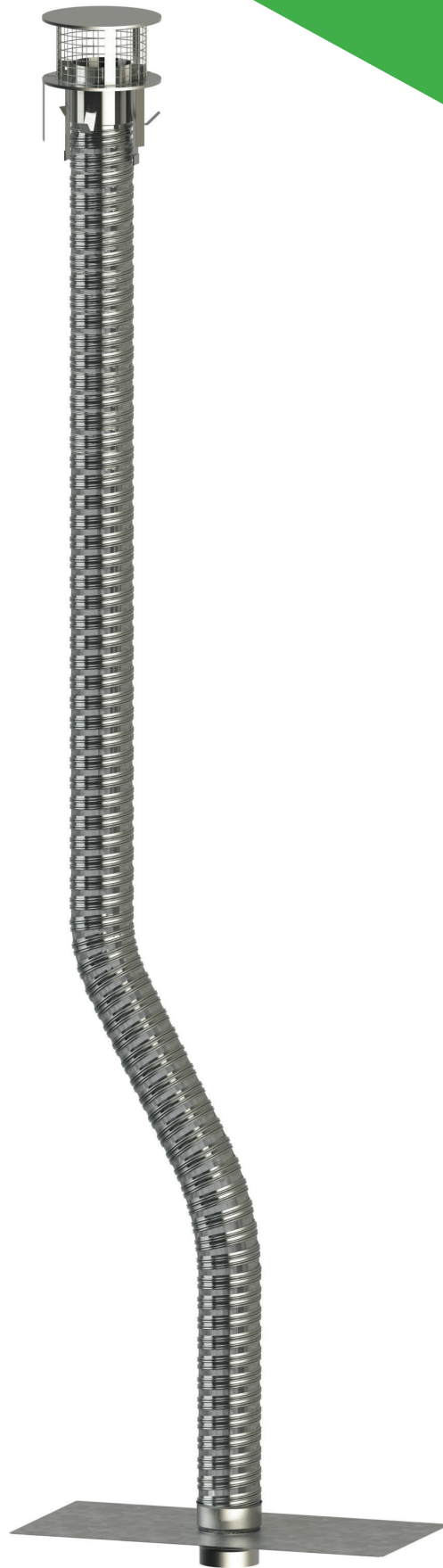


Midflex

Installation

2017



Twin Wall Midflex
Flexible Flue Liner System

For: Multifuel
Woodburning
Biomass
Pellet
Gas and oil applications

Made in the UK.
130mm to 200mm available from stock
Powder Coated Stock available

0333 456 8000
www.midtherm.co.uk



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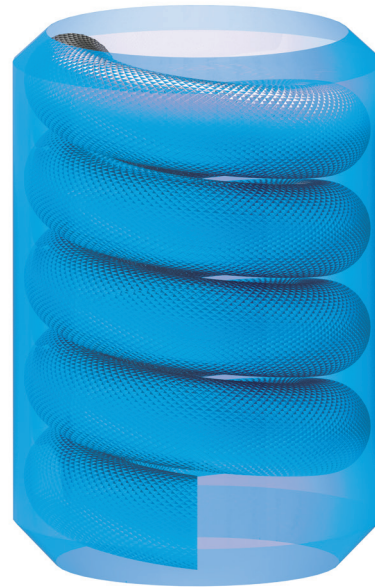
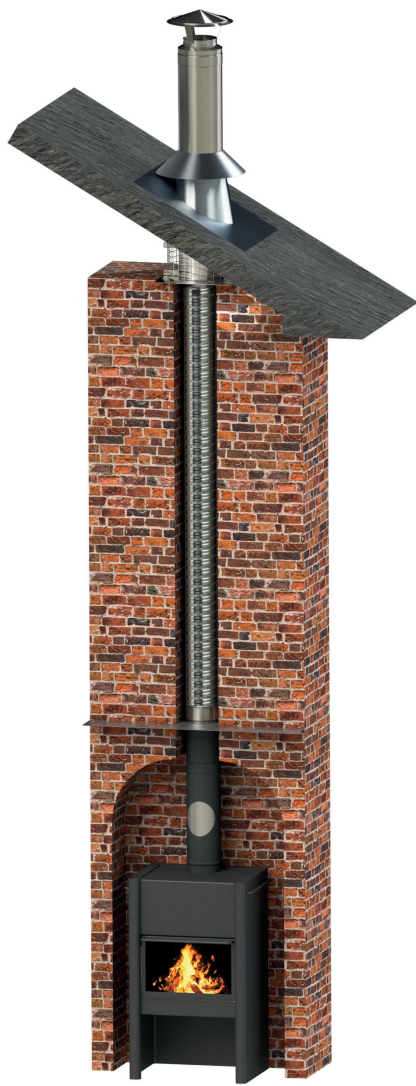
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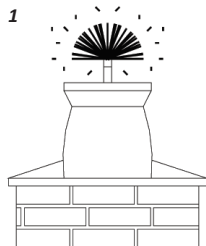
DESCRIPTION

The Midflex products are twin wall flexible liners suitable for lining masonry chimneys, and should not be placed near combustible materials. All the range is manufactured from high grade austenitic stainless steel profiled strip which is rolled and seamed in a continuous process and which results in a product with a smooth inner surface and robust outer casing. The Midflex 316L liner is manufactured from 316L inner and outer while the Midflex 904L liner is manufactured from 904L inner and outer. These products offer excellent corrosion resistance and both 316 and 904 have a temperature range of T600.

OPERATING AND WARRANTY

Midflex 316L has a 20 year warranty while Midflex 904L has a 35 year warranty against corrosion caused by the products of combustion, as emitted by the burning of gas, oil, wood and coal. (Details of suitable fuels can be obtained from HETAS Ltd.) The warranty applies providing the liner is correctly installed by a HETAS registered installer on an approved appliance, maintaining a controlled vented air space with clean stack walls, the liner regularly cleaned and inspected, and the stack otherwise maintained and sealed. Excluded from the warranty are chimney liners installed in hairdressing or dry cleaning establishments or any other where hydrochloric or hydrofluoric vapours are present, liners connected to fully condensing boilers, or where any chemical cleaning sprays have been used. See a copy of the warranty for further details.

Installations shall meet the requirements of Building Regulations Document J.



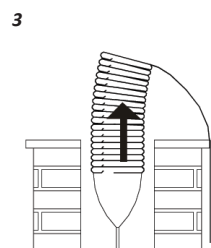
CLEANING AND REPAIR OF EXISTING CHIMNEY

It is important that the chimney to be lined is thoroughly cleaned using the correct equipment, see figure 1. This should be carried out by a competent chimney sweep. The internal face of the chimney should then be checked to ensure that it is clean. The external face should then be checked for damage and any damage should be repaired prior to installing the liner, to ensure it is structurally sound and rainwater cannot penetrate into the cavity.



UNPACKING INSTRUCTIONS

When unpacking the product, uncoil the flex from the outside of the coil, removing the packaging to do so. This is necessary to avoid exceeding the minimum curvature radii. Uncoiling from the inside of the coil will damage the flex and void your warranty. Please retain the packaging label for future reference. See figure 2.

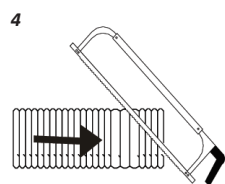


PASSAGE WAY CHECK/TEST

Prior to installing the chimney liner the internal passage way of the chimney must be checked. This is done by using a one metre test length of liner of the same diameter as that which is to be installed. The one metre test length should be fixed with a nose cone and two suitable lengths of rope, one of which should be passed through the passage way prior to fixing to nose cone. The check/test should then be conducted by drawing the test length through the chimney passage way in the proposed direction of installation of the main liner. The liner will run more easily if a fine coil spring is wrapped around the liner, providing a roller action. See figure 3. NOTE: If at any time the one metre test length lodges in the passage way, it may be withdrawn by pulling the rope on the opposite end to retrieve the test length.

MEASUREMENT ASSESSMENT

Dropping a weighted line through the stack and taking measurements can assess the length of chimney flue liner required. It should not be necessary to cut the liner after installation if reasonable care has been taken with the measurements. If it is for any reason necessary to cut, once installed, it is best to have the surplus to be cut at the top. NOTE: Recommended clearance between the chimney shaft and outside diameter of the flue liner is 25mm, this is only applicable to chimney shafts made bricks or other non-combustible material.



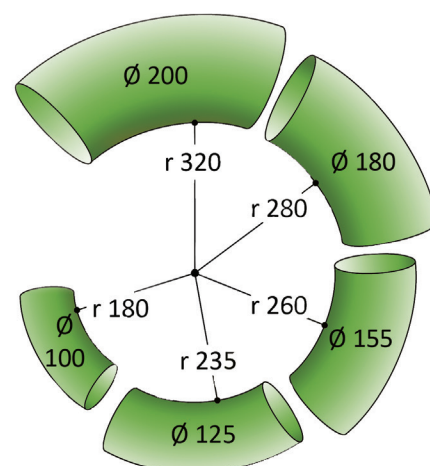
CUTTING INSTRUCTIONS

Place the liner on a flat surface and clamp, fully stretch the liner in the region to be cut and bind twice with an adhesive duct tape. Cut on the raised convolution, not in the groove, using a deep-bow hand saw, see figure 4. To secure the cut ends the adhesive tape method is satisfactory.

Minimum Curvature Radii

The product's flexibility enables it to be handled and installed with minimum curvature radii. When unpacking the product, uncoil the flex from the outside of the coil, removing the packaging to do so. This is necessary to avoid exceeding the minimum curvature radii. Uncoiling from the inside of the coil will damage the flex and void your warranty.

Please see the packaging instructions for further details.



INSTALLING THE LINER

The work required for securing bottom support bracket/plate and clamp bracket at the top and bottom of the stack should be carried out in such a way as to allow free passage of the liner without possibility of causing friction on the liner or catching the stack. The nose cone will allow easy penetration of the liner without causing friction.

The length required to be installed should be either on the roof or positioned at the base of the chimney, depending from which end of the chimney it is to be installed. Prior to installing the liner a nose cone and rope (the rope being passed through the chimney passage way first) should be fixed to the correct end of the liner in keeping with the direction of the flue gas flow as indicated by the arrows on the liner (arrows must point upwards). Robust nose cones are available.

The liner should then be introduced into the chimney by pulling the rope through the aperture. One person should stand at the point of entry of the stack to guide the liner through during installation, see figure 5. The liner should project from the base of the chimney by just sufficient length to connect to the stainless steel or Midtherm Vitrelux flue pipe. If the installed length is over 12 metres, supports should be installed at 12 metre intervals.

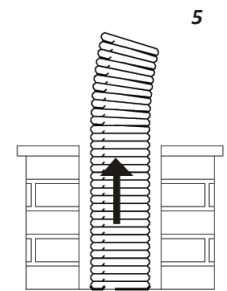
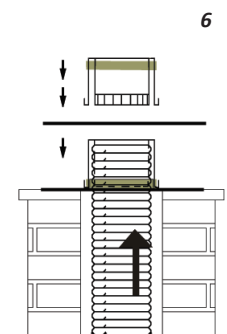


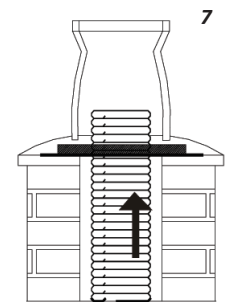
PLATE AND CLAMP AND PROTECTION SLEEVE

Fit clamp bracket and closure plate at top of the chimney. With the increased use of mechanical aids to clean products, we recommend the use of a protection sleeve. If it's intended for a mortar clay pot, apply mix over the plate, re-locate the pot. See figure 6 and 7.



TERMINATION

The Code of Practice CP131 does not generally recommend terminals for a number of reasons, one of which is that it affects the ability to clean and can also lead to premature build-up of soot. However, many chimneys are located in conditions where down draughts occur, our AD Cowl or Rotorvent Cowl are effective in these conditions. If using a terminal, ensure users know why a terminal is being used and that sweeping facilities are not impaired.

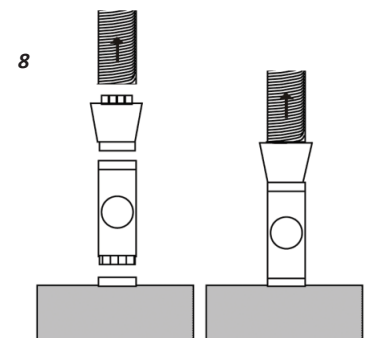


CLAY POT HANGING COWLS

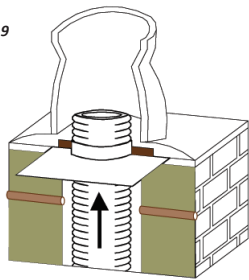
Offer the flex up to the plain end of the clay pot adaptor and secure a jubilee band around the flex, tighten and fix in place. With the clay pot adaptor secured firmly to the Midflex liner, apply a bead of silicone to the skirt then feed the liner into the chimney ensuring the arrows on the flexible liner point up the chimney. Secure the clay pot adaptor to the pot. Sit the three attaching straps on the outside of the clay pot and secure with a jubilee band, tighten until secure.

CONNECTION OF LINER TO APPLIANCE

When connecting the liner to a wood burning stove, a short length of connecting flue pipe e.g. Vitrelux, SW316 0.9mm etc. (complete with a clean out door for access to sweep if required) must be used directly off the appliance. To link the liner and connecting flue pipe, the liner should be pushed into a Midtherm flex adaptor and all joints sealed. Then secure the liner in place with the flue adaptor bolts or stainless steel self tapping screws. Figure 8 shows how the connection between the flexible liner and the appliance should be made. Remember that the spigot (crimped end) of the flue pipe must point downward to allow condensation to drain. Midflex is also suitable for use on gas and oil condensing applications. In this instance the connections to and from the flex should be sealed with silicone sealant suitable for the appliance operating temperature.



9



AIR GAP VENTING

A simple way of maintaining the air gap is to insert, at an angle to prevent rainingress, a 15mm diameter copper pipe to allow any moisture in the air gap to evaporate. See figure 9

BACKFILL/INSULATE

We recommend that all installations be back filled or insulated with a high density mineral wool such as Rockwool to improve the resistance to corrosion of the liner. We offer an effective alternative with the Midtherm Flue Jacket, designed to reduce corrosion and maintain flue gas temperature.

DATA PLATE

The plate should be permanently and indelibly marked and fixed in a visible position. The plate must not be covered or removed. Possible locations are by the cleaning / inspection access, the side of the fire place, at the chimney inlet or possibly by the electricity / gas / water meter. The actual 'Installation Designation' written onto the data plate should reflect the combination of products installed. See figure 10

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IMPORTANT SAFETY INFORMATION
This label must not be removed or covered

Product Type: System Chimney ☐ Metal Liner ☐	Property Address: _____
Product Name: _____	Post code: _____
Installation Designation: EN 1443 - J _____ Example: EN 1443 - T450-N1-D3-G50	The Hearth & Chimney Installed in the: _____
Suitable for condensing appliances: Yes ☐ No ☐	Are suitable for: _____
Distance to combustibles in mm: _____	Installers Company Name: _____
Nominal Size: 130 ☐ 150 ☐ 180 ☐ 200 ☐ 250 ☐ 300 ☐ 350 ☐ Other: _____ mm	Installed by: _____
Product Type: Connecting Flue Pipe ☐	Installed on: _____
Product Name: _____	Address and Telephone No: _____
Installation Designation: EN 1443 - J _____ Example: EN 1443 - T450-N1-D3-G600	Other Information: _____
Suitable for condensing appliances: Yes ☐ No ☐	
Distance to combustibles in mm: _____	
Nominal Size: 100 ☐ 130 ☐ 150 ☐ 180 ☐ 200 ☐ Other: _____ mm	

Tel: 0333 456 8000
www.midtherm.co.uk

5052147024970

Guidance on completing the 'Installation Designation'

Midflex 316L & 904L	Solid/Multifuel - T600 N1 D3 G
Midflex 316L & 904L	Gas & Oil Condensing - T250 P1 W2 O

The 'Installation Designation' shall reflect the combination of products installed.

IF IN DOUBT please call the sales or technical department.

HANDLING AND STORAGE

Please handle all flexible flue liners with care and ensure that they are stored in a suitable location and on a suitable surface so as to avoid damage. Please also ensure that the products are not bent beyond the curvature radii detailed in the product sales brochures (see left) as this will cause the inner liner to deform and may damage the product beyond use.

COMPETENCE

It is important that any personnel installing, carrying out work or maintenance on appliances and flues is suitably qualified and competent to do so. More frequent maintenance may be required depending upon the application. HETAS registered personnel should be employed to install and work on solid fuel appliances and their flues. The client shall be made aware of the need for regular maintenance by persons competent to carry out such work. Please note that for some applications i.e. maintenance of liners for solid fuel appliances, the Chimney Sweep shall require qualifications as well as competence.

COMMISSIONING OF FLUE LINER, CLEANING AND MAINTENANCE

After installation a pre-commissioning inspection shall be carried out followed by a suitable smoke test (dependant upon fuel and application) and any problems rectified and re-commissioned before the Data Plate is located. Following commissioning all user instructions shall be left with the client and as far as practicable, the client shall be instructed in the correct and safe operation of the appliance and suitable fuels and the warranty scheme details :-

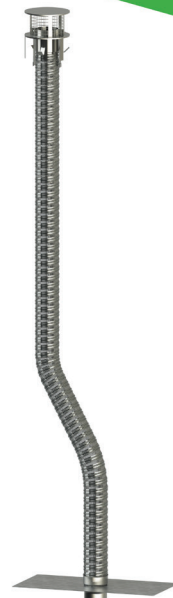
- The following checks are to be carried out on commissioning and on a regular basis thereafter, (annually as a minimum however some systems may require more regular inspections):-
- Check that the liner is suitably supported.
- Smoke test to ensure that the passageway is clear.
- Good visual inspection internally and externally to ensure that no damage has been caused to the system especially exposed sections which may be more susceptible to damage and corrosion.
- Check that the terminations are free from blockage and that flashings still provide water tight seals.
- Check all components are still secure.
- Ensure that the appliance is running as efficiently as possible.
- Review the operating, cleaning and maintenance instructions in the warranty scheme section with the homeowner, updating them on any additional precautions that may become best practice after the original installation.

FURTHER INFORMATION

- Midflex Brochure
- Appliance Manufacturer's Instructions
- Building Regulations Document J
- HETAS Ltd. - Heating Equipment Testing and Approval Scheme
- NACS - National Association of Chimney Sweeps
- British Standards

Midflex Sales Brochure

Midflex
2015



Twin Wall Midflex
Flexible Flue Liner System

For: Multifuel
Woodburning
Biomass
Pellet
Ventilation and Extract
Gas and oil applications

Made in the UK.
125mm to 200mm available
from stock in both 904L and 316L

0333 456 8000
www.midtherm.co.uk



TERMS AND CONDITIONS OF WARRANTY

Midtherm Flue Systems Limited offer a 20 year warranty scheme for Midflex 316 and a 35 year warranty scheme for Midflex 904L, against defects due to faulty manufacture or defective materials when used for its intended purpose of providing a liner for flue gases in suitable chimneys serving domestic appliances, fired with solid fuels, (dry well seasoned wood or kiln dried wood or coal), or oil, natural gas or L.P.G.. Regarding fuels in all circumstances refer to the appliance manufacturers instructions. These warranty schemes are subject to the following conditions:-

1. Registration

The warranty scheme registration form has been completed and forwarded to Midtherm Flue Systems offices to arrive within 28 days from the date of installation. The customer will receive acknowledgement of receipt by return, and this acknowledgment number should be mentioned in any further correspondence.

2. Installation

- The liner has been correctly installed as detailed in the current installation instructions by a qualified and competent person and in compliance with Building Regulations and industry installation standards.
- The chimney itself is properly constructed in suitable materials, suitable wall thickness, and be large enough to ensure the minimum clearance to the brick chimney is maintained.
- The minimum clearance to the brick chimney must be maintained via brackets where bends occur in the chimney.
- The chimney must also have been thoroughly cleaned of all soot deposits, and then checked with an internal camera to make sure that no combustible materials are present, and that the chimney is in good condition, water tight, and wind proof. Any faults found should be rectified before installing the liner.
- All gable end and exposed installations must be back filled or insulated with high density mineral wool such as Rockwool to improve the resistance to corrosion of the liner. Flue jackets can also be used for this purpose.
- The liner must have been installed in one complete length, without damage, or modification before, during or after the installation.
- All fittings, adaptors, connectors and ancillaries must be supplied as standard by Midtherm Flue Systems Limited.
- The product is suitable for use on the appliance.
- The appliance is installed, operated and maintained in accordance with these instructions and the appliance manufacturer's instructions.
- When carrying out smoke tests/spillage tests, consideration should be given to fans, draughts and combinations of the two which may affect the results of the test.

3. Commissioning

The appliance and flue liner must be commissioned as detailed in the current installation instructions and in line with Building Regulations, current British Standards and industry standards and should include a smoke test.

4. Handover of Information

The homeowner should be advised on the suitable fuels / operation / cleaning and maintenance requirements / warranty scheme and requirements by the installer and be specific to their installation. All user manuals shall be left with the homeowner.

5. Fuels

Coal, coke, anthracite, cured dry logs, cured dry peat, pellets, wood chip and all normal fuel oils, gas. HETAS approved fuels suitable for the liner and the appliance must be used - details can be obtained from HETAS. Smokeless fuels (processed coal products) can be used with Midflex 904L, not 316L. Solid fuels must be stored in a dry, covered environment and ventilated on all sides.

6. **Appliance Type**

Wood burning stove, Multifuel stove, Open fire, Gas fire, Gas boiler, Oil boiler, Cooker, Biomass Boiler, Pellet Stoves/Boiler, Non Condensing appliances, i.e. appliances designated D.

7. **Operation, Cleaning and Maintenance Instructions**

Cautions

All 316 stainless steel products, although have a very high corrosion resistance, are at risk when exposed to relatively high sulphur content fuels, such as processed coal products (smokeless fuels), particularly if the appliance can be left burning all night. When the appliance is under-fired, the flue gas temperature is low, and excessive condensation can result. This level of condensation and high sulphur content fuel can very quickly destroy even the best quality twin wall liner. 904L has a better corrosion resistance than 316L.

The HETAS registered installer will advise on which fuel products to avoid.

The homeowner should be shown how to correctly and safely: -

- Light the appliance
- Operate the appliance
- Clean the appliance and dispose of ash
- Achieve any specific ventilation requirements
- Re-fuel without spillage into the room
- Re-ventilate the room following a spillage to eliminate the dangers of smoke spillage
- And, also be shown how to check the Carbon Monoxide Alarm is working periodically and what to do in the event of the Carbon Monoxide alarm sounding.

Ventilation requirements - only suitably tested room sealed appliances can be used with whole-house mechanical ventilation systems. Installers must ensure that the user knows how to use the appliance and room ventilation correctly.

Experience has shown that liners can last the full lifetime of the appliance when burning dry well seasoned wood with a bright hot flame with little tar and soot deposits building up.

The liner is manufactured from 316L and 904L grade stainless steel, is classified as being suitable for constant operation at temperatures up to 600 deg C and is classified as being soot fire resistant.

Relatively high sulphur content fuels, such as processed coal products (smokeless fuels), particularly if the appliance can be left burning all night, should not be used with Midflex 316L liner. Midflex 904L liner has even better corrosion resistance than 316L and should be used for such applications. If the wrong fuels are used particularly in slumbering conditions this will drastically reduce the life of the liner and void the warranty.

The appliance manufacturer operating instructions should be referred to for operation of the appliance.

1. An increase in fuel consumption, smoke in the building, evidence of sooting, difficulty in lighting, and staining around the appliance casing generally indicates a problem either with the appliance or that a blockage in the system may have occurred.
2. **Do not use chemical cleaners on the flue.**
3. Do not block or obstruct flue outlets or chimneys.
4. Do not cover appliance.
5. Running appliances on constant low heat produces an increased level of condensation and may shorten the life of the product.
6. Burning low grade fuels with high sulphur content can shorten the life of the product.
7. Any personnel installing or carrying out work or maintenance on appliances and flue must be suitably qualified and competent to do so.
8. After installation the chimney should be inspected to determine the frequency of sweeping required.
9. **In the event of a chimney fire the liner may suffer structural damage. Therefore the liner must be replaced before the appliance is lit again. As part of that installation as with all installations, a thorough inspection of the condition of the chimney must be carried out.**
10. Ensure that the appliance is running as efficiently as possible and as directed by the manufacturer's instructions.
11. Empty ash from solid fuel appliances regularly, and ensure that the appliance is maintained in accordance with its manufacturer's instructions.

8. After Care

After installation the chimney liner and all flue ways must have been regularly checked, cleaned and maintained as detailed below, to avoid build-up of soot which could cause a chimney fire, or collection of condensation which could result in premature and excessive corrosion. If soot/tar is allowed to build up, a blockage or soot fire may result.

Ensure the relevant inspections and chimney sweeping routines below are carried out by competent personnel and keep the certificates / invoices provided by the qualified and competent persons as proof of their completion. Any rectification work detailed in reports should be carried out promptly and signed off by the installer and records kept.

Competence of installers

Installers should be qualified to the appropriate level for the type of installation in accordance with requirements of the relevant authorities as detailed below: -

<i>Fuel</i>	<i>Relevant Authority / required qualifications</i>
<i>Solid Fuels</i>	<i>HETAS</i>
<i>Oil</i>	<i>OFTEC</i>
<i>Gas</i>	<i>GAS SAFE</i>

Competence of chimney sweeps

Qualified chimney sweeps / members of NACS (National Association of Chimney Sweeps) should be employed to carry out correct and thorough cleaning and inspection.

Inspections and Chimney Sweeping

- The chimney should be checked and swept at least once per year as a minimum, and more frequently if advised to do so by the installer, or if operating conditions change. This should be done by a competent chimney sweep.
- The correct brush size and type must be used for each system and other suitable equipment will be required to ensure that the liner is not damaged through the cleaning process.
- Mild steel brushes or brushes that may otherwise be contaminated must not be used.
- Mechanical aids are only permitted provided that a protection sleeve is fitted as part of the installation or another method of protecting the top end of the liner is employed.
- Inspections should be carried out on the installation as detailed in the current installation instructions, building regulations and industry standards.
- It is important that your customers are aware that with solid fuel burning particularly if low grade fuels, wet wood or coal mixes are used, soot and tar deposits form, and the chimney should be swept more regularly.
- Chimney fire may damage the liner should the temperature reach 800°C for any period of time in excess of 15 minutes and consequent use will subject steel to more rapid corrosion than would otherwise occur. The vented air space will protect the whole structure both at low and high temperature operation.

9. Records

The following records should be kept in a safe place with this document and would be required should a claim under warranty be made: -

- Warranty Registration Form
- Installation invoice
- Inspection and Chimney Sweeping invoices/certificates.

10. Complaints

All complaints should be immediately reported to and investigated by the installer initially. Should a fault in the liner be suspected then the installer will notify Midtherm Flue Systems Limited in writing, within 14 days of discovering the fault, together with copies of the supply invoice, the acknowledgement of registration, and certification or invoices of proper sweeping and inspection as recommended herein. Should any complaint be found to have been caused by faulty installation, poor or insufficient maintenance and inspection, incorrect operation, or any abuse contrary to these conditions, then the cost of site inspection shall be chargeable.

11. Warranty Scheme

Should the above conditions be met, and after inspection of the site and the product, and completion of tests, the product is, in the opinion of Midtherm Flue Systems Limited, unsatisfactory due to faulty workmanship, or defective material, then the company will provide a replacement length of liner subject to the following terms:-

- For claims made within the first four years from date of installation, and subsequently agreed, subject to the requirements herein being satisfactorily met, a replacement length of liner will be provided and delivered, free of charge, to the place of installation.
- For claims made after the first four years from the date of installation, and subsequently agreed, subject to the requirements herein being satisfactorily met, a replacement length of liner will be provided, and charged for on a scale which makes an allowance for wear and tear. The goods will be supplied at a price equivalent to the current net price, discounted on the following reduced scale, based on the number of years the liner has been in service:-

316	904
Up to 5 years 100% off	Up to 5 years 100% off
6-10 years 50% off	6-15 years 50% off
11-20 years 20% off	16-25 years 20% off
	26-35 years 10% off

This warranty provides only for the supply of a replacement length of liner and does not cover the cost of builders work, removal, and re-installation, fixing insulation or any other incidental, consequential or other costs whatsoever. All of which are to be the responsibility of the customer and it is on this basis that the liner is offered for sale and with this warranty.

Reasonable efforts will be made to provide a replacement liner to the same specification as originally used, but Midtherm reserve the right to provide the nearest equivalent type and size of the liner available at the time of replacement.

Cash refunds or payments will not be made in lieu of providing replacement lengths for agreed claims.

12. Transfer

The warranty can be transferred if the following criteria are met:

- Midtherm Flue Systems Ltd are notified within 28 days of the change of ownership
- An inspection prior to transfer has been carried out and evidence is submitted to Midtherm Flue Systems Ltd. Evidence should be in form of a certificate or invoice of inspection.

13. Statutory Rights

This warranty scheme does not affect the statutory rights of the buyer.

14. Exclusions

This warranty only applies to installations made in England, Scotland, Wales, Northern Ireland and Republic of Ireland, and it is a condition of this warranty that the customer has paid for the installation in full, at time of application. Specifically excluded from this warranty is any liner installed for use with fully condensing boilers, any installation serving appliances with wet (W) classification or where harmful chemical fumes, such as chlorine or halogenic vapours are present. Also excludes any installations installed in conjunction with non-Midtherm products from appliance to terminal.

The Midtherm Family



Midtherm Flue Systems Limited
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www.midtherm.co.uk  @MidthermFlue
sales@midtherm.co.uk  /MidthermFlue
UK Reg. 00936960

Midtherm Flue Systems is a family owned UK Business with over 40 years in the flue industry.

Committed to providing excellence in both our products and service.

With one of the largest flue manufacturing, storage and distribution facilities in the UK, we are able to supply direct from stock and rapidly produce for domestic, commercial and industrial customers worldwide.



Midtherm Laser Limited
Sub-Contract Laser Cutting
Tel: 01384 458841
www.midthermlaser.co.uk
sales@midthermlaser.co.uk



Midtherm Powder Coating Limited
Sub-Contract Powder Coating
Tel: 01384 258877
www.midthermcoating.co.uk
sales@midthermcoating.co.uk



Midtherm Stainless Limited
*Stainless Steel Canopies, Sinks, Tables and
Bespoke Commercial Kitchen Fabrications*
Tel: 01384 238786
www.midthermstainless.co.uk
sales@midthermstainless.co.uk