



# BBQ PIT BOX®

## Cabinet Smokers

professional barbecue-cookers



## User manual

### Bottom-Firebox / Reverse-Flow models

(BFB-RF S, BFB-RF XS, BFB-RF XXS, BFB-RF XXS plus)





## About the BBQ Pit Box® Cabinet Smokers

- **The BBQ PIT BOX® Cabinet Smokers** (from now on: cabinet smokers, smokers or cookers) are **professional barbecue-cookers**.
- Recommended both for private and professional / catering use.
- The BBQ PIT BOX® Cabinet Smokers are originally designed for outdoor use, however it may be used indoors, in closed areas. Please read the chapter titled **The BBQ PIT BOX® Cabinet Smokers Indoor Use**.
- Two main product lines of the BBQ PIT BOX® Cabinet Smokers:
  - **Side-Firebox / Gravity-Feed charcoal smokers** (at present in 5 sizes)
  - **Bottom-Firebox / Reverse-Flow charcoal smokers** (at present in 4 sizes)
  - See up-to-date products range in the Appendix.
- The BBQ PIT BOX® Cabinet Smokers are charcoal-smoker constructions with the possibility of using smoking wood.
- The BBQ PIT BOX® Cabinet Smokers are excellent for preparing barbecue-style food, namely cooking for long hours in a low temperature range (100-140°C / 210-280 °F).
- Using a smoker requires both patience and experience. In case you have less experience with barbecue-style cooking techniques, please read literature in this topic and start using the smoker with patience and in small steps.
- Recommended reading material:
  - [www.nyarspolgar.hu](http://www.nyarspolgar.hu)
  - Kócsa László – Adorjányi Máriusz: BBQ Expedíció (chefparade, 2016)
  - English language literature:
    - *Tim Byres: Smoke – New firewood cooking*
    - *Franklin Barbecue – A meat-smoking manifesto*
    - *Chris Lilly: Big Bob Gibson's BBQ Book*
    - *Meathead: The Science of Great Barbecue and Grilling*
    - *Adam Perry Lang: Serious Barbecue*
    - *Joe Carroll: Feeding the fire*



## General technical features:

- Firebox and Cooking Chamber inner walls:
  - LV4 sheet, S 235 material quality: BFB-RF S és XS
  - LV3 sheet, S 235 material quality: BFB-RF XXS és XXS-plus
- Combustion Chamber: LV10 sheet, S 235 material quality
- Hollow section frames: 30x30x2
- Hollow section braces: 30x15x2
- Coating: LV1,5 sheet, powder-coated paint
- Fire Grate Access Doors: sintered, heat-proof black paint
- Chimney Damper: Heat-proof, matte black paint
- Brushed aluminium edge protectors
- Hollow section frame, expanded steel cooking grills
- Heat-proof (up to 600 °C) fibreglass door insulation in the Cooking Chamber
- Heat-proof (up to 900 °C) ceramic door insulation in the Firebox
- Heat-proof (up to 1200 °C) rock-wool insulation between the inner walls and coating of the Cooking Chamber and the Firebox.
- Solid rubber tyres: 2x fix, 2x tyres with rotating brakes

## Manufacturing background:

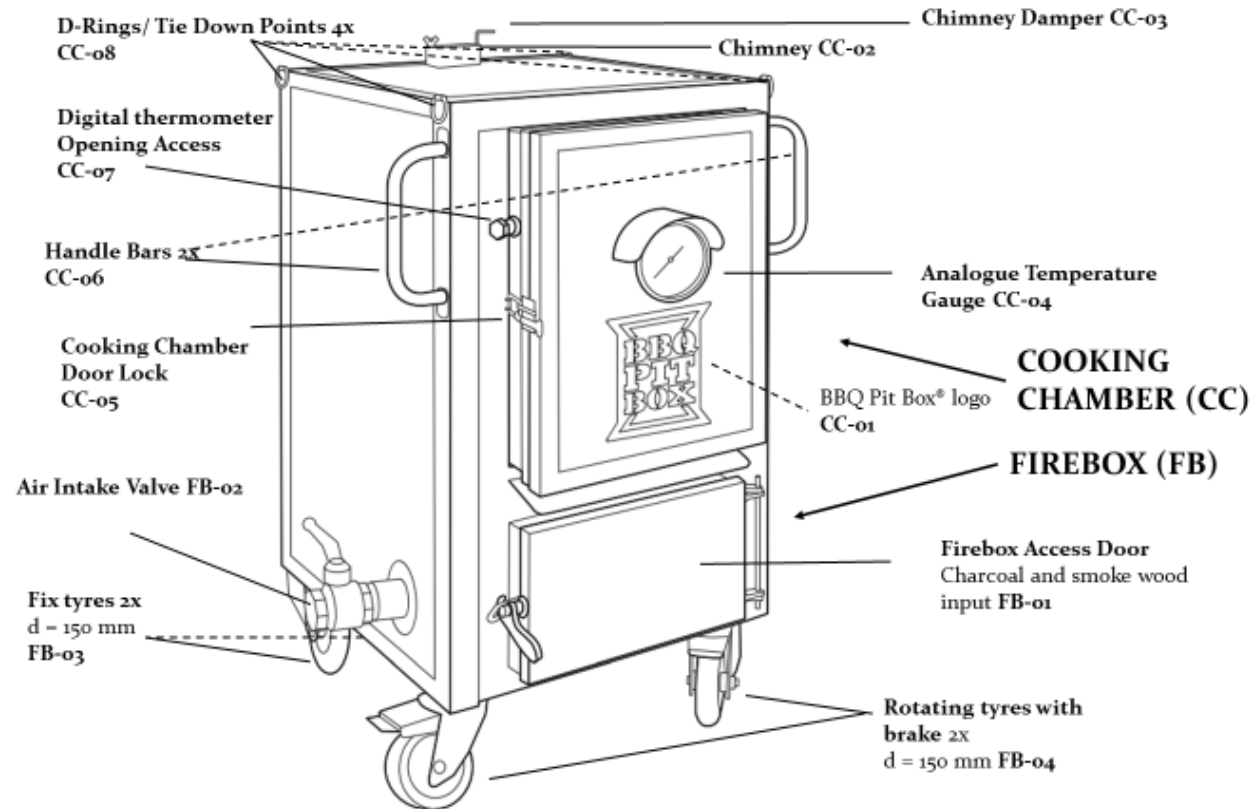
Every single BBQ PIT BOX® Cabinet Smoker is a unique piece, handmade by qualified metal-workers, with industrial background and technology.

- Materials cut with plasma cutter
- Consumable metal electrode and AVI manual welding
- Walls bent with hidraulic bending-off press
- Detailed workmanship process





BBQ Pit Box® Cabinet Smoker structure / **Bottom-Feed** / **Reverse-Flow** models



\* The image above is based on Model BFB-RF-XS.

© 2015-2017 BBQ Expedition Ltd.



BBQ Pit Box® Cabinet Smoker structure / **Bottom-Feed models with open Cooking Chamber and Firebox**



\* The image above is based on Model BFB-RF-S.

© 2015-2017 BBQ Expedition Ltd.



---

## **FIREBOX (FB – Firebox)**

### **Firebox Access Door 01 (FB-01)**

- Access door for fuel - namely charcoal or charcoal-block – input.
- Access Door is used while heating up and air intake regulation. It is typically open while heating up or regenerating the Cooking Chamber temperature.
- The Ash Pan can be removed through this door, so it should be open while adding smoking wood and also while cleaning the Firebox.

### **Air Intake Valve (FB-02)**

- Nr. 1 control of charcoal burning in the Firebox. When appropriately used it can stabilize and fine-tune the Cooking Chamber temperature and ventilation.

### **Fix tyres 2x (FB-03)**

- Used for moving the smoker. Standard size: d = 150 mm. Solid rubber tyres, bearing capacity: 350 kg/ tyre.

### **Rotating tyres with brakes 2x (FB-04)**

- Used for moving and braking the smoker. Standard size: d = 150 mm. Solid rubber tyres, bearing capacity: 350 kg/ tyre.

### **Charcoal Holder Grate (FB-05)**

- Central part of the Firebox as the fuel is burning on it. Oxygen gets to the fuel from below, through the grates. Removable module.

### **Ash Pan (FB-06)**

- Double function:
  - 1) Smoking wood fuel placed here is slowly igniting and burning by the dropping burning charcoal pieces from the above Charcoal Holder Grate.
  - 1) Cleaning pan: ash collector and can be taken out for cleaning when it is cold. Removable module.

### **Flame Protector Sheets (FB-07)**

- In extreme cases (e.g. inappropriately open Firebox Access Door + Air Intake Valve) it can happen that small-sized flames get through the Firebox Access Door. The Flame Protector Sheets prevent these flames to reach the powder-coated casing of the smoker.

### **Water / Grease Cleaning Drain Valve, back & bottom (FB-08)**

- There is a drain pipe in the back part of the V-shaped bottom sheet of the Cooking Chamber.



- The pipe ends in a Water / Grease Cleaning Drain Valve. It can be opened and closed with it.

### **COOKING CHAMBER (CC – Cooking Chamber)**

#### **BBQ Pit Box® logo (CC-01)**

- We are proud that the BBQ Pit Box® smokers are made in Hungary. Therefore our logo is in the middle of the Cooking Chamber door.

#### **Chimney (CC-02)**

- The other main element in the heat ventilation of the Cooking Chamber apart from the Air Intake Valve (FB-04). The ventilation in the Cooking Chamber is sustained by the Chimney downdraft.

#### **Chimney Damper (CC-03)**

- Regulates chimney downdraft intensity.

#### **Cooking Chamber Analogue Temperature Gauge (CC-04)**

- Gives important information on the Cooking Chamber inside temperature.

#### **Cooking Chamber Dook Locks (CC-05)**

- Responsible for airtight closing of Cooking Chamber.  
Lock tightness can be set with wrench nr. 10.

#### **Handle Bars 2x (CC-06)**

- Used for pushing and moving the smoker.

#### **Digital Thermometer Opening Access (CC-07)**

- Various digital meat and grill grate thermometer wires can be entered through this into the Cooking Chamber.

#### **D-Rings / Tie Down Points 4x (CC-08)**

- Fastening the smoker while transporting.

#### **Grill Grate Rails (CC-09)**

- Grill grates are to be put here; they are variable.

#### **Grill Grates (CC-10)**

- Standard equipment, hollow-section frame, expanded steel grates.



---

### **Water Pan (CC-11)**

- Double function:
  - 1) Collecting juice and grease from the meat while cooking.
  - 2) Heat-flow, heat-stabilizing

### **Water Pan Holding Rail (CC-12)**

- Water Pan goes here. Always put the empty pan on the grate and only then pour water in it.

### **Grease and Water Vapour Deflector Sheet (CC-13)**

- Responsible for deflecting the water vapour and grease from the Cooking Chamber door inner side.





---

## Safety Instructions

- **Please read and follow these instructions before using your BBQ Pit Box® smoker.**
- **Cooking is dangerous and improper use may result in fire, serious injuries, accidents and even death.**

## General Safety

- Use the smoker carefully, in sober state and patiently every time.
- Using the smoker is recommended for people over the age 18.
- Only use this smoker on a hard, level and non-combustible surface.
- The smoker must not be used on any combustible and unstable surface.
- The weight of the BBQ Pit Box® Cabinet Smokers Charcoal models is 160-760 kg (350 - 1700 lbs) (See product specifications in Appendix). Only use them on statically suitable surfaces.
- Make sure there is at least 10 m clearance between the unit and any combustible materials such as bush, trees, wooden decks/fencing and buildings.
- Do not leave the smoker unattended and keep children and pets away from the unit at all times.
- Before using the smoker, brake the rotaring tyres at all times.
- Do not attempt to move the unit whilst in use.
- Use extreme caution when adding charcoal or wood.
- Wear closed shoes while using the smoker, especially when working with hot charcoal.
- Certain surfaces of the cooker can get very hot whilst in use, especially the Firebox Access Door. Therefore use BBQ/oven mitts at all times when touching them or setting the vents, etc.
- Only pour water in the Water Pan when the pan is already in place in the cooker. Never pour water in the pan first and then try to put it inside. The water might splash on the hot surface of the Cooking Chamber. Try to avoid this.
- **Never pour water on the charcoal for cooling purposes.** Instead close the Air Intake Valve and the Chimney and wait for the charcoal to burn down.
- Make sure that the charcoal ember and ash is cooled down after use and before emptying the cooker. Only leave the smoker unattended after this.
- It is recommended to keep a fire-extinguisher near the smoker.



---

### **Moving the smoker**

- Before moving the smoker make sure that the surface is appropriate for moving.
- Make sure that nobody stands in the way of the moving smoker.
- The smokers are rather heavy, so only move them if you consider yourself physically strong and healthy.
- The BBQ Pit Box® Cabinet Smokers are massive, heavy constructions. This is the key in their heat flow and cooking stability. However these features make the moving quite difficult. We recommend the followings:
  - In case you often move the smoker, e.g. taking it to events, etc., please prepare the necessary equipment and manpower to move it.
  - Do not get the smoker down from anywhere, e.g. trailer, in a way that it lands on the wheels.
  - Do not move the smoker on stairs so that any side of it would land on the wheels.
  - The smoker should be moved between levels by appropriate number of people or by forklift.

### **Bottom-Feed models:**

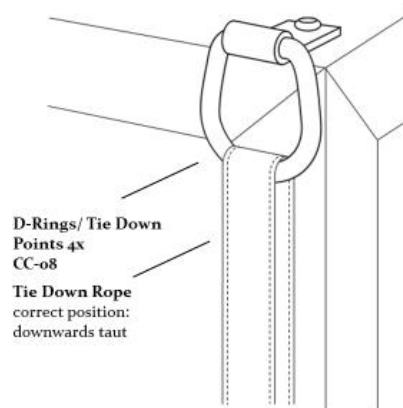
- Please only push the smoker when you want to move it.
- In case you pull it, please do it cautiously, especially on uneven surface.
- Never drag the smoker towards yourself.



---

## Transport and fastening

- The **D-Rings / Tie Down Points** on the four corners of the Cooking Chamber are for fastening.
- Do not lift the smoker with the D-Rings.



- 
- Never fasten the smoker on the top of the Cooking Chamber, as you can damage the coating sheet.
  - The BBQ Pit Box® Cabinet Smokers can be transported both on trailers or inside vans.
  - Before leaving make sure that the smoker is securely fastened.
  - Make sure that the tyre brakes are on.
  - Make sure that no objects can damage the smoker coating during transport.



---

## General Instructions

- The BBQ Pit Box® Cabinet Smokers are originally designed for outdoor use.
- Only use them indoors:
  - on your own responsibility, after consulting with experts,
  - with proper air ventilation and keeping all the fire safety regulations.
- Further information on this topic: **The BBQ PIT BOX® Cabinet Smokers Indoor Use** chapter.
- Do not use instant lighting charcoal, or flammable liquids.
- **We recommend using natural, winnowed – so called egalised - charcoal.** It is necessary to point out that the quality of the commercially available charcoal is very different. Please always read the description – especially the ingredients - on the packaging before buying charcoal. Make sure you use the best possible quality during cooking.
- **Certain charcoal-blocks and coir briquettes are also suitable for the smoker.** However, you need your own experience in using these and be familiar with their effects. In case you use a new fuel, please pay attention to the reactions and the operation of the cooker.
  - There are certain briquette types which burn fast even with smaller air intake, therefore they cause overheating or can be stabilized with more difficulty.
  - The BBQ Pit Box® Cabinet Smokers were developed by using large pieces of natural lumpwood charcoal. Such problems cannot happen if good quality charcoal is used.
- We do not recommend using any other fuel types.
- The BBQ Pit Box® Cabiner Smoker Side/Bottom and Back-Firebox / Gravity-Feed models must not be operated by using wood. Barbecuing with wood burning requires a different structure, as wood works differently from charcoal.
- Do not overheat the smoker. Cooking Chamber temperature over 250°C (480°F) is strongly not recommended.

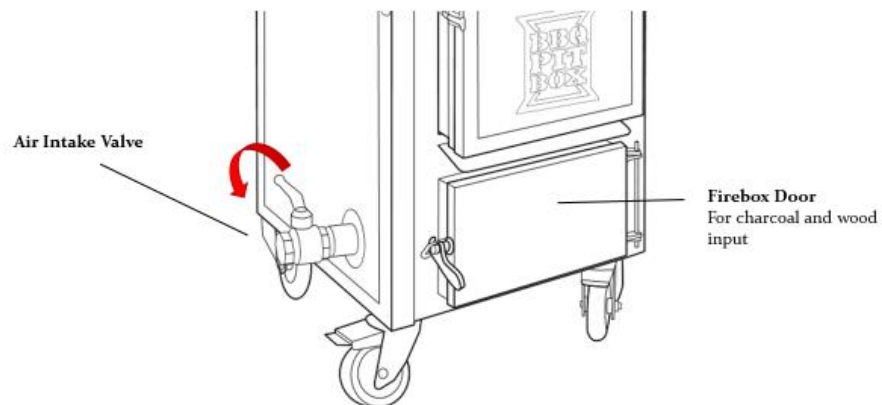


- **Basic information and instructions for cooking in the BBQ Pit Box® Cabinet Smokers**
- **Heat flow model / Bottom-Firebox smokers.**
  - The charcoal burns in the bottom of the Firebox. The lumpwood gets the necessary oxygen from the bottom through the Charcoal Holder Grate, from the Air Intake Valve and while heating up through the Firebox Access Door.
  - The Firebox and the Cooking Chamber is divided by a thick V-shaped sheet in these models.
  - The Bottom Feed smokers have a 3 walls. On both sides of the Cooking Chamber wall there is another wall. The heat-flow happens between these walls, always from bottom to top. **The heat generated in the Firebox hits the bottom part of the V-shaped sheet and goes upwards.**
  - **The heat arrives in the Cooking Chamber on both sides in the top part.**
  - The Chimney is set in the back of the Bottom-Feed models. Its inner openings are at the bottom so it makes the downdraft in the bottom part of the Cooking Chamber. This creates the unique mechanism of the Bottom Feed smokers: **the heat and smoke arrives from the top into the Cooking Chamber and leaves in the bottom / back.** This gave the name of the model: BFB-RF – **bottom-firebox / reverse-flow.**

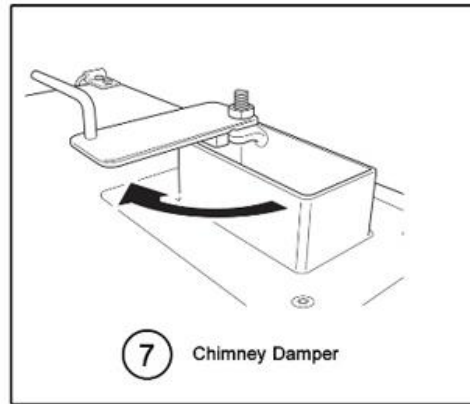
It is important to take into consideration that the two top grill grates get to a higher temperature than the rest of the grates. This is because the heat arrives into to the top segment of the model



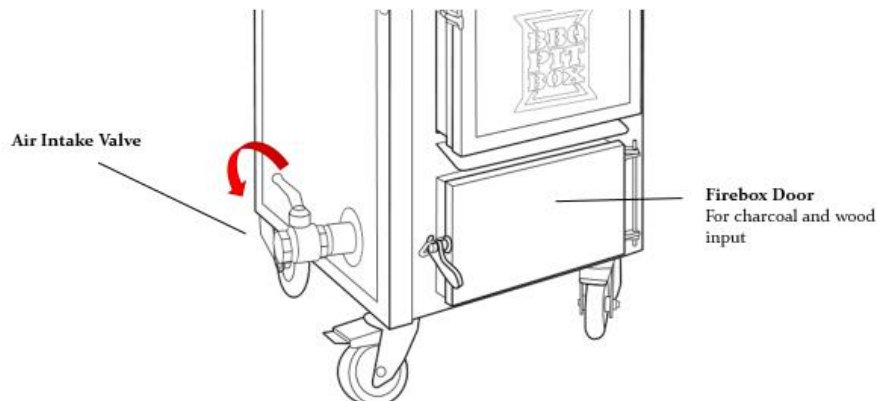
- **Air Intake regulation:** There is a **Firebox Access Door** on the bottom part of the BBQ Pit Box® Bottom-Feed Cabinet Smokers, below the Cooking Chamber door. **This Access Door supports the air intake regulation during heating up.**
- During cooking the air intake is regulated first and foremost by the **Air Intake Valve on the bottom left side of the smoker.**
- The **Chimney** is on the top part of the Cooking Chamber.
- The **Chimney** itself runs down full length on the back of the Cooking Chamber and the downdraft is in the bottom. It is a high downdraft power chimney.
- The hot air and smoke gets into the Cooking Chamber in the top region through the openings on both sides and leaves through the Chimney holes at the bottom.



- The more open the Valve is the more oxygen flows into the Firebox and the temperature increases in the Cooking Chamber.
- The Chimney needs to be open while heating up. During the rest of the cooking, and in case of certain models to various extent, we can control the temperature by closing the Chimney to create the ideal heat and flow.



- The Chimney is only open for a little bit during barbecue-style cookings in the Bottom Feed models.
- The Firebox Access Door and the Air Intake Valve **must never be open together**. In this case the heat energy leaves through one of the openings and there will not be appropriate heat-flow.





## About barbecue in general

**Barbecue (BBQ) = it is first and foremost a food cooking technique.** Long-time cooked meat on simmering fire with wood or charcoal generated indirect heat, traditionally in the 110-120°C (230-250°F) temperature range, but definitely below 150°C (300°F).

The manufacturer of the BBQ Pit Box® interprets the concept of barbecuing strictly according to the above stated definition, as it is accepted in the traditional barbecuing regions (south-east states of the USA).

**Barbecue-cooking:** The barbecue-style cooking can typically last between 3-14 hours, in a low temperature range (110-120°C /230-250°F). The temperature of all grill grates levels off in the Cooking Chamber, therefore we can cook on all grates with the same efficiency.

- The BBQ PIT BOX® Cabinet Smokers are extremely efficient barbecue-cookers.
- After heating up the cooker, the inner walls become hot and perfectly stable temperature and heat flow can be established with fine-tuning the Chimney Damper and the Air Intake Valve. This creates ideal environment for tender but superbly efficient cooking of meat in big quantity.

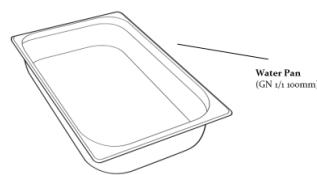


- **The meat is being cooked in intense flow on the grates.** Moreover, the thick walls adsorb the heat and as the Cooking Chamber is insulated and there is no heat egress, **the inner walls radiate the heat in every direction into the Cooking Chamber.**





- **Water Pan in the Cooking Chamber.** The Water Pan is set in the lower section of the Cooking Chamber in every BBQ PIT BOX® Cabinet Smokers.
  - **Primary function of the Water Pan: collecting juice and grease from the meat.** As the Cooking Chamber is vertical a lot of grease leaves the meat during barbecuing and using the Water Pan can help us to avoid the grease getting onto the bottom of the cooker and causing inconvenient smell and smoke.



- **Secondary function of the Water Pan: heat-flow and moisturizing.** The position of the Water Pan is between the meat and the hottest and lowest region of the cooker. Therefore it partly supports stabilizing the cooking temperature, cooling the smoke and moisturizing the cooking environment.



- **Important note:** contrary to the so-called water smokers, the role of the water and water pan is not primary in the BBQ PIT BOX® Cabiner Smokers. Due to their construction these smokers are stable enough without a water pan and there is no need for extra moisturizing in the Cooking Chamber. It has a secondary, minor effect on heat flow, but even with this, the primary function of the Water Pan is to collect juice and grease from the meat.
  - It is recommended to put aluminium foil into the pan before pouring the water in. This makes the cleaning much easier.
  - It is recommended to pour only  $\frac{3}{4}$  part water in the pan in all smoker types. If you do it with hot water you save energy and it makes heating up faster.
- **Water Pan heat control effect / Bottom-Feed smokers.**

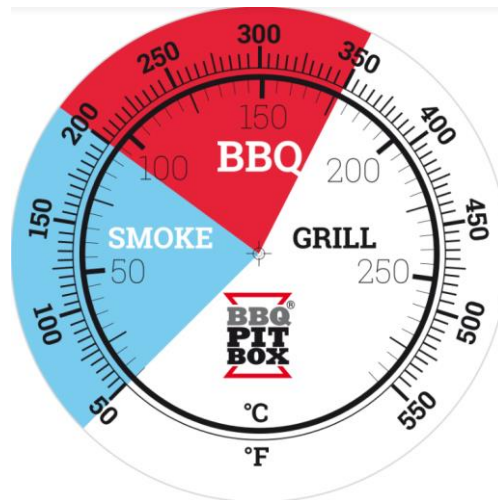
The Water Pan is situated **above the Firebox and the V-shaped sheet dividing the Firebox and the Cooking Chamber and below the Grill Grates**. The heat flowing upwards hits the V-shaped sheet and even though the heat is rising, the hot V-shaped sheet directly radiates it into the Cooking Chamber. Therefore the Water Pan has a positive effect on the even temperature of the Cooking Chamber as it levels off the heat radiating from the V-shaped bottom sheet.



- 
- **Filling up the Water Pan:** The water can evaporate during a 7-8- or more hour cooking. The pan needs to be filled-up once during a long cooking. Hot or cold tapwater can be added by pulling the pan halfway out and pouring the water from a bottle into it.
  - If the water evaporates and the pan is not filled-up the dripping grease will burn on the bottom. It can cause inconvenient smell and smoke in the Cooking Chamber.

### Cooking Chamber Analogue Temperature Gauge:

- The thermometer of the BBQ Pit Box® Cabinet Smokers is a two-scale (°C/ °F) analogue temperature gauge.



- Display diameter: 130 mm, probe length: 120 mm.
- It is covered with stainless steel sheet.



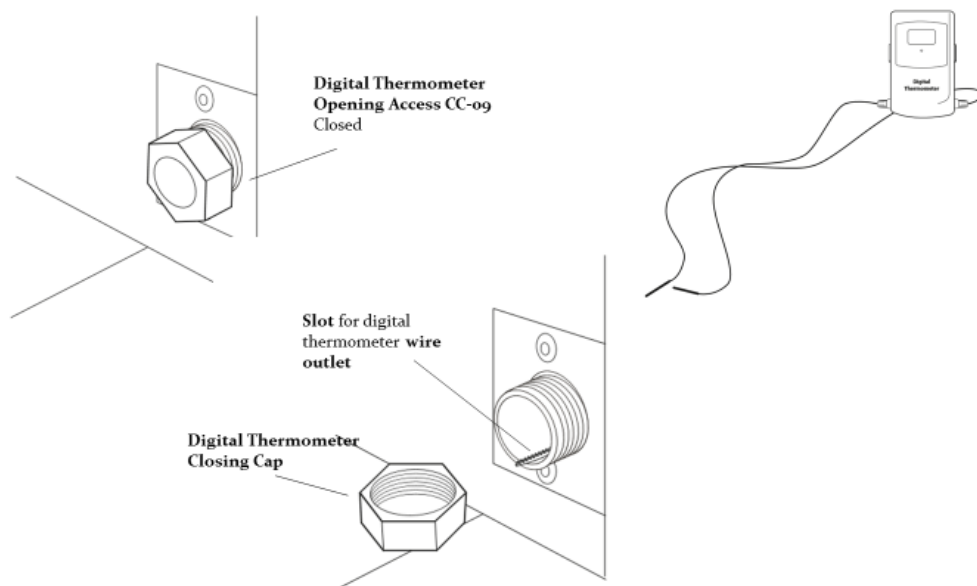
- The Analogue Temperature Gauge on the BBQ Pit Box® Cabinet Smokers is located in the top third section. Its probe is 120 mm long, therefore it goes deep into the Cooking Chamber.
- The temperature displayed is definitely relevant but first and foremost it is informative. All analogue thermometers follow the temperature change slower than the digital ones.



- **Important:** The temperature gauge probe must not touch either the meat or the grates. If it does, it will show the meat surface or grate temperature and not the real heat-flow temperature. This could be misinforming when setting the cooker temperature.
- It is recommended to clean the probe from time to time because the burnt crust can decrease the gauge's efficiency, therefore giving false measurement.

### Using digital thermometers:

- There is a wide variety of digital thermometers. They usually have two probes, one for measuring the grill grate temperature, the other monitoring the meat core temperature.



- The access opens by unreeling the hexagonal cap. It is recommended to fix the probes in the Cooking Chamber then lead the wires out through the outlet by putting them in the slot. After this the cap can be closed.
- Some smoke might come out through the slot but this does not influence the heat-flow in the Cooking Chamber.



---

### Ways of using smoking wood in the BBQ PIT BOX® Cabinet Smokers:

- **Smoking wood** – There are various forms of smoking wood: logs, cunks, slices or chips. Furthermore these can be purchased in different variations giving all kinds of aroma, ranging from apple to walnut.
- **Basic method: Logs placed in Ash Pan though Fire Access Door.** Optimal log length: 220 mm, d=50-70 mm.
  - The continuously falling ember from the Charcoal Holder Grate slowly ignites the smoking wood in the Ash Pan. The logs fully smoulder in 20-40 minutes and then burn. During this time the emitted smoke gets evenly into the Cooking Chamber due to the downdraft of the Chimney.
  - We can coordinate the smoke quantity with the smoking wood quantity during cooking.
  - **Important:** The role of smoking wood in a charcoal smoker is not more than seasoning, like with salt and pepper. They are only for giving taste. Make sure you do not over-smoke the meat.
- **Additional method: Mixing smoking wood into the still cold, unlit charcoal through Fire Access Door 01.** Optimal chunk size here: 40-50 mm.
  - 3-4 chunks are enough for 1 kg charcoal. Mix them into the charcoal.
- The Additional Smoking Wood Methods can be especially useful when **cooking poultry**. They get ready in a significantly shorter time in the 110-120 °C (230-250°F) barbecue-heat range than beef or pork, therefore more intense smoke is needed to give them the characteristic barbecue-flavour.





## Lighting and Heating Up

Properly lighting up and efficiently heating up all barbecue smokers, including the BBQ PIT BOX® Cabinet Smokers, must be a primary user skill.

Heating up speed and efficiency can be influenced by 2 outside factors:

- Weather conditions, mainly the outside temperature and wind direction.
- Quality of the charcoal.
- **Lighting and heating up steps / Bottom Firebox cookers:**
- Prepare the cooker, fix the tyres.
- **Make sure that the cooker is clean.** In case there is charcoal, ash from previous barbecuing, remove it and properly clean the Charcoal Holder Grate. The bigger, unburnt charcoal pieces can be used again.
- Remove the Water Pan from the Cooking Chamber for the heating up.
- Fully open the Chimney Damper and the **Fire Access Door**. Make sure that the Side Air Intake Valve is closed.
- Pull out the Charcoal Holder Grate and fill it with charcoal. Light the first part of the charcoal, which is marked on the picture below.



- Two possible lighting methods.
  - Fill up the first row with charcoal, put it back to the Firebox and light it there with open doors, with electric lighter or fire starter cube:

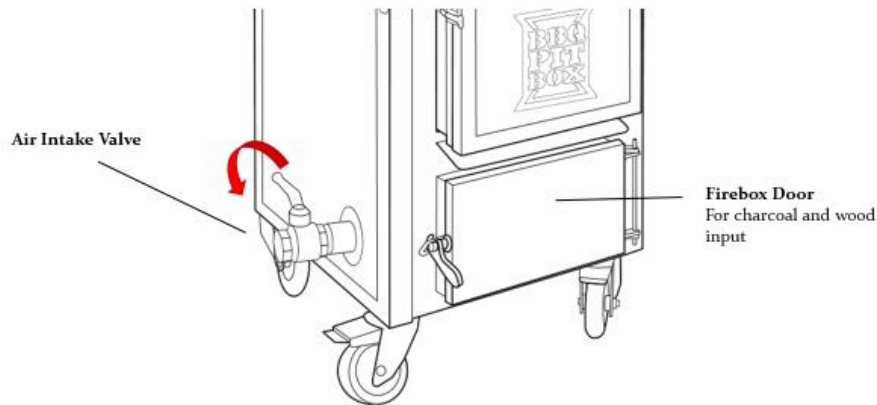


- The other method is to leave the first row empty and put it back to the Firebox. Meanwhile burn charcoal in a Charcoal Starter Chimney and pour already burning lumpwood into the first row.



- After making sure that the charcoal is burning in the first row, push back the Holder. Leave the Firebox Access Door open for about 10-15 minutes.
- After this close the Firebox Access Door and fully open the **Air Intake Valve**.





- It takes 40-50 minutes from this point for the Bottom Feed smokers to heat up.
  - It is necessary to open the Firebox of the heated and stabilized temperature smoker and manually fill up the Charcoal Holder Grate with the quantity that was burnt. There will be no need for long hours to fill it up again.
  - **You can fully pull out the Charcoal Holder Grate when filling up**, as the brakes at the end of the grate do not allow it to fall out.
  - Use **heat-proof mitts or long steel tweezers** to put the unlit charcoal into the holder.
- **Important:** If the **Air Intake Valve** is fully open even in case of a heated up cooker the temperature will continuously rise, despite big quantity of meat on the grill grates.
- The **Air Intake Valve** is usually half or one-third part open in barbecue-style cooking.



## Seasoning / First-run / Burnout

The cooker is made of steel elements. The first „empty” burnout is extremely important as this is the first-run of the smoker, when the unwanted factory material, oil, etc., burns out. Please follow these steps:

- Remove the Water Pan and Grill Grates, wash them with detergent in warm water, then rinse with clear water and dry them. Put them aside.
- Wipe all parts of the inside of the Cooking Chamber first with a wet then a dry cloth.
- Coat the inside of the Cooking Chamber evenly with cooking oil. Use a wide paint brush or an oil spritzer. Make sure to put oil in the Grill Grate Rails, as well.
- Heat up the smoker. When it reaches the 180-200°C (350-390°F) temperature close the **Firebox Access Door** and fully open the **Valve**. When the temperature in the Cooking Chamber reaches 180-200°C (350-390°F) again, half or 2/3 close the Valve. The smoker should run on 180-200°C (350-390°F) temperature for 4-5 hours.
- Meanwhile coat the Grill Grates evenly with cooking oil. After 2 hours of stable operation on 180-200°C (350-390°F) temperature put the grates back into the Cooking Chamber.
- Smoking wood can be put into the Ash Pan during Seasoning / Burnout.
- The Water Pan is not necessary for Seasoning / Burnout.
- Let the charcoal fully burn and the smoker to cool down. After this process the cooker is ready for the first real cooking.
- **Important:** The inner frame of the smoker, namely the part under the insulation and outer coating, is fully coated and painted with black, heat-proof stove paint. This paint gradually burns on the frame under the insulation during the Burnout. This may cause some smoke and faint burnt smell, so it is normal if you experience this during First-run. The first few cookings are necessary for this protection coat to fully burn on the inner frame. This does not influence the barbecuing.
- **Important: It is prohibited to leave the cooker alone and without attention during First-run / Burnout.**
  - The Burnout process runs in a higher temperature range than the normal barbecue-style cookings, namely the normal use of the smoker.
  - When we do the Burnout we do not know our smoker yet. Therefore we cannot be sure how the fuel behaves.
  - It is important to get to know our cooker and realize how it reacts to various heat regulation techniques.



## Seasoning

- The cabinet smokers are getting seasoned with every cooking. Their Cooking Chamber inner wall carries the aromas from earlier barbecues.
- It is recommended to cook simple food in it for the first few times, such as sausage, bacon, chicken, etc.
- By the third or fourth time the cooker will have a „taste character” and the smell will be nicely smoked.





---

## Barbecuing in the BBQ Pit Box® Cabinet Smokers

As all the barbecue cookers in the world, the BBQ Pit Box® smokers also have a unique cooking style. It is worth paying attention to these unique attributes:

- As the cooker is insulated, the Cooking Chamber walls are continuously radiating heat towards the meat during cooking. Therefore the meat is being cooked with double efficiency in the BBQ Pit Box® smokers:

- in intense heat-flow,
- in radiating heat by the steel metal walls.

As a result, cooking in the BBQ Pit Box® smokers is stable and really efficient. Cooking a brisket in certain uninsulated smokers can take up to 14-16 hours, while the same amount of meat with the same Grill Grate temperature can be ready in 10-11 hours in the BBQ Pit Box® smokers.

- Certain barbecue-meat types need to be finished wrapped into aluminium grill foil or baking paper in the last part of the cooking. The time when to wrap the meat mainly depends on the smoker type and heat flow. Wrapping features in the BBQ Pit Box® smokers:
  - Certain meat types do not need wrapping as they can be properly cooked without it.
  - It is recommended to wrap when the bark on the meat is in proper condition.
  - The ideal time of wrapping mainly depends on the bark condition rather than the core temperature of the meat. Wrapping can only come after proper bark formation.
  - Recommendation: we need to be patient to cook the meat (typically pork rib and shoulder, spare ribs, brisket) until the bark is strong, stable and crusty without any moist. Wrapping can moisturize the bark so it is important that it keeps the nice crustiness after cooking. We should not think that delaying the wrapping can result in smokier meat. The smoke can really get into the meat until it reaches 60°C core temperature. Afterwards everything is about bark formation.



**Smoke ring:** A trademark of barbecue-technique. This is the 2-8 mm wide pink ring right below the outer meat crust. This comes as the result of long-term, low-temperature cooking with clean, properly handled and fed quality smoke.

The 110-120°C (230-250°F) temperature smoke starts an acidic reaction when it arrives on the meat surface. Technically the molecules released by the slow burning wood mix with the moist on the meat surface, coloring it and slowly permeating into the meat core.

Apart from the taste, consistency and juiciness, the smoke ring qualifies the value of the cooked barbecue meat. The smoke ring can only appear as a result of precisely built-up ember and long-hour wood smoking.

Wider smoke rings are not necessarily more valuable. They can appear easily by using more than necessary smoke or by smoking with water soaked wood chips. These methods result in impressive smoke rings. Smoke rings can even be more effectively created by rubbing meat-tendering mix (salt, sodium-nitrate etc) on the meat, but this is cheating and self-delusion. The only really valuable, elegant, though not so wide, smoke ring is the one that is created by just the necessary amount of smoke for cooking.

**Bark:** is a spice crust on the meat surface.

Bark is created, just like smoke rings, by using barbecue technique and constant 110-120°C (230-250°F) temperature heat-flow. The slowly surfacing moist from the meat melts the salt, sugar and other spices in the dry rub and gradually creates the bark character. This is supported by the smoking wood smoke. The bark will only be mahogany colour and less memorable on meat that are cooked on charcoal only, without smoking wood. Bark also appears if we only use the classical Texan salt-pepper-smoke method, the rub does not have to contain sugar as the natural sugar and protein dissolving from the meat is enough for a good bark.

The well-prepared bark gives the best bites of the barbecue, it makes the crust of the pulled pork and the burnt ends of the brisket great. It is a special delicacy, rich, complex and concentrated in flavours. Its colour is mahogany after 4-5 hours of cooking, while after an 8-hour session it is like liquorice.



---

## Meat, Grill Grates, Heat-flow in the BBQ Pit Box®

- One of the most important rules of barbecuing is never to overload the cooker. General recommendation is to fill maximum 70% of the grates surface.
- Optimal ratio: 70-30%, namely the 30% of the grates should be left free. This surface use is ideal for perfect heat-flow. This is the best way to regulate the temperature and create proper intensity heat-flow inside the smoker. All meat surface is free and even cooking is ensured.
- If we go above 70% in a cooker it can result in uneven cooking so it is a compromise.
- The exceptional stability of the BBQ Pit Box® Cabinet Smokers can help with this problem. For the second part of the cooking the meat on the overloaded grates slowly shrinks during the roasting so much that it provides better heat-flow. However it is true that less meat on the grates results in more successful barbecue and more stable heat-flow.
- It is important to take into consideration that the two top grill grates get to a higher temperature than the rest of the grates. This is because the heat arrives into to the top segment of the model.

## Placing the meat on the Grill Grates at the start

- **The basic rule is that the meat must not touch the Cooking Chamber walls in any directions.**
- Never put a piece of meat of such size on the top grate near the Chimney opening that can close or narrow the outbound diameter and therefore blocking the heat-flow.
- You need to know that the volume of certain meat types significantly changes during barbecue-style cooking. For example, brisket and ribs shrink a bit in width, but swell and can rise 2-3 times their original height.
- The heat-flow can be established with more difficulty in an overloaded cooker. Therefore not enough heat can get to the meat on the top grates and it greatly influences cooking time.
- It can also happen, that a 100% loaded grate blocks the smoker and the necessary heat-flow is not created therefore the necessary temperature is not reached.



## Meat preparation and heat-flow

- Fine-tuning the Air Intake Valve and the Chimney makes it happen that the burning charcoal radiates the necessary heat that flows around the meat in the classical BBQ heat-range (110-120 °C / 230-250°F) during cooking.
- This gets a role during preparation as well. The more even, homogenic surface the meat has, the more freely the heat can flow around it, resulting in an even cooking.
- It is important to create an even form from classical, big-sized meat (brisket, spare-ribs) and cut the uneven, hanging parts, as these would surely burn during a 6-hour cooking.



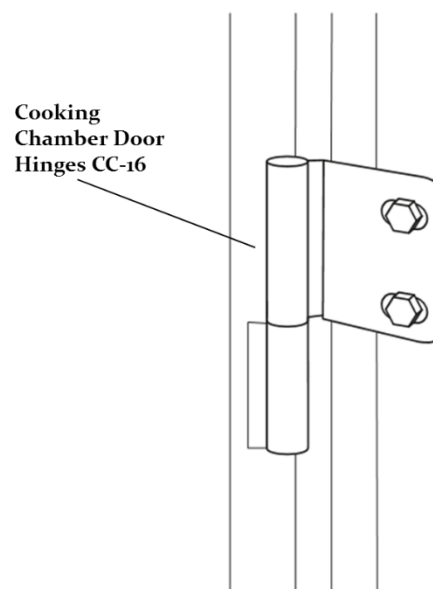
---

## Cleaning and maintenance

- Take care of your oven in order it to have a long life.
- We especially recommend using **tarpaulins** to protect the cooker and make its lifetime longer. Tarpaulins can only be put on if the smoker is absolutely cold.
- Never use the top of the smaller sized, Bottom Feed models as table.

## Cooking Chamber Door Hinges

- The hinges are lubricated before delivery.



- 
- Please regularly check the condition of the hinges, lubricate them with grease from time to time.
  - The hinges can be damaged if they are not taken care of.

## Cleaning the outside of the smoker

- It is recommended to clean the outside of the cooker with warm water, detergent and sponge, then dry it with a cloth.
- The use of abrasive cleaners or sharp objects will damage the coatings.
- Minor parts inside the Cooking Chamber is coated with heat-proof stove paint. These are:
  - Cooking Chamber Door Frame





- Firebox Access Door frame
- Chimney
- These surfaces are less weather resistant than the others, so it is recommended to paint them once or twice a year with some black, heat-proof stove paint.

### Cleaning the Cooking Chamber

#### • **Cleaning the Grill Grates:**

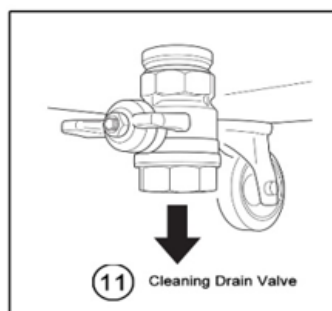
- Primary task when cleaning the Cooking Chamber is to clean the Grill Grates. After finishing the cooking and removing the meat from the grates it is best to heat up the cooker with the grates again to 180°C (350°F) and then properly clean them with wire-brush, as it is usually done with traditional grill grates.
- After this it will be much easier to clean them with detergent, warm water and scrub.
- The clean grates should be coated with cooking oil again and burnt out again in the Cooking Chamber.

#### • **Cleaning the surface of the Cooking Chamber:**

- After removing and cleaning the Grill Grates it is recommended to scrub the rails as well.
- Scrub the soot (black, carbonaceous substance), preferably in a dry way, from the wall of the Cooking Chamber. In case of proper use there will not be too much of it.

#### • **Full cleaning**

- There is a drain pipe in the back part of the V-shaped bottom sheet of the Cooking Chamber.
- The pipe ends in a **Water / Grease Cleaning Drain Valve**. It can be opened and closed with it.



Víz-/ zsírleeresztő csap,  
hátsó, alul FB-08



It is recommended to clean the inside of the smoker regularly with high-pressure washer. The first step is to open the Water / Grease Cleaning Drain Valve.

It is recommended to put a pan under the Valve and collect the waste water in it.

- **Cleaning with cold degreaser:**

- Both the inside of the Cooking Chamber and the Grill Grates can be cleaned with cold degreaser.

**Important:** after cleaning with cold degreaser the Cooking Chamber and the Grill Grates need to be burnt out and seasoned again.

- **Chimney sweeping**

- The Chimney makes the downdraft through the round-shaped openings in the bottom of the Cooking Chamber. From time to time we have to make sure that these openings are not stuffed. In case they are, we have to clean them through the Cooking Chamber.
- The Chimney should be scrubbed with a long wire-brush from time to time and remove the soot from it.

### **Cleaning the Firebox**

- It is recommended to clean the Firebox after each cooking when it is cooled down.
- Remove the ash from the Ash Pan.
- Pull out the Charcoal Holder Grate through **Firebox Access Door**. The charcoal pieces remaining on the holder grate will fall into the Ash Pan and can be removed.
- In case ash or solid fuel is stuck in the grate remove it and clean it.



---

## Typical mistakes/ **What NOT TO DO with our Cabinet Smoker**

- **DO NOT fire up an uncleaned cooker.** In case the remaining charcoal is left in the Firebox and the lit charcoal is poured on it we need calculate with difficulties in the heating up process.
- The **Firebox Access Door** has to be closed 10-15 minutes after heating up. After this only use the **Air Intake Valve** to feed the burning charcoal with oxygen. The reason for this is that after a while more heat is lost through the door than gained from the burning charcoal with intense oxygen inflow.
- During running **never open** the two bottom opening accesses (**Firebox Access Door and Air Intake Valve**) **together at the same time**. In this case the bigger part of the heat energy disappears through one of the doors and the heat-flow is not created.

## Important tips

- In case you pour hot water into the Water Pan the smoker will reach the requested temperature quicker.
- Every time the Cooking Chamber door is opened the heat-flow is disturbed. Fortunately the BBQ Pit Box® Cabinet Smokers regenerate quite quickly but the less time the door is opened the better it is.
- Start by using small quantity of smoking wood as it is very easy to over-smoke the food.
- Significant experience is necessary to purchase and use the proper quality fuel (charcoal) and smoking wood, as they heavily influence the result.
- Only use wood appropriate and recommended for smoking. Too much tannin can be harmful for your health. Only use hardwood, as softwood, fir wood etc., is inadequate for smoking. Try to purchase wood without bark, as it can contain bugs, resin etc., which can be harmful for your health.
- Only buy good quality basic materials and meat as this means a lot in the end result.
- **Meat core thermometer for checking core temperature** – Basic equipment to determine whether the food is properly cooked or not. Wide-range of them is available.

Stick the thermometer into the thickest part of the meat (be careful not to touch bone as it leads to false data) and read the data and see if the meat is at the required temperature or not yet. You can find many charts regarding this topic on the Internet.



- 
- It is very important to practice. Try various types of wood, rubs and sauces until you find the perfect combination for you.

### Grill, barbecue and health

- Nr. 1 danger with grilling is the charred layer on the burnt meat surface. This mainly happens with direct grilling not while using barbecue technique. **Properly applied barbecue-technique is an especially gentle food cooking method.**
- Do not over-smoke the meat.
- Do not make the sauce too sweet.
- If you use sugar for seasoning only add it towards the end of the cooking. Do the same with the sauce. In any other case the surface can be caramelised too much.
- Carefully select the smoking wood. Preferably use it without bark and make sure the wood was dried in natural conditions for at least 6 months.



## Charcoal Starter Chimney user manual

The **Charcoal Starter Chimney** is not part of the cooker. It can be bought in various quality, range and size. Their operation principle is usually the same.

Using the Charcoal Starter Chimney is especially dangerous. You must use proper protection gloves to touch and move the chimney. **The chimney must be lit on solid, non-flammable surface.**

### Lighting options:

- **01:** Place loosely creased paper on the bottom of the chimney then fill it up with charcoal above the grate. Put the chimney on solid, non-flammable surface (e.g. grill charcoal basket) and light the paper on the bottom. By the time the paper is burnt, the bottom part of the charcoal will have been lit as well. After 15-20 minutes the charcoal in the chimney will properly burn.
- **02:** Put charcoal on the chimney grate, about 1/3 height. Place a fire starter cube on the top and light it. By the time the cube is burnt the charcoal will have been burning on a palm-sized area. Then fill up the chimney. After 15-20 minutes the charcoal in the chimney will properly burn.
- 





## Direct grilling in the BBQ Pit Box® Cabinet Smokers

- The BBQ Pit Box® Direct Grill App is a great additional application for the cabinet smokers: Charcoal Holder Pan + Ash Pan + stainless steel Grill Grate.



Rozsdamentes grillrác

Faszéntartó tálca

Hamutálca

- In this case the burning charcoal is in the Cooking Chamber.
- Use the smoker with closed door in this mode, so the insulation and inner heat-flow supports the end result.





## Automated heat control

- Applying automated heat control with various devices (e.g. BBQ Guru) is widespread in competition barbecue.
- Three main parts of the automated heat control devices: mini computer, vent and digital thermometer probes.
- These systems can be applied to all BBQ Pit Box® Cabinet Smoker models.
- The vent can be attached to the Air Intake Valve with a 2 inch connecting element. These parts can be purchased from the heat control device manufacturers.

## The BBQ PIT BOX® Cabinet Smokers Indoor Use

- The BBQ PIT BOX® Cabinet Smokers are originally designed for outdoor use, however they may be used indoors, in closed areas.
- **Establishing the indoor use conditions and safe operation is always the responsibility of the user.**
- **Consult with fire safety experts before setting up the system.**
- **Possible options for smoke outlets:**
  - Chimney outlet
  - High capacity exhauster
- **You must not operate a charcoal fuel smoker indoor without proper and intense ventilation of the place or without a ventilation system.**
- **Capacity data for indoor use:**
  - **Capacity = 6,5 kW**, with the following parameters:
    - Average calorific value = 7000 kcal/kg with charcoal
    - 8 kg charcoal use during an approximately 10-hour cooking
    - average 110-120 °C Cooking Chamber inside temperature
  - **Flue gas / Waste gas temperature:** 90-250 °C (190-480°F) depending on cooker use
  - Ideal use range: 110-150 °C (230-300°F).



---

### **Important warnings for indoor use:**

- As soon as the permissions for indoor use arrive and all conditions are given for safe use we recommend discovering the cooker thoroughly.
  - Map the various suppression options, position and grade of the Chimney. Discover how this extra air flow influencing factor affects your smoker.
  - The final installation may cause different partial effects with each cooker.
  
- Light up the smoker with extreme caution.
- It is typical of cookers attached to chimney outlets that the **chimney provides a much bigger downdraft than their outdoor counterparts**, where the chimney only operates with its natural downdraft.
- Due to the increased downdraft the cookers indoor heat up faster than outdoor. It is important not to let the smoker heat up too quickly. It is necessary to suppress the chimney up to that point **where the heating up to 120-150 °C (250-300°F) Cooking Chamber temperature happens in about 60 minutes.**
  - In case we let the smoker heat up in 15-20 minutes, as it is possible with the increased downdraft, certain parts of the Firebox can seriously be damaged in time.
  - The reason for this is that the downdraft effect heats up the charcoal with such energy and pace that can burn the thickest steel.
- This can only be prevented by heating up in the normal, slow outdoor way. Please pay attention to slow heating up.





## About barbecue-meat

The essence of barbecue-technique is cooking for long hours on slow fire and gently adding smoke. The barbecue-technique, due to the smoke, dries the meat. Therefore the range of possible meat types for classical barbecue is limited.

We can group the meat types suitable for barbecue from different points of view. These are the following:

- Fat ratio and type
- Meat type: suitable for fresh roasting or long cooking
- Animal type

We can generally state that meat with at least 20% fat content should be chosen for barbecue. Lean meat does not really work with barbecue and definitely not with smoking. The fat carries taste therefore fatty meat is always more tasty, especially if cooked on the bone.

The fat tissue between the meat parts can be categorised differently. From barbecue point of view the 2 most important and different fat parts are:

- **Covering fat:** The covering fat is a thicker fat layer, typically between the meat and the skin. After removing the skin this layer covers the meat. Typical example is the duck-breast, where the meat and the covering fat sharply divides.
- **Fat within the tissue:** this fat type is in unity with the meat, it goes through and through the meat, sometimes thicker sometimes thinner. These marbled meat types are very valuable for any kind of cooking, so they are great for barbecue.

Great pieces of meat where the two fat types are together, for example a full lamb chop or beef rib, where the meat is nicely marbled and covered with fat, as well.

## Fresh roasting vs. slow & long cooking

Key meat types for barbecue, especially the fatty ones, are those which can be cooked for hours on low temperature.

Outstanding BBQ pork meat parts:

- Shoulder (20-30% fat ratio), typical basic material for BBQ pulled pork.
- Spare rib (20-30% fat ratio), equals with the shoulder. It is used together with the shoulder in the USA.
- Rib (30-40% fat ratio), emblematic BBQ food.
- Pork belly (40-50% fat ratio), needs to be used with the whole fat. Without the fat it is not recommended.



## About beef:

Non-matured meat is much better for barbecuing than aged one, as during aging it loses moist. Any part of a good quality, fat woven, marbled beef is excellent for barbecue. The American breeds are outstanding, especially those which are not fed but pastured.

Recommended beef parts for BBQ:

- brisket (BBQ master category)
- rib (favoured by many)
- clod (tied in shape)
- shin (tied in shape)
- rump (cooked extremely tender to preserve juice)
- ox tail (smoked for 4 hours, then braised on stew base)
- flank steak
- cheeks
- shoulder

## Meat types recommended for BBQ / summary:

- TOP-BBQ meaty types and parts: Fatty pork part for long cooking: shoulder, spare rib, rib; fatty beef parts for long smoking: brisket, ribs. Though not used in the USA great BBQ meat can be (the fatty parts): lamb, veal, goat, boar etc.,
- Soft meat for fresh roasting: poultry breast; all part of cured beef possibly in big chunks and on the bone.
- Whole roast chicken or turkey.
- Meat types that need testing and solutions: game shoulder, game ribs, wild duck, guinea-fowl, etc.



## Warranty

In case you have any complaints, remarks please let us know:

- [info@bbq-expedition.hu](mailto:info@bbq-expedition.hu)
- +36 70 429 2173
  
- For two years from date of purchase, BBQ Expedition Ltd warrants the BBQ Pit Box® against defects due to bad workmanship or faulty materials to the original purchaser.
- The warranty does not cover damage due to rust, dashes, dents, improper use, loss of spare parts, improper setting, surface scratches and deformation due to high temperature.
- Furthermore this warranty does not cover smokers that have been unofficially altered by anyone.
- The BBQ Expedition Ltd./ BBQ Pit Box® Hungary may elect to repair or replace damaged units covered by the terms of this warranty.
- The warranty extends to the original purchaser only and is not transferable or assignable to subsequent purchasers.