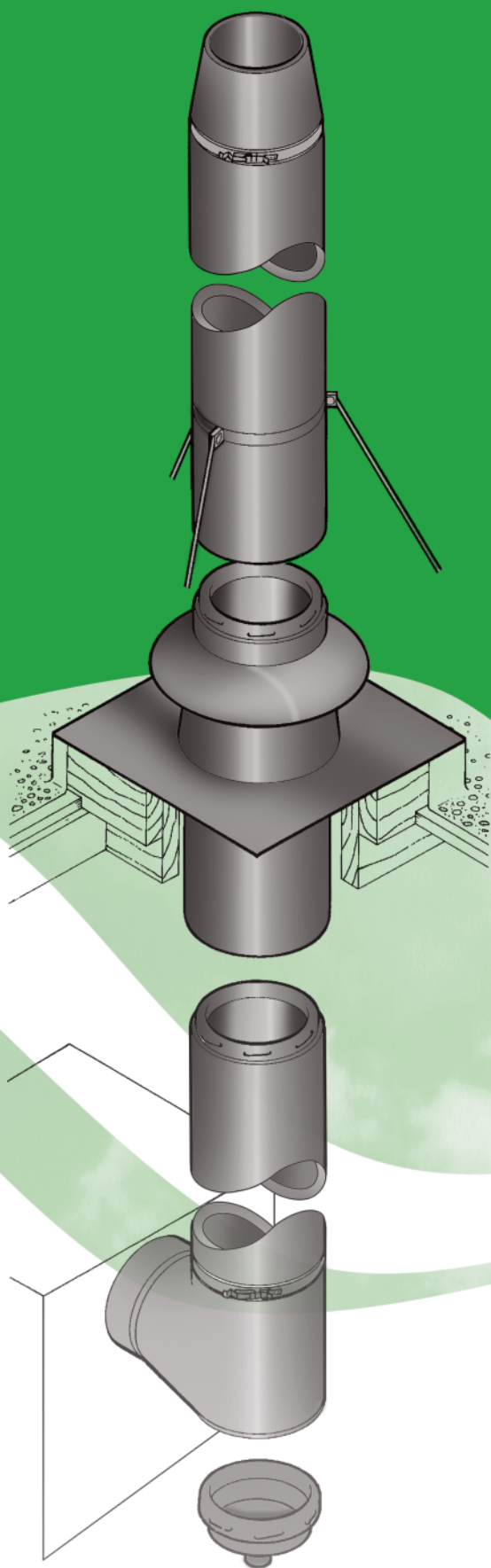


SM250

Twin-Wall, Insulated
Stainless Steel
Multi-Fuel
Chimney System

DIAMETER RANGE
127mm-203mm (5"-8")



Product Information

The SM250 Chimney Systems is a high quality prefabricated stainless steel insulated chimney system designed for use Solid and Multi-Fuel combustion equipment operating under natural draught and non-condensing conditions.

Multi Fuel Chimney System Twin Wall, Insulated Stainless Steel

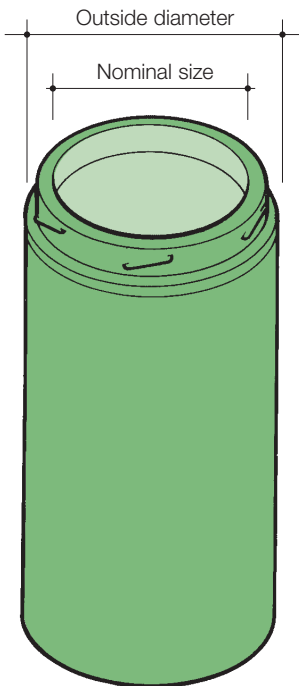
Introduction

SM250 is a prefabricated twin wall insulated chimney system and has been designed specifically to be used on Solid and Multi-Fuel combustion equipment, operating under negative natural draught conditions. Under no circumstances should SM250 be used on appliances that generate excessive condensation such as condensing appliances or where the chimney system has been designed to operate under positive pressure conditions.

The SM250 product is manufactured to the highest quality and is CE Marked to BS EN 1856-1 and suitable for appliances with flue gas temperatures up to 450°C (Intermittent 550°C).

The system consists of straight pipe lengths and associated fittings, which are constructed entirely from stainless steel and have a 25mm insulated annulus. The external casing is weatherproof and supports the structural load, while the inner liner is manufactured from a high grade 316L stainless steel, offering excellent protection from the often corrosive products of combustion and is free to expand or contract as the flue gas temperatures change.

SM250 can be used either internally or externally. The relatively low external wall temperature permits installation with only a 50mm air gap clearance to combustible material. The distance to combustible material is related to the thermal testing procedure as defined in both BS EN 1856-1/BS EN 1859.



SM250 Product Designation To BS EN 1856-1

Cert. No: 0086 - CPD - 496040	SM250	BS EN 1856-1	T450	N1	D	Vm	L50040	G(50)
Standard Number	_____							
Temperature Level < = 450°C	_____							
Pressure Level	_____							
Condense Resistance D = Dry W = Wet	_____							
Corrosion Resistance	_____							
Material Specification Liner = Grade 316L S/S Liner Thickness 0.4mm	_____							
Sootfire Resistance G = Yes O = No (50) = Distance to combustible material	_____							



Nominal size (internal diameter)	Outside diameter	Cross-sectional area
127mm (5in)	175mm (7in)	12 668mm ² (20in ²)
152mm (6in)	200mm (8in)	18 146mm ² (28in ²)
178mm (7in)	230mm (9in)	24 885mm ² (38in ²)
203mm (8in)	255mm (10in)	32 365mm ² (50in ²)

Note that the metric nominal sizes have been converted from their true imperial sizes and rounded to the nearest equivalent.

Description

Composition and manufacture

All lengths and fittings are twin-walled with a 25mm cavity. The outer case is attached to both the male and female couplers, while the inner liner is attached only to the upper male coupler, allowing the liner to expand or contract as the flue gas temperature varies without affecting the structural performance of the outer and removing the need for expansion components such as bellows etc.

The SM250 product utilises a silica based insulating medium providing an optimum and carefully controlled density which in addition to providing safe operation at high temperature, also maintains a relatively high flue gas temperature throughout the chimney length, enabling the provision of a rapidly established and stable draught.

Lengths and fittings utilise a rapid one-eighth turn twist action locking system at the joint, allowing simple and rapid installation of the product. A toggle clip locking band must then be fitted to finish each joint.

Application

SM250 is primarily designed for use on domestic Multi-Fuel appliances such as stoves, boilers and heaters operating under dry and negative draught conditions where the flue gas temperature will not exceed 450°C.

The chimney system should be installed in accordance with the requirement of BS EN 15287-1: 2007 "Chimneys - Design, installation and commissioning of chimneys" and, depending on where used in the United Kingdom, the requirements of:

Document "J" of the Building Regulations, Section "F" of the Building Standards (Scotland),

Section "L" of the Building Regulations (Northern Ireland)

SM250 is manufactured, tested and CE Marked to BS EN 1856-1 as per the designation on page 2. SM250 is also manufactured under a Quality Assurance Scheme certificate No. FM557622 administered by British Standards in accordance with BS EN ISO9001:2008.

CE Certificate No. 0086-CPD-496040.

SM250 is also listed by HETAS as an approved chimney for solid fuel.

Installation

Installation instructions are on pages 10 and 11 and are provided with all support components. These should be consulted to accurately determine the components that are required to enable any installation to be correctly assembled.

Jointing

All lengths and fittings are designed to be installed with the male coupling uppermost. Joints are achieved simply by placing the female coupling over the male coupling and making a one-eighth turn. A Locking Band must be used to secure every joint and to ensure a firm connection.

Connection to the appliance outlet

Both standard, cast iron and increaser adaptors are available to facilitate connection to the heating appliance in accordance with Building Regulations.

Supports

The weight of the chimney may be carried by a number of components according to whether the chimney is installed internally or externally, and whether it is supported by the roof, ceiling, floor or external wall. These components include the Wall Support, Ceiling Support, Roof Support, Floor Support and Ventilated Ceiling Support. Lateral stability is provided by Wall Bands, Bracing Brackets or Guy Wire Brackets.

Supporting free-standing chimneys:

Irrespective of roof configuration, where the chimney exceeds 1.5m beyond the last support it must be braced with steel bracing rods or preferably angle iron. Guy wires should only be used where alternatives are not possible. In either case, a Guy Wire Fixing Bracket should be used and secured above a Locking Band as close to the joint as possible. Where the chimney is supported by a mast consult SFL.

Roof support

The Roof Support is designed for supporting the chimney on the roof joists and is provided with adjustable gimbal plates. Bracing Brackets should be used in the roof space to restrain movement of the chimney due to wind forces on the chimney above the roof.

Load bearing performance

The weight of the chimney supported depends on the support components employed: Table B on page 11 provides support details.

Weight characteristics

The table below indicates average weight of each diameter per metre run installed, excluding support components.

	127mm	152mm	178mm	203mm
SM250	8.0kg	9.0kg	11.0kg	12.5kg

Clearance

The relatively low external casing temperature experienced in normal operation permits installation with only 50mm air gap clearance to combustible material.

However, where the SM250 Chimney passes through a combustible floor or ceiling and serves a Solid / Multi-Fuel or oil fired appliance where the flue gas temperature exceeds 250°C, a Ventilated Firestop and Ventilated Ceiling Support **MUST** be used to maintain the 50mm clearance and act as a fire stop.

Lengths of chimney

Standard lengths of 1500mm, 1000mm, 500mm, 300mm and 120mm as well as two adjustable lengths are available. Please see individual component tables for further information.

Restrictions on elbows

15°, 30° and 45° Insulated Elbows are available for use where it is not possible to construct a vertical chimney. Building Regulations dictate that no part of a chimney should form an angle greater than 45° from the vertical, except where it may be necessary to use a very short horizontal section of flue to connect the chimney to a back outlet appliance. Additional restrictions also apply on angles. See paragraph 8 of the Installation Instruction on page 10.

Floor and ceiling penetrations

Where the chimney penetrates a combustible floor or ceiling, a 50mm air gap clearance must be maintained, and the opening fire-stopped. Where SM250 is used for solid and multi-fuel applications and where the flue gas temperature is greater than 250°C, the ventilated support and fire stop components must be used as detailed on page 7. Floor apertures **MUST** be lined with 1/2 hour fire rated board. For oil and gas applications where the flue gas temperature is below 250°C or where the chimney passes through a non-combustible floor the Ceiling Support and Firestop Spacer can be used.

The combination of lengths used must be such that no joint occurs within the thickness of any floor or ceiling construction, and where connected to flue pipe serving a solid, Multi-Fuel or oil-fired appliance, the chimney must project at least 150mm below the ceiling before the connection to the flue pipe is made.

SFL Patented Intumescent Ceiling Support

The Ventilated Ceiling Support component utilises a patented intumescent matrix. In the event of a fire in the appliance room, the intumescent matrix rapidly expands to close off the ventilation slots and form a fireproof barrier, stopping the potential spread of fire to the first floor area.

Fire Rating

The SM250 product in accordance with the stability and integrity criteria of BS 476: Part 20 is fire rated for a period of 120 minutes.

Roof penetrations

Flat and Adjustable Flashings are available to provide the appropriate weather cover where a chimney penetrates the roof. Both types are fabricated from sheet aluminium.

The flat flashing is suitable for flat or nearly-flat roofs. The Adjustable Flashing is available in two types, for low or steeper pitched roofs. Both types of Adjustable Flashing are available with the flashing base constructed from malleable alloy for use with heavily-contoured roof tiles (to special order). Storm Collars are supplied with sealant and should be placed over the pipe immediately above the flashing. They are screw-clamped over the pipe and must be sealed to its outer wall with a waterproofing sealing compound. Alternatively, the Seldek Flashing system, manufactured in EPDM is available (see separate literature).

Terminations

Four types of termination are available. All have a female coupling and are fixed to the top of the chimney length and secured with a Locking Band. The Insulated Top Stub provides a neat finish to the top of the chimney where a Rain Cap is not required. The Rain Cap is a domed stainless steel cap. The Round Top allows rapid exhaust of combustion products and its integral skirt deflects the wind. Where required for use with gas combustion equipment, Gas Terminals are available for diameters 127mm to 203mm.

Product handling

The products are relatively easy to handle, but care should be taken when holding, fitting or assembling any part of the system. Users are advised to take suitable precautions, gloves etc., to avoid injury on any sharp exposed edges.

Design Information

SFL offers a comprehensive chimney sizing and design service to the trade and distribute through a geographic network of specialist distributors and national merchants.

SFL cannot accept responsibility for any installation or application, which seeks to combine the SM250 chimney with any other form of chimney construction.

Product Warranty

The SFL SM250 chimney system is covered by a manufacturing defects warranty for a period of 10 years, subject to written conditions, copies of which are available on request.

Life Expectancy

Those components within the SM250 range which are fabricated from only a single skin, can be vulnerable when exposed to the products of combustion from solid fuel appliances. In the majority of cases, an open-ended terminal better suits appliance performance, but it is acknowledged that on occasions, other types of terminal from the SM250 range have to be used to reduce rain entry. The Condensate Collector and the Locking Plug when used with solid fuel are also vulnerable to flue gas by-products, particularly if the chimney is not regularly maintained and cleaned.

Such components are considered sacrificial and their life expectancy will vary dependant on application, location, maintenance and fuel usage. For that reason, the Rain Cap, Round Top, Condensate Collector and Locking Plug are not covered by any warranty other than for a twelve month period against defective manufacture.

It should also be noted that chemically contaminated combustion air will also affect the durability of the product as will the use of chemical chimney cleaners. Typical examples of contaminated combustion air has been seen in de-greasing plants and dry-cleaning companies

Where used on solid fuel, care should be taken to ensure that only high quality fuel is used. SFL do not recommend fuels such as petroleum coke or other fuels containing a blend of petroleum coke. Also some smokeless fuels contain halogens that are released when burned, forming Hydrochloric and Hydrofluoric Acids. These fuels can lead to premature failure of the chimney system through corrosion. Before burning any fuel, SFL would suggest that written confirmation is obtained to ensure that the fuel is halogen free.

Only HETAS Approved fuels should be used with SFL products.

Freshly cut firewood can contain up to 50% moisture, provision must be made to allow the wood to season so that the moisture content is reduced to around 20%. This must be done in a dry environment and can take up to 8 months. Green wood can lead to product like creosote being deposited on the chimney liner and could lead to a chimney fire occurring.

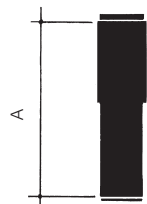
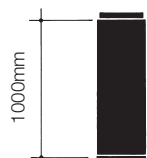
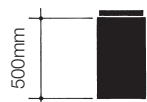
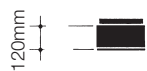
Adequate provision should be made for inspecting and cleaning the chimney system. This is particularly important for solid fuel applications.

SFL recommends that chimneys serving solid fuel appliances are swept at least twice a year. If the appliance is allowed to slumber, it should be run at full fire for at least 30 minutes per day, to reduce the build up of corrosive substances. Under no circumstances should chemical cleaning agents be used in the chimney.

It is recommended where the SM250 product is installed near coastal locations that any external part of the chimney is protected from the salt environment by means of a suitable protective coating over the external surface.

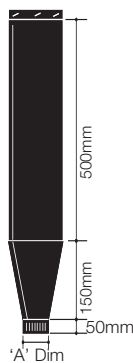
Individual components

Lengths



A (mm)

INTERMED 200 - 325
LONG 350 - 530



'A' Dim

Straight lengths

Fixed straight lengths are available in five lengths: 120mm, 300mm, 500mm, 1000mm and 1500mm

Actual length of component is 32mm greater. Please note that no lengths are provided with Locking Bands.

Size	Code No.	
	120	300
127mm	0120605	0140305
152mm	0120606	0140306
178mm	0120607	0140307
203mm	0220608	0240308

Size	Code No.		
	500	1000	1500
127mm	0140205	0140105	0149905
152mm	0140206	0140106	0149906
178mm	0140207	0140107	0149907
203mm	0240208	0240108	0249908

Adjustable Lengths

A telescopic section designed to provide small increments in lengths between two fixed points. Two versions are available to provide maximum flexibility, ie, INTERMEDIATE (200mm-325mm adjustment) and LONG (350mm-530mm adjustment). The components are NOT load-bearing. Self-tapping screws are provided to secure the overlap once the required length has been determined. Because the component's application, and therefore performance, cannot be accurately controlled, it should be used internally and, in any event, never positioned so that the external skin is nearer than 305mm from any combustible material.

Size	Code No.	
	INTERMED	LONG
127mm	0144005	0141205
152mm	0144006	0141206
178mm	0144007	0141207
203mm	0244008	0241208

Starter Length

Offers an aesthetic solution to facilitate connection to a single wall connecting pipe.

Size	Dimensions		Code No.
	A		
127mm	125		0140405
152mm	150		0140406
178mm	175		0140407
203mm	200		0240408

For painted back version add 'B' to the end of the part number.

Locking Band

Used at all joints between chimney lengths or lengths and fittings.

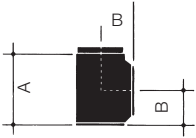
Size	Code No.
127mm	0108605
152mm	0108606
178mm	0108607
203mm	0208608



Fittings

90° Tee

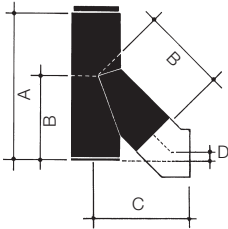
Used at base of vertical chimney. Can be used on the base or branch to provide access.



Size	Dimensions		Code No.
	A	B	
127mm	298	149	0124305
152mm	324	162	0124306
178mm	349	175	0124307
203mm	375	187	0224308

135° Tee

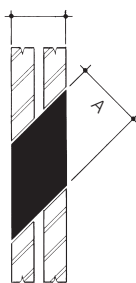
Used at base of vertical chimney. Can be used on the base or branch to provide access.



Size	Dimensions				Code No.
	A	B	C	D	
127mm	500	311	368	30	0140505
152mm	500	341	398	35	0140506
178mm	500	378	433	42	0140507
203mm	1000	408	463	47	0240508

Dimensions "C" & "D" apply where Tee is used with 45° Elbow

280mm



Wall Sleeve

Must be used where 135° Tee is used to pass the chimney through an external wall. The sleeve component provides, in effect, an uninterrupted run through the wall.

Size	Dimensions		Code No.
	A		
127mm	200		0107105
152mm	225		0107106
178mm	255		0107107
203mm	280		0207108

Condensate Collector

Provides a removable trap for condensation and soot/debris under an Insulated Tee and is locked into the Female Coupler under the Anchor Plate. Easily removed to provide cleaning access. Uninsulated and non-Load bearing, it incorporates a stainless steel drain tube and cap having a 25mm bore and a 1" BSP external thread. This component must be secured with a Locking Band.



Size	Code No.
127mm	0153205
152mm	0153206
178mm	0153207
203mm	0253208

Locking Plug

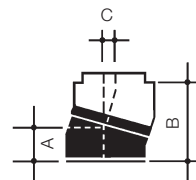
Used to seal and provide access on a female connection of a length or fitting.



Size	Code No.
127mm	0119105
152mm	0119106
178mm	0119107
203mm	0219108

15° Elbow

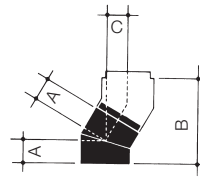
Used to provide offsets or bends.



Size	Dimensions			Code No.
	A	B	C	
127mm	87	342	45	0140605
152mm	92	362	48	0140606
178mm	97	381	50	0140607
203mm	102	401	53	0240608

30° Elbow

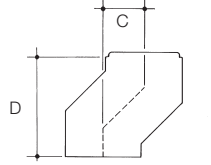
Provides a 30° bend; or, by using two components, a 60° or variable offset bend can be obtained.



Size	Dimensions			Code No.
	A	B	C	
127mm	87	325	87	0122305
152mm	92	343	92	0122306
178mm	97	362	97	0122307
203mm	102	381	102	0222308

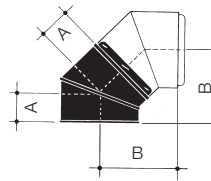
45° Elbow

Provides a 45° bend; or, by using two components, a 90° or variable offset bend can be obtained.



Size	Dimensions				Code No.
	A	B	C*	D	
127mm	87	210	123	297	0122205
152mm	92	222	130	314	0122206
178mm	97	234	137	331	0122207
203mm	102	246	144	348	0222208

* Maximum offset



Adaptor

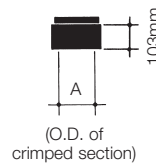
Used to connect appliance flue outlets or vertical or horizontal single-wall flues to insulated chimneys.



Size	Dimensions		Code No.
	A	(I.D.)	
127mm	128		0119405
152mm	153		0119406
178mm	179		0119407
203mm	204		0219408

Adaptor for Cast-Iron Pipe

Used to connect boiler flue outlets or cast-iron or mild-steel flue pipes to insulated chimney lengths. The crimped inner lining fits inside the pipe or outlet and, where the outer casing fits outside the flue or outlet, it should be caulked with a fire cement compound.



Size	Dimensions		Code No.
	A	(I.D.)	
127mm	114		0119505
152mm	140		0119506
178mm	165		0119507
203mm	190		0219508

Increaser Adaptor

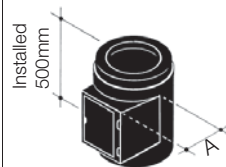
Used to increase the appliance spigot to the next size chimney diameter.

Size	Code No.
100 - 125 SM250	0129705
125 - 150 SM250	0119706

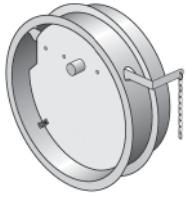
Inspection Length

Used to provide access for inspection or cleaning. A recessed square catch prevents unauthorised use. Access may also be provided to the chimney using a 90° Insulated Tee with a Locking Plug in the branch.

Where used with solid, Multi-Fuel or oil-fired appliances, a 150mm air-gap clearance must be maintained from the outer surface of this component to any combustible material.



Size	Dimensions		Code No.
	A	Door Size (140 x 200mm)	
127mm	148		0141805
152mm	160		0141806
178mm	175		0141807
203mm	188		0241808



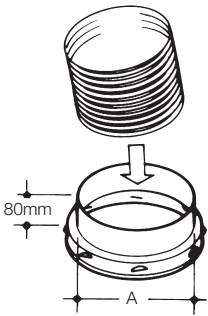
Separate detail sheet and instruction available on request

Flue Draught Stabiliser

Designed to be used with any SFL Flue system where excessive draught is likely to create combustion problems. The Stabiliser should be applied with the Appliance Adaptor, Code No. 194, (in turn located onto the 90° Tee branch).
To fit flue Ø

Size	Code No.
127mm	3192005
150mm	3192006
175mm	3192007
203mm	3192008

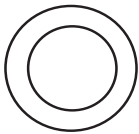
Special Fittings



Flexible Liner Adaptor

Used where SM250 connects an appliance to an existing chimney which is to be lined. The lower end of this connects to standard product. The upper end incorporates a socket/stub designed to accommodate flexible chimney liner.

Size	Dimensions		Code No.
	A		
127mm	134		0150105
152mm	161		0150106
178mm	187		0150107
203mm	218		0250108



Trim Plate Collar

Polished stainless steel circular collar with a 100mm wide flange to provide a neat finish at the ceiling or where exposed internal chimneys meet the appliance.

Size	Code No.
127mm	0108505
152mm	0108506
178mm	0108507
203mm	0208508

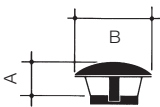
Flashings & Terminals



Top Stub

Secured with a Locking Band.

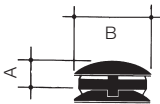
Size	Code No.
127mm	0127305
152mm	0127306
178mm	0127307
203mm	0227308



Rain Cap

Secured with a Locking Band.

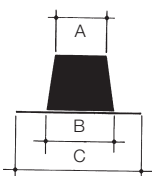
Size	Dimensions		Code No.
	A	B	
127mm	127	254	0107405
152mm	143	305	0107406
178mm	165	356	0107407
203mm	183	406	0207408



Round Top

Secured with a Locking Band.

Size	Dimensions		Code No.
	A	B	
127mm	96	254	0107505
152mm	110	305	0107506
178mm	127	356	0107507
203mm	144	406	0207508



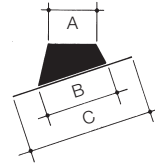
Flat Flashing

For flat or nearly-flat roofs.

Size	Dimensions			Code No.
	A	B	C*	
127mm	190	280	495	70000007
152mm	210	300	495	70000009
178mm	240	330	610	70000010
203mm	260	350	610	70000011

* Base is square (C x C)

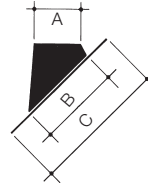
5°-30° Adjustable Flashing



Size	Dimensions			Code No.
	A	B	C*	
127mm	190	281	495	70053007
152mm	210	304	508	70053009
175mm	240	335	550	70053010
203mm	260	361	578	70053011

* Base is square (C x C)

32°-45° Adjustable Flashing



Size	Dimensions			Code No.
	A	B	C*	
127mm	190	375	578	70324507
152mm	210	403	610	70324509
175mm	240	428	650	70324510
203mm	260	475	678	70324511

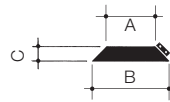
*Base is square (C x C)

**The degree of malleability is limited. Excessively corrugated or profiled roofs could exceed the limitations of the malleable flashings.

Alternatively, the Seldek range of flashings, manufactured in EPDM material are available. See separate brochure for details.

Storm Collar

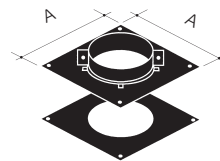
Used as a weathering over flashing and supplied with sealant.



Size	Dimensions			Code No.
	A	B	C	
127mm	177	280	70	70123407
152mm	202	301	70	70123409
175mm	227	330	70	70123410
203mm	252	351	70	70123411

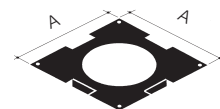
Support Components (Gas & Oil <250°C)

The following components MUST be used where SM250 is used on gas or oil fired appliances where the flue gas temperatures do not exceed 250°C and/or where the chimney system penetrates a non-combustible floor.



Ceiling Support

Provides a 50mm air gap clearance to a penetrated floor or ceiling and is only used where SM250 penetrates a non-combustible floor, and/or serves a gas or oil fired appliance where flue gas temperatures do not exceed 250°C.



Firestop Spacer

Used to provide location, fire and dust stopping where SM250 is used through non-combustible and combustible floors when serving gas or oil fired appliances ONLY with a flue gas temperature not exceeding 250°C. These components are supplied singly but are usually installed in pairs and are not Load bearing.

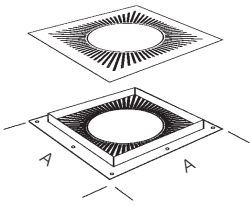
Size	Dimensions		Code No.
	A		
127mm	330		0108705
152mm	355		0108706
178mm	381		0108707
203mm	406		0208708

Support Components (Solid Fuel/Oil >250°C)

The following components MUST be used where SM250 is used on Solid Fuel and Oil fired appliances where Flue Gas Temperature exceeds 250°C and/or where the chimney system penetrates a combustible floor.

Ventilated Fire Stop

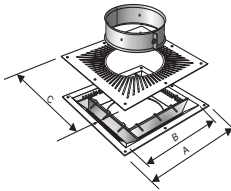
This component MUST always be used where SM250 is used internally on Solid Fuel or Oil fired appliances producing Flue Gas Temperatures exceeding 250°C and passes through combustible floors where the sections below the floor penetration are enclosed within a compartment.



Size	Dimensions		Code No.
	A	B	
127mm	379		0188705
152mm	399		0188706
178mm	429		0188707
203mm	453		0288708

Ventilated Ceiling Support

This component MUST always be used where SM250 is used internally on Solid Fuel or Oil fired appliances producing Flue Gas Temperatures exceeding 250°C and passes through the first combustible floor above the heating appliance. Fitted with an intumescent matrix.



Size	Dimensions			Code No.
	A	B	C	
127mm	361	281	379	0172705
152mm	381	301	399	0172706
178mm	411	331	429	0172707
203mm	431	351	453	0272708

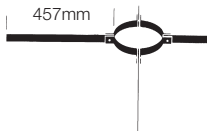
The above component is a patented design as UK Patent 2388651.

For painted add ZB (Black) or ZW (White) after the part number.

Fixings & Supports

Bracing Bracket

Used to provide lateral stability to a chimney passing through the roof space.



Size	Code No.
127mm	0109805
152mm	0109806
178mm	0109807
203mm	0209808

Universal Wall bands

Used for lateral support with no more than 3.0m externally and 4.0m internally between centres. The galvanised wall band is intended for internal applications only, whereas the stainless steel version can be used for both internal and external applications.



Size	Dimensions		Code No.
	A*	B	
Steel			
127mm	137	136	3115155
152mm	162	148	3115205
178mm	192	161	3115234
203mm	212	173	3115255

Size	Dimensions		Code No.
	A*	B	
Galvanised			
127mm	137	136	3116155
152mm	162	148	3116205
178mm	192	161	3116234
203mm	212	173	3116255

*Fixing centres

Guy Wire Bracket

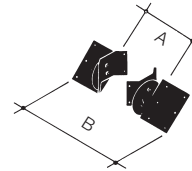
Wires are not provided. Rigid Stays are preferred. Structural calculations should be made for each application. See installation instructions.



Size	Code No.
127mm	0109205
152mm	0109206
178mm	0109207
203mm	0209208

Roof Support

Provided with adjustable gimbal plates to permit a chimney to be supported on roof joists, trussed rafters etc. Maximum suspended chimney length supported is 6m and maximum total length supported is 9m.

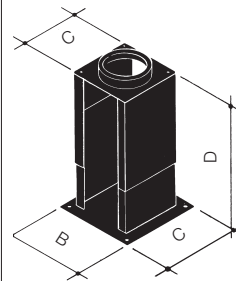


Size	Dimensions		Code No.
	A*	B	
127mm	280	490	0102900
152mm	304	515	0102900
178mm	330	545	0102900
203mm	356	570	0102900

*Minimum distance between trusses.

Telescopic Floor Support

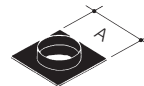
Used to support chimney at floor level.



Size	Dimensions				Code No.
	A	B	C	D	
127mm	246	340	290	300-550	0102605
152mm	271	365	315	300-550	0102606
178mm	296	390	340	300-550	0102607
203mm	322	416	366	300-550	0202608

Mounting Plate for Precast Chamber or Lintel

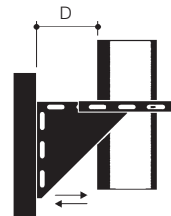
Designed to be used when connecting SM250 chimney to a Lintel.



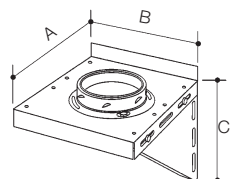
Size	Dimensions		Code No.
	A	B	
127mm	210		0152705
152mm	235		0152706
178mm	261		0152707
203mm	286		0252708

Adjustable Wall Support

Designed to be internally or externally applied to provide either initial or intermediate support for the chimney. Maximum supported chimney lengths are detailed on page 11.

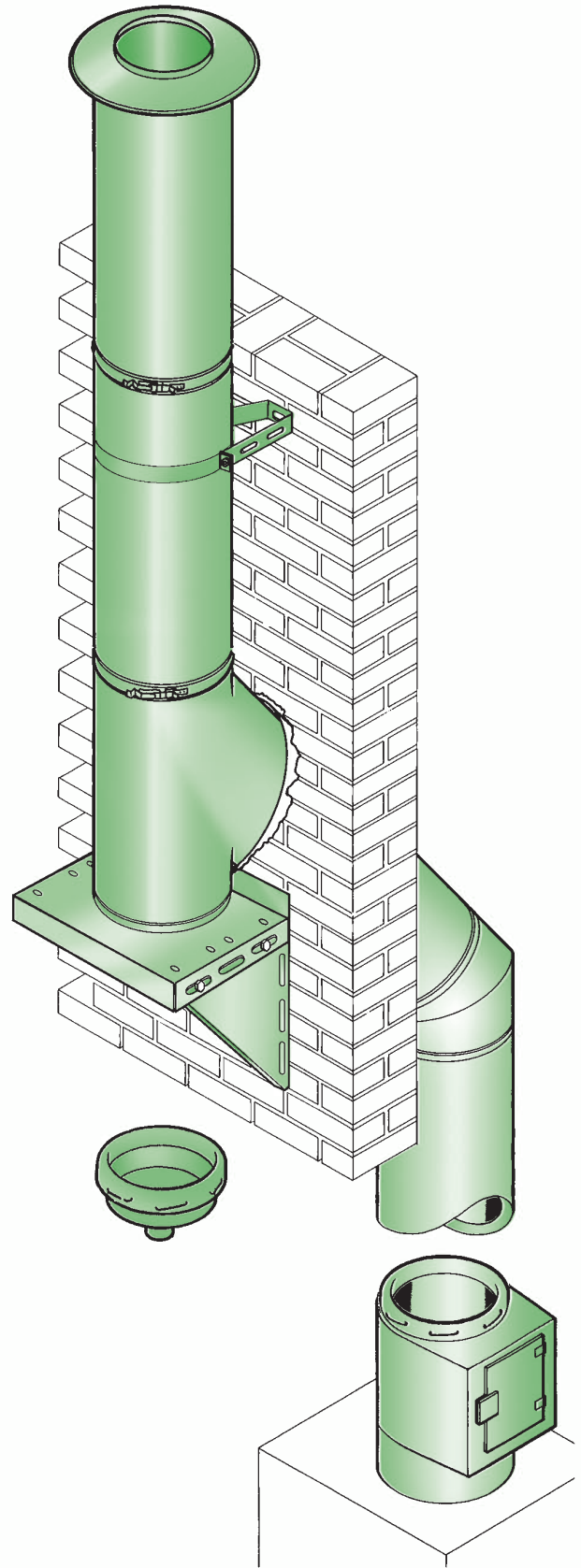
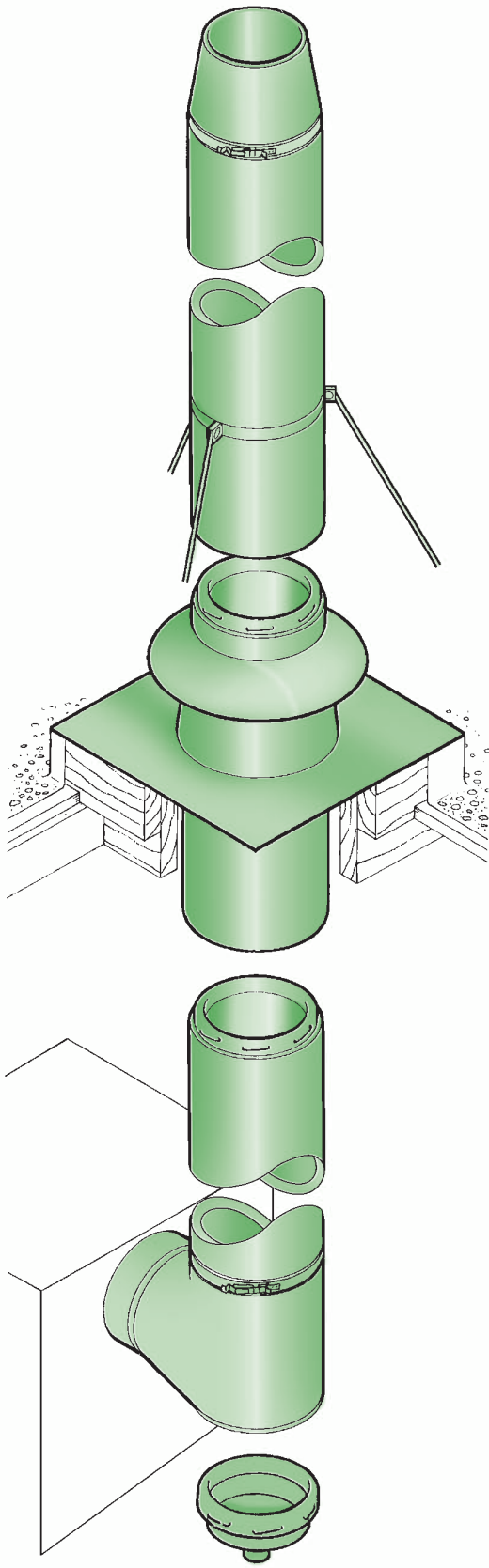


Size	Code Number	
	Stainless Steel	Galvanised
127mm	0151705	0199805
152mm	0151706	0199806
178mm	0151707	0199807
203mm	0251708	0299808



Size	Dimensions			
	A	B	C	D
127mm	282	311	279	150
152mm	302	331	299	150
178mm	331	360	328	200
203mm	355	384	352	200

Typical Installations



Typical Applications

Where the chimney passes through the roof space, it is essential that it is adequately supported by bracing to roof timbers. If there is a chimney run of more than 1.5m from the Ceiling Support to the Roof Support, use a Bracing Bracket and rigid stays for such an application. Also provision must be made to ensure that no accidental placement of combustible product can occur within 50mm of the external casing of the chimney. For example a mesh or screen around the lower part of the chimney directly above penetration would be acceptable.

It is a Building Regulation requirement that any prefabricated chimney arrangement in an accessible roof must be protected such that combustible materials cannot come into contact with the outer skin of the chimney. A minimum air gap clearance of 50mm can be maintained using cladding or a wire frame.

Chimney joints must not be positioned in the thickness of floor or ceiling joist spaces or within 150mm of floor/ceiling.

The fire resistant enclosure must maintain a 50mm clearance from any combustible material, this also applies to any combustible material within the enclosure (See instructions 5 & 7).

The chimney must project 150mm below ceiling level before flue pipe connection is made. It is very important that if a spigotted flue pipe is used, the lower end of the Adaptor does not rest on the shelf of the spigot. Allow at least 15mm for expansion of the flue pipe, and whatever the configuration, seal the joint with fire cement and fibre rope or suitable alternatives. Single wall flue pipes should maintain a distance of $3 \times OD$ to any adjacent combustible surface.

For solid fuel back or side flue outlet, the maximum legally permitted length of horizontal chimney or flue pipe is 150mm.

Fig. 4

No more than ONE offset in the chimney, (not including the connection to the appliance). The length of chimney between Elbows MUST NOT exceed 20% of the total chimney length.

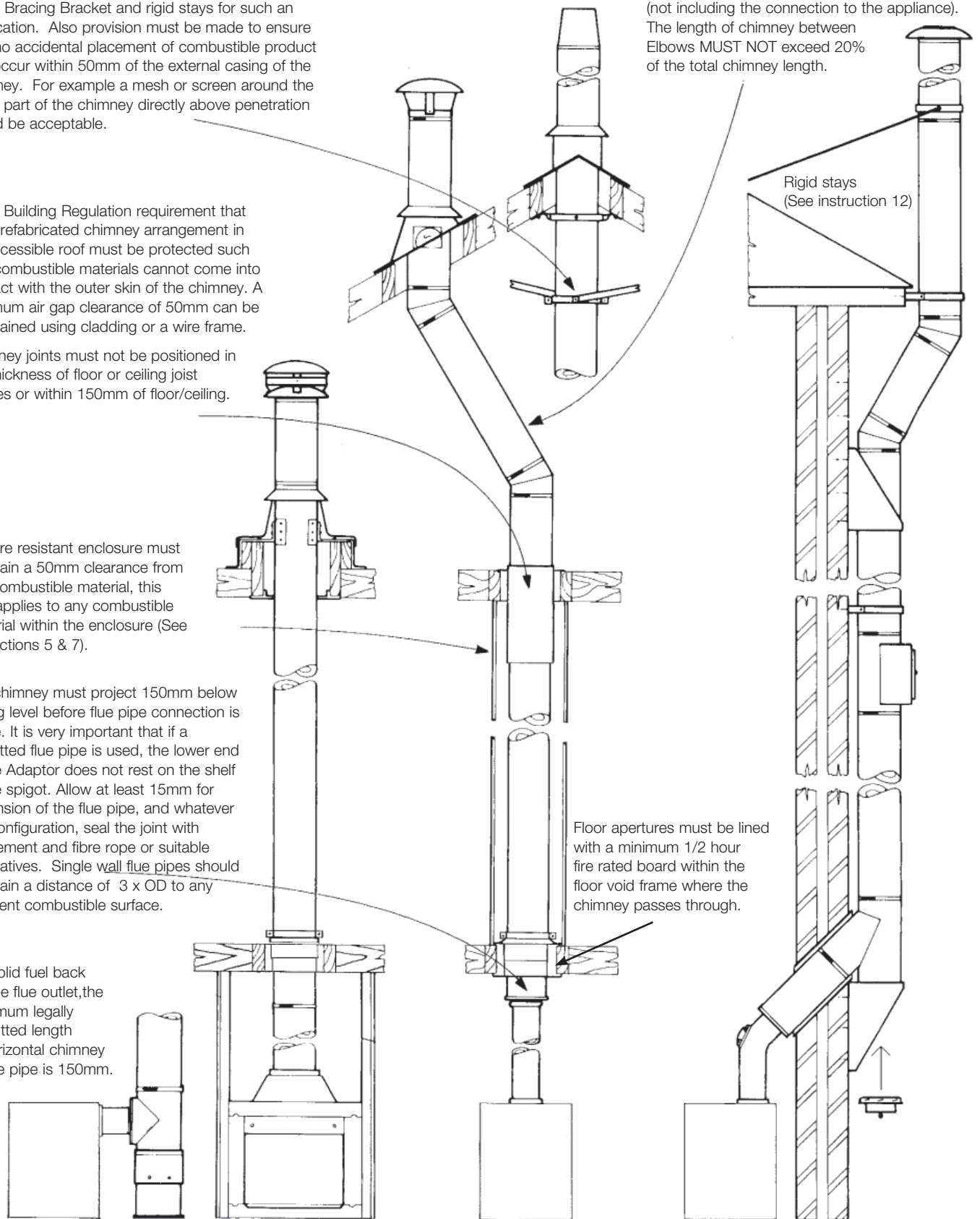


Fig. 1

Fig. 2

Fig. 3

Fig. 5

Apply these illustrations with the instructions on the next page.

Installation instructions

- 1 It is important to consult with the Building Regulations and, where the equipment served exceeds 150kW, the Clean Air Memorandum if appropriate.
- 2 To conform with Building Regulations, ensure that either an Inspection Length or an Insulated 90° or 135° Tee is used to provide easy access to the chimney for inspection and cleaning (unless such inspection and cleaning can be achieved through the appliance).
- 3 The internal diameter of the chimney must conform to the requirements of the heating appliance manufacturer's instructions and should not, under any circumstances, be less than the diameter of the appliance outlet. The height of the chimney will depend on the building structure with which it is used. However, not less than 4.5 metres chimney height from the top of the appliance is considered the minimum height for solid fuel appliance use. In any event, SFL have available Technical Data which provides chimney sizing criteria for any configuration.
- 4 Each chimney section and associated fitting shall be used as manufactured for assembly on site without any alteration or cutting. Sections and components are easily secured together with an eighth of a turn twist-lock which provides a sturdy and neat joint. Make sure that the elements are installed the right way up, with the male coupler uppermost. Once assembled, Locking Bands must be fitted to every joint. No special tools or sealing compounds are required.
- 5 Where used with SOLID FUEL or OIL appliances producing flue gas temperatures exceeding 250°C, the clearances at floor/ceiling joists must be established using the Ventilated Ceiling Support and the Ventilated Firestop.

All of these components incorporate spacers which are designed to provide a minimum 50mm air gap clearance from combustibles. This distance MUST be maintained elsewhere in the system between the outer case of the chimney and any combustible materials. Do not place any additional insulation material around any part of the chimney, and in all cases, the system must be designed so that no joints between chimney elements occur within the thickness of a floor space.
- 6 Joints between floors. The selection of chimney elements should be made so that no joints occur within the thickness of a floor space.
- 7 Where serving Solid Fuel or Oil appliances, any part of the chimney which passes through any room other than that in which the appliance using the chimney is situated, should be protected to prevent both damage and the accidental location of combustible materials against the outer skin. It is a Building Regulation requirement that ANY factory made insulated chimney should be enclosed where passing through a cupboard, storage space or habitable space. Any such enclosure must be constructed of materials and applied in such a way that they can be considered as providing access to the chimney. In the case of SM250, the 50mm air gap clearance applies.
- 8 No part of the system should be constructed at an angle greater than 45° from the vertical. The only permitted exception is where it is necessary to use an angle of 90° to make the connection to an appliance, which can be direct or with the use of a suitable flue pipe. The latter arrangement can be constructed using the 90° Tee as illustrated in these instructions. Where a change of direction or offset is required, 15°, 30° and 45° Elbows should be used within the limitations earlier mentioned. NOTE. Building Regulations will not permit more than ONE offset in any chimney run, (ie 2 Elbows). However, that excludes any Elbows used to make the connection to the appliance. Where an offset is used, the length of chimney between two elbows MUST NOT exceed 20% of the total length of the chimney.
- 9 The chimney must be adequately supported with the system support elements. Where externally used, the chimney must be supported on a wall or mast. (For latter applications, seek further details from SFL). The external support components must be used at intervals depending on the load-bearing criteria quoted in Table B. Wall Bands are not load-bearing and should be provided at intervals not exceeding 3.0 metres external and 4.0 metres internal for lateral stability only. Where used externally the stainless steel Wall Band should be used. All support components, except Wall Bands, are provided with their own installation instructions.
- 10 Where an external installation requires the chimney to offset past a roof overhang, Elbows should be used to form an angle as shallow as possible.
- 11 Connection to the appliance can either be direct using the Adaptor or a length of flue pipe can be connected to the Adaptor. In all cases, all joints between flue pipes/appliance outlets/chimney must be securely caulked and sealed with fibre rope (or suitable alternative) and fire cement. ANY flue pipe connection to the chimney MUST be made in the same room as the appliance.
- 12 The outlet of the chimney must comply with Building Regulations, where appropriate. Fig 6 indicates the requirements for solid fuel and oil served appliances. See IL Gas Vent Installation Instructions for Gas served appliance termination requirements. Under most circumstances, the above regulations will permit the normal operation of the chimney. However, should it be necessary to construct the chimney so that it extends beyond 1.5 metres above the roof or last support, such extension must be provided with additional support. A Guy Wire Bracket should be clamped to the chimney for this purpose, to which rigid stays, preferably angle iron, should be connected.
- 13 The terminals illustrated are suitable for all fuels, with the exception of the Gas Vent Terminal. For such applications please refer to separate IL Gas Vent System Installation Instructions for details.
- 14 If painting of the chimney is desired, first thoroughly degrease and then dry and prime the surface; in the case of galvanised components, use a zinc chromate based primer. Apply a finishing coat of external quality paint as required. NB: Do not paint the chimney where it is internally positioned 50mm from combustible materials. SFL would suggest that a specialist is employed to undertake any painting of the product.
- 15 It is a regulatory requirement that a data plate is to be completed, positioned and secured by the installer where a hearth, fireplace, flue or chimney is provided or extended. The data plate provides essential information regarding the performance, specification, designation and installation for the chimney system. The data plate is to be completed by the installer using an indelible ink and securely fixed in an unobtrusive but obvious position.

It is strongly recommended that any galvanised components that are externally applied, are thoroughly protected by painting or suitable alternative.

Framing and Load Bearing Data

Table A: Framing Data

The following data provides the opening required in all floor and ceiling areas. All details in mm.

Chimney Size	127	152	178	203
External Diameter	175	203	230	255

Ventilated Firestop and Ventilated Ceiling Support

Framing Size*	281sq	301sq	331sq	351sq
---------------	-------	-------	-------	-------

* Includes plasterboard lining of the timber frame.

Table B: Load Bearing Data

The weight of the chimney can be borne in a number of ways and this table states the maximum length of chimney that can be supported by the various components. All details in metres.

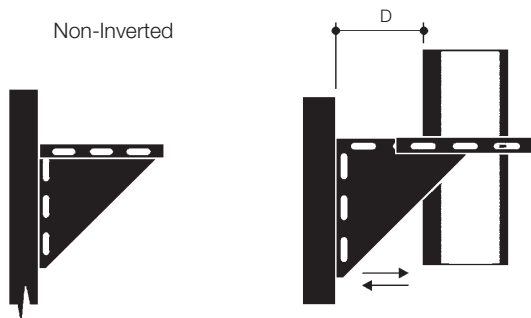
Component	127	152	178	203
Ceiling Support	6	6	6	6
Vent Ceiling Support	6	6	6	6
Telescopic Floor Support	16.7	16.7	16.7	16.7
Roof Support*	9	9	9	9
Inspection Length	16.7	16.7	16.7	16.7
90° Tee	16.7	16.7	16.7	16.7
135° Tee	10.7	10.7	10.7	6.7

* Part of the chimney up to a maximum of 6m may be suspended beneath the roof support.

NB: Wall Bands are not load-bearing and must be used at intervals not exceeding 3.5m internally and 3.0m externally.

Wall Support Brackets

Diameter (mm)	Plate Position	
	Closed	Open D>50mm
127	30	25
152	30	25
178	25	20
203	25	15



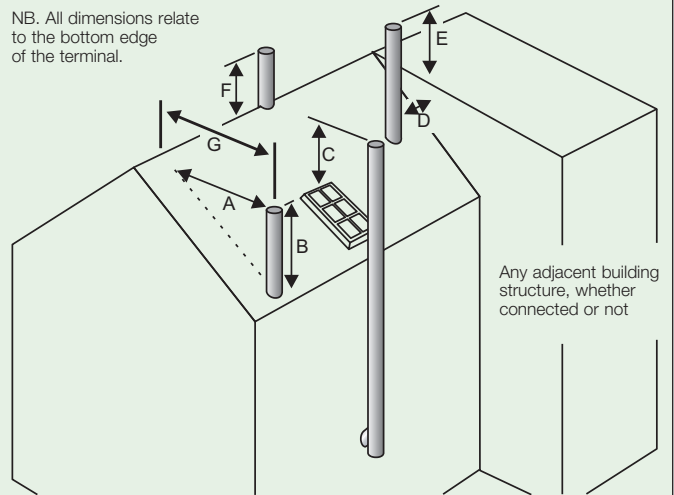
Chimney Termination

Fig. 6

The illustration and table identify the minimum requirements as dictated by Building Regulation where the chimney is used with solid fuel, wood or, if vapourising burner fitted on an oil-fired appliance.

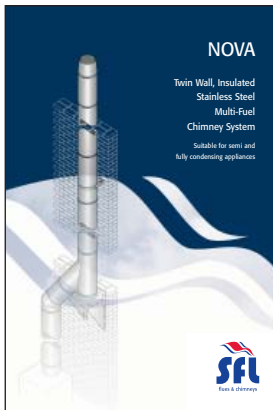
A chimney terminal over a pressure jet oil-fired boiler must discharge a minimum 600mm above the roof penetration point, or any adjacent structure, if it is with 750mm. It must also be at least 600mm from any opening into the building and 300mm, from any combustible material. If the chimney extends more than 1.5m above last support, it must be supported with rigid stays.

See IL Gas Vent literature for details of legal termination requirements where SM250 is used for gas fired appliances of rating up to 70kW.

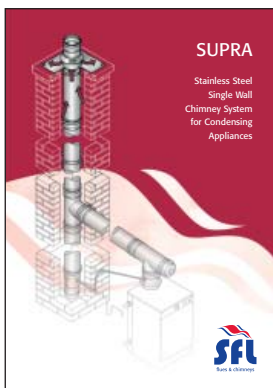


Dimension	Minimum distance measured from the top of the chimney construction, excluding any pot or terminal.
A	2.3 metres horizontally clear of the roof surface, eg. if the roof pitch is 45°, then the chimney should project 2.3 metres above it.
B	1 metre, provided A is satisfied, or 600mm above the ridge if G is less than 600mm.
C	1 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	Edge of chimney to roof ridge.

Complementing products For Condensing Applications



The Nova SM product is a twin wall insulated multi-fuel stainless steel chimney system covering an internal diameter range from 100mm to 600mm. Nova is also suitable for positive pressure and condensing applications.



Supra is a single wall grade 316L stainless steel chimney system suitable for positive pressure and condensing applications. Supra covers an internal diameter range from 80mm to 600mm.

The information contained in this brochure was accurate at the date of publishing. However the company reserves the right to introduce at any time modifications and changes of details as may be necessary. To avoid any misunderstanding, interested parties should contact the company to confirm whether any material alterations have been made since the date of this brochure.



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