

SFL[®]

FLUE & CHIMNEY

Quality stainless steel twin wall flue system designed and built in Britain.
The S-Flue range from SFL.

S-FLUE

Twin Wall Insulated Flue

For wood, gas, oil & multi fuel appliances



BRITISH BUILT
FLUE & CHIMNEY SYSTEMS FROM SFL

CE
UK
CA

S-FLUE

Stainless Steel Chimney System



British Built
Flue System



125-200mm
Diameter



Twist-Lock®
Joining



50mm To
Combustibles



Multi-Fuel
Appliances



T450
Rating

Safety Quality Efficiency

SFL's twin wall residential flue, Sflue.

S-flue is a CE marked chimney system, designed to meet requirements for multi-fuel appliances operating under negative or non-condensing conditions.

The fully welded construction, combined with a high performance insulating medium, provides the optimum level of performance for both DEFRA approved and the latest EcoDesign high-efficiency stoves, in addition to both modern and traditional appliances.

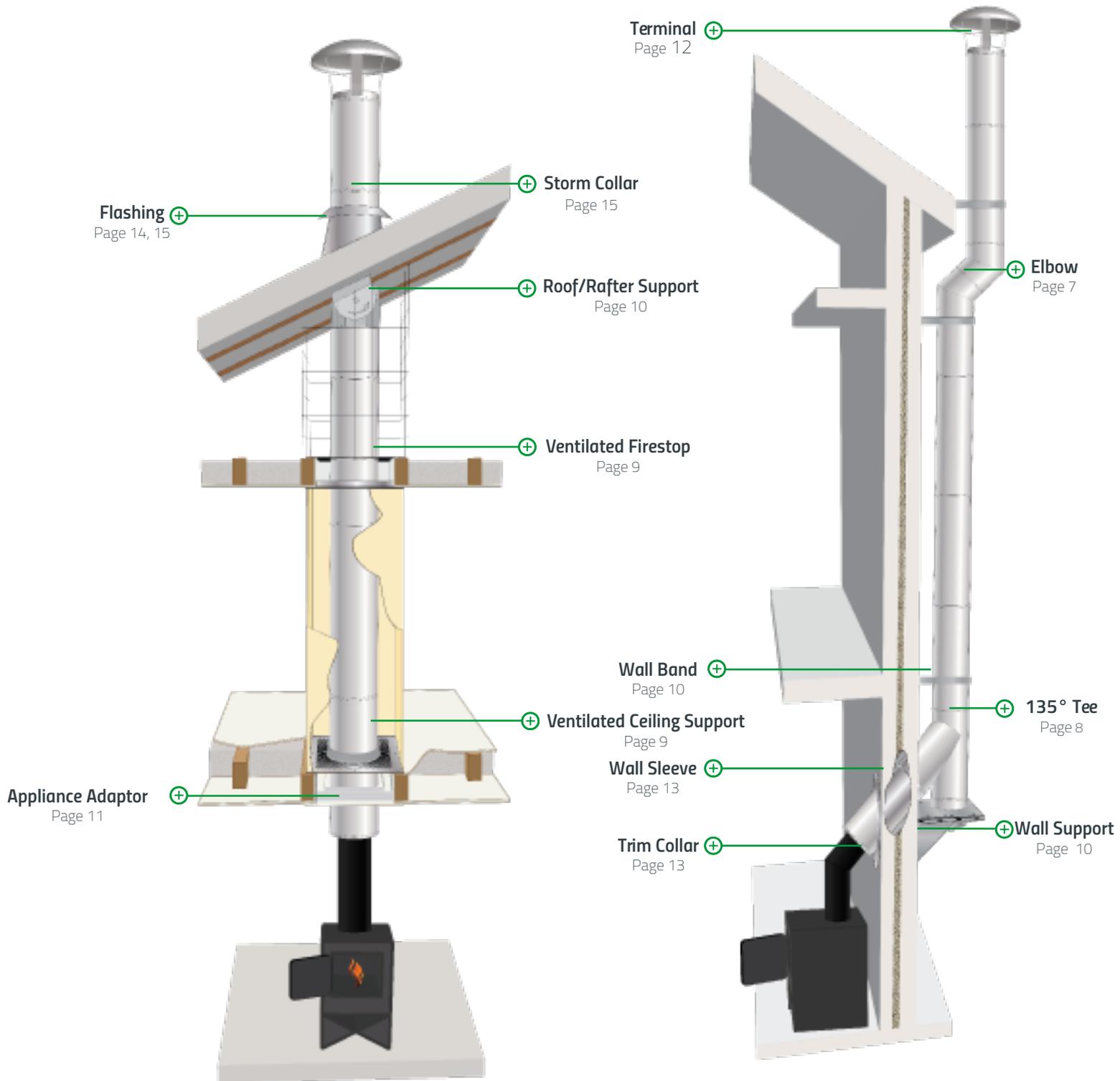
Fixing packs are included with any components that require fixings.

Sizes/Colours Available

- 127mm (5 inch)
- 152mm (6 inch)
- 178mm (7 inch) Made to order, price on application.
- 203mm (8 inch) Made to order, price on application.

(Minimum order quantities apply for all 7&8 inch components)

Internal & External Installation Examples



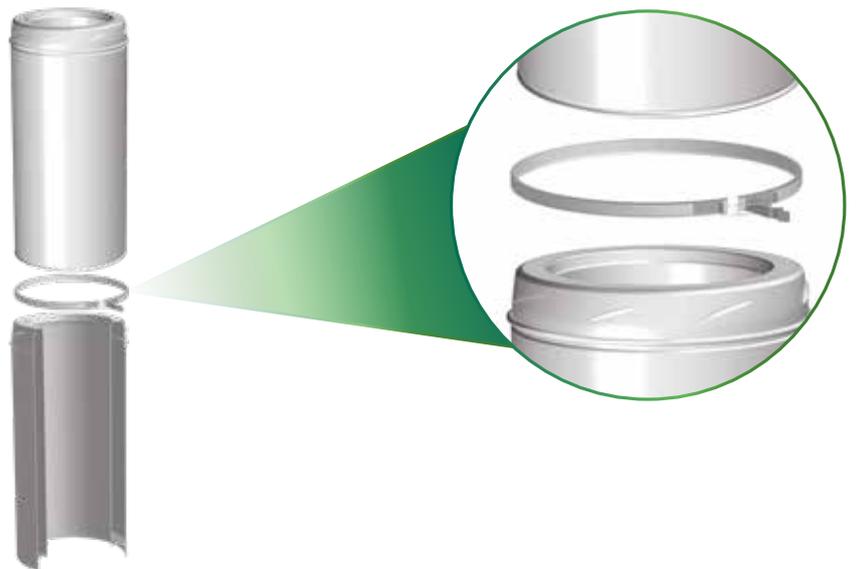
Technical Specification

Chimney Designations to BS EN 1856-1

2797-CPR-496040	⊕ SFL Licensing Code
BS EN 1856-1	⊕ British Standard
T450	⊕ Temperature Class-Up to 450°C
N1	⊕ Pressure Class-Negative to 40 Pa
D	⊕ Condense Resistance-Dry only
Vm	⊕ Corrosion Class-Rating declared by manufacturer
L50040	⊕ Material Specification-316L 0.4mm thickness
G(50)	⊕ Soot fire Resistance-Resistant, 50mm clearance to combustibles

Twist-Lock Jointing System

Sflue utilises an eight-barb twist lock jointing system to secure each joint. The components are secured by engaging the barbs with a firm twist of each section, and then finished with a locking band. The joint design facilitates a maximum unsupported height above the last support of up to 1.5 metres. A locking band is provided with all female ended couplers.



Construction

Sflue is manufactured from a high grade 316L stainless steel liner and a 304 outer case. The unique joint design allows the inner liner to freely expand and contract throughout the system as the flue gas temperature varies, eliminating the need for additional expansion components.

Insulation Properties

The product utilises a high performance mineral wool, which is auger injected into a 25mm annulus between the inner and the outer. A mean insulation density of 250kg/m³ offers rapid stabilisation of draught and excellent thermal performance. The insulation properties achieve a 50mm distance to combustibles and a 2 hour fire rating.



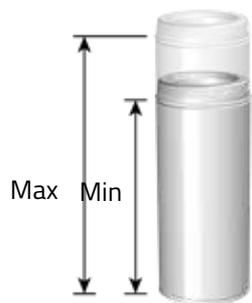
Lengths



Straight Length

Available in nominal installed lengths of 120mm, 300mm, 500mm, 1000mm.

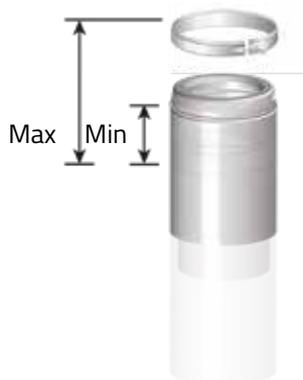
	120mm	300mm	500mm	1000mm
∅	Code	Code	Code	Code
127mm	2110605	2141105	2141005	2140905
152mm	2110606	2141106	2141006	2140906



Adjustable Length

The telescopic adjustable length offers a degree of flexibility when standard length dimensions are not suitable. All adjustable lengths are supplied with separate insulating material for insertion into the annulus once the installed length has been determined. **Includes a clamp band as standard.**

∅	Short Adjustable Length			Long Adjustable Length		
	Min	Max	Code	Min	Max	Code
127mm	200	325	2144005	350	530	2141205
152mm	200	325	2144006	350	530	2141206

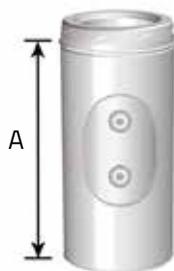


Adjustable Slip Section

Designed to fit over any standard length and offers a degree of flexibility when standard dimensions are not suitable. Bottom length **not** included. Supplied with separate insulation and a clamp band. **Only to be used to extend standard lengths.**

∅	Min(mm)	Max(mm)	Code
127mm	30	256	2143005
152mm	30	244	2143006

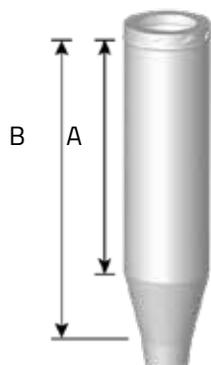
The adjustable components above are not load bearing, always use a support component directly above when vertically applied.



Inspection Length

A 500mm length incorporating a removable door for inspection & cleaning.

∅	A(mm)	Code
127mm	500	2141805
152mm	500	2141806



Tapered Adaptor Length

Offers an aesthetic transition from single wall connecting flue pipe to Sflue.

∅	A(mm)	B(mm)	Code
127mm	865	1015	2140405
152mm	865	1015	2140406

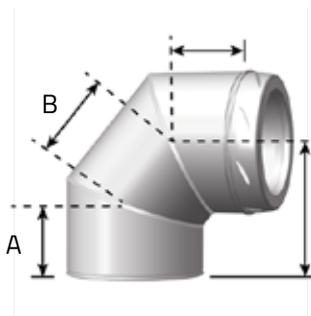
This component should only be fitted to a single wall connecting flue pipe, and not directly to the appliance.



2 Segment Elbows (15° / 30° / 45°)

Provides a change of direction, measured from the vertical by the specified angle. Elbows are supplied with an un-barbed female coupler (to allow for 360° rotations) and bolted locking band for rigid joint bracing, especially when used as an offset around gutters and fascia boards. Detailed elbow offset dimensions are located on page 19.

Angle	15°	30°	45°
∅	Code	Code	Code
127mm	2131405	2132305	2132205
152mm	2131406	2132306	2132206



3 Segment 90° Elbow

Provides a 90° change of direction.

∅	A(mm)	B(mm)	C(mm)	D(mm)	Code
127mm	87	126	148	87	2145305
152mm	92	136	157	92	2145306

Complementary SFL Product

SIGMA 1MM

Connecting Flue

Single wall imperial stainless steel connecting flue pipe.

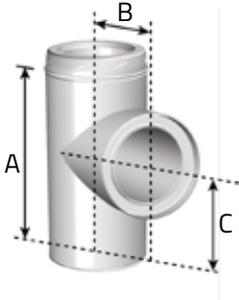
For wood and multi-fuel appliances.

Available in 5"-8" internal diameter.



BS EN 1856-2 T600 N1 D V3 L50010 G400 M

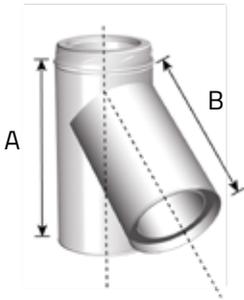
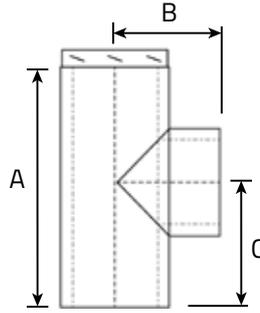
Tees & Tee Components



90° Equal Tee

Used at the base of a vertical chimney from a horizontal stove outlet, or as an inspection opening.

ϕ	A(mm)	B(mm)	C(mm)	Code
127mm	305	152	152	2114305
152mm	325	162	162	2114306

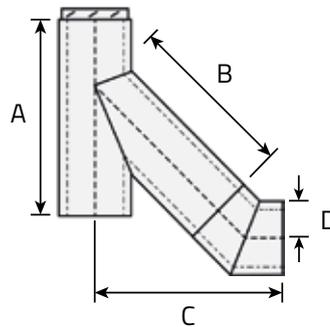


135° Tee

Used at the base of a vertical chimney, or to allow a smooth transition from the horizontal to vertical plain when used with a 45° elbow. The coupler on the branch is unbarbed to allow unlimited rotational adjustment and includes a bolted locking band.

Dimension (mm) With 45° Elbow

ϕ	A(mm)	B(mm)	C(mm)	D(mm)	Code
127mm	495	340	388	38	2141305
152mm	495	375	422	45	2141306



Tee Cap with Drain

Used at the bottom of a vertical chimney to facilitate drainage and cleaning. Fitted with a stainless steel 1" BSP external thread drain connection.

ϕ	Code
127mm	2153205
152mm	2153206



Tee Cap

Used to close off the branch or base of a tee, or for use as an access/inspection/cleaning component.

ϕ	Code
127mm	2119105
152mm	2119106

Floor Penetration & Firestop Components

Combustible floors - solid fuel and oil fired appliance's (T450)

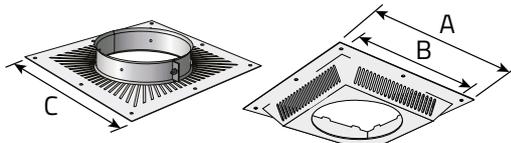
The following components must be used when Sflue is fitted to a solid fuel or oil fired appliance, when the flue gas temperature will not exceed 450°C, and/or where the chimney system penetrates a combustible floor. Each ventilated component offers a 50mm distance to combustible materials.

Intumescent Sealant (1099900) is required for the correct installation of ventilated components, available on page 13.

Standard Ventilated Ceiling Support Kit (T450)

Used to both support and firestop the chimney system when it passes through the first combustible floor, directly above the appliance. The support component incorporates a patented intumescent matrix design which expands rapidly with temperature and seals the plate to prevent the potential spread of fire or smoke from the room below. Also available painted black (add a **ZB** to the code), or white (add a **ZW** to the code).

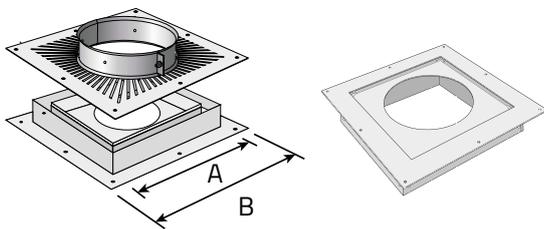
∅	A(mm)	B(mm)	C(mm)	Code
127mm	361	281	379	2172705
152mm	381	301	399	2172706



D5 White Ventilated Ceiling Support Kit (T450)

Used as per the standard version. The D5 offers an aesthetically pleasing flat appearance where the chimney passes through the ceiling penetration and uses minimal ventilation openings. This component is finished in a high quality white gloss finish.

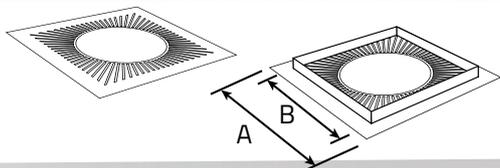
∅	A(mm)	B(mm)	Code
127mm	352	279	2188805
152mm	372	299	2188806



Ventilated Firestop (T450)

Used where the chimney passes through the upper combustible floors, and where sections below the floor are enclosed within a non combustible shaft. This item is not load-bearing.

∅	A(mm)	B(mm)	Code
127mm	379	281	2188705
152mm	399	301	2188706



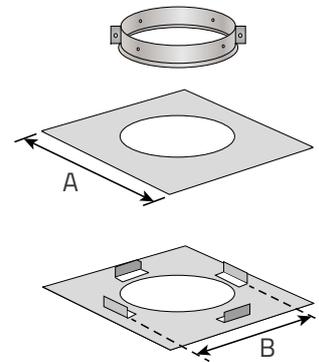
Non-combustible floors

The following components can be used on appliances where the flue gas temperature does not exceed 250°C, and/or where the chimney passes through a non-combustible floor.

Ceiling Support

Provides a 50mm air gap clearance to a penetrated floor or ceiling and is only used where Sflue penetrates a non-combustible floor, and/or services a gas or oil fired appliance where the flue gas temperature does not exceed 250°C.

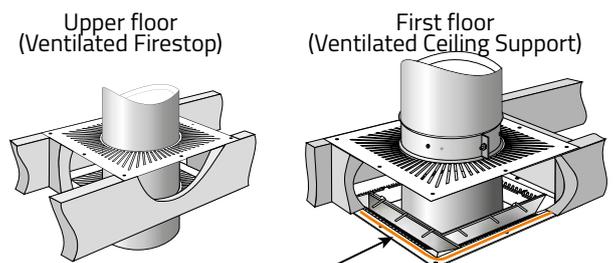
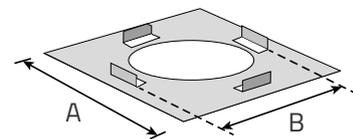
∅	A(mm)	B(mm)	Code
127mm	330	280	2102705
152mm	355	305	2102706



Firestop Spacer

Used to provide location, fire and dust stopping where Sflue is used through non-combustible floors, and/or services an appliance where the flue gas temperatures does not exceed 250°C. This item is not load bearing.

∅	A(mm)	B(mm)	Code
127mm	330	280	2108705
152mm	355	305	2108706



Apply a bead of intumescent sealant around the flange.

Support Components

Wall Band

Wall bands provide lateral support for the chimney and must be used at intervals not exceeding 3.0 metres beyond any load bearing support.

∅	A(mm)	Code(S/S)	Code(Galv)
127mm	137	3115155	3116155
152mm	162	3115205	3116205

Wall Band Extension Pieces

Where externally applied, the intervals between Wall Band fixing centres must be reduced from 3.0 metres to 2.5 metres. The maximum clearance is as detailed below. Available in both stainless steel and galvanised steel.

∅	Min	Max	Code(S/S)	Code(Galv)
All	50	100	3119136	3120136

Heavy Duty Wall Band (S/S)

Can also be used as a conventional wall band.

∅	A(mm)	B(mm)	Code
127mm	250	112.5	3109512
152mm	270	126	3109515

Extension Brackets (S/S)

Size	A(mm)	Code
Short	324	31093ST
Medium	395	31093MD
Long	600	31093LG

Roof/Rafter Support

Designed to allow a chimney to be supported on roof joists, trussed rafters etc. Supplied with a diameter specific rotational clamp band. Maximum suspended chimney length supported is **6 metres** and maximum total length supported is **9 metres**.

Suits up to 600mm rafter span.

∅	A(mm)	B(mm)	Code
127mm	617	206	7072612
152mm	643	232	7072615

Universal Roof/Rafter Support

As the Roof/Rafter Support above, but with a gimbal plate that is universal across all diameters. The gimbal plate is adjusted on site to match the diameter of the chimney.

Suits up to 600mm rafter span.

Each item consists of 2 supports.

∅	A(mm)	B(mm)	Code
All	203	220	7002900

Support Length (Strut/Guy Attachment)

A 100mm installed length which incorporates a support plate located 33mm from the bottom edge and features slotted holes for rotational adjustment, for fixing to bespoke bracketry. This component also doubles as a strut / guy attachment length offering anchoring points to which guys, or preferably rigid stays can be secured using M8 nuts and bolts.

∅	A(mm)	B(mm)	Code
127mm	100	33	2171305
152mm	100	33	2171306

Wall Support Bracket

Used to take the vertical load of the chimney when supported from a wall. The support bracket is fully adjustable allowing varying clearances from the wall (50mm-150mm). Requires M10 wall fixings.

Support length included.

Stainless

∅	A(mm)	B(mm)	C(mm)	Code
127mm	282	311	265	2151705
152mm	302	331	285	2151706

Galvanised

127mm	282	311	265	2151805
152mm	302	331	285	2151806

Single Wall to Sflue Anchor Plate

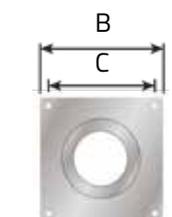
Designed to be used when connecting Sflue to a lintel or pre-cast chamber. A short section of liner projects a nominal 150mm through the bottom of the plate. This component could also be used to connect a flexible liner to Sflue on a capped chimney within the attic space. **Maximum Load: 13m.**

∅	A(mm)	B(mm)	C(mm)	Code
127mm	123	400	350	2152705
152mm	148	400	350	2152706

Bracing Bracket

A clamping collar for the attachment of struts / supports.

∅	Code
127mm	2109205
152mm	2109206





Appliance Adaptor

Used to connect the appliance outlet to the Sflue chimney system. Also used to connect Sflue to single wall connecting flue pipe.

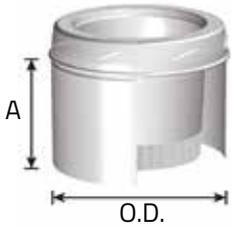
∅	A(mm)	O.D.	Code
127mm	36	123	2119405
152mm	36	148	2119406



Sflue Increaser

An increaser to facilitate an increase in diameter size between Sflue components.

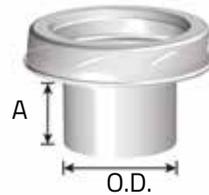
∅	Flue size A(mm)	Code
127mm	152	2151005
127mm	178	2154805
127mm	203	2154905
152mm	178	2150606
152mm	203	2154806



Adaptor to Cast Iron

A crimped, reduced inner section to adapt a cast iron stove outlet directly to Sflue. Features an outer sleeve for improved aesthetics.

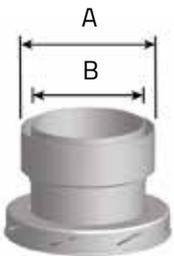
∅	A(mm)	O.D.	Code
127mm	103	114	2119505
152mm	103	139	2119506



Appliance Increaser Adaptor

Used to increase from the appliance outlet size by one diameter size.

∅	A(mm)	O.D.	Code
127mm	30	97	2119705
152mm	30	123	2119706



Sflue to Flex Adaptor

Used to connect Sflue to a flexible flue liner.

∅	(I.D) (O.D)		Code
	A(mm)	B(mm)	
127mm	134	125	2150105
152mm	161	145	2150106



Flex to Sflue Adaptor

Used to connect from a flexible flue liner to Sflue.

∅	A(mm)	B(mm)	Code
127mm	132.5	125	2150205
152mm	157.5	145	2150206



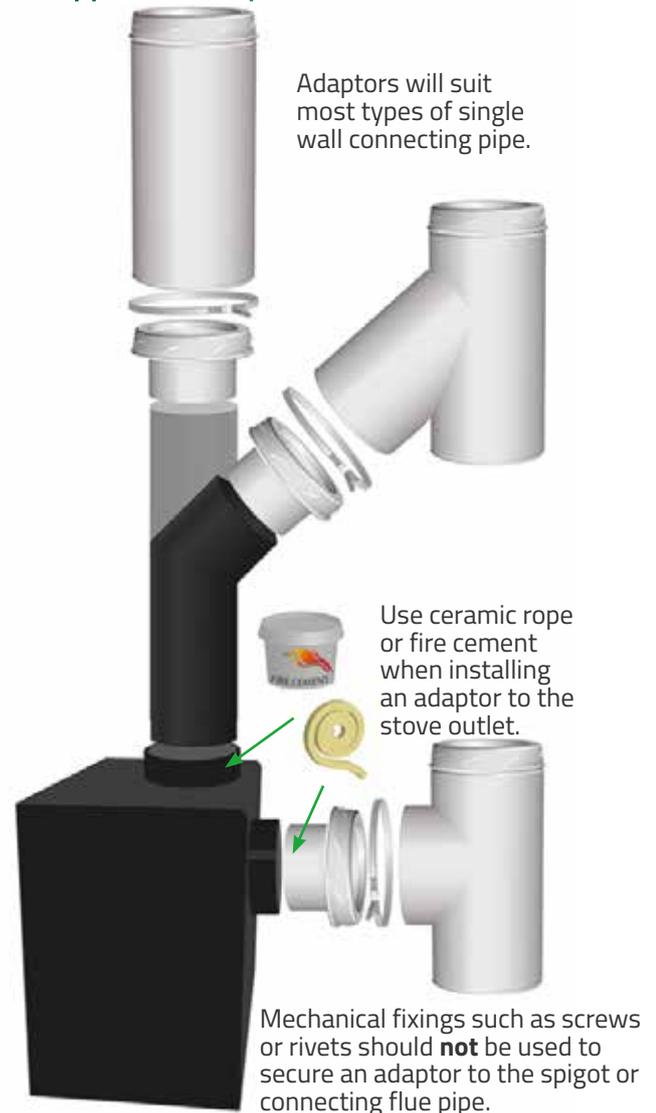
Short Tapered Adaptor

Offers an aesthetic transition from the single wall connecting flue pipe to an Sflue chimney system.

∅	A(mm)	Code
127mm	150	2140505
152mm	150	2140506

This component should only be fitted to a single wall connecting flue pipe, and not directly to the appliance.

Appliance Adaptor Installation



Terminals

Solid Fuel Chimney Termination Heights

Termination for solid fuel and oil are subject to EN 15287. The illustration below is for solid fuel. If the chimney serves an oil-fired pressure jet appliance, the chimney must discharge a minimum of 600mm above the roof penetration point, or any adjacent structure, if it is within 750mm. The chimney must also terminate at least 600mm from any opening into the building and 300mm from any combustible material. For domestic natural gas appliances, chimney termination heights are governed by BS EN 5440-1.

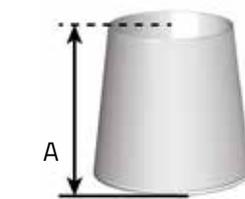
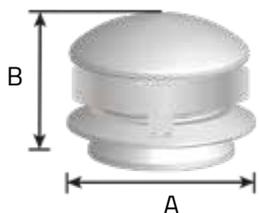
Minimum distance measured from the top of the chimney construction, excluding any pot or terminal:

- A** 2.3 metres horizontally clear of the roof surface, e.g. if the roof pitch is 45°, then the chimney should project 2.3 metres above it, **and:**
 - a) At least 1m above the highest point of intersection of the chimney and weather surface; or
 - b) At least as high as the ridge.
- B** 1.0 metre, provided A is satisfied, or 600mm above the ridge if G is less than 600mm.
- C** 1.0 metre above the top of any flat roof, and the top of any openable roof light, dormer window or ventilator, etc., if it is located within 2.3 metres.
- D/E** If D is less than 2.3 metres, E shall be not less than 600mm.
- F** 600mm above the ridge.
- G** If G is within 600mm of the ridge then B shall be 600mm above the ridge.

Round Top

The Round Top offers strong protection against driving rain and wind, recommended for exposed locations. The new design features a barbed coupler and a step for easier installation.

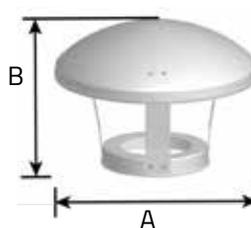
∅	A(mm)	B(mm)	Code
127mm	255	234	2107505
152mm	300	234	2107506



Top Stub

The Top Stub offers the least resistance to flue gases and are ideal for solid fuel and oil fired appliances, providing there is drainage at the base of the chimney.

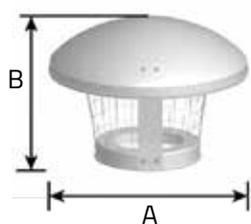
∅	A(mm)	Code
127mm	228	2117305
152mm	228	2117306



Rain Cap

The Rain Cap offers a degree of protection from rain and is suitable for solid fuel and oil fired appliances.

∅	A(mm)	B(mm)	Code
127mm	255	155	2107405
152mm	300	155	2107406



Rain Cap with 1" Mesh

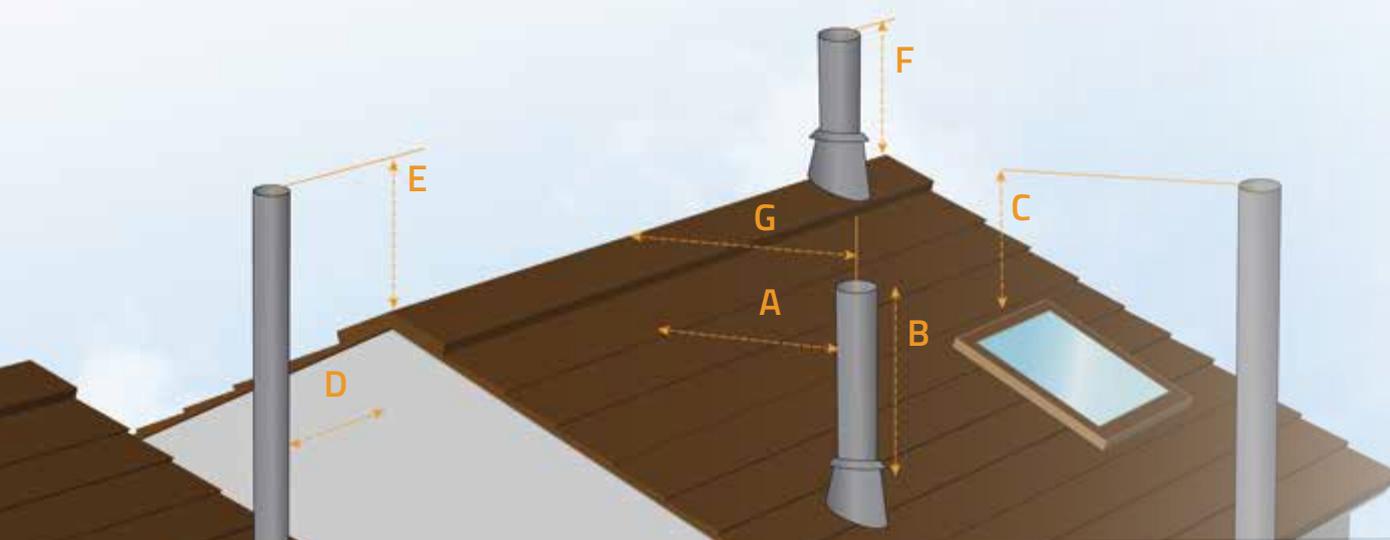
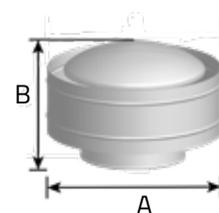
As the Rain Cap above, but with a mesh incorporated to protect from birds.

∅	A(mm)	B(mm)	Code
127mm	255	155	2107605
152mm	300	155	2107606

Storm Cowl

The Storm Cowl is designed to offer maximum protection against driving rain and strong winds. Please note that this is not an anti-down draught terminal. For solid fuel applications, the Round Top would be recommended.

∅	A(mm)	B(mm)	Code
127mm	294	175	2148705
152mm	319	188	2148706





90° Trim Collar

This item is used to offer an aesthetic closing ring where a chimney passes through an outside wall. Manufactured from polished stainless steel.

∅	A(mm)	B(mm)	Code
127mm	108	394	2108505
152mm	103	409	2108506



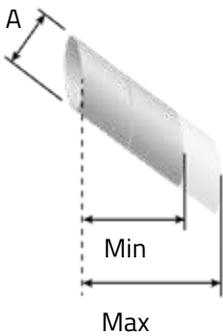
Sprung Locking Band

A locking band must be used on all joints and is included with each component that has a female coupler.

∅	Code
127mm	2108605
152mm	2108606

45° Adjustable Wall Sleeve

Must be used where a 135° tee is used to pass the chimney through an external masonry wall and provides a continuous, uninterrupted run through the wall. Provides clearance of 25mm as standard. Adjustable for a wall thickness of 200mm - 380mm.



Once extended, the joint must be secured with self-tapping screws and covered around the circumference with a heat resistant foil duct tape. Available in both stainless steel and galvanised steel.

Not suitable for applications where the wall construction may contain combustible materials.

Stainless Steel (Masonry)

∅	A(mm)	Min	Max	Code
127mm	237	200	380	3107305
152mm	257	200	380	3107306

Galvanised Steel (Masonry)

∅	A(mm)	Min	Max	Code
127mm	237	200	380	3107105
152mm	257	200	380	3107106

Bolted Locking Band

A screw-toggle locking band is provided as standard with the unbarbed female coupler on elbows and 135° tee branches. Can be used to provide extra strength on a joint.

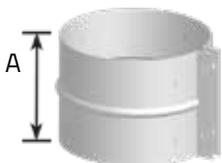
∅	Code
127mm	2108605MT
152mm	2108606MT



Intumescent Sealant

Required for the correct installation of the Ventilated Ceiling Support Kits & Firestops

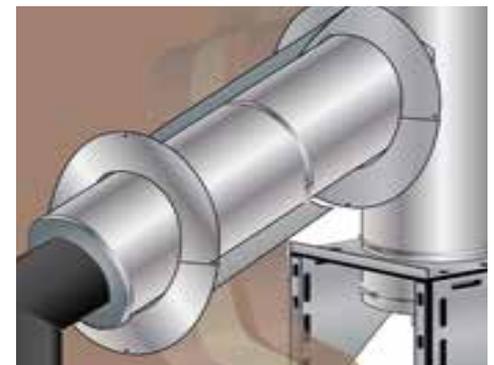
Code
290ml 0199900



Structural Locking Band

Required for added security on unsupported stacks up to 2.5m above the final support or wall band, in accordance with the instructions on page 18.

∅	A(mm)	Code
127mm	80	2159805
152mm	80	2159806



Angled Wall Cover Rings

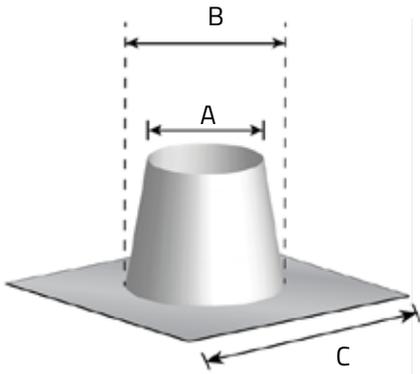


Angled Wall Cover Ring (2-Piece)

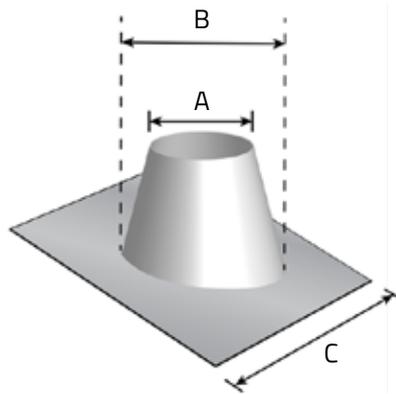
Designed to offer an aesthetic trim around the chimney where it penetrates the wall at an angle. The component is available in 5 angle variations.

∅	A(mm)	0-10°	10-20°	20-30°	30-40°	40-50°
		Code	Code	Code	Code	Code
127mm	159	7071212	7071312	7070012	7070312	7070212
152mm	146.5	7071215	7071315	7070015	7070315	7070215

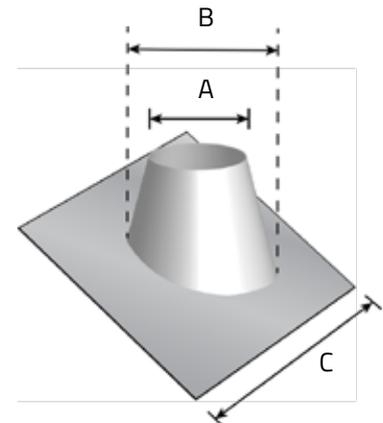
Flashings & Weathering



Flat Flashing



5° - 30° Adjustable Flashing

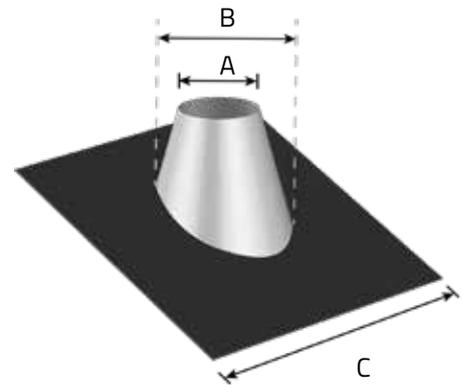


32° - 45° Adjustable Flashing

SFL Eco Pro lead-free, malleable flashings feature a durable 0.6mm 304 BA stainless-steel cone, formed and adhered to the flashing base.

The flashing base can be dressed in exactly the same way as lead and is highly flexible. Craftsmen experienced in working with lead covering will find it easy to apply.

The lead-free base is highly weather resistant, completely waterproof and provides a breathable membrane which prevents the build-up of condensation. It is one third the weight of conventional lead and does not require the application of patination oil to prevent oxidation.



If the lead-free base comes into contact with rainwater contaminated by copper or bitumen, a protective coating will need to be applied.

SFL EcoPro



Lead-Free Flashing Installation

EPDM Synthetic Rubber Flashing



EPDM Flashing

The EPDM flashings offer an installation friendly alternative to the traditional type of roof flashing.

Flashings & Weathering

Aluminium Flashings

The SFL aluminium flashing range offers a competitive alternative to the traditional lead flashing, while still maintaining a traditional design and malleable material. All aluminum flashings should be fitted in conjunction with a storm collar.

Flat flashings have a cone height of 250mm, cone height of the adjustable flashings vary depending on the angle.

Flat Flashing

For flat or nearly flat roofs.

5° – 30° Adjustable Flashing

For low pitched roofs.

32° – 45° Adjustable Flashing

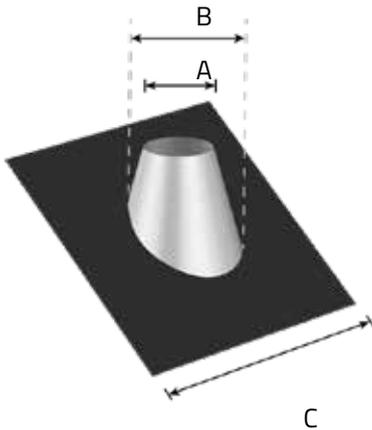
For high pitched roofs.

∅	A(mm)	B(mm)	C(mm)	Code	A(mm)	B(mm)	C(mm)	Code	A(mm)	B(mm)	C(mm)	Code
127mm	190	280	495	70000007	190	280	495	70053007	190	375	660	70324507
152mm	210	300	495	70000009	210	300	660	70053009	210	403	660	70324509

Aluminium Storm Collar

Used to weather the top of the flashing. Supplied with a tube of silicon sealant.

∅	A(mm)	Code
127mm	50	70123407
152mm	50	70123409



SFL EcoPro Lead-Free Flashings

5° – 30° Adjustable Flashing

For low pitched roofs.

32° – 45° Adjustable Flashing

For high pitched roofs.

∅	A(mm)	B(mm)	C(mm)	Code	A(mm)	B(mm)	C(mm)	Code
127mm	205	275	900	70053007P	191	350	900	70324507P
152mm	227	300	900	70053009P	211	379	900	70324509P

The EPDM flashing system will effectively seal and remain pliant over a wide range of external chimney surface temperature extremes, from -30° to 115°C. The EPDM cones have been proven to withstand intermittent surface temperatures of up to 150°C.

EPDM Synthetic Rubber Flashing

The selection of the correct flashing depends on the outside chimney diameter and intended roof pitch. The table below identifies which flashing should be used. Each consists of a malleable aluminium base to which an EPDM rubber cone is sealed. The cone is easily trimmed on site to suit the external diameter of the chimney. Separate installation instructions are provided with every flashing.

∅	Flue O.D. (mm)	Roof Pitch	Flashing No.	Cone Index Cut Line	Base Size	Code
127mm	180	0-40°	2	E	600x600mm	4901020
152mm	200	0-30°	2	F	600x600mm	4901020
152mm	200	0-45°	3	C	764x764mm	4901030



EPDM Flashing Installation

Installation Guidelines

Approvals

Sflue has been assessed and CE marked to BS EN 1856-1, the performance designations are specified on page 4.

Sflue has also been assessed by the Loss Prevention Council for fire resistance. A fire resistance of two hours can be achieved in accordance with the stability and integrity criteria of BS 476: Part 20 for duct type B.

Quality

All components are manufactured under a quality assurance scheme, certificate No. FM557622, administered by British Standards in accordance with BS EN 9001. In addition, SFL operate a CE approved factory production control system as required under the Construction Products Regulation.

Mandatory Requirements

The installation of a solid fuel appliance must be carried out by a member of a Competent Person Scheme, such as HETAS or through Local Authority Building Control (LABC) or one of their appointed inspectors, who will certify the installation. For oil and gas, connection to an appliance that is connected to a fuel supply must be carried out by a registered installer, e.g. OFTEC (Oil) / Gas Safe (Gas). For full design and installation details, the key referral documents are:

Approved Document J (England & Wales)

DFP Technical Booklet L (Northern Ireland)

Technical Handbook – Domestic (Scotland)

BS EN 15287 – Design, Installation and Commissioning of chimneys

BS EN 1443 – Chimneys – General Requirements

BS EN 13384-1 – Calculation methods single inlet chimneys

Notice Plate

It is a requirement that a robust Notice Plate must be provided and indelibly marked, detailing the application and specific data relating to the installation. The Notice Plate should be securely fixed in an unobtrusive but obvious position within the building, such as:

- Next to electricity consumer unit
- Next to the chimney installation as described
- Next to the water supply stop-cock

Joint Design and Construction

The joint is made by fitting the female end over the male end and engaging the joint system by rotating the component clockwise. A Locking Band is then fitted to finalise the joint.

The Sflue joint incorporates an eight barb twist lock coupler system to allow easy and rapid installation of the product. When used with the Sflue support components, the joint will support up to 1.5 metres free standing above the last support.



Life Expectancy and Affecting Factors



Under normal operating conditions and with the correct servicing, Sflue will provide many years of service and is provided with a 15-year manufacturers defects warranty as detailed within SFL's standard terms and conditions of sale. To ensure the optimum condition and longevity of the product, the following points must be observed:

- Chemical chimney cleaning products or the use of mild steel brushes and equipment MUST not be used to clean the chimney system.
- Cleaning / inspection of both the connecting flue pipe and chimney should be undertaken at least once a year, preferably twice a year, before and after the heating season. Particularly important when burning solid fuel.
- Use only approved solid fuels as listed in the HETAS Guide (www.hetas.co.uk)

Note: Fuels containing petroleum coke or other such blends must not be used. Some smokeless fuels contain high levels of halogens and when the appliance is slumbered, may cause the formation of acidic compounds, leading to premature corrosion of the product. Corrosion is not considered a manufacturing defect and will invalidate the warranty.

- It is important that the combustion air supply is chemically clean and not contaminated. For example, if the appliance is located near a chlorinated swimming pool.
- When the chimney is installed externally in coastal regions, the external casing must be adequately protected either with a painted or specialist coating to prevent localised corrosion. Galvanised component should not be used, always use stainless steel.
- As unseasoned virgin wood can contain up to 50% moisture, newly felled wood must be allowed to season until the moisture content reduces to around 20%. Failure to use well seasoned wood can increase the risk of deposits building in the liner, which is the main cause of chimney fires. Under no circumstances should chemically treated wood be used as the fuel source. When buying wood, look for the "Woodsure Ready to Burn" logo as a sign.
- Prolonged slumbering of the appliance is a contributing factor to system chimney failure. It is important to maintain a sufficiently high flue gas temperature to ensure complete combustion. Complete combustion prevents condensation that can lead to corrosion issues and the excessive build up of combustion deposits in the liner. Where the appliance has been slumbered, it is advisable to run the appliance at a controlled high fire condition for a period of at least 30 minutes afterwards.
- Multi-fuel appliances are designed to burn either seasoned virgin wood or approved solid fuels. Fuels should not be mixed as it increases the risk of deposits building up in the liner.

Installation Guidelines

Lateral Supports

Wall Bands and Heavy Duty Wall Bands are available for the lateral support of the installation. All Wall Bands offer 50mm clearance from the outer case of the flue. Optional Extension Brackets are available to increase this distance up to a maximum of 100mm. Heavy Duty Wall Bands are also available with Side Extension Brackets, available in three sizes.

Adjustable Length & Slip Section

These components are supplied with an insulation pack. Depending on the required finished length of the component, additional insulation is added into the annulus. It is critical that care is taken when adding the insulation to ensure full integrity of the insulation throughout the length when installed. Where used as a disconnecter section directly above the appliance, any combustible material should be located at a distance of at least 1.5 x ID away from the component. Neither the Adjustable Length or Slip Section are load bearing, a Wall Support Assembly must be used immediately above when vertically applied.

Roof/Rafter Support

A Roof/Rafter Support bracket is used where flue passes through the roof to termination. This component offers both lateral and vertical loading.

Calculation and Technical Support

Using the latest software modelling, SFL can undertake full chimney sizing calculations to BS EN 13384 Parts 1 & 2, as well as advise on technical matters such as the Clean Air Act and current regulations regarding chimney systems.

Product Weights

Maximum weight of Sflue per metre run installed, excluding support components.

Ø (mm)	127	152
kg/m	6.7	8.2

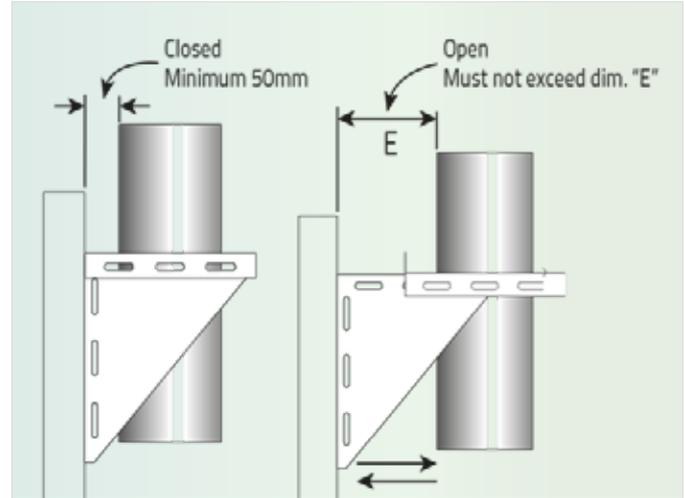
Maximum Structural Considerations for Components

The table below details the maximum number of metres that can be supported by various components, it is imperative that these limitations are not exceeded. Where possible, components such as Inlet Tees and Inspection Lengths should not be vertically loaded, but suspended below a support component such as the Wall Support Assembly. Where this is unavoidable, refer to the maximum heights in the table below.

Components	Diameter (mm)	
	127	152
Inspection Length	13m	13m
Ceiling Support	6m	6m
Ventilated Ceiling Support	6m	6m
Anchor Plate	13m	13m
90° Tee	13m	13m
135° Tee	10m	10m

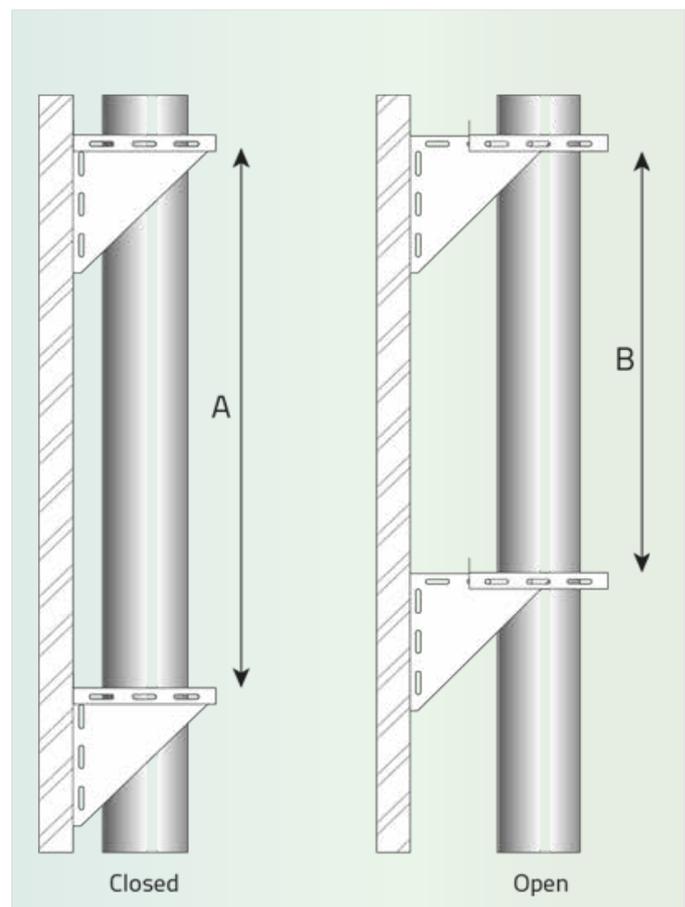
Wall Support Bracket – Technical Information

Support configuration and distance between brackets



Ø (mm)	A (m)	B (m)	E (mm)
127	30	25	150
152	30	25	150

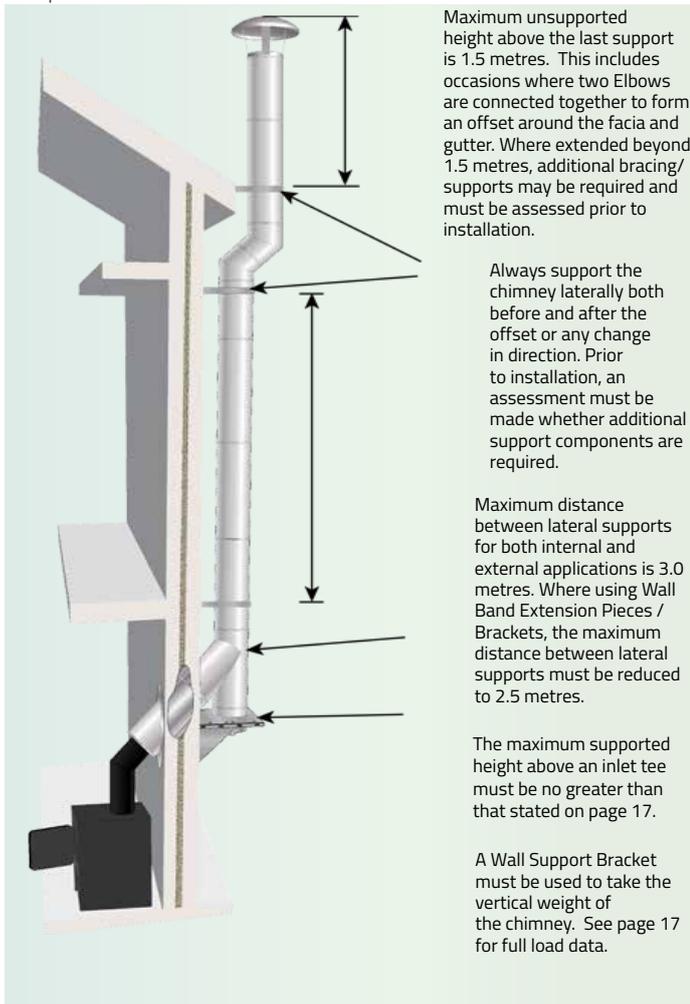
This table details the maximum distance in metres between wall supports, based on the support configuration below.



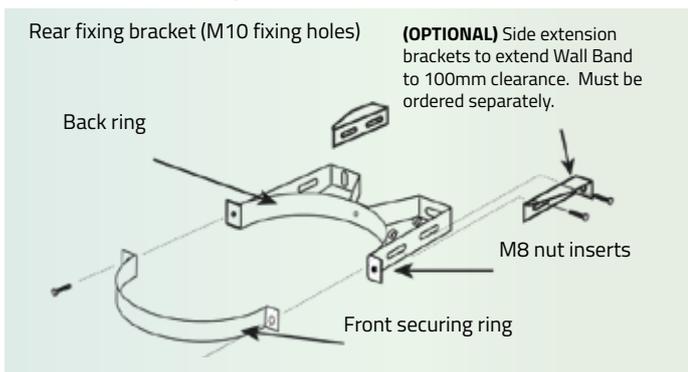
Installation Guidelines

External Installation

The illustration below shows a typical support arrangement for an external chimney. The vertical weight of the chimney is taken by a Wall Support Bracket. A removable Tee Cap with Drain (21532XX) is fitted to the underside of the Wall Support Bracket which can be removed for sweeping and inspection. Wall Bands (3115XXX) are then installed every 3.0 metres to provide lateral support. It is essential that adequate bracing is provided directly before and after an offset or change in direction. It is important that adequate fixings, such as M10 rawl bolts, are used throughout the chimney system to anchor support components to the structure. In all cases, the structure to which fixings are attached must be structurally sound and capable of taking the required loadings of the support components.

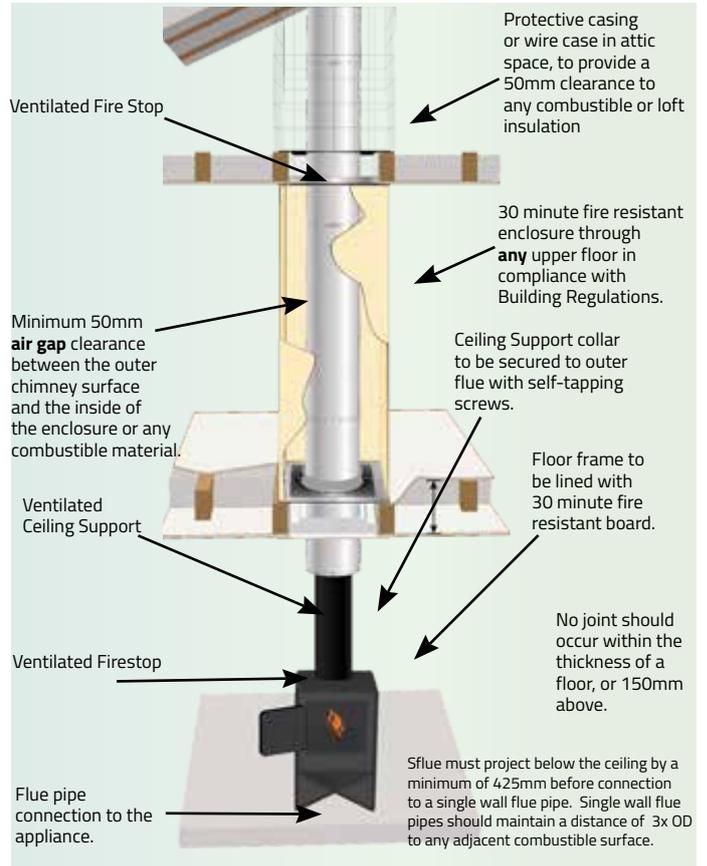


Wall Band Assembly



Combustible floor penetration (>250°C)

Where the chimney system is used with appliances producing flue gas temperatures exceeding 250°C, and where the chimney passes through a combustible floor, the following ventilated components must be used. All floor penetration components are designed to be secured to a pre-built frame construction and lined with a 30 minute fire resistant board to the dimension detailed in the table opposite.



Extending the Free-Standing Height to 2.5 Metres

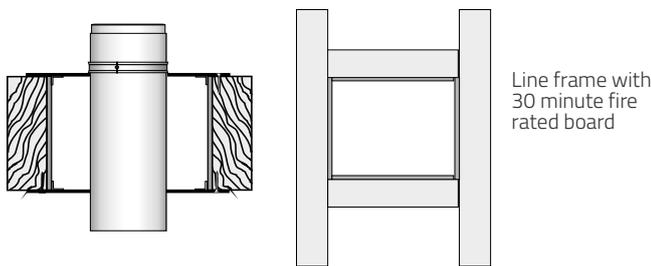
The free-standing height above the last lateral support can be increased from 1.5 metres to 2.5 metres with the use of Structural Locking Bands.

In this configuration, a Structural Locking Band must be used on the joint immediately below and on every joint above the last support, as detailed in this example.

It is recommended that Heavy Duty Wall Bands are used for lateral support when extending the free-standing height of the chimney, or where bracing an offset top to bottom.

A lateral or vertical support must be used lower down the system to counter any turning movement.

Ventilated Ceiling Support and Ventilated Firestop



Note: The fire rated board is required under the test conditions of BS 476: Part 20 where the chimney passes through a representative combustible floor. The purpose is to protect the ceiling void from the effects of radiated heat from the outer case of the chimney when the chimney below the ceiling is engulfed in fire.

Framing data and dimensions

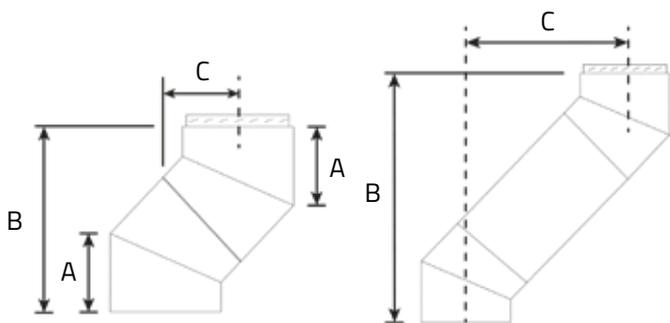
Chimney Size (mm)	127	152
'A' Square*	281	301

* The above dimension does not allow for 30 minute fire rated lining, adjust according to thickness used.

Elbow offset dimensions

This data relates to just two elbows used to form an offset as shown below. It also indicates the installed length of the elbow segments. Data is also provided where standard lengths are incorporated within the offset below.

∅	15°			30°			45°		
	A	B	C	A	B	C	A	B	C
127	87	342	45	87	325	87	87	297	123
152	92	362	48	92	343	92	92	314	130



Elbows are not load bearing. Vertical runs after changes of direction should be re-supported appropriately.

Offset dimensions with standard lengths(mm)

∅	120mm length						300mm length					
	15°		30°		45°		15°		30°		45°	
	B	C	B	C	B	C	B	C	B	C	B	C
127	457	76	429	147	382	208	631	123	584	237	509	335
152	478	79	447	152	399	215	651	125	603	242	526	342

∅	500mm length						1000mm length					
	15°		30°		45°		15°		30°		45°	
	B	C	B	C	B	C	B	C	B	C	B	C
127	825	174	758	337	651	476	1308	304	1191	587	1004	830
152	844	177	776	342	668	484	1328	306	1209	592	1021	837

General

1. Installation of Sflue components must be in accordance with local Building Regulations and associated National Standards and Codes of Practice. For additional guidance, please refer to the Mandatory Requirements on Page 16.
2. Every chimney section and fitting must be used as manufactured, and assembled without any alteration or cutting. Components are joined with a multi barbed twist lock coupler and secured with a Locking Band. The exceptions to this are Elbows and the branch of a 135° Tee, which are designed to allow full rotation of the component and therefore do not have locking barbs on the female end. All components must be installed with the male coupler facing up.
3. The internal diameter of the chimney must conform to the requirements of the appliance manufacturers instructions and should not, under any circumstances, be less than the diameter of the appliance outlet unless operational requirements of the appliance and chimney can be demonstrated by calculations to BS EN 13384-1.
4. The total height of the chimney will depend on the building structure and surrounding environment, however a height of 4.5 metres from the top of the appliance outlet to termination is considered the minimum for solid fuel. Throughout its height, the chimney should remain as straight as possible.
5. It is recommended that a vertical run of at least 600mm should be allowed immediately above the appliance, before a change of direction. Where single wall connecting flue pipe is used directly off of the appliance, it is recommended that the total length is no greater than 2 metres, to avoid excessive cooling of the flue gases. The joint between the single wall connecting flue pipe and the Sflue product must be a minimum 425mm below the ceiling in accordance with BS EN 15287-1.
6. Although components are included that will permit horizontal application, they should only be used for connection to the appliance. When connected to a rear outlet appliance, the maximum horizontal distance should be no more than 150mm. It is possible to extend the horizontal length to a maximum of 450mm when meeting the full requirements of BS EN 15287-1. When passing through a wall where the structure or in fill is combustible, the distance to combustible must be increased to 100mm.
7. No part of the chimney system should be constructed to form an angle greater than 45° from the vertical.
8. Offsets can be constructed using Elbows, Lengths and Adjustable components available within the system. Within a system, for all fuels, there should be no more than four changes of direction of 45°. Factory made 90° elbows or tees within the system may be treated as being equal to two 45° elbows. Where an offset is used, the length of chimney between the two elbows must not exceed 20% of the total vertical length of the chimney.
9. Under no circumstances must there be a joint within the thickness of any floor space, or 150mm above the floor line. Where passing through a cavity wall, a wall sleeve must be used and finished with a suitable trim collar / angled cover ring. Note that a wall sleeve does not guarantee the required distance to combustible, this must be assessed during installation.
10. Except for the room containing the appliance, the chimney must be enclosed as per Building Regulations where the chimney passes through any part of the building, where there is a risk of accidental human contact, i.e a bedroom etc., or where there is a risk of contact with combustible materials, e.g a cupboard or in the roof space. This can be achieved by enclosing the chimney within a non-combustible enclosure in habitual rooms etc., or using a protective wire mesh frame in roof spaces etc. In all cases the minimum distance to combustible material must be maintained. Any enclosure should be ventilated using the appropriate Ventilated Firestop components.
11. It is important when passing through lower and upper floors that the correct firestop components are used and the required distance to combustible material is observed. When used on solid fuel or oil-fired appliance where the flue gas is greater than 250°C, always use the Ventilated Ceiling Support and Ventilated Firestops when passing between the lower and upper floors. See pages 9 and 18 for further information.

About Us

Since 1969 we have provided expertise in system design and innovation for commercial, domestic and industrial applications, with uncompromised customer service. Our portfolio of trusted brands are known throughout the world for their engineering excellence.

We are proud of our British built heritage at SFL. All our products are fabricated at our manufacturing centre in Barnstaple, Devon, UK. As well as investment in the latest manufacturing system, we also have an extensive R&D centre ensuring continuous product development and testing to the latest European Standards.

Our Brands

SFL branded products are synonymous with the highest quality – it is this reputation that enables specifiers, contractors and house-holders to use our products with total confidence.



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