Miflues
flue and chimney systems

# QUATTRO-SS

## Multi-Fuel Liners

KM40323
to BS715

# **QUATTRO-SS** *Multi-Fuel Liner*

**QUATTRO-SS (SINGLE STRIP) is a flexible twin-skinned stainless steel flue lining with a smooth inner wall. The system has been designed to upgrade existing chimneys which have failed, or for use where the performance is not adequate for modern conditions.**

**QUATTRO-SS (SINGLE STRIP) liner is classified as a Class ONE flue liner and is suitable for gas, oil and multi-fuel, including wood burning appliances where the maximum flue gas temperature does not exceed 500°C. Manufactured in two skins of either 316 grade or 904 grade austenitic stainless steel, with a range of accessories and is available in 5 diameters. It is also ok for condensing appliances.**

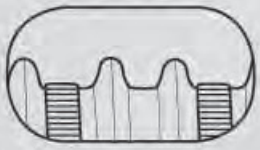
## *Approvals*

**QUATTRO-SS** has been approved and tested to BS EN 1856-4-2006.

It is manufactured under an ISO 9001:2000 Quality system.

## *Design*

**QUATTRO-SS (SINGLE STRIP)** is manufactured using a single strip of raw material, this is rolled, seamed and manipulated in such a way that it forms both the outer corrugated durable case and an extremely smooth inner bore. The product has 2 convolutions between each seam.



The product is marked with BS EN1856-2 designation number and directional gas flow on every metre.

**QUATTRO-SS (SINGLE STRIP)** jointing system is shown above. With a knurled seam and two convolutions between each seam, provides it with excellent cross sectional strength, and gives it great flexibility.

**QUATTRO-SS (SINGLE STRIP)** has a high resistance to damage, and is virtually impossible to unwind and can withstand prolonged high temperatures without distortion.

**QUATTRO-SS (SINGLE STRIP)** can be used with UK solid mineral based fuels that contain sulphur (up to 2%) and chlorine (up to 1%) as well as wood and wood products.


The **maximum bending radius** of all **QUATTRO** flexible liners is 3 x diameter;

**100mm** – 300mm **125mm** – 375mm
**150mm** – 450mm **180mm** – 540mm
**200mm** – 600mm

## *Specifications*

**316 QUATTRO-SS – TYPE 35Z**
Grade: 316L – low carbon stainless steel.
Thickness: 0.12mm - tolerance –0, +0.01.
Designation No. EN1856-2-T450-N1-D-V3-L50024-G

**316 QUATTRO-SS – TYPE 35L**
Grade: 316L – low carbon stainless steel.
Thickness: 0.10mm - tolerance –0, +0.01.
Designation No. EN1856-2-T450-N1-D-V3-L50020-G

**904 QUATTRO-SS – TYPE 36Z**
Grade: 904L – low carbon stainless steel.
Thickness: 0.12mm - tolerance –0, +0.01.
Designation No. EN 1856-2-T450-N1-D-V3-L70024-G

**904 QUATTRO-SS – TYPE 36L**
Grade: 904L – low carbon stainless steel.
Thickness: 0.10mm - tolerance –0, +0.01.
Designation No. EN 1856-2-T450-N1-D-V3-L70020-G

## *Packaging*

**QUATTRO** is available in pre-cut packs for diameters 125mm, 150mm, 180mm and 200mm. Each pack contains a cut length of liner up to 14m, and is shrink wrapped.

Full coils are available in a variety of different sizes, see table below for full options. They are also wound and shrink wrapped.

**QUATTRO** liner in diameters 100mm, 125mm, 155mm, 180mm and 200mm are available in full length coils, these coil lengths are:

| Diameter | Coil Length |
|---|---|
| 100mm | 54m |
| 125mm | 54m |
| 150mm | 49m |
| 180mm | 32m |
| 200mm | 30m |

## *Quattro-SS 100m*

Mi-Flues are dedicated to helping our environment, that's why we have come up with this self contained flue liner carrier. Not only is it reusable, it means you have no plastic or cardboard waste, and the liner never gets damaged. After cutting the liner it is simply rewound into its case - no mess.
*A forklift is required for deliveries.*

# QUATTRO-SS *Multi-Fuel Liner*

## *Installation Instructions*

### PREPARATION

Before starting work, read the installation instructions carefully and contact our technical Department with any queries.

Good working practices and statutory health and safety considerations should be followed. Safe working platforms or other means of access should be arranged to avoid accidents. Wear protective gloves, goggles and dust-masks, particularly when handling insulation, and dusty or sooty materials. There is a danger of cuts and abrasions from the liner and metal fittings.

### SIZE OF LINING

The following is a general guide for flue sizing but referral should be made to Building Regulations ADJ Clause 2.4 and Table 2.2.

***Open fires including flame effect open gas fires.***
Minimum 200mm diameter for fire openings up to 500mm x 500mm. Larger fires require a flue area equal to 14-16% of the total area of the fireplace opening. (Minimum flue diameter 180mm for gas effect fires).

***Solid-fuel stoves, room heaters, boilers and cookers.***
Minimum 150mm diameter, 180mm – 200mm for larger or multi-fuel appliances.

***Other appliances.***
Consult the appliance manufacturer.

Unless the appliance manufacturer recommends otherwise, the diameter of the liner should not be smaller than the appliance outlet.

### PREPARING THE CHIMNEY

Check that the appliance and chimney arrangements are satisfactory and that the walls of the chimney are at least 100mm thick solid masonry; ensure that the chimney is structurally sound, wind proof and watertight. Clean the chimney using a brush and rods. Remove any terminals or cappings, which might effect installation of the liner.

There are two methods of installation at the top of the stack that we recommend (1) where the pot is removed to secure the liner or (2) a pot hanger or pot hanging cowl is used therefore removal of the pot is not required – this is not recommended in an exposed area.

### METHOD (1) - POT REMOVAL

(a) Attach the draw-cord to the nose cone. Use self-tapping screws OR strong tape to secure the nose cone to the end of the liner. Lower it into the chimney from the top, if necessary gently pulling from below using the draw-cord. When the lower end position has been determined remove the cone

(b) Remove the chimney pot and clear any cement and debris from the pot area.

(c) When the chimney liner is all the way through the flue, connect the base of the chimney liner to the appropriate adaptor using stainless steel screws and seal with fire cement.

(d) If you are insulating the chimney do this now.

(e) Cut the liner to the desired length leaving about 100mm for the clamp to be secured and insert the Protection Sleeve into the top of the liner.

(f) Place the Top Plate over the liner and secure the liner in place using the Top Clamp. The clamp should secure both the liner and Protection Sleeve.

(g) Flaunch the Top Plate and Top Clamp and surrounding area with a suitable mortar and re-fit the chimney pot.

### METHOD (2) - NOT REMOVING POT

(a) Attach the draw-cord to the nose cone. Use self-tapping screws OR strong tape to secure the nose cone to the end of the liner. Lower it into the chimney from the top, if necessary gently pulling from below using the draw-cord. When the lower end position has been determined remove the cone.

(b) When the chimney liner is all the way through the flue, connect the base of the chimney liner to the appropriate adaptor using stainless steel screws and seal with fire cement.

(c) If you are insulating the chimney do this now.

(d) Cut the liner to the desired length – this should be to the height of the chimney pot.

(e) Attach the Pot Hanger or Pot Hanging Cowl to the top of the liner – the bottom spigot is inserted into the top of the liner. The straps are then tightened around the liner to form a secure hold.

(f) The Pot Hanger or Pot Hanging Cowl should now fit flush with the top of the chimney pot.

(g) If the Hanger has a strap on the outside secure this to the pot.

### LINING TO APPLIANCE CONNECTION

At the bottom of the chimney, secure the liner into the socket of an appliance adaptor (MA Adaptor (20-D-MA)) using fire cement. For open fires, secure and seal a flue gather into the masonry gather above the fire opening.

For other appliances use a minimum 600mm length of flue pipe before connecting to the appliance adaptor. Note that the liner should be the at least the same diameter as the outlet from the appliance.

The space between the liner and the inside wall of the chimney should be sealed.

The Chimney Notice Plate should be filled in and fixed in an appropriate place as per Building Regulations.

### INSULATION

We recommend insulation or back filling only on tall, large or exposed chimneys. Whilst not essential, an insulated flue should ensure maximum performance and minimize condensation in the lining.

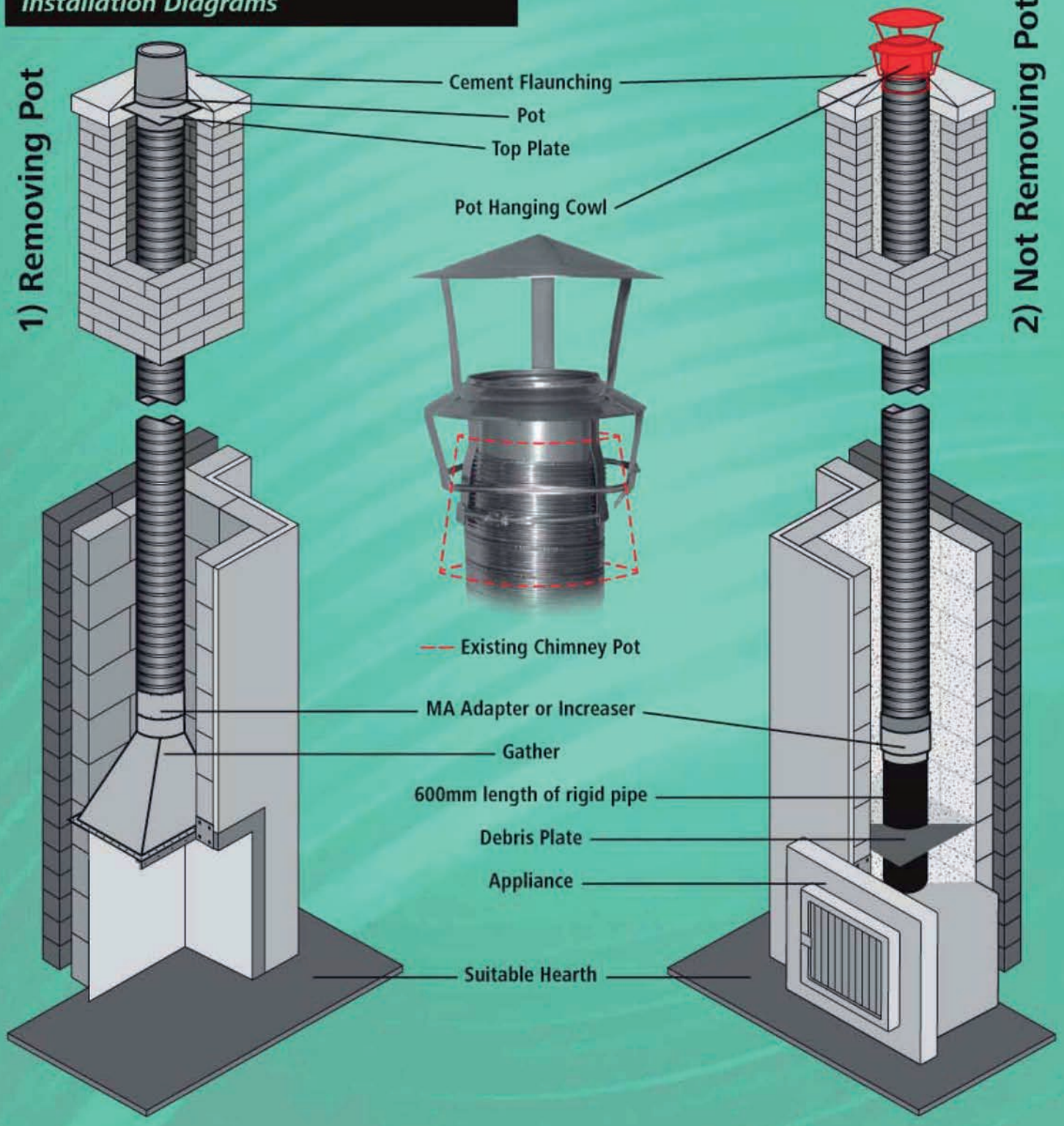
To insulate the chimney either (1) use a loose fill granular insulating material such as Micafil, this should be mixed one part ordinary Portland cement to six parts Micafil. (2) rockwool insulating tubes.

### CUTTING THE LINER

We recommend cutting the liner with a hacksaw, be sure to use protective gloves while cutting because the liner can have razor sharp edges.

# QUATTRO-SS *Multi-Fuel Liner*

## *Installation Diagrams*



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