizes with enough space for 33 or 50 cm logs.



HKD 5.1 Steel mounting frame . Historical stove tiles Design: Die Ofenmacherei - Frank Gehring

THE OFFERED STANDARD FORMATS WITH FRONT PLATE HAVE STANDARD INSTALLATION DIMENSIONS. IMPORTANT, WHEN AN OLD STOVE INSERT HAS TO BE REPLACED WITH A NEW ONE.



HKD 4.1 COMBUSTION CHAMBER DETAILS

COMBUSTION CHAMBER

variants

VARIOUS DOOR OPTIONS IN STANDARD SIZES FOR SMALL, MEDIUM AND BIG HEATING SYSTEMS.

The standard formats are installed in traditional tiled stoves. Variants with smaller glass sizes will dissipate less heat directly into the room during combustion. This allows for more ceramic mass to be installed and used for heat storage.





HKD 2.6 k

Wood capacity: 1.5 - 2.5 kg Log length: 25 cm HKD 2.6

Wood capacity: 2.5 - 4 kg Log length: 33 cm Identical glass sizes for HKD 2.6 k, HKD 2.6 and HKD 6.1, as well as for HKD 4.1 and HKD 5.1





Wood capacity: 1.5 - 2.5 kg Log length: 25 - 33 cm



HKD 5.1

Wood capacity: 3 - 6 kg Log length: 33 cm



HKD 4.1

Wood capacity: 3.5 - 7 kg Log length: 50 cm

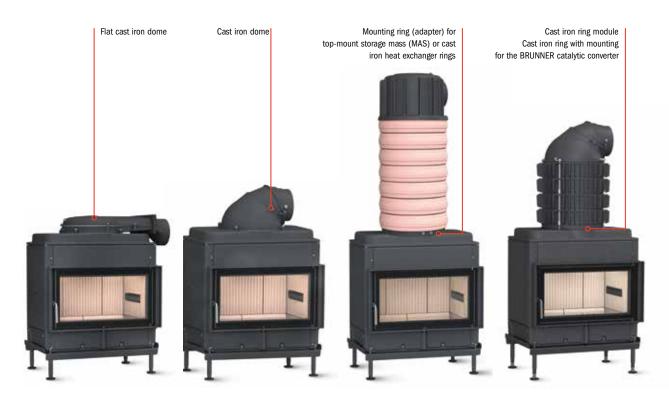


THE top cover variants

STOVE HEIGHT ACCORDING TO YOUR WISHES.

In most cases, the ceramic heat storage mass is a standalone system installed next to the stove insert. In these cases, the cast iron dome must be used. For stoves with reduced height it is possible to use the lower cast iron dome option (e.g. room dividers with Tunnel variants; see page 10).

The variant with top-mount accumulation rings or cast iron heat exchanger can be used, when the installation of adjacent storage mass is not possible due to limited space conditions (see page 42).



The top-cover variants can be used for almost every HKD model (exception: HKD 2.2k, HKD 6.1).

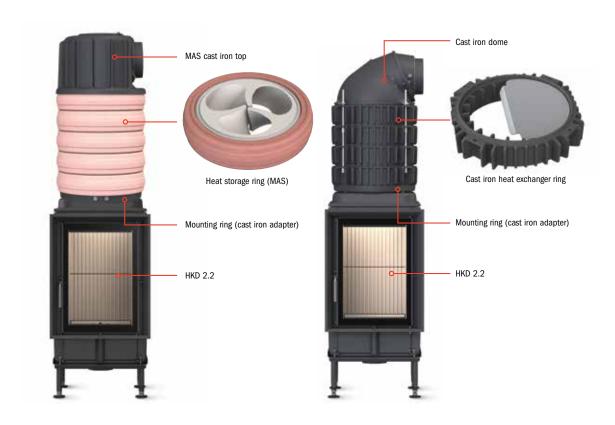


Slim structures

WITH TOP-MOUNT RING MODULES

LIMITED SPACE - REDUCED HEAT DEMAND.

Even the smallest area is sufficient to create hand-crafted wood-burning stoves with the HKD variants. For these situations we offer special ceramic top-mount accumulation modules or cast iron heat exchanger rings.

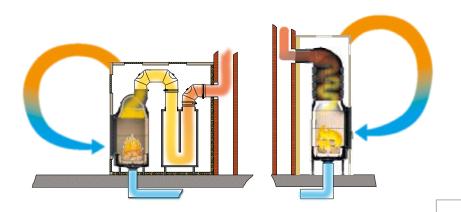


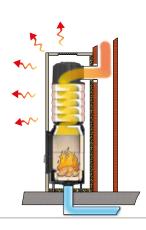
Tiled stoves with top-mount storage mass (MAS) are operated with less wood under rated load conditions. A damper flap just before the chimney entrance or auxiliary air supply device is used to optimize the appearance of flames and to prevent a rapid cooldown of the top-mount heat storage in case of strong chimney negative pressure.

We recommend the motorized option in combination with the EAS combustion control (see page 48).



THE POSSIBLE Heating systems





HOT AIR CONVECTION

The "fast reacting stove"

With warm air it is possible to supply a lot of heat into the surrounding room in shortest time. This can be used, when high heating power (> 4 kW) is required: in old buildings or rooms of large dimensions, for example.

Ambient air streams around the stove insert and the surface of additional metallic heat exchanger, it gets warm very quickly, and is returned to the living spaces via ventilation openings or warm air ducts. Accordingly, the power peaks are high only during combustion, because "heat storage mass" is present only in form of tiled stove cladding. After combustion ends, the heat supply is significantly decreased. The stove is cooling down.

> COOLS DOWN QUICKLY

HEAT ACCUMULATION

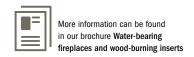
The "slow reacting stove"

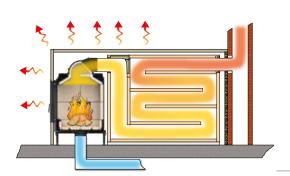
The most pleasant form of heat is the slow thermal radiation of a tiled stove. The concept of radiant heat is used particularly when a relatively small, long-lasting and uniform heating power is required.

In accumulation stoves, the heat is stored in a heavy (300-600 kg) ceramic accumulation block, and then released slowly through the tiled stove surface. This eliminates the high power peaks and excessive room temperature variations.

Depending on the weight of storage mass, tiled stoves will need a longer time for heating up. After combustion ends, the hot storage mass provides the required heating inside the room.

▷ PLEASANTRADIANT HEAT▷ LONG-TERM HEAT STORAGE

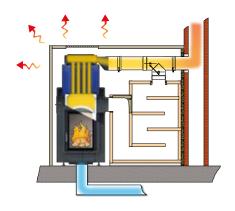




Handcrafted heat storage mass

The handcrafted storage mass represents the most traditional form of heat storage. Rectangular combustion gas ducts are built from individually assembled fireclay bricks or plates in order to create a ceramic duct system. This allows for absorbing heat from the combustion gases, to store it and then release it again through the tiled stove surface.





HOT WATER SUPPLY

A completely different type of heat storage is possible, when the fireplace or stove insert is combined with a water boiler. This includes top-mount heat exchangers or a water jacket - or both combined in a boiler unit. In case of all water-bearing stoves, the space around the stove is heated mostly through direct heat dissipation. The surplus of heat during combustion is used for water heating; the hot water is fed into a buffer tank and distributed through the central heating system according to current needs.

▷ SUPPLIES HOT WATER▷ SUPPORTS THECENTRAL HEATING

Massive cast Iron

THE TILED STOVE INSERT FROM BOLTED CAST IRON PARTS.

Obviously, it is much more difficult to manufacture tiled stove inserts from cast iron, the most durable material used in heating technology. Its main advantage is the almost strainless and torsion-free combustion chamber construction, which is able to withstand the highest thermal loads, but it is also known for its long lifetime. Problems caused by high temperature, which are typical for ordinary steel, and the resulting limited lifetime are unknown for iron castings.





The **DOOR VARIANTS**

DOOR VARIANTS FOR DESIRED HEAT RADIATION EFFECT

In case of new residential buildings, conforming to the common standard of lowenergy house, it is very important to adjust the heating power of tiled stoves to the individual heat demand of the surrounding space. The rapid heat projection through the glass must be combined with indirect heat radiation through the outer shell of a handcrafted tiled stove in such a way that the extreme temperatures and the risk of undersupply are avoided at the same time.



Single/double glass HKD 2.2 / 7



Single glass HKD 2.6 / 4.1 / 5.1 / 6.1



Double glass HKD 2.6 $\,/$ 4.1 / 5.1 / 6.1 Single glass HKD 11 / 12 / 13



Cast iron door HKD 4.1 / 5.1 / 6.1

For the stove door, there are four options:

- single glass for highest heat radiation
- single glass with heat reflectant coating (HKD 13)
- double glass with reduced heat projection
- cast iron door with control window and minimized heat radiation



The **FRAME VARIANTS**

FOR THE PERFECT FINISH AGAINST THE STOVE CLADDING.

Fine and simple in form of a slim mounting frame. Popular in plastered stove casings.

Door frames made of steel or cast iron as a border between the door and surrounding tiles.



HKD 2.2	HKD 2.6	HKD 4. ₁	HKD 6.1	HKD 7/8/13
HKD 2.2 k		HKD 5.1		HKD 11
HKD 2.2 XL				HKD 12

DOOR FRAME	black/ stainless steel ¹⁾	black	black/ stainless steel	black/ stainless steel	black
MOUNTING FRAME	black/ stainless steel ¹⁾	-	black/ stainless steel	-	black 2)
CAST IRON FRAME	-	black	black	black	-

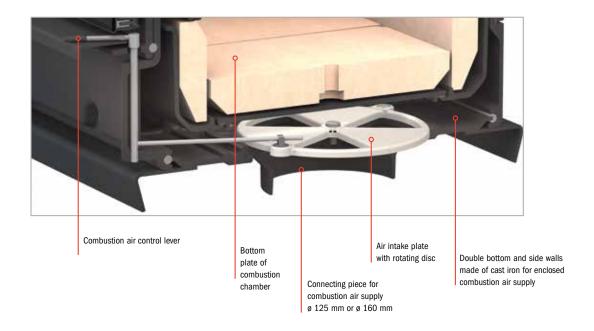
 $^{^{\}rm 1)} \text{The door frame for the round HKD 2.2}$ available only in black

²⁾ Mounting frame in form of fixed angled bracket made of cast iron (see page 18).



Simply uncomplicated

ONLY ONE CONTROL LEVER FOR MANUAL COMBUSTION AIR ADJUSTMENT.



COMFORT OF USE AND SAFE OPERATION

The most comfortable option is a combination with the electronic combustion control system (EAS). Just light the fire or load more wood, everything else is controled automatically.

The result are the perfect heating efficiency and long warm-keeping periods, because the EAS actuator never forgets to adjust or close the combustion air supply after combustion ends. This is very useful, when you have no time to watch the burning stove after lighting the fire, because you go to bed or you want to leave.



EAS 3 display unit

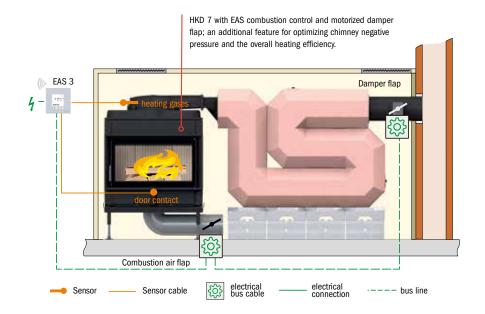


more efficiency

REQUIRED?

If you want even more, you can combine the EAS control system with a motorized damper flap to avoid the effect of excessive negative pressure. With this control feature, the hot combustion gases will not pass too quickly through the ceramic duct and are able to warm up the storage mass optimally. After combustion ends, the closed damper flap position prevents the loss of heat through the chimney.

THE TILED STOVE REMAINS WARM FOR LONGER!



At the beginning of combustion, the EAS controller opens the damper flap completely. The controlled damping process is activated after a certain temperature threshold is reached. When combustion ends, not only combustion air supply closes, but also the damper flap at the chimney entrance.

The result is a gain in efficiency of approx. 10-15%. Over many years, it is a fair amount of saved energy losses.

Damper flap



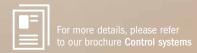








The shown and described equipment variants and display contents are partially additional functions available at extra cost.





Safety

The safe operation of a wood-burning stove requires always a sufficient level of chimney negative pressure. When the fire is lit, the negative pressure safety device (the "USA" switch) checks, if there is enough negative pressure for safe evacuation of combustion gases. If a kitchen hood or a defective air conditioning system is working against the chimney effect, the USA switches off the corresponding disruptive factor due to safety reasons. Otherwise, it would be possible that the gases will be released unnoticed into the room.

The monitoring unit is activated as soon as the fire is lit. In the meantime, the system is in standby mode.

Negative pressure safety device USA 4 with glass front. Behind the detachable glass plate (12 x 12 cm) there is a line display with control elements.

A specialized technician can use them to recall the current negative pressure value and data about commissioning and function check.







Radio transmitter

USA combined with a radio transmitter can be used for wireless connection with the air conditioning system, without any cables, even after the stove is already installed.







The variants

WITH SINGLE DOOR







HORIZONTAL FORMATS HKD 7 HKD 8 HKD 13





Left/right corner variants possible, with one-piece or two-piece corner glass

CORNER FORMATS HKD 11 HKD 12













VERTICAL FORMATS

HKD 2.2k f

HKD 2.2k r

HKD 2.2 f

HKD 2.2 r

HKD 2.2 XL f

HKD 2.2 XL r











STANDARD FORMATS

HKD 2.6 k

HKD 2.6

HKD 6.1

HKD 5.1

HKD 4.1

WITH TWO IDENTICAL DOORS (TUNNEL)

WITH A SMALL ADDITIONAL DOOR (DHT)







The Tunnel versions are available with the HKD 7 and HKD 8 door formats.

HKD 7 TUNNEL

HKD 8 TUNNEL

HKD 13 TUNNEL













HKD 2.2 f TUNNEL

HKD 2.2 r TUNNEL HKD 2.2 XL f TUNNEL HKD 2.2 XL r TUNNEL HKD 2.2 f DHT HKD 2.2 XL f DHT





HKD 5.1 DHT HKD 4.₁ DHT

Let's make it clear:

A tiled stove is for a lifetime. Because we know what it means, the components of BRUNNER tiled stoves comply to the highest quality standards. Even the comparatively high weight of our products reflects our motto:

"Only the best is good enough for your tiled stove."

Therefore, insist on genuine BRUNNER.

We guarantee with our good name for every piece of our stove components.

Eggenfelden, december 2023

Hubertus Brunner

heizen auf bayerisch.

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