



INSTALLATION & OPERATING INSTRUCTIONS

Forbes Bench Top Wood Fire

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GENERAL INFORMATION

1. This Forbes bench top wood fire must be installed by an approved installer, ideally registered with the New Zealand Home Heating Association. Do not allow any makeshift or compromising installation methods as this could result in a house fire. This Forbes bench top wood fire must be installed according to these instructions.
2. A Building Consent from the Local Authority must be obtained before installing this wood fire, and we suggest that the Insurance Company covering building insurance be advised of the installation.
3. This Forbes bench top wood fire, when installed according to these instructions, complies with the provisions of AS/NZS 2918-2001 "Installation of Domestic Solid Fuel Burning Appliances".
4. Kent wood fires can be installed by a licenced plumber, gasfitter or registered NZHHA installer. Installers outside this criteria need to register with Kent as an approved installer before Kent products can be installed.
5. The clearances given in these instructions are necessary to prevent overheating of nearby combustibles and drying out of the house structure. They may not be reduced without authorisation.
6. There must be a clearance of at least 1 metre between the front of this Forbes bench top wood fire and any building structure or other substantial immovable object in front of the wood fire.

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Important: the installer or seller must leave these instructions with the purchaser

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TESTING & APPROVALS

| Model | Model No. | External fire dimensions (mm) | | | Performance | | ECAN NO * |
|------------------|-------------|-------------------------------|-------|--------|-------------------|--------------------|-----------|
| | | Width | Depth | Height | Average emissions | Average efficiency | |
| Forbes Bench Top | KWF295-6964 | 575 | 560 | 450 | 0.98g/kg | 66% | |

* ECAN NO = Environment Canterbury authorisation number.

TABLE 1

WOOD FIRE INSTALLATION

The Forbes bench top wood fire is suitable for a wide range of installation situations. The Forbes can be set on a non-combustible base anywhere between 100mm-750mm above the floor.

Installation heights with a bench measurement between 300mm-750mm above the floor:

- The wood fire may sit on a non-insulating base, eg; steel bench.
- The minimum base support requirement is that it must be a non-combustible material capable of supporting a minimum of 200kg.
- Base supporting platforms that are non-insulating require a ventilated air gap below the platform of a minimum of 100mm to any combustible material.

If the wood fire sits on an insulating base support such as concrete, stone or other non-combustible material with equal or better insulating properties as concrete:

- A minimum supporting base thickness of 50mm is required.
- The non-combustible base must not sit directly on any heat sensitive continuous support material.
- A minimum 9mm air gap is required between any combustible support material and an insulating concrete or similar insulated base material. This can be achieved by using slats of 9mm fibre cement board.

If the wood fire is installed less than 300mm above a timber or heat sensitive floor or shelving:

- An insulating base support as above is required with a minimum air space below insulated base of 100mm between any continuous combustible support such as timber flooring or shelving.
- If the wood fire base is to sit directly on to any continuous combustible support material the minimum thickness of the concrete insulating base or similar product is 100mm.

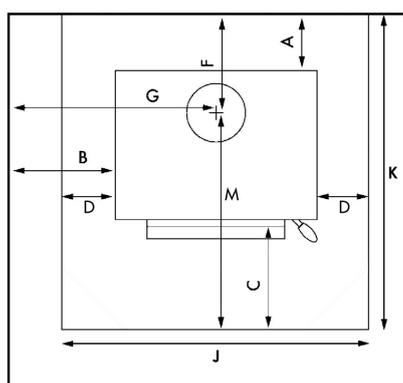
Ensure adherence to minimum base/floor protection requirements:

- The minimum size of the non-combustible base must be larger than the fire by 80mm in all directions (front, rear and sides of the fire).
- Floor protection must extend a minimum of 200mm to each side and 300mm in front of the door opening of the fire.
- If minimum floor protection measurements are met as part of the supporting bench they do not have to be repeated on the floor.

For a wood fire installed with the door opening less than 300mm above the floor the hearth must extend out in front of wood fire door 450mm.

IMPORTANT: Ensure the constructed bench base can withstand the weight of at least 200kg and has provision for earthquake restraint.

Wall Clearances



Corner Clearances

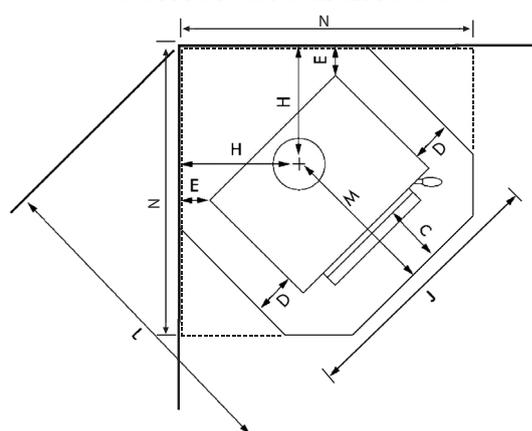


FIG. 1

| Model | Model No. | Minimum Installation Clearances (with flue shield) mm | | | | | | | | Hearth Clearances (mm) | | | | |
|------------------|-------------|---|-----|-----|----|-----|-----|-----|-----|------------------------|------|------|-----|------|
| | | A | B | C* | D | E | F | G | H | J | K | L | M | N |
| Forbes Bench Top | KWF295-6964 | 300 | 200 | 300 | 80 | 180 | 460 | 648 | 500 | 735 | 1083 | 1340 | 640 | 1160 |

* Fuel loading opening to end of floor protector.

TABLE 2

STANDARD FLUE INSTALLATION

Cut a 260mm square penetration for the passage of the flue pipe and casings through the ceiling. Trim back and reframe timbers to allow for fixing the ceiling plate and outer liner.

Cut and frame an opening in the roof and position the outer casing through the roof until it is flush with the underside of the ceiling. Fix with 4 adequate screws to the framing of the square opening in the ceiling. Centralize 250mm flue casing in the 260mm square cut holes so each fixing point has a 5mm gap between flue casing and timber.

Ensure a suitable flashing is installed on any roof penetration point. Flash the outer casing to the roof, to make a permanent, weatherproof seal. Place the ceiling plate with folded edges upwards over the flue spigot on the wood fire.

Join the required number of flue pipes by inserting the swaged ends of the upper piece into the plain end of the lower piece. Drill and fix each length with three stainless rivets or self-tapping screws. It is important that each flue pipe joint is sealed with commercially available flue sealing compound, including the joint between the flue spigot and the first length of flue pipe.

Note: Black painted flue pipes may only be used where they are visible. Flue pipes located wholly inside the casings in the roof space **must** be stainless steel only. Position the flue pipe into the spigot in the top of the wood fire. The flue pipe can either be lowered from the top as a single unit or fed up from the room a length at a time, ensuring that all joints are sealed and fixed properly.

Slide the inner 200mm Ø casing into place, between the outer casing and the flue pipe, ensuring that the spacers are fitted to maintain equal clearances around the flue and casings.

The flue pipe must extend at least 200mm above the outer casing at the top of the flue system. Extra lengths of flue pipe, inner casing and outer casing may be required to achieve the minimum distance above the roof. Joins between lengths of outer casing must be made with the upper end of the lower section inside the bottom edge of the upper length (the opposite of the method used for the flue pipe).

Place the top spreader in place and tighten. Slide the cowl transition over the flue pipe until it rests on the top spreader. Secure with stainless rivets or self-tapping screws.

Fit the rain-hat. **Note:** It must be removable for cleaning.

Screw the ceiling plate securely in position, through the holes provided, into the outer casing support framing. Ensure that the ceiling plate is spaced off from the ceiling by means of the spacers supplied in the flue kit. Do not fix the ceiling plate directly to the ceiling.

Where a flue terminates more than two metres above the roof penetration, it may be necessary to fit restraining guy wires for stability in high wind conditions.

The flue system should be vertical and without bends. If an offset is required, it should be as close to the wood fire as practicable and should not be offset more than 0.5 metres from the centre line of the flue stub. Clearances from the flue pipe to combustible materials must be maintained (Refer Table 2). Restrictions or leaks in the flue system may reduce the draught and, in severe conditions, could cause smoke to enter the room.

The flue pipe shall extend not less than 4.6 metres above the top of the floor protector.

The flue cowl must be at least 0.6 metres above the highest point of the roof if within 3 metres of it, or 1m above the roof penetration if more than 3 metres from point of the roof (Refer Fig. 2).

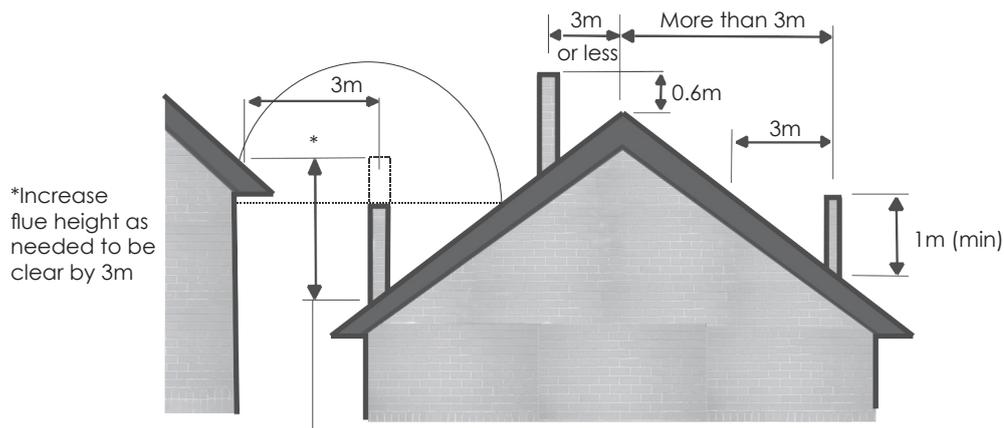


FIG. 2

No part of a building, or any adjacent object, may be in or above a circular area of 3 metres from the flue exit.

These heights are given as a general minimum, and in actual practice the presence of surrounding structures, trees, fences, etc. may necessitate additional height for satisfactory performance.

FOR MORE INFORMATION, REFER TO THE INSTALLATION INSTRUCTIONS INCLUDED WITH THE FLUE KIT.

Before the wood fire is used, ensure that a Compliance Certificate (supplied by a Registered Installer and/or Territorial Authority Inspector) is obtained for the user. We encourage initial demonstrations on how to light and operate the fire to ensure the user can confidently operate the fire for safe and efficient performance.

Single storey flue install

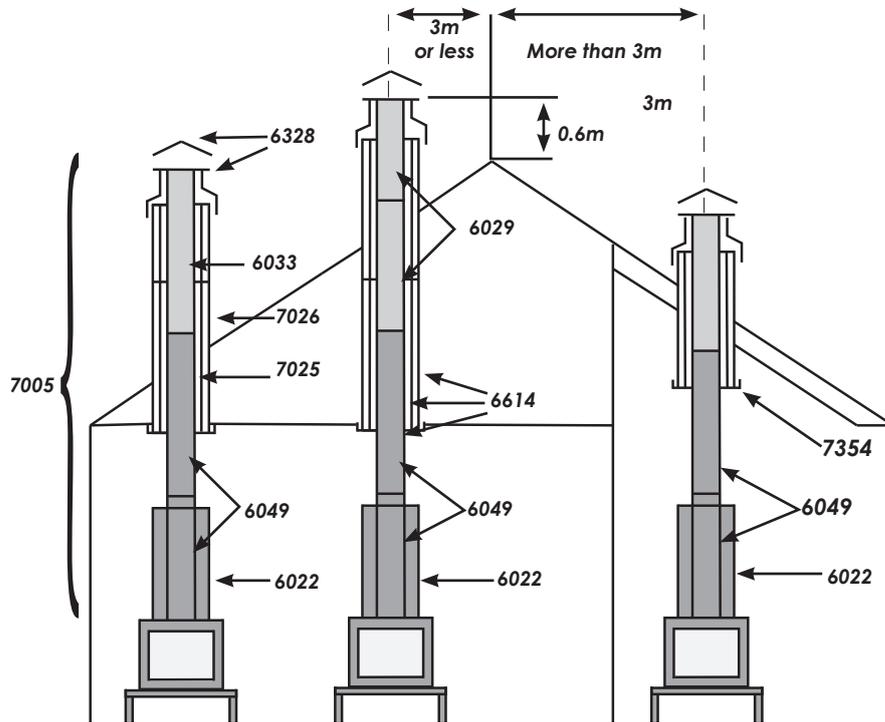


FIG. 3

Second storey flue install

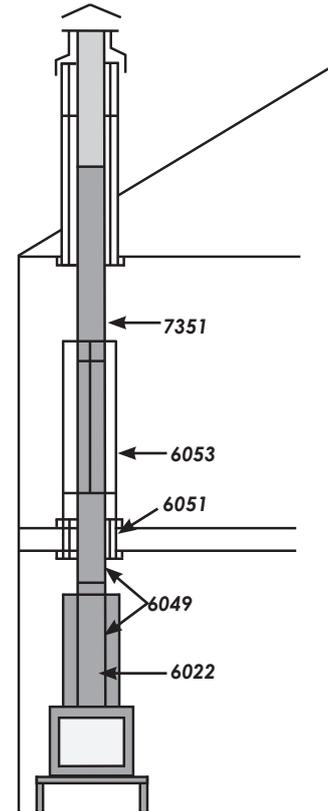


FIG. 4

| Model No. | Description |
|-------------|--|
| KWF298-7005 | Kent standard flue kit 4.2m |
| KWF298-7006 | Kent energy saver flue kit 4.2m |
| KWF298-6033 | Kent single length stainless steel flue 150 x 1200mm |
| KWF298-6022 | Kent stainless steel flue reflector |
| KWF298-6029 | Kent stainless steel flue twin pack 150mm |
| KWF298-6049 | Kent black stainless steel flue twin pack 150 x 1200mm |
| KWF298-6051 | Kent floor penetration 200/250mm diameter |
| KWF298-6053 | Kent 360 degree flue pipe guard |
| KWF298-6328 | Kent stainless steel hat and cowl |
| KWF298-6614 | Kent extension flue 150-200-250 - 1200mm |
| KWF298-7025 | Kent galvanised flue 200 x 1200mm |
| KWF298-7026 | Kent galvanised flue 250 x 1200mm |
| KWF298-7351 | Kent black flue 150 x 1200mm |
| KWF298-7354 | Kent sloping ceiling kit |

OPERATION

Thank you for purchasing a Forbes bench top wood fire. Used and maintained correctly, it will provide you with many years of warmth in your home. Kent wood fires have been the main source of heating for many Kiwi homes, with nearly 400,000 installed.

Please ensure your installer completes and signs the warranty registration card in this booklet. We encourage you to read the warranty conditions and draw your attention to improper fuel use.

LIGHTING

On initial light up, the presence of smoke may be noticed. This is normal and will dissipate quickly. **DO NOT BURN YOUR WOOD FIRE TOO QUICKLY TO BEGIN WITH.** Allow several small fires to build up a layer of ash in the wood fire, and cure the paint before using maximum power.

1. Adjust the air control knob, until it is fully open.
2. Place several pieces of crumpled newspaper in the base of the firebox, and criss-cross with 8-10 pieces of dry split kindling. Stack several pieces of dry split firewood no greater than 30cm in length on top of the kindling.
3. Ignite the paper and leave the door slightly ajar (resting it on the latch). Let the fire establish itself for 4-5 minutes, then open the door and add some more pieces of wood. Do not leave the fire unattended during this process.
4. Close the door fully, but leave the air control fully open until the wood is well alight and burning brightly.



Note: It may be necessary in some cases to leave the door ajar for longer periods and use more small kindling in order to establish enough heat to warm up the flue. Only when the flue is sufficiently warm to create the necessary draft to maintain the fire may the door be fully closed. It may take trial and error to find a lighting procedure that suits your situation.

NORMAL OPERATION ONCE THE FIRE IS ESTABLISHED

The Forbes bench top wood fire requires fresh air for optimal burning, and this must come from outside the house. A normal house will allow enough air in through incidental openings to satisfy this. We recommend that a source of air be located near the wood fire for best performance. This can be simply a window that is left ajar while the wood fire is in use. If this is not possible, and the house is particularly air-tight, a vent may need to be installed next to the wood fire to provide the air required. Lack of air will lead to a wood fire that is hard to light and get going, or in bad cases, to smoke spilling back into the room.

While an air control is fitted, it is recommended that, for the cleanest operation, this is left fully open and the amount of heat generated is adjusted by the amount of fuel that is used. The heater burns cleanest when it is running at a high rate.

Once the fire is well established, the output can be regulated by the amount of wood that is used.

To reload the fire, open the air control fully, and then open the door. Note that the fire burns hottest at the front of the firebox and so there may be unburnt wood at the back when it comes time to reload. This is normal. Rake through the contents to move any unburnt wood forward and then place the desired amount of wood into the firebox. Close the door.

The view of the flame through the glass door will give you the best indication of how your wood fire is performing. In order to accomplish maximum combustion performance, the fire should give a rolling, boiling flame pattern. At reduced setting the flame will be slower.

For all practical purposes, the air control should be fully open when there is unburnt wood in the wood fire. Fire holding periods may be increased by turning down the air control, this is at the cost of greater emissions and creosote production. At low settings, creosote may condense on the glass, reducing the visibility of the fire. The best indication that the fire is operating correctly is that the glass remains clean, without build-up of black or brown deposits. Some whitish bloom on the glass is normal and does not generally indicate a fault in operation.

The way you burn your wood fire will also determine what is happening up the flue. Continued burning at high rates with a good clean flame will minimise soot and creosote deposits in the flue.

CLEANING OUT THE WOOD FIRE

Your wood fire should require minimum cleaning. If the wood fire is operated correctly according to the instructions most of the ash will be consumed by later fires and a bed of ash will be maintained that does not build up to any great extent.

If you find that you have to clean out ashes every day or so, it indicates that the wood fire is not being operated correctly. Either excessively wet wood or foreign materials are being burnt, or the air control is being turned down too much.

Don't clean out the firebox completely. Leave approximately 25mm of ash in the bottom of the firebox after cleaning. These ashes in the bottom of the wood fire assist the burning process, by insulating the firebox and allowing air circulation under the fire bed.

When emptying ashes use a metal container with a tight fitting lid. Do not use this container for any other purpose. The closed container of ashes should immediately be taken outdoors to a location well away from any combustible materials, pending final disposal. If the ashes are to be disposed of by burial in the garden or otherwise locally dispersed, they should be retained in the container until they are completely extinguished and cold. This may take several days.

CREOSOTE FORMATION AND NEED FOR REMOVAL

We recommend the flue of your wood fire is inspected before use at the start of the heating season and also periodically during the season. When you are able to operate the wood fire without creating creosote deposits, the interval between inspections may be increased, but the flue must always be inspected and cleaned at least once a year.

The flue should be swept by a professional chimney sweep to remove any build-up of creosote and soot. A professional sweep should also advise of any problems that may be detected in the inspection of the flue and offer advice on any repair and replacements. Your Kent wood fire requires minimal maintenance, and will keep its good looks for a long time with just a little attention.

FIREWOOD

Modern clean burning wood fires are designed to burn **seasoned dry natural soft wood only**, such as pine.

The moisture content of the wood affects the performance of your wood fire greatly. The most important thing you can do to operate your wood fire correctly is to use the correct seasoned dry wood. All types of seasoned natural wood will burn in your wood fire, but your wood fire is tuned to burn clean, dry soft woods.

Fossil fuels such as coal are not suitable. Do not burn garbage or large quantities of paper, cardboard or similar materials. Do not use chemically impregnated timber, reclaimed wood from wet environments and do not use drift wood. These corrode the components of the wood fire and flue systems reducing the life of your wood fire.

Important: Kent wood fires with a wood box are designed for temporary wood storage only. Store your "ready-to-use" firewood away from the wood fire while in use. If firewood is placed near or under the wood fire it must be there for reloading use only, and be rotated through often to stop the firewood becoming tinder dry and a potential fire safety hazard.

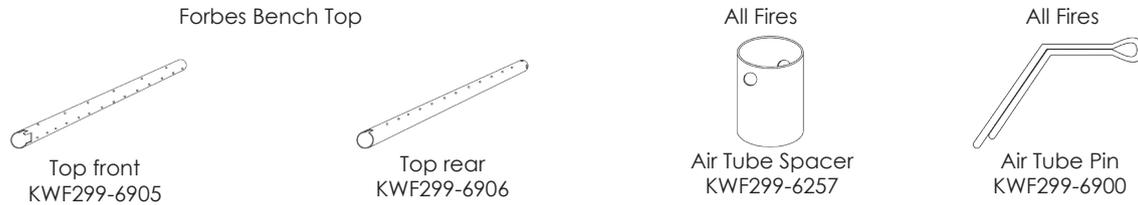
Handy Hint: When preparing firewood for use, store it in an open shed exposed to wind. If stored in an enclosed garage or shed it will take longer to dry out.

DO NOT BURN TREATED TIMBER
DO NOT BURN WET OR UNSEASONED WOOD

REPLACEMENT PARTS

Replacement parts must be original Kent parts. Maintenance required should be carried out by qualified service people. Please consult your Kent retailer for their details. The wood fire should not be modified in any way except in accordance with instructions supplied by Kent.

KENT AIR TUBES



The air tube in your Kent wood fire is an important part of the appliance and helps ensure a clean, efficient and controllable burn. However, air tubes are a consumable item and are designed to be replaced as they are likely to degrade with use due to the exposure to the extreme heat of the fire.

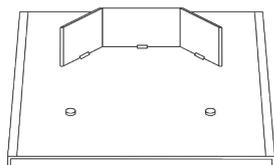
The life of the air tube will depend on what is burnt in the fire, how hot the fire usually burns and also the ash level. If the ash level is allowed to build up. It means hot embers are in closer proximity to the tube, increasing the temperature exposure. Keep ember levels to the recommended maximum height of 3cm below air tubes.

Replacing air tubes:

1. Remove bricks from both sides
2. Remove the pin from the end of the old tube
3. Slide tube to one side; this will release the opposite end
4. Pull released end up and towards the door and remove
5. Reverse process for new tube

KENT BAFFLES

Forbes Bench Top



Includes Promat bricks
Dimensions (mm): 480 x 200
KWF299-7043

The baffle in your Kent wood fire is an important part of the appliance and helps ensure a clean, efficient and controllable burn. However, baffles are a consumable item and are designed to be replaced as they are likely to degrade with use due to the exposure to the extreme heat of the fire.

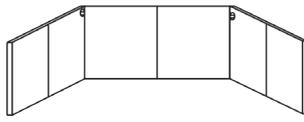
The life of the baffle will depend on what is burnt in the fire and how hot the fire usually burns.

Replacing baffles:

1. Remove side bricks from the fire
2. Pull the old baffle out of the locator hole in the rear of the fire
3. Allow the front of the baffle to drop forward and down to the bottom of the fire
4. Rotate and remove through the door
5. Reverse process to install new baffle

KENT FIRE BRICKS

Forbes Bench Top



Dimensions (mm):
2 - 240 x 190 x 25
2 - 245 x 177 x 25

KWF299-7089

The fire bricks in your Kent wood fire are an important part of the appliance and helps ensure a clean and efficient burn. However, fire bricks are a consumable item and are designed to be replaced as they are likely to degrade with use due to the exposure to the extreme heat of the fire.

The life of the fire bricks will depend on what is burnt in the fire and how hot the fire usually burns and also any damage sustained from wood not being positioned correctly.

At the risk of damaging the fire box, fire bricks should be replaced when they are damaged enough that they no longer remain in place and cannot perform their intended function. Fire bricks which are only cracked but still remain in place do not need to be replaced and are safe to use.

NOTE: For all other fire parts please contact your Kent dealer.

WARRANTY

STANDARD WARRANTY

Your Kent wood fire is warranted for 10 years on the firebox with the exception of the following Kent parts: glass, glass seal, door seal, fire bricks, flue, secondary air system and removable baffle which will all have a 12 month warranty (parts only) provided they have been installed by an approved installer. The warranty does not apply to normal wear and tear, misuse or neglect, nor if parts of the wood fire are replaced with non genuine Kent parts. Kent recommends a flue sweep and annual service with replacement of any worn parts recommended, to obtain maximum life out of your wood fire. Please note that with everyday use you must expect some visual signs of wear on the surface of this product.

CONDITIONS

Your Kent wood fire must be installed in accordance with the manufacturer's instructions and all applicable standards, regulations and by-laws. Your Kent wood fire must be installed with an approved flue system. Failure to do so may void your warranty in its entirety. The company is not liable for any consequential damage by a failure or defect covered in this warranty. All claims against the warranty must be directed in the first instance to the retail outlet from which you made your purchase. Any repairs undertaken without the express authority of Kent will invalidate this warranty. This warranty does not cover damage caused by wetbacks/water boosters, burning improper fuels including but not limited to (driftwood/treated wood/coal or plastic-based waste), or installation, plumbing and sweeping work done by others (the installer is liable for any incorrect procedures or poor workmanship).

TRANSFERABILITY

Your Kent wood fire warranty is transferable on the sale of the home where the wood fire is installed. Nothing in this warranty is intended to limit any conditions of the warranty right or remedy pursuant to the Consumer Guarantee Act 1993, except to the extent permitted under the Act. Your Kent wood fire is intended for domestic use only and the warranty is not valid for wood fires to be used for business purposes. Kent reserves the right to alter or amend specifications or designs of its product without prior notice.

KENT WARRANTY REGISTRATION

Please keep this copy for your records.

MODEL:

SERIAL NUMBER:

RETAILER:

PURCHASE DATE:

INVOICE NUMBER:

(Please keep your invoice attached to your warranty record)

INSTALLER NAME:

DATE INSTALLED:

NZ HOME HEATING
ASSOCIATION NUMBER:

INSTALLER SIGNATURE:

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