
Turner & Wilson
FLUE TECHNOLOGY
VAN GOGH

Twinflex Multifuel - Turner & Wilson

WHY LINE A CHIMNEY?

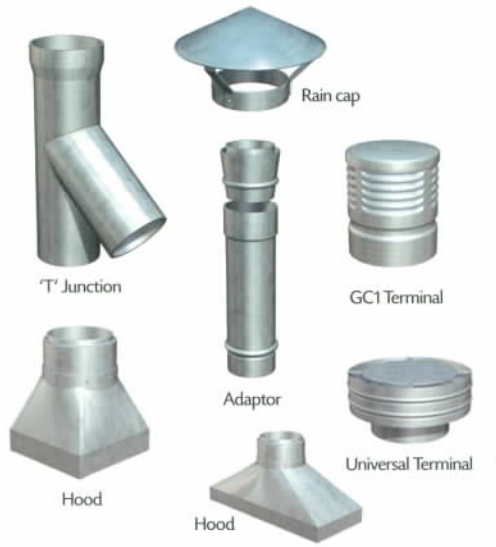
A good draft is essential to an efficient flue. So for many years different sizes of chimney in different materials have been built to vent appliances. But the day comes when a liner must be fitted. It may be prompted by routine maintenance, or fitting a new appliance, or even the catastrophic failure of the existing liner. That's the day to choose carefully, because your installation will have to take much more than just the heat.

In fact a chimney is a chemical plant producing Sulphurous Acid, Carbon Monoxide and Sulphur Dioxide. Combine these with with flue temperatures of over one thousand degrees C and you'll realise that you need an extraordinary flue liner to ensure a trouble-free life. There is one proven solution... Twinflex MF from Turner & Wilson. It's a multi-fuel flexible chimney liner constructed in twin-skin stainless steel, and it works equally well on enclosed appliances or open fires.

THE CHARACTERISTICS OF COMBUSTION

Enclosed appliances and open fires produce quite different chimney effects. Understand these and you will choose a flue liner with confidence. The Twinflex MF liner has been designed to cope with all these problems.

Turner & Wilson Fittings



ENCLOSED MULTI-FUEL APPLIANCES

Thermal Shock

In just a few seconds, the temperature of a boiler flue can rise from perhaps 100°C to 500°C. This induces huge thermal shock which no masonry or ceramic liner can withstand for long. Only a high quality steel liner with its inherent bellows construction can expand and contract undamaged. Twinflex MF is the extraordinary liner designed to withstand these extraordinary shock loads.

Brickwork, condensation & protection

Water is the main product of combustion. At first it's invisible in the form of super-heated steam. But high efficiency appliances lower the stack temperatures causing the steam to condense. Without a liner these condensates will saturate the brickwork. Worse still, they are acidic and cause long-term damage to the masonry. Stainless steel Twinflex MF remains inert when attacked by acid condensation.

Creating a better draft

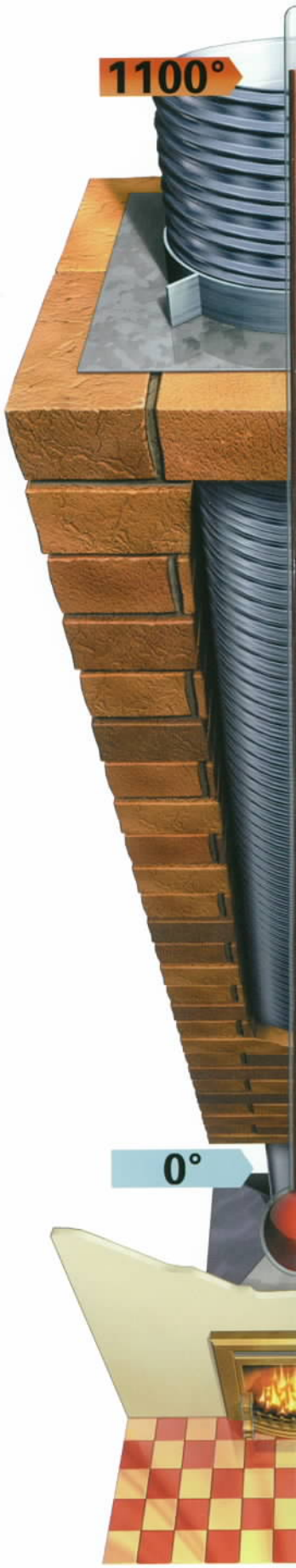
Greater fuel efficiency can be a by-product of using twinflex MF. The correct sizing of the liner improves draft conditions to the appliance and brings the long-term benefits of economy in operation. See our www.turnerwilson.com website for troubleshooting tips.

OPEN FIRES BURNING SOLID FUELS

Over-fire drafts helps regulate the chimney

An open fire is the least efficient way to heat a house but it is to some extent self regulating. This is because huge quantities of air are drawn over the top of the fire and up the chimney. That's over 3,000 cu. ft/hr of air which takes no part in the burning process. This "over-fire draft" dilutes the gases and lowers the temperature in the chimney. It reduces thermal shock and dries the condensates.

A chimney in good repair with clay liners can cope with the lower thermal shock from open fires. A stainless steel lining will be needed only if a specific



FOR MORE DETAILED INFORMATION VISIT OUR WEBSITE AT:
www.turnerwilson.com

Technology *Plus* Stainless Steel Quality

size flue is required where some proprietary appliance has been installed.

If the brickwork is poor or if extra protection is needed then flue liners can help improve the situation.

Liners will not cure smoke seeping into rooms

It's worth remembering that a chimney is under negative pressure. Air can be drawn into the flue through leaking masonry as district from smoke forcing its way out. So when smoke is present in a building the cause will be due to down-drafts, blocked flues or the design of the fireplace. There's advice on troublesome chimneys and fireplace design on our website: www.turnerwilson.com.

THE CHARACTERISTICS OF TWINFLEX MF

Some people think that flexible chimney liners are all much the same. Experienced installers know this is not so. In fact Turner & Wilson Twinflex MF has several unique features which set it apart from 'ordinary' chimney liners.

Triple lock construction

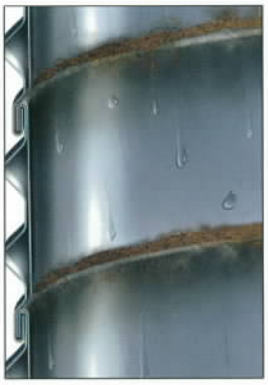
Twinflex has inner and outer walls jointed and locked in 3 planes. This gives maximum joint integrity and allows even weight and load distribution throughout the entire length of the installation.

Superior Quality

Twinflex is built in high performance 316 or 904 molybdenum bearing steels. The smooth inner bore allows optimum passage of flue gases and draining of condensates.

High Overlap

The Twinflex is simply superior. The unique large overlap of the joint formed by the inner skin protects against acid penetration. On close inspection you'll find some liners on the market with minimal or non-existent overlaps.



Conventional folded seam joints can loosen under compressive loads permitting condensates to enter.

Twinflex Joints lock in every direction with a large overlap to protect against condensates.

Spring Loading

The unique Twinflex design and construction provides a built-in shock absorption system. The liner will flex vertically. This helps resist the thermal shock when subjected to high temperatures. The narrow strip continuous steel used in manufacture also protects from high temperature ripple effects.

European Extremes

Even under the EC definition of extreme conditions for violent chimney fires (1100 degrees c). Twinflex remains intact. It's resilient in solid fuel, oil and gas installations.

TWINFLEX - TRIPLE EFFECTIVE FOR SOLID FUEL, OIL AND GAS FLUES

Full specification: **www.turnerwilson.com.**

316

APPLICATIONS: Dry logs, Peat, Oil, Gas, Open Coal Fires

SPECIFICATION: High Quality Stainless Steel

904

APPLICATIONS: Dry logs, Peat, Oil, Gas, Open Coal Fires & Stoves Burning Coal

SPECIFICATION: High Quality Alloy with increased Chromium Molybdenum Content

SIZE GUIDE

TUBE DIAMETER	BENDING DIAMETER RADIUS	TUBE DIAMETER	BENDING DIAMETER RADIUS
100mm	1.00m	175mm	1.75m
125mm	1.25m	200mm	2.00m
150mm	1.75m	250mm	2.50m

The perfect installation

1 HANDLING

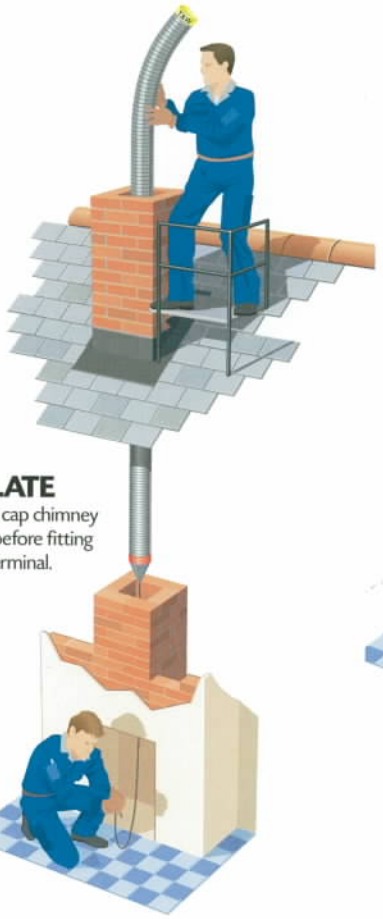
Exposed edges are sharp. Protect against cuts by taping ends. Linings have a coating of mineral oil. Do not over coil tubes.

TUBE DIA.	BENDING DIA. RADIUS
100mm	1.00m
125mm	1.25m
150mm	1.75m
175mm	1.75m
200mm	2.0m
250mm	2.5m

N.B. Coils are under tension. Take care when untying as the end will spring outwards. Linings may be cut with a hacksaw and tin snips. When cutting a length from a drum do not attempt to twist the lining or attempt to recoil the length until it has been cut, as the high leverage strains this causes, may lead to a collapse of the lining. The minimum bending radius is three times the tube diameter measured on the inside of the bend.

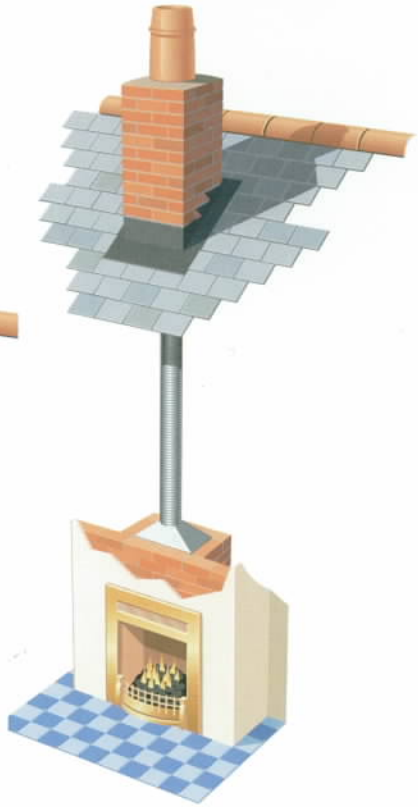
5 NOSE CONE

Always use a nose cone. This stops debris entering the tube and makes installation easier.



8 TERMINAL

finish setting terminal in sand and cement mortar.



2 CLEANING

Thoroughly sweep the chimney. Do not use chemical cleaners.

7 CLAMP PLATE

Fix clamp plate to cap chimney and clamp lining before fitting chimney pot to terminal.

3 BRICKWORK

Brickwork, damp proof courses, flashings etc should be thoroughly checked and corrected before installation.

6 AIR SUPPLY

There MUST be an adequate AIR SUPPLY. ENSURE that the air intakes are not contaminated by any chemical fumes.

4 OBSTRUCTIONS

Shine a light down the chimney to ensure there are no obstructions and that the lining will pass down the chimney. If in doubt use a short test piece fitted with a nose cone..

Turner & Wilson

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