Homewood Heritage - Installation Specifications

IMPORTANT: all stove measurements **nominal only** with slight variation possible, confirm critical dimensions on site!

The Homewood Heritage has been tested to AS/NZS 2918:2001, Appendix B, and must be installed as per AS/NZS 2918, these installation specifications, any applicable local regulations, and the appropriate requirements of the relevant building codes.

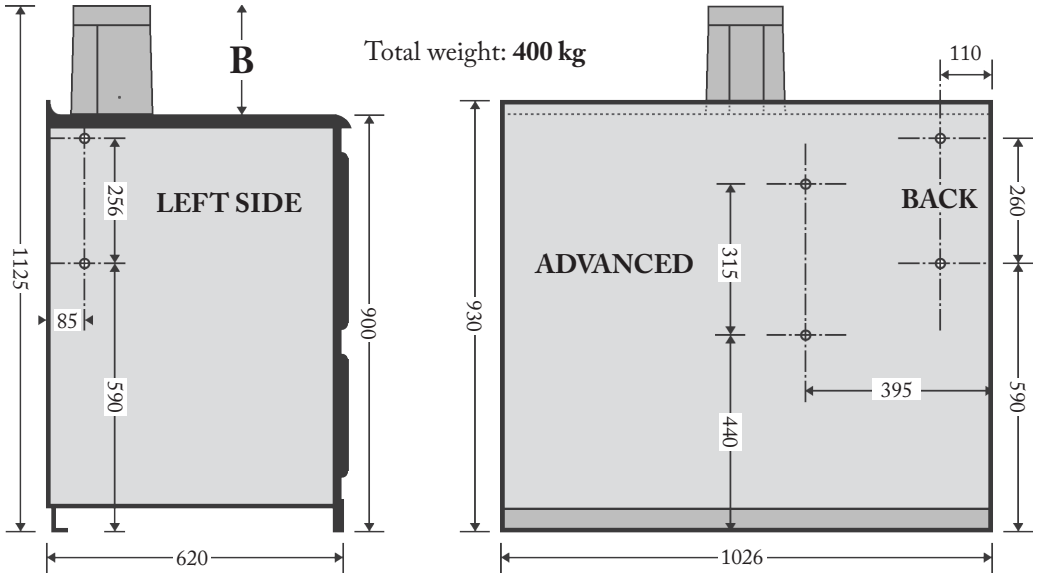

Figure A: *Overall Dimensions and Wetback Pipe Locations*

Water Jacket

The regular jacket has an approximate output of 4 - 5 kW during normal use, with options for pipe fittings that come out either the **LEFT SIDE** (toward the back) or the **BACK** (toward the left) as 25 mm brass thread. The Heritage can be fitted instead with our **ADVANCED** jacket, which has 25 mm brass *sockets* and approximate output of 8 - 9 kW during normal use. Stove must only be connected to an open-vented system at low pressure (76 kPa **max**) and be installed in accordance with AS 3500.4.1 or NZS 4603, and the appropriate requirements of the relevant building codes. The hot flow pipe (top pipe) must always have a minimum upward slope to the cylinder of 1:20 at any point, and an average slope not less than 1:7 overall. The base of the cylinder must be raised above the stove top at **least** 300 mm (if flow line carries up two-thirds inside it) or 600 mm (if no such internal riser pipe). **Confirm all critical dimensions on site only.**

Safe Installation Clearances

Clearance testing as per AS/NZS 2918, Appendix B, has shown that the closest distance allowed between the Heritage and any **heat-sensitive material** (eg: wood) is 500 mm on the left, right and rear sides **(A)** and 1400 mm above the cooking surface **(B)**. Where the installation will **not** have heat-sensitive material within any of the above distances, you are able to position your stove as you like, without the need for shields (however, we do recommend leaving an expansion gap of at least 2 - 5 mm between the stove and anything else, and there must be a 1 m minimum access clearance left in front of the stove). We strongly recommend that people building new homes take advantage of this by ensuring all walls and surfaces within the safe installation clearances of the intended stove position be made up entirely from heat-resistant materials (eg: brick, concrete block, metal frame, compressed mineral board or similar).

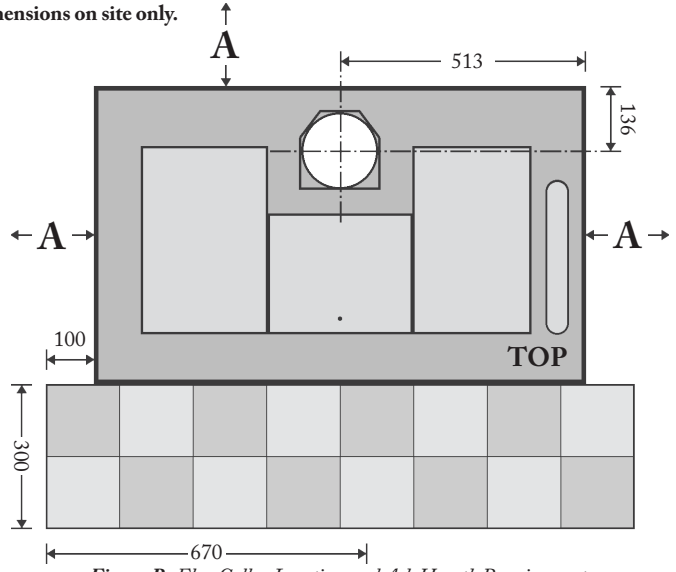

Figure B: *Flue Collar Location and Ash Hearth Requirements*

Reduced Installation Clearances

Where the installation will have heat-sensitive material *within* those safe installation clearances, heat shields **must** be employed between the stove and that heat-sensitive material. ***Figure C*** shows the reduced clearances for different shield options - **WALL** is any heat-sensitive surface or material (including benches); **A** is the closest allowed distance from the wall to the left, right and rear sides of the stove and **B** is the allowed distance from the stovetop to any heat-sensitive ceiling above.

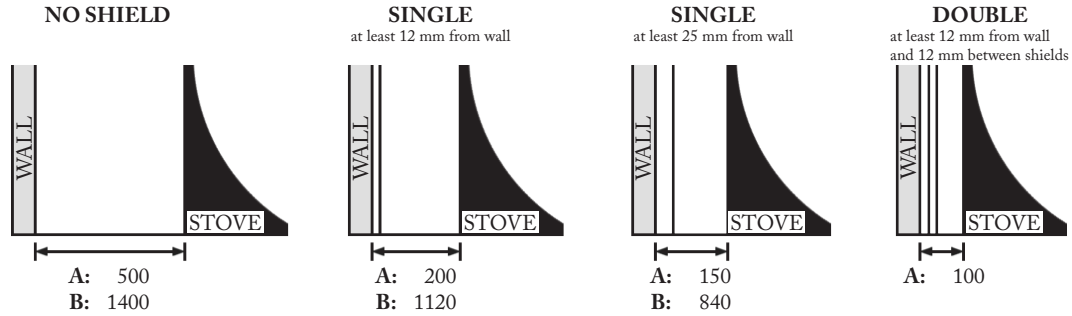

Figure C: *Heat Shield Clearances*

Heat Shield Construction

Heat shields must be built from heat-resistant materials only (eg: sheetmetal 0.5 mm minimum; masonry brick on edge or flat; stone; concrete/concrete block; non-combustible mineral board products, and so on), and all shield spacers must also be of a heat-resistant material only (eg: 12 or 25 mm thin-wall steel square tube).

Air gaps behind and between all heat shields must be ventilated at both the top and bottom with openings that are not less than half the cross sectional area of the air space behind the shield.

Shields must extend beyond the stove to at least a minimum distance that ensures all heat-sensitive materials within the safe installation clearances are shielded, as in ***Figure D***.

Where planning to have the stove built-in as close as possible to a heat-sensitive wall or bench, double shields should be used to get the clearance distances down to the absolute minimum. ***Figure E*** shows a common double shield: heat-sensitive bench, gap at least 12 mm, sheetmetal shield extending the full height of the bench, another 12 mm gap, second shield (brick in this example), then the stove. The heat-sensitive wall in ***Figure E*** does not require shielding as it is further than 500 mm from the stove, so the shields may stop at bench height. The total spacing of the gaps and the width of the brick has put the stove outside of the reduced installation clearances, allowing it to be built right in. If the bench top is heat-resistant (eg: granite, stainless or tiles) it can be extended over the shields, and the face (and/or top) of the shields are able to be capped off (with tiles, sideways bricks, sheet stainless or similar) for a tidy finish - provided the air gaps are ventilated elsewhere.

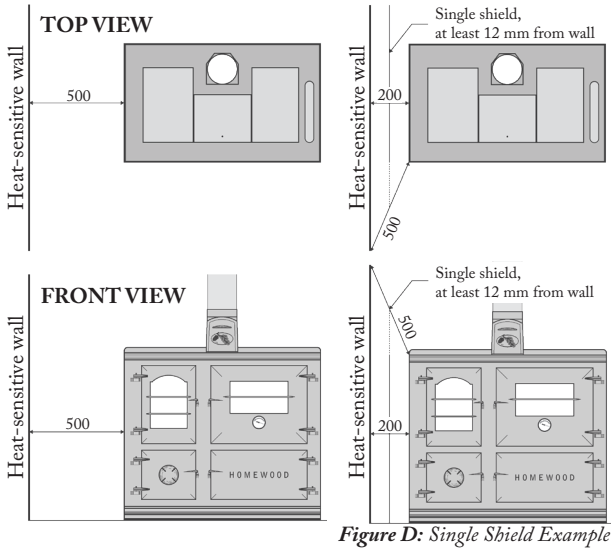

Figure D: *Single Shield Example*

Floor Protector

Unless the floor is already non-combustible (eg: concrete), an "ash hearth" floor protector, made from a durable and heat-resistant material (most commonly tiles, but could be concrete, sheetmetal, brick and so on), must extend at least 300 mm in front of the stove, and at least 200 mm either side of the firebox opening (minimum 670 mm long, extending 100 mm from left side of the stove), except where it contacts a heat shield at a lesser distance. We recommend that the ash hearth be symmetrical and constructed to finish flush with the surrounding floor. An additional floor protector beneath or behind the stove is **not** required (the Heritage has a built-in floor protector), though you may wish to continue your ash hearth (or run steel strips of the same thickness) beneath the stove so it is all at the same level.

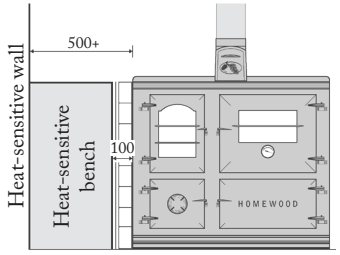

Figure E: *Double Shield Example*

Seismic Restraint

Testing the Homewood Heritage for seismic loading as per section 3.8 of AS/NZS 2918 has shown that it does **not** require any seismic restraints, due to its weight and shape. The stove must be installed on a level surface.

Coal

If your Homewood Heritage is being installed to run on coal, let us know before delivery - we need to provide you with a modified grate for coal-only running.

Emissions

The Homewood Heritage is a cooking stove and therefore exempt from the emissions testing requirements of AS/NZS 4013.

Flue

The Homewood Heritage must be installed with a 150 mm diameter flue that has been manufactured in accordance with AS/NZS 2918. The flue must be installed as per our specifications, AS/NZS 2918 and the flue manufacturer's instructions. The flue must be at least 3.6 m long (a minimum length of 4.2 m is **strongly recommended** for optimum draw), and must be lengthened as required to extend beyond the minimum flue exit positions marked below.

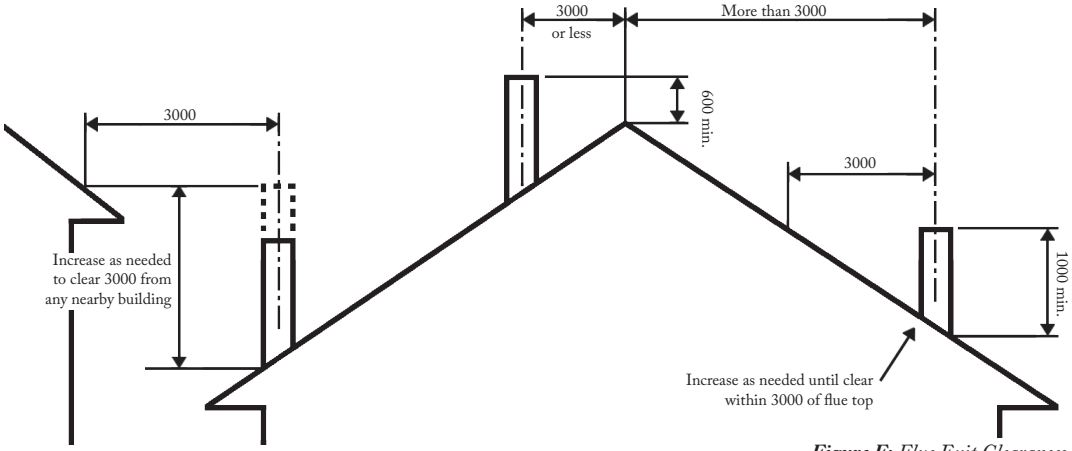

Figure F: *Flue Exit Clearances*

The position of the flue collar on the Heritage is marked on ***Figure B***, page 1 - we recommend cutting the holes for your flue only after the stove is in its final position. Where possible, situate your stove so it has a completely vertical flue. If your flue needs to be offset, make sure all lengths between 0˚ and 30˚ from the horizontal (**not recommended**) do not exceed a total of 900 mm, and all lengths between 30˚ and 60˚ from the horizontal do not exceed a total of 1800 mm.

Flue Shields

The Homewood Heritage does not require a flue-mounted shield, unless it is being installed to run primarily on coal. Where a heat-sensitive wall behind the stove has been shielded to achieve the reduced installation clearances in ***Figure C***, that shielding must continue up the rear wall, at a width that ensures all points of heat-sensitive wall within 500 mm of the flue are shielded. This shielding may terminate at a height of no less than 1.2 m from the flue collar, provided anything heat-sensitive above this height is at least 250 mm from the flue. From the ceiling cavity up, the flue must be shielded as per AS/NZS 2918 and the flue manufacturer's instructions.

☞ **Need a flue?** We don't manufacture flues ourselves, but can source them for you: send us an email - we can provide you with a no-obligation quote.

Some Pre-Installation Considerations

A few suggestions regarding common issues, compiled for your consideration...

Stove position. Installing the stove against internal walls rather than external is generally preferred (less heat loss to the outside, easier plumbing, keeps it more central for heat distribution, and the ceiling may be lower on external walls and so require extra shielding). The stove will be hot when it is running, so it is usually a good idea to install it away from entrances and main thoroughfares. The hot water cylinder relative to the stove deserves careful thought: consider the plumbing, and economical use of space while trying to keep it within 5 m of the stove. As above, locate your stove so it has a vertical flue - and choose a position that will keep the flue clear of any rafters, beams or joists.

Wood storage. When planning your stove installation, spare some thought to locating a convenient firewood store. It should be handy to the firebox side of the stove for easy refuelling, but must be shielded or outside the installation clearances.

Hearth. Your ash hearth is allowed to be *larger* than the AS/NZS 2918 minimum, so design the size of your hearth around your choice of tiles and pattern, rather than cutting down tiles to fit. Having it extend 400 mm in front of the stove is ideal.

Surrounds. Where applicable, we suggest having the bench or brick surround stopping 10 - 15 mm from the front panel of the stove (not including doors). This will give the installation some extra prominence and keeps the doors clear from obstruction when open. Surrounds that jut out in front can also make polishing a little trickier (having to avoid bricks).

Wood is for burning. Where possible, keep wood right away from your stove installation plans. Wooden mantelpieces, skirtings or trimmings are only going to create shielding complications when it comes time to install the stove. Instead, think: tiles, brick, stone (non-exploding type only!), granite, concrete, plaster and so on.

Trays and racks. Consider putting some of your "heat-resistant only" space to good use: leaving an open (or partly open) section at the front, between the wall/bench and a heat shield, can create an ideal place to store spare trays and racks.

Drying rack. Where in keeping with the rest of the installation, a rack positioned at a suitable height above your stove (built from heat-resistant materials) will provide you with a valuable space for rising bread, warming plates and drying things out.

Wetback pipe choice. The **LEFT SIDE** wetback pipe option suits situations where the hot water cylinder is to the left, and the pipes can go straight from the stove into a hot water cupboard. The **BACK** wetback pipe option suits situations where the cylinder is to the right, or on the other side of the wall behind the stove.

Plumbing BACK or ADVANCED pipes. Where the stove is going to be pushed back against the wall or shield, denying your plumber access to the rear pipe connections, he will want to fit extensions to the wetback pipes *before* the stove is in its final position; extensions that will go right through holes in the wall behind and provide him with something to work with on the other side. Where the pipes are going to be running *inside* the back wall, the plumber will want to cut in an access panel from the other side of the wall, and work from there. Otherwise you must leave 100 mm plumbing access behind the stove.

Hot water cylinder size. 220 L+. A smaller cylinder will heat more quickly (and boil over more quickly too), but will run out of hot water faster when the stove is not going. A larger cylinder will take longer to get up to temperature, but will then hold a good store of hot water for longer when the stove is out of use, and will be much less prone to boiling over. A small cylinder only really suits situations where the stove is run infrequently (like a holiday home) - whereas a large cylinder will provide you with a more useful store of hot water. We almost always recommend going for the largest size cylinder your space and budget allows - just keep in mind that the larger the cylinder, the longer it will take to heat that full volume in the first instance. Once the water is up to temperature all the wetback has to heat is the *replacement water* based on your usage - irrespective of cylinder size - so your main consideration should be around how much hot water you want to store. Wrapping your hot water cylinder with extra insulation will help it keep hot water for longer while the stove is not running.

Low pressure. A low pressure hot water system is your simplest and least expensive option. The cylinder will be open-vented, and the wetback will connect directly to it. You won't get the same water pressure as with the other systems, but may be able to install an in-line pump to boost your shower pressure.

Mains pressure. More expensive, this system requires a special cylinder that can withstand high pressures, and contains a coil that lets the wetback run on a separate vented-system, heating the water inside the cylinder via the coil. Downside: the cylinder will open a valve when close to boiling, letting in cold water at mains pressure, ejecting *all* your hot water before closing.

Thermal store setup. Combination of the above. The cylinder is open-vented at low pressure, so the wetback is connected directly to it. This cylinder also has a coil in it, but this time has the mains pressure water running through the coil. When you open a tap, the hot water stored in the cylinder heats up the cold water as it moves through the coil, giving hot water at high pressure on demand. The downside to this system is that performance suffers unless the whole cylinder is already heated - you can't just draw off recently heated water from the top - so it better suits colder climates where the stove will be in very frequent operation, or combination systems that are supplemented with solar heating and having a very large cylinder.

Radiators/underfloor heating. Certainly possible. You will require our **ADVANCED** wetback if wanting to run something extensive. Visiting our website and reading our hot water guide in full is **strongly recommended.**

Involve a plumber. We're not water-heating experts, so discuss your situation with a knowledgeable plumber in conjunction with our guide during the planning stage to decide on the setup that will best suit your household.

Ceiling fans. Heat rises, so if you have high ceilings you will miss out on a lot of the warmth that is sitting above your head. An appropriately-situated ceiling fan will allow you to push that heat down in winter, and installing a type that can also be reversed will let you pull heat up and away (where there is a window or vent) over summer.

Heat ducts. Similarly, a heat duct system that takes in the heat through a vent in the ceiling above your stove and carries it through a ceiling duct to a colder room in the house can be an relatively inexpensive way to more fully utilise the rising heat during winter. An alternate path set up to duct that heat outside may be a worthwhile and inexpensive addition to a heat duct system for the summer months.

Moving your stove. A heavy cast-iron stove has the potential to be a rather awkward item to manoeuvre through a house - but is completely manageable with some planning. Use the "how-they-built-the-pyramids" method: lever the stove (or pallet) up to slide in rollers (lengths of water pipe are ideal) at each end, and push! You can lay down a path of plywood or similar to protect your floors as it moves through the house.

Visit **www.homewoodstoves.co.nz** for more in-depth advice and guidance.

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