

ULTIMATE 500

SLOW COMBUSTION WOOD HEATER

INSTRUCTION BOOKLET



COMPLIES WITH AUSTRALIAN STANDARDS
AS4013 (EMISSION CONTROLS)
AS2918 (INSTALLATION CLEARANCES)
MANUFACTURED BY:



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INSTALLATION INSTRUCTIONS

INTRODUCTION

For your safety, Building Regulatory Authorities in Australia require that any solid fuel Heater installation complies with Australian Standard AS/NZ 2918-2001. In addition to this, you may be required by your local council to comply with local regulations, in which case it would be advisable to check with your local building authority first, before commencing any installation. You may be required to obtain a permit or building application or simply adhere to local procedures.

By following the instructions in this "Instruction booklet", Ultimate 500 wood heaters, fitted as described, will meet the requirements of AS/NZ 2918-2001 as tested.

Your Ultimate 500 wood heater has also been designed to reduce flue gas emissions to a minimum Australian Standard level and thus complies with AS/NZ 4013-1999.

To ensure that your Ultimate 500 remains in compliance with these two standards:

THE MANUFACTURER STRONGLY RECOMMENDS THAT YOUR ULTIMATE 500 INSTALLATION ONLY BE CARRIED OUT BY A QUALIFIED AND LICENCED INSTALLER.

Use only Ultimate 500 components, do not interchange components, do not remove or add components as any of these actions may adversely affect the performance of your heater or nullify its compliance to either AS/NZ 2918-2001 or AS/NZ 4013-1999.

WARNING: THE HEATER AND FLUE SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZ 2918 AND THE APPROPRIATE REQUIREMENTS OF THE LOCAL BUILDING REGULATORY AUTHORITY.

CAUTION: THE MIXING OF HEATER OR FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATION OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE. (IE THE HEATER HAS BEEN TESTED TO AS/NZ 4013 FOR ENVIRONMENTAL CONTROLS USING A 5 INCH FLUE THE MANUFACTURER THEREFORE RECOMMENDS THE USE OF A STANDARD 5 INCH FLUE.)

HEATER POSITION

Your Ultimate 500 heater must not be installed under a heat sensitive ceiling of less than normal height (approx. 2.4 metres). No wall or other immovable object may be closer than one metre from the front or side of the heater.

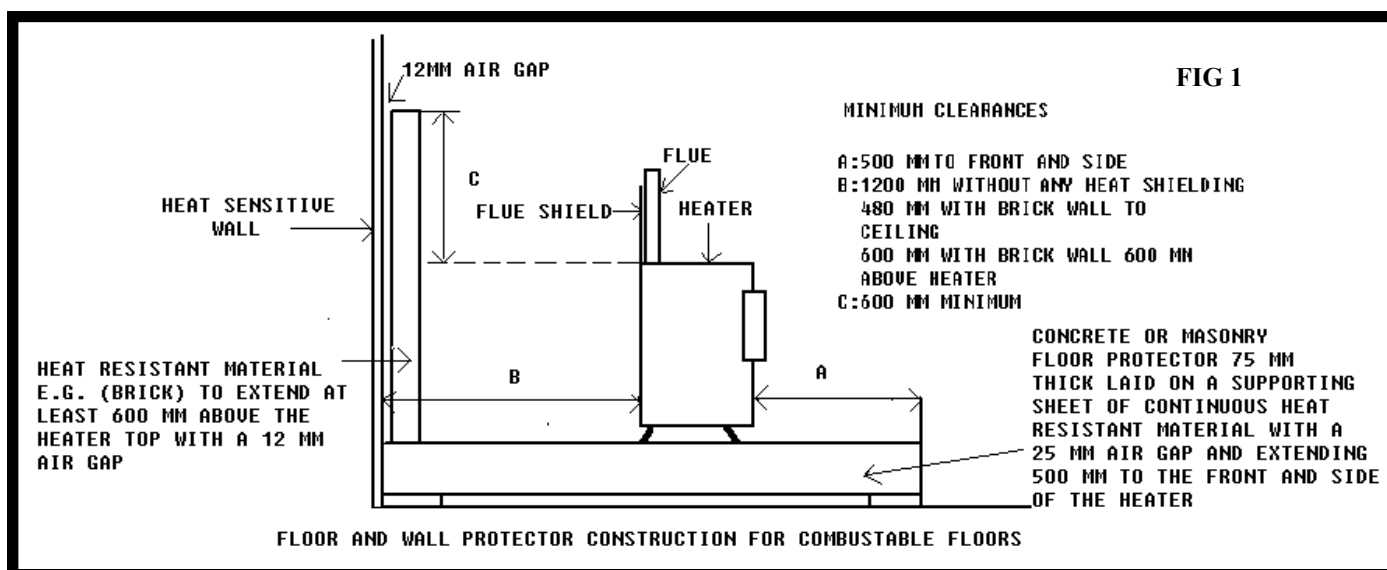
The heater may be installed in front of or partially into a fire place which has a suitable heat resistant surround, but any heat sensitive material (such as a mantel piece) within 600 mm from the top of the heater which protrudes from the face of the fire place surround will need to be completely shielded. This shielding is best provided by a sheet metal panel held 12 mm from the face that is to be protected on heat resistant spacers.

The inner edge of the shield must butt up to the face of the fire place surround and the outer edge and ends must have an unobstructed 10 mm gap to allow cooling air circulation.

FLOOR AND WALL PROTECTION: must be provided by a floor protector, and shall be constructed of concrete or masonry at least 75 mm thick, laid on a supporting sheet of continuous heat resistant material with a 25 mm air gap off the floor, supported by heat resistant spacers with opposite ends left open for ventilation and extend at least 500 mm from the front, sides and rear of the heater. On a heat sensitive wall, the minimum wall to rear of heater distance is 1200 mm. This distance can be reduced to 480 mm by installing a brick wall, the same width as the floor protector, up to the ceiling. If the brick wall only continues to the minimum of 600 mm above the top of the heater, the heater to wall clearance will be 600 mm. This can be reduced back to 480 mm with use of a flue shield. (see fig 1).

The positioning of the heater will also be affected by the requirements set down for the installation of the flue system. (see fig 2)

As a reference guide use figures 1 and 2 to position your heater to comply with heater to wall clearances. Before finalising your heater location it will be necessary to check inside the ceiling and on the roof outside, to ensure that the vertical projection of the flue through the ceiling and the roof will not mean removal of any structural beams. If necessary move the heater in such a way to ensure that the flue passes through the ceiling and roof without interfering with any structural beams. Your licensed installer will be able to advise you as to what is structural and what is not.



FLUE KIT INSTALLATION

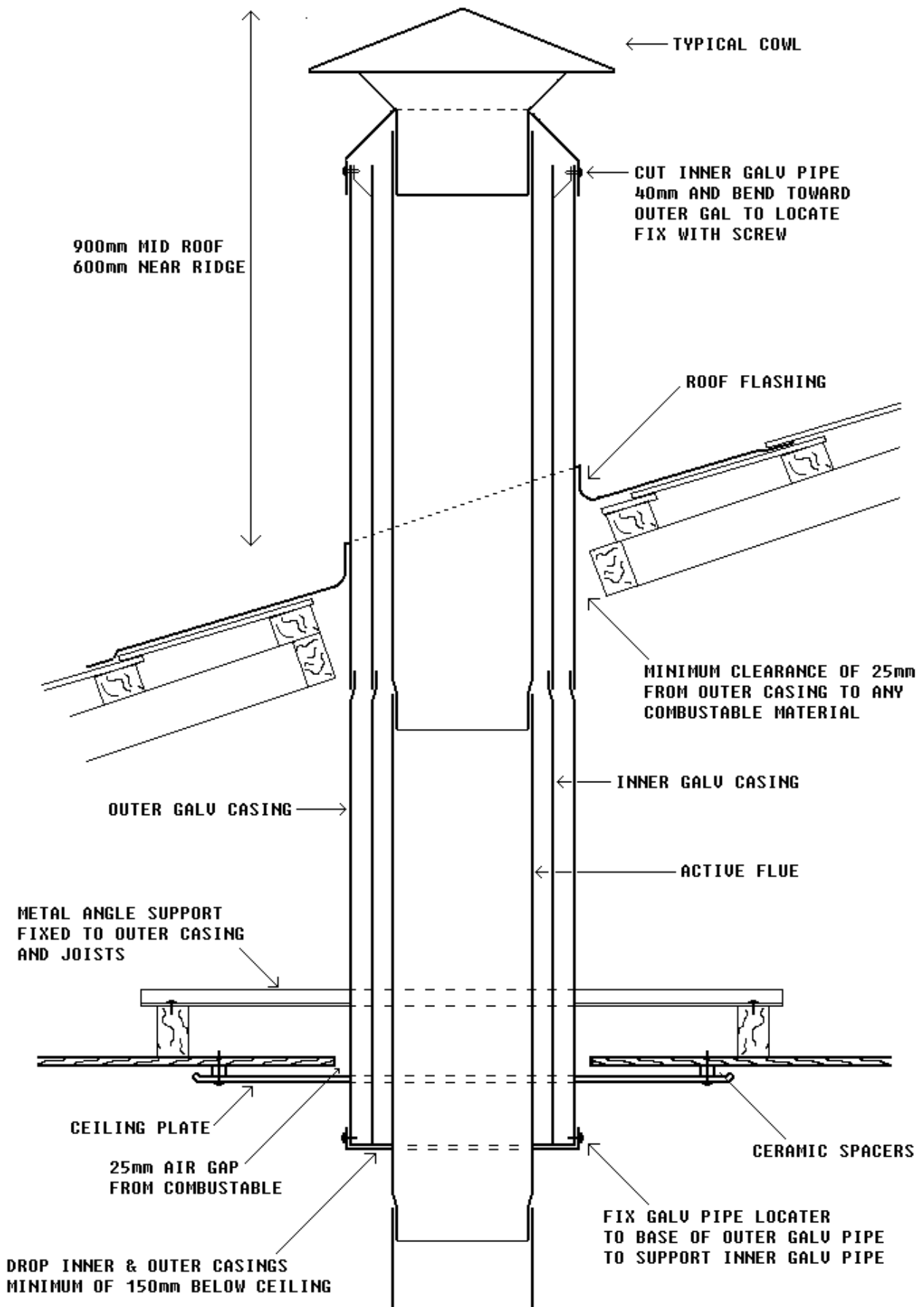


Fig 2

OPERATING INSTRUCTIONS

GENERAL INFORMATION

HEAT OUTPUT CONTROL: There is only one heat control available for this heater. It is a disc located on the top of the heater, which can be rotated around an arc to open or close the flow of air into the heater. This feature alone is enough to control the level of heat output from the heater.

EMISSION CONTROL DEVICES: This heater has been designed to comply with Emission Control standards AS4013 and as such has certain features that must remain fitted at all times, while the fire is operational. The baffles in the upper parts of the heater, the central baffle (which may be temporarily removed for flue cleaning only) and fixed side baffles which are welded in position. The air control device at the top of the heater (a rotating disc with a central hole) can be rotated to close off the air control only to the extent of the disc itself. The hole in the centre of the disc must remain uncovered to maintain a minimum air flow to prevent undue creation of smoke pollution and its escape into the atmosphere.

FUELS TO USE: This heater is designed and tested for the efficient burning of **dry hardwood**. It is not designed or tested for other types of fuels.

Do not burn green softwood (such as fresh pine ,because they give off larger quantities of creosote which may block your flue more quickly than other woods) and volatile eucalyptus (because of their explosive nature). **Never use arsenic treated timber (such as treated pine logs)** because of the danger of inhaling the very poisonous gases given off when burnt.

OTHER IMPORTANT INFORMATION: Correct installation, the use of fuels as recommended above, and adherence to the following instructions will ensure the best performance from your heater.

MAKE SURE THAT THE MINIMUM HEATER TO WALL CLEARANCES SHOWN IN EARLIER SECTIONS OF THIS INSTRUCTION BOOKLET ARE ALWAYS MAINTAINED BETWEEN THE HEATER AND ANY HEAT SENSITIVE MATERIAL SUCH AS CLOTHING, FURNITURE, CURTAINS, HEATER FUEL, ETC.

DO NOT ATTEMPT TO BURN LIQUID FUELS OF ANY KIND . EVEN SMALL QUANTITIES OF COMBUSTIBLE LIQUIDS CAN BE EXTREMELY DANGEROUS IF Poured INTO THIS HEATER.

LIGHTING OF FIRE

FIRST TIME LIGHTING UP OPERATION: Place in the bottom of your heater a reasonable layer of the following materials: dry twigs, sawdust, woodchips, or ash if readily available. Place a layer of scrunched up newspaper on top of this material, towards the front of the heater under the venturi. Place kindling wood on top of the paper. Light paper and lower venturi into opening and adjust air control to approximately the half open position. When the fire has caught, add more fuel to maintain a **low** heat fire, until the exterior paint of the heater has properly cured, (i.e. until all trace of smell has disappeared). It is suggested that the “Burn in” procedure be carried out with adequate ventilation in the house eg windows and doors to be open, so to dissipate the smell from the curing paint as quickly as possible.

NORMAL LIGHTING UP PROCEDURE: The Ultimate 500 performs at it’s best once it has accumulated a bed of ash in the bottom. This can be achieved over several days burning, but if available, place an inch of ash in the heater before starting. Wood is normally stood vertically, but it is not important provided you leave a small clear passage to allow oxygen to the red coals directly below the venturi. Large blocks of wood that fit through the opening need no further splitting. Do not over stoke the heater. It may be a little difficult to get used to the incredible burning range at low heat levels.

When starting, place large heavy blocks of wood in the heater first and lean them to the back of the heater. Next place kindling and scrunched up paper directly under the venturi and light at the top of the kindling pile. Leave the control disc about half open for a few minutes until you have some red coals forming, the close to about a quarter open. From this point you can open or close the disc slightly to set the heat you require. The venturi fans the red coals, which burn the wood as it slowly sinks vertically to the fire and the fire continually burns on itself until all wood and ash is burnt to fine powder.

Before retiring for the night, you may wish to stoke up the fire for overnight burning. In this case it is recommended to set the air control to minimum, i.e. fully closed the disc. Do not over stoke the fire as you may block the passage of air to the fire, resulting in the fire going out. Experience and determination of the required burn time will indicate how much wood to put in for overnight burning

HINTS FOR THE MOST EFFICIENT OPERATION OF YOUR HEATER

1: When burning slow combustion, open the air control fully to remove excess smoke in the heater before stoking.

2: When stoking, always leave a path to the fire for oxygen below the venturi. Don’t block it with wood. If you can see a small area of red coals when the air control is replaced, that is sufficient.

3: On slow combustion the glass will blacken. This is normal. There is no need to clean it. When next you bring the fire up to high temperature it will burn off and return to clear.

4: Burning wood very slowly causes a faster build up of soot in the flue. An occasional “opening up” or hot run helps remove most of the soot build up, but in some cases it will be necessary to run a flue brush down the flue. If the fire is sluggish when you open up the air control, this indicates the flue needs cleaning.

5: Keep a heat proof container of water under your heater. As it slowly evaporates, it replaces moisture in the air. This avoids the discomfort of a dry atmosphere and the sensation of a stuffy room.

6: Where possible, leave all internal house doors partly open to enable the heat to circulate and warm the whole house. After several days of continuous running you will notice that rooms which were previously very cold are now comfortable, walls are no longer cold to touch, and both you and your family only have to face cold nights and mornings when you step outside the door of your home. Another benefit of solid fuel heating is the almost total elimination of condensation moisture and mildew spots.

7: Don't over stoke the heater from habit with previous heaters. The Ultimate 500 is like no other heater you have owned. Even a red glowing heat will burn slowly for hours.

8: When installing the heater, **do not have any flue controls added.** The Ultimate 500 is designed to run with an open flue. All the control necessary is incorporated in the design of the heater. The recommended 5 inch flue is only required to allow the air control to push the smoke out of the heater.

9: It is recommended to ensure the floor protector extends at least 500 mm from the heater sides and 500 mm from the front. Walls other than brick also need heat shielding with bricks to a minimum 600 mm above the top of the heater. With this shielding the Ultimate 500 has minimum clearance from the rear of the heater to the wall of 600 mm. Otherwise the minimum distance to a heat sensitive wall is 1200 mm.

10: The Ultimate 500 will out perform other heaters many times the price. Long life span and minimal replacement parts make the Ultimate 500 an excellent choice in heating.

MAINTENANCE

CLEANING THE FLUE: Over a period of time all flues will build up with a layer of unwanted deposits of creosote and soot. Generally, it will be necessary to have the flue cleaned annually, however this may vary depending on the quality of the wood used. Tell tale signs that the flue requires cleaning include inadequate draught control adjustment, (even when fully open). Smoking when the venturi is removed to stoke the fire. The cleaning of the flue can only be done mechanically (not chemically), using a correct size flue brush. In some more difficult blockages it may be necessary to first use a mandrel to remove large sections of creosote deposits before brushing. Your local chimney sweep should have all the necessary equipment to fully clean your flue.

Do not use chemical cleaners.

CLEANING THE GLASS: Discolouration and residual build up on the glass is most likely to occur after long periods of slow burning. Under normal conditions, with a good hot fire, these deposits are usually burnt off. If the residue is not burnt off, then a proprietary oven cleaner can be used to remove stubborn residue. Take care not to break the glass by being too vigorous with your cleaning techniques.

REMOVAL OF ASH: All wood burning heaters will get build up of ash over a period of time. Your Ultimate 500 will probably have less build up than most heaters due to its particular burning technique. However when it does become necessary to remove ash deposits, use the tools provided with your heater to take out the excess ash.

Do not remove all the ash, leave an ash layer in the heater at all times.

Take extreme care when handling ash as it can remain hot for many hours after the fire has gone out. (see safety considerations over page)

CLEANING THE HEATER EXTERIOR: Use a damp cloth to wipe over the exterior of the heater. This is all that is required to maintain its appearance. Should the heater get scratched or damaged over time, then it may be necessary to improve its appearance by using a special high temperature paint, available in pressure pack cans from your local supplier. **(see operational instructions regarding initial firing, after repainting).**

SAFETY CONSIDERATIONS:

- 1: Always keep children away from the heater when alight.
- 2: Do not put clothing, furniture, firewood, or other combustibles near the heater.
(The minimum safe clearance should be at least 1 metre from the heater.)
- 3: Do not leave the heater unattended with the venturi removed.
- 4: Accidental fires may start by wrapping seemingly cold ashes in paper. It is much safer to place ashes outside in a metal container with a close fitting lid, prior to disposal.
- 5: If you have a flue fire, where a fire is burning within the flue, close the heat control and call the fire brigade. **Do not remove the venturi or open the air control as this will only spread the fire.**
- 6: Having had a flue fire, have the flue inspected for possible damage before relighting.
(Your qualified installer or chimney sweep are best to ascertain the extent of any damage to your heater and flue)
- 7: Do not modify the heater or the flue in any way without first obtaining written permission from the manufacturers.
- 8: If the heater glass has been broken, replace it immediate. Use only the correct glass, obtainable direct from the manufacturer, who will also be able to supply you with the correct insulation materials for refitting.

WARNING: DO NOT USE ANY FLAMMABLE LIQUID SUCH AS PETROL, KEROSENE, OIL ETC. TO START OR REKINDLE THE FIRE.



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FIG 1



FIG 2



FIG 3

THE CENTRAL BAFFLE PLATE IS INSERTED THROUGH THE OPENING (SEE FIG 1) TURNED AROUND INSIDE THE HEATER AND SLID INTO THE GUIDE (SEE FIG 2) TO ITS FINAL POSITION (SEE FIG 3). TEMPORARY REMOVAL OF THE BAFFLE FOR FLUE CLEANING IS THE REVERSE OF THESE INSTRUCTIONS.



FIG 4



FIG 5

DO NOT LEAVE THE HEATER UNATTENDED WITH THE VENURI REMOVED (SEE FIG 4) ONLY TEMPORARILY REMOVE THE VENURI TO STOKE THE FIRE. REPLACE VENURI INTO OPENING IMMEDIATELY (SEE FIG 5)



TOOL KIT

UPDATED MAY 2023