

INSTRUCTION BOOKLET
Installation and Operation Guide

*Wood-Burning Built-in Fireplace
- Traditional & Blaze*



Thermo Fires

Leadership Through Quality

Dear Builder / Installer
please hand these
instructions over to the
home owner after reading

Established 2003

Choosing the correct braai:

At THERMO FIRES we manufacture different shapes and sizes braais:

- * Single-sided braais to be installed inside a Braai room, kitchen, etc. If you are installing your single-sided braai through an outside wall, you will need bends and maybe flue brackets.
- * Double-sided braais to be installed between two rooms, or even between your inside and outside braai areas. These braais are manufactured with a single lintol on one side, and a double lintol on the other, for installation through outside walls.
- * Combination braais incorporate a wood burning unit as well as a gas BBQ, for those days that you just want to quickly make dinner.

Choosing the placement:

Built-in braais are usually installed while building the home, but may also be added on when doing renovations. We will focus on instances where braais are added on afterwards. Once you have decided where to place your unit, your builder may need to check that the roof structure allows for installation in that position, whether you will need bends, or extra flues, etc.

You may have to compromise by moving the unit a little to the left or right to clear roof beams. You may also opt to have an offset installed in the flue to bend around a beam.
NEVER CUT A BEAM TO ACCOMODATE A FLUE.

IMPORTANT

If you have combustible flooring in front of your braai, i.e., wood or laminate, you must provide for a hearth made from non-combustible material, to protect your flooring. This may be tiles, or a metal floorplate (at least 3 mm thick), or a tempered glass panel (at least 8 mm thick), or a slab of marble, quartz, granite, or similar.

1. The SANS law regarding hearths requires:

- * The hearth must extend at least 300 mm beyond each side of the unit
- * It must extend at least 500 mm in front of the log grate or fire basket

*Combustible materials, i.e., curtains or wood, and electrical points cannot be fitted within 300mm of the sides of the firebox or less than 450mm above the firebox, without making adequate provision to insulate these materials.

2. If you are installing a braai through a roof with combustible roofing materials, check with your insurance company about the type of precautions they want you to take. Usually, it is sufficient to install an insulated section of flue through the roofing material, as well as adding spark arrestor mesh to your cowl. We can supply this to you as well. Please ensure your installer reads the section regarding the flue height above the roof.

3. Never obstruct the flue outlet or chimney.

Instructions on building in a Build-in Braai

- A. **If you are using bricks that have not been baked in an oven, i.e., grey cement bricks** you will need to protect the bricks from the braai's heat. You can use **Nutec** Fibre Cement board - about 5mm thick – or Rock Fibre sheets that you can buy from us. It is important that you DO NOT USE Think Pink or Isotherm in this instance but to use a material that is able to absorb and insulate the heat from the steel box. You need to apply the layer of insulating material around the sides and back as well as around the gather of the braai.
- B. **If you are using baked clay bricks - face brick or ROK** - it is not necessary to use any protecting insulation material around the braai as the bricks will be able to withstand the heat. You may still choose to use insulation material around the unit.
- C. **If you are cladding the unit with cabinetry instead of bricks,**
You **must** use Rock Fiber sheets** to insulate the outside of the unit.
You **must** use our insulated flues on top of the unit, extending the full height of the cabinetry.

**Rock Fibre Insulation sheets are supplied by us, is not flammable and has a melting point of > 1000°C, complying with *Part V of SANS 10400*.

However, in all of the above, you **must** leave a "clean" gap (no cement or rubble in the gap) of 25 mm around the sides and back of the braai, whether you are using insulation or not. There should also be a gap of about 15mm between the brickwork and the lintel of the braai, the gather of the braai and about 1 meter up the chimney. From here, you can build the bricks flush against the flue liner. It is advisable that flue liners of at least 2.4m be used and, if any bends are needed, it is advised to use our steel bends. When using flue liners that extend through the full height of the chimney, the chimney wall may be reduced to 90 – 110 mm. The cost saving on bricks and plaster will offset the cost of the liners. If you choose not to use flue liners, the chimney must be plastered to a semi-smooth finish (a.k.a. bagged) on the inside. In this case a straight flue is preferable, but if there are any bends, ensure that there is no reduction in area at these points and that there is no mortar blockage – at these areas or anywhere else.

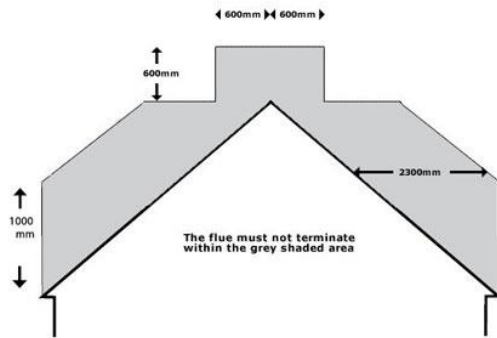
Please note: Any chimney more than 4m in height must be designed in accordance with SANS 10400 Part B.

Never build in the braai at a height higher than about 700mm from floor level – unless you are very tall. Remember, the lowest grid level is 200mm higher than the height of the lintels/concrete base on which you are placing the braai. A good height for the lowest grid is 900mm – the same height as a standard kitchen counter. And keep in mind that you will mostly braai on a higher level!

Height of Chimney for non-combustible roofing materials

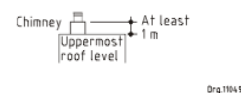
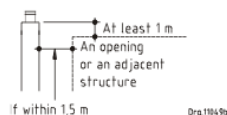
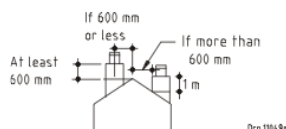
The flue gasses from the chimney should be able to discharge freely and not present a fire hazard, whatever the wind conditions. To discharge the flue gasses freely, you need a good draw. To get a good draw, you need to raise the flue sufficiently above the roof structure – a surface (like a roof) creates wind eddies and slows the wind down, thus reducing draw. By raising the flue outlet, you bring the top of the flue up into unimpeded air flow. The flue

termination is measured to the end of the chimney / flue pipe where the gasses discharge. Rain caps, turbo, or rotating cowls, etc., are not included within this height.



centre of the flue is within 600mm of the highest point / ridge,

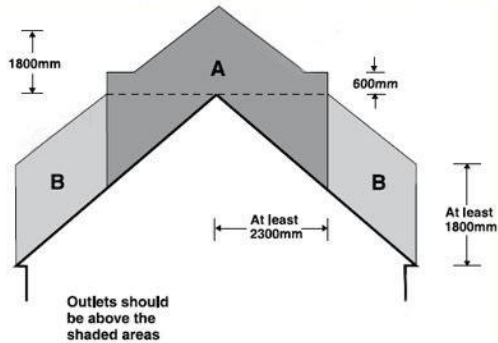
1. The point of outlet of a chimney must be a minimum of 600mm above the highest point of contact of the chimney and the roof, if the
- centre of the flue is within 600mm of the highest point / ridge,
2. or 2.3m away from the roof structure measured vertically but at least 1m above the highest point of contact of the chimney and the roof, if more than 600mm away from the highest point / ridge of the roof,
3. or 1m above the highest point of a window or roof light that can be opened, or a ventilation inlet situated in a roof or external wall, where the horizontal distance from the nearest point of such window, roof light or opening in a vertical line through the Centre of such chimney is less than 2.3m
4. The point of outlet of a chimney must be a minimum of 1m above the eaves level in the case of a chimney that passes within 1.5m of the nearest wall of such building.
5. On the gable end of such building, the chimney shall not extend less than 1m above the highest point of such gable end, or a roof less than 10° pitch.



Height of Chimney for Combustible roofing materials

When your roof is made of combustible materials like thatch or timber, the recommended distances should be increased to those shown below:

- A. If within 2.3 m, measured vertically, from the highest point of the roof - the top of the



outlet of a chimney must be at least 1.8m above the highest point of contact of the chimney and the roof, **and** at least 600mm above the ridge / pitch,

- B. If more than 2.3m, measured vertically, from the highest point of the roof - the top of the outlet of a chimney must be at least 1.8m above the highest point of contact of the chimney and the roof.

IMPORTANT:

- You must provide for spark arrestor material in the flue liner or in your cowl.
We strongly suggest using a Thermo turbo cowl with spark-arrestor material on the outside of the cowl, to facilitate cleaning.
- If an exposed flue liner is taken through combustible roofing material, an insulated flue will be needed – which can be ordered from us.

Other Important Notes to keep in mind

- The laws regarding flue lengths are prescribed to "...not present a fire hazard..." and does not guarantee a proper draught. You may have to lengthen the flue outlet if external factors require this, if i.e., you have an A-Frame roof, large trees close to the house, sitting between double-storey homes, etc.
- Never obstruct the flue outlet or chimney.
- **IMPORTANT:** Combustible materials (i.e., electrical points or curtains) should not be fitted within 300 mm of the sides of the unit without making adequate provision to insulate these materials.
- If combustible flooring materials are to be used (i.e., laminate or wood flooring), read the section on page 1 about hearths.

Instructions on how to use your Braai

If you are new to this thing called “braaiing” (never called BBQing):

1. Good meat is one of the most important ingredients for a good braai, so the secret is to find yourself a butcher you can trust and go for quality over quantity – rather buy a smaller cut of A-grade meat and pay a bit more, than opt for the biggest and cheapest. You can braai almost anything – chicken, prawns, crayfish – but if you’re just starting out, three foolproof options are boerewors, pork and lamb chops.
 - **Boerewors:** when buying this option, be sure to pointedly look for the word ‘boerewors’ on the packaging. This is because there’s a big difference between ‘braai wors’, which can contain anything, and ‘boerewors’, which is your safe bet.
 - **Steak:** rump steak is a great fallback option and tends to have more flavour than fillet. As a general rule, look for one that’s been aged.
 - **Lamb chops:** if you’re not sure what you’re looking for, go for rib chops or best-end chops – they’re usually nicer and not as tough as leg chops.
 - **Pork:** pork neck steak is a great option as it has more marbling and flavour than loin chops. Another South African favourite on the braai is pork ribs and rashers.
2. The second most important rule of all is to always use dry seasoned dense hardwood. Any hard wood like Kameeldoring, Mopane and Rooikrans is great for braaiing. Do not use wood that is meant for a fireplace, i.e., BlueGum and Black Wattle. You may also opt for charcoal or briquettes.
3. Never make a fire in the ashpan – UNLESS you are using charcoal or briquettes. (That big pan in the bottom of your braai. A.K.A. coal tray). We know all your friends are making fires in theirs, but this will cause you to lose the guarantee on your braai. The coal maker is designed to protect the body of the unit against the flames – which is the most expensive part to replace.
4. Use a fire starter (i.e., Blitz) and some kindle** in the bottom of your coal maker. On top of this, place a good amount of wood. Never pack your wood too tight. The fire needs to breathe. Now light your fire starter. **Kindle is well seasoned wood that has been chopped up in small pieces (which you can do yourself or buy from your wood supplier).
5. Never skimp on the amount of wood you use. Using too little wood may not allow the steel unit to heat enough to form the negative air pressure in the flue, needed to remove all the smoke. Cold air trapped inside the flue may cause the braai to smoke out. The bigger the braai, the more wood you will need as the ashpan will also suck some heat out of the coals. Besides, your friends will laugh at you if your meat is undercooked because you did not have enough coals to last to the end.

6. A fire can take anything from 30 minutes to two hours until it's at the correct temperature to braai. Braaiing on open flames is not advised because the meat will burn. When your wood has broken up into coals, use your poker or scraper to agitate the wood in order for the coals to fall through into the ashpan. Scrape your coals to the side, underneath the grid.
7. To marinade or not to marinade, that is a personal preference. Most braaiers prefer to baste the meat during cooking, towards the end, to prevent the sauce from burning.
8. Also add spices nearer the end of the cooking time, or rub it into the meat at least an hour before you braai. Salt draws out moisture so you need to give the meat sufficient time to reabsorb it.
9. Hold your open hand a few centimetres above the grill to determine when to put the meat on. If you can keep your hand there for five seconds, you can put your steak on. Seven or eight seconds means you're ready for boerewors and 10 seconds for chicken.
10. When it comes to flipping meat, less is usually more. Over-flipping causes the juices to be lost to evaporation, making the meat hard and dry. The exception is boerewors, which contains plenty fat and moisture, and cooks more evenly when flipped often. As a general rule, you should flip the meat when blood and juices appear.
11. Remember to keep a fire going in the coal maker. This will provide you with a supply of coals for continuous braaiing, and keep your unit hot enough to facilitate a draught.
12. Depending on the heat and number of coals, as well as the type of meat you are cooking, you may have to adjust the height of your grid. Typically, steak needs hotter coals, and is therefore braaiied on a lower height. Most meats will be happy on the middle level and toasties on the top level.
13. Now you're ready to put your meat on the plate, grab another drink and enjoy the awesome occasion of a South African braai!
14. Practice makes perfect, and you may just have to braai every weekend (and some week nights) until you master your braai.

Important tip:

Steak should be left to rest for 5 to 10 minutes when taken off the heat. This is to let it reabsorb some of its juices and continue cooking a little (because steak keeps cooking on the plate) Sometimes it's actually best to remove it from the fire a bit before it's done to your liking.

Frequently asked Questions

Q: Why is my braai smoking out?

A 1: When using the braai for the first time

1. Refer to the installation instructions and check the chimney heights conform to required heights. Fix this if needed.
2. Shine a torch down the chimney and remove any obstructions. Also check for mortar in the opening of the flue outlet.
3. Did you start the fire with kindle? If not, check "Instruction on how to use your Braai". The other most common mistake is not using seasoned wood. Seasoned wood must be at least 2 years old, and you should not see or hear any wood sap discharging when burning.
4. Crack a window or open a door. If this works, your home is too air-tight and a negative air pressure is forming in the room. You will have to provide a fresh air inlet or have an extractor fan installed.
5. If nothing works, call us for more advice.

A 2: If your braai used to draw correctly, but suddenly starts smoking out:

1. Check the chimney for obstructions like birds' nests.
2. Call a Chimney Sweeper to clean the chimney. A build-up of soot may, over time, clog up the outlet enough to restrict air-flow. It is good practice to do a sweep and service every couple of years to prevent flue fires.
3. Do you have spark-arrestor mesh on your cowl / inside your chimney? This can clog up very quickly (every few braais) and needs to be cleaned regularly.
4. Did the neighbour add an extra storey to his home? Has the tree on your property (or the neighbour's) grown higher than your cowl? You may have to extend your chimney.

Q: How do I clean my mild steel braai?

A: Never use harsh chemicals like an oven cleaner that may cause rust. Wipe with a damp cloth only. The best is to always leave a thin greasy layer which will protect your unit. We suggest putting a layer of foil on top of the bottom door (which doubles as your workspace) to catch any grease or marinate drips while braaiing. Simply roll up and discard the foil when you are done. Marinade tends to be acidic and will eat away the paint, which will cause the door to rust if not cleaned immediately.

Q: How do I clean my stainless steel braai?

A: Your stainless steel braai will discolor because of heat. To clean away grease, you can spray the inside of your braai with a stainless steel cleaner or grease remover, and wash away any grease inside the unit. Never use an abrasive cleaner or material as this will scratch your braai. A quality stainless steel cleaner should get rid of most of the discoloration.

Q: How do I clean the stainless steel façade on my braai?

A: If you opted for a braai with a stainless steel façade, or have a complete stainless steel braai, you may clean the façade by spraying the surface with a quality stainless steel cleaner and rubbing surfaces with a clean damp cloth. Then using a clean dry cloth, wipe the surfaces again to remove residual cleaner. Never use an abrasive cleaner or material as this will scratch your braai. You may also want to wipe the outside with a stainless steel polish. We suggest putting a layer of foil on top of the bottom door (which doubles as your workspace) to catch any grease or marinate drops while braaiing. Simply roll up and discard the foil when you are done.

Q: How do I clean my braai grid?

A: If ever you are tempted to 'clean' your braai grid by putting it into a fire, don't do it! Your grid will last you many years if you simply wash it after every use. A good soap will keep your grid looking new for longer. All our braai grids are manufactured using 304 stainless steel, and electro-polished.

Your Thermo Braai carries a 20 years quality warranty on the body of the unit. Please complete the below and keep in a safe place.

Model:_____

Place of purchase:_____

Date of Purchase:_____

Invoice Number:_____

Thermo Fires cc: Designing and Manufacturing
Braais and Fireplaces of the highest standard
since 2003.