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 fireplace:

At THERMO FIRES we manufacture different shapes and sizes fireplaces for installation in various positions, i.e.

* Corner Units were designed to be built into a corner of the room.

* Wall-fitted units are available in an extensive range of shapes– single, two and three-sided - and sizes.

* Room dividers - We have a range of double-sided fireplaces that can be installed in the middle of a large room to delineate different zones.

Choosing the placement:

Built-in fireplaces are usually installed while building the home, but may also be added on when doing renovations. We will focus on instances where fireplaces 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.
For installation through an outer wall, you may need bends, wall plates and flue brackets.

IMPORTANT

If you have combustible flooring in front of your fireplace, i.e., wood or carpet, 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 fireplace

    * 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 fireplace 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. If you are installing a slow- or closed- combustion fireplace you MUST use insulated flues. If we provided insulated flues, PLEASE use them. This is to protect your roof structure from catching fire.

4. Never obstruct the flue outlet or chimney.

Instructions for building in open wood-burning fireplaces

This type of fireplace is usually supplied with plain flues, as the flue does not get hot enough to pose a fire hazard. It may also be installed without flues, if your builders plans to brick up the chimney.

Thermo Blaze Fireplaces must be installed on top of a raised base, at a height of at least 100mm above finished floor level, due to the flange around the opening of the fireplace. Traditional fireplaces may be installed on top of the finished floor.

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 fireplace's heat. You can use ***Nutec*** Fibre Cement ***board*** - about 5mm thick – or rock fibre boards or blankets 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 bricks from the heat. You need to apply the layer of insulating material around the sides and back as well as around the gather of the fireplace.
B. **If you are using baked clay bricks - face brick or ROK** - it is not necessary to use any protecting insulation material around the fireplace as the bricks will be able to withstand the heat. You may still choose to use insulation material around the fireplace.

However, in both A and B above, you **must** leave a "clean" gap (no cement or rubble in the gap) of 25 mm around the sides and back of the fireplace, whether you are using insulation or not. There should also be a gap of about 15mm between the brickwork and the lintel of the fireplace, the gather of the fireplace 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 3.6m 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 (single wall). 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.

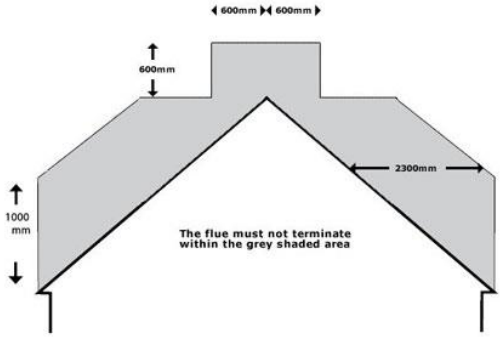
Traditional Built-in fireplaces have an air-inlet vent at the bottom that must not be blocked. Blocking this vent will result in the loss of heat into your home.

Installing the flues is the easiest part as our flues are stackable. The first flue simply fits over the fireplace spigot. Subsequent flues are stacked, as many as needed (see HEIGHT OF CHIMNEY), topped with a cowl.
Rivet all flues together (as well as the cowl to the top flue) and seal all the flue seams with silicone. Seal around the flue.

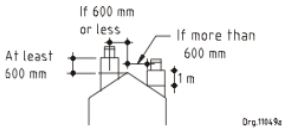
Please note: Any chimney more than 4m in height must be designed in accordance with SANS 10400 Part B.

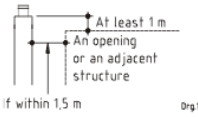
Height of Chimney for non-combustible roofing materials

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.



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 10º pitch.

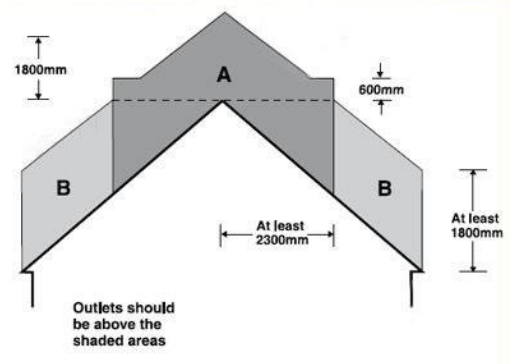




Height of Chimney for Combustible roofing materials

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., carpet or wood flooring), read the section on page 1 about hearths.

Instructions on how to use your Fireplace

All Traditional built-in fireplaces are supplied with a damper. This is a plate inside the unit that can be opened and closed (or anything in-between) by way of a handle inside the fireplace, on the left, depending on your unit, in order to regulate the amount of oxygen pulled into the fireplace. The handle will be showing forwards when it is completely open and to the rear when it is completely closed.
Blaze units are not fitted with dampers, as they are not available as open units.
Always use dry seasoned wood. Using unseasoned "wet/green" wood will cause black smoke that may pour into your room. Although hard woods like Kameeldoring and Rooikrans is great for braaiing, this is not the best wood to use in your fireplace, as it will burn through your grate much faster than fireplace wood. Rather use wood that won't make as much coals, like Black Wattle or Blue Gum.
The paint on your fireplace will need curing. This happens the first (and sometimes second) time you use your fireplace. It is best to use your fireplace for the first time on a warmer day, leaving open some windows and doors to get rid of the paint smells. Curing may look like smoke leaking "through" the steel, but this is just the curing process, and nothing to be alarmed about.
How to correctly start a fire:

1. Locate your damper handle and open the damper completely.
2. Use a fire starter (i.e., Blitz) and some kindle to start your fire. Kindle is well-seasoned wood that has been chopped up in small pieces (which you can do yourself or buy from your wood supplier). You may also use twigs or pine cones if it is properly dried out.
3. When the kindle is burning properly, add 2 or 3 smaller pieces of wood and wait until this is also burning well, before adding more wood.
4. When the second batch of wood is burning hot, add as much wood as you need. You can now start to 'choke' the unit by closing the damper a bit at a time, by pushing the handle backwards. You will know the position is correct when no smoke leaks out the front of your fireplace, and your flames are dancing.
5. **If you bought a unit with (a) glass door/s**, **or a BLAZE**, leave the door/s slightly open when first lighting your kindle. You can close the doors when you add the second lot of wood. You may now also start choking the fire by way of the damper and vents.

These steps are very important to allow your unit and flue to heat up, pushing out all the cold air trapped inside your flue, and forming the negative air pressure that will remove all the smoke. Cold air trapped inside the flue may cause a cold-lock, and the fireplace to smoke out.

6. ALWAYS stack your wood to the rear of the unit/ furthest from the glass. Any piece of burning wood that rolls against the glass, will cause thermal pressure in the glass and cause it to break. Your glass is not under guarantee against this.
7. Clean your fireplace regularly to prevent a build-up of ashes and coals underneath your fire grate. If this happens, your grate will burn through (melt) and need more regular replacement.
8. It is good practice to have your chimney swept regularly to prevent flue fires.

Frequently asked Questions

Q: Why is my fireplace smoking out?

A 1: When using the fireplace for the first time

1. Refer to the installation instructions and check the chimney heights conform to required heights. Fix this if needed.
2. Check that the damper is open!
3. Shine a torch down the chimney and remove any obstructions. Also check for mortar in the opening of the flue outlet.
4. If using a rotating cowl, check that it is greased (this must be done every 6 months) and turning freely. If not, grease the cowl.
5. Did you start the fire with kindle? If not, check "Instruction on how to use your Fireplace". 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. Un-seasoned wood also does not burn very hot.
6. 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.
7. If nothing works, call us for more advice.

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

1. If using a rotating cowl, check that it is greased (this must be done every 6 months) and turning freely. If not, grease the cowl.
2. Check the chimney for obstructions like birds' nests.
3. 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.
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.
5. Check that your damper is not stuck in the "closed" position.

Q: Why is the glass in the door of my fireplace turning black?

A:

1. Using un-seasoned wood will cause this. Seasoned wood must be at least 2 years old, and you should not see any wood sap discharging when burning. Un-seasoned wood does not burn hot enough and, together with the discharge of moisture from the wood, causes a tarry layer on the glass.
2. Check that you followed all the steps on how to correctly light a fire.
3. You may have closed the damper too much and the fire is being starved of oxygen, thus burning too cold. Open the damper completely; this should burn away most of the black residue. Then start closing the damper again, but do not close the damper again as much as before.

Q: How do I clean the glass in the door of my fireplace?

A: Using a damp cloth, dip the cloth into some fine ash from your fireplace and use this to rub clean the glass. Do not use abrasive chemicals that may damage the surface of the glass (and our planet).

Q: How do I clean my mild steel fireplace?

A: Never use harsh chemicals that may cause rust over time. Brush ash & dust away with a soft brush or duster. You may wish to repaint your fireplace from time to time. Please contact us to get the correct paint for the job.

Q: How do I prevent the glass in my fireplace from breaking?

A: When adding wood to your fireplace:
Never throw the wood into the unit, but place it in instead.
Stack wood towards the rear of the unit
Never slam the door on your fireplace
If a piece of wood rolls forward and against the glass, remove it. The heat in the piece of burning wood is different from the ambient temperature inside the fireplace. Leaving it to burn against the glass will cause thermal stress, and may cause the glass to burst.
PS: the glass in our fireplaces are tempered, and upon bursting it will "crumble" into millions of tiny pieces. Rest assured it will NOT explode into shards which could injure someone.

Your Thermo Fireplace 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.