

# SIGMA 1MM

1mm 316L Stainless Steel  
Connecting Flue Pipe



SIGMA 1MM has been specifically designed as a connecting flue pipe to facilitate connection between a multi-fuel appliance and either an existing brick chimney or a prefabricated twin wall chimney system.



[www.sflchimneys.com](http://www.sflchimneys.com)



Flue & Air Care  
Since 1919

## ABOUT US

Sphering is the leading industrial player in flue and chimney systems in Europe.

**With +1000 experienced people across Europe, Sphering is an EU market maker with renowned expertise in design, manufacturing and distribution of advanced air and flue care systems.**



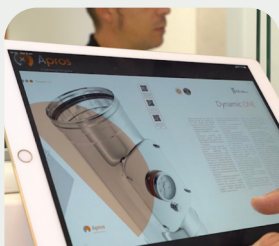
**+1000**  
Employees

**8**  
Production Plants

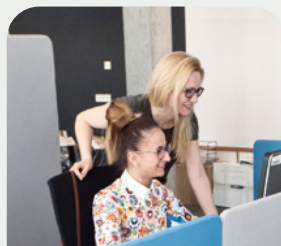
**26**  
Distribution Branches

## A UNIQUE COMBINATION OF LOCAL APPROACH AND GLOBAL EFFICIENCY WE CARE TO DO WELL BY DOING GOOD

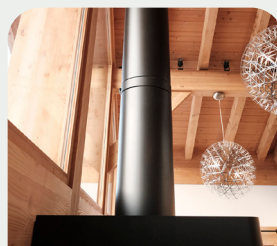
With customers



With employees



With secured and efficient product



With the environment & society



## EVERYTHING CHANGED IN 100 YEARS EXCEPT OUR VALUES

Staying loyal to its historical values and operating with an exclusive industrial model based on the autonomy of its brands, Sphering has become, in a century, an ethical industrial collider in Europe.

Since 1919  
**100** YEARS  
of passion



Reliable Partner



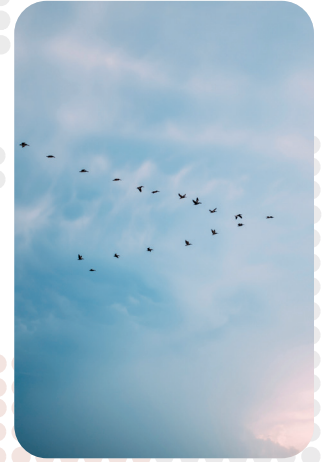
Leading Edge



Family long-term horizon



No Shortcut



Local approach



## OUR R&D AND INNOVATION CENTERS

We are here to stay and we collectively enable our capacity to answer our industry requirements.

## MORE THAN 150 TESTS PER YEAR

These tests are based on requirements we have set up in order to guarantee our customers the highest levels of security and performance.



Thermal



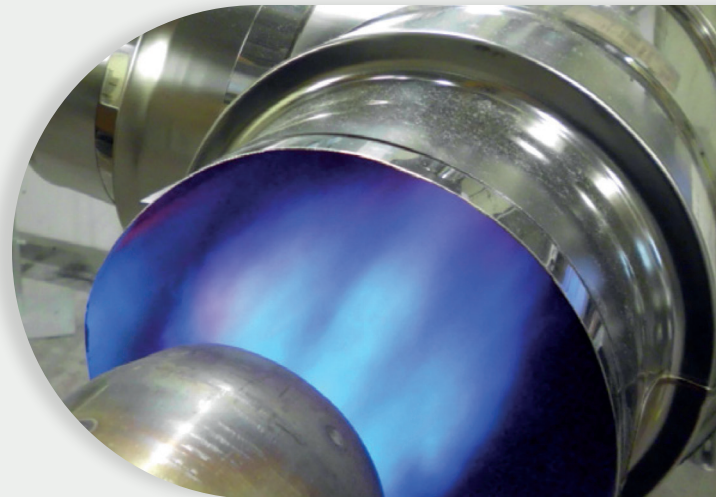
Mechanical



Tightness

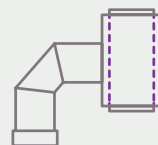


Fine dust



## DESIGN & TEST FOR MANUFACTURERS

To ensure advanced safety, performance, quality and innovation.



Special pieces co-development



Pairing test certification

# SIGMA

1mm 316L Stainless Steel  
Connecting Flue Pipe

**SIGMA IMM has been specifically designed as a connecting flue pipe to facilitate connection between a multi-fuel appliance and either an existing masonry chimney or a prefabricated twin wall chimney system.**

SIGMA IMM offers a smooth, aesthetically pleasing joint, without the need for additional Locking Bands or sealants. The product is available in 127mm 152mm, 178mm and 203mm true imperial internal diameter. The product range covers lengths, fittings and support components to ensure simplicity of installation.

SVIT is manufactured from a 1mm 316L high corrosion resistance stainless steel.

The joint is designed to offer the appearance of a smooth continuous pipe, offering a very aesthetically pleasing finish to the product. The aesthetic finish is achieved by slightly reducing the diameter of the male end to allow engagement with the female end. The joint is made by sliding the male end into the female end of the joint. Due to the tight tolerance interference fit and the 50mm of engagement, a strong joint is formed, alleviating the need for a traditional Locking Bands or joint sealants.



### Typical Applications

- Woodburning Stoves
- Multi-Fuel Stoves



Multi-Fuel  
Appliances



T600  
Rating



Condensate  
Resistant (W)



V2 Corrosion  
Tested



Quick  
Installation



Brand  
Compatibility



Approved  
Product



No Sealant  
Required



Year Product Defect  
Warranty



Product &  
Downloads  
QR Code

**Table A - Product Designation**

SIGMA IMM Product Designations to BS EN 1856-2									
Product Description	Standard Number	Diameter mm	Temperature Class	Pressure Class	D = Dry W = Wet	Corrosion Class	Material Specification	Sootfire Resistance G= Yes O= No	NM=Not measured M =Measured
SIGMA IMM	BS EN 1856-2	DN127	T600	NI	W	V2	L50100	G375	NM
SIGMA IMM	BS EN 1856-2	DN152	T600	NI	W	V2	L50100	G450	NM
SIGMA IMM	BS EN 1856-2	DN178	T600	NI	W	V2	L50100	G540	NM
SIGMA IMM	BS EN 1856-2	DN203	T600	NI	W	V2	L50100	G600	NM
SIGMA IMM	BS EN 1856-2	DN127-DN203	T600	NI	W	V2	L50100	G400	M

**Application**

SIGMA IMM is designed to be used internally as a multi-fuel connecting flue pipe and must be installed in accordance with National Building Regulations and installation guidelines. The product is designed for use on natural draught and dry systems, where the flue gas temperature will not exceed 600°C. SIGMA IMM is not suitable for positive pressure applications, in these cases SUPRA PLUS should be used.

**Support**

The system **MUST** only be supported by components within the SIGMA IMM product range.

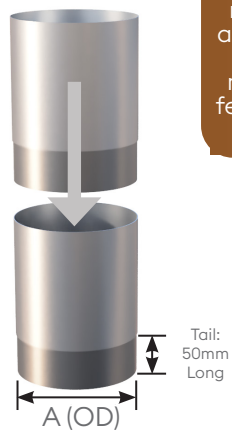
**Approvals**

The SIGMA IMM system is CE and UKCA marked to BS EN 1856-2 to the performance designation as detailed within Table A and certified under the Construction Products Regulation, certificate number 0036-CPR-91455 and 0168-CPR-91455 respectively.

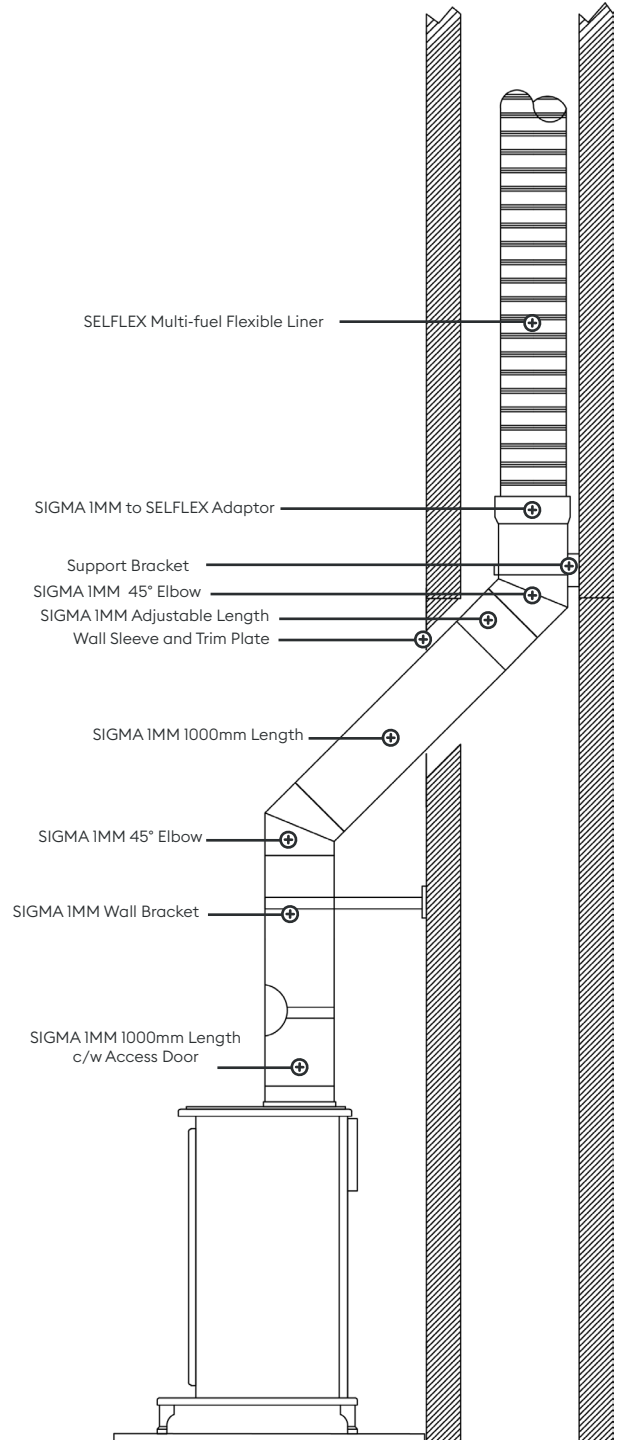
**Connection Detail**

SIGMA IMM is installed with the male spigot end facing towards the appliance. Each component is simply pushed together by engaging the male spigot end into the uppermost female socket. The system is installed from the appliance upwards. With the exception of connecting to the appliance, no additional sealant is required when making the joints.

SIGMA IMM is installed with the male spigot end facing towards the appliance. Each component is simply pushed together by engaging the male spigot end into the uppermost female socket. The system is installed from the appliance upwards.



Size (mm)	A
127	126.4
152	151.7
178	177.15
203	203.2



*Partner with us, succeed together.*

Need assistance with your residential or commercial flue project? Our team of experienced experts are here to help at every stage. We offer product selection and design assistance, conduct system surveys, and work with key installation partners to provide bespoke turnkey packages tailored to your needs.

[www.sflchimneys.com](http://www.sflchimneys.com)  
[info@sflchimneys.com](mailto:info@sflchimneys.com)  
01271 326633

## Standard Lengths

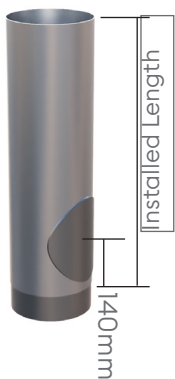
Lengths are available in nominal sizes as detailed below. With care the female end can be cut down on site to suit requirements.



Size	Installed Length			
	1010mm	480mm	300mm	150mm
127mm	9025005	9025105	9025205	9025305
152mm	9025006	9025106	9025206	9025306
178mm	9025007	9025107	9025207	9025307
203mm	9025008	9025108	9025208	9025308

## Access Length

As per the Standard Lengths but with an inspection door fitted.



Size	Installed Length		
	1010mm	480mm	303mm
127mm	9026205	9026305	9026405
152mm	9026206	9026306	9026406
178mm	9026207	9026307	9026407
203mm	9026208	9026308	9026408

## Adjustable Length

Used where standard lengths are not suitable, can be cut down if required. The Adjustable Length constitutes a slip length designed to slide into an existing standard length. A Clamp Band is then secured around the joint and finished with the provided self tapping screw.



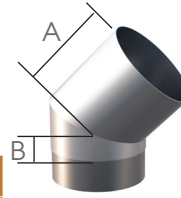
Size	Adjustable Lengths		
	Short	Medium	Long
127mm	9024505	9026605	9024605
152mm	9024506	9026606	9024606
178mm	9024507	9026607	9024607
203mm	9024508	9026608	9024608

Size	Maximum Adjustment (x)		
	Short	Medium	Long
127mm	288mm	465mm	985mm
152mm	278mm	455mm	975mm
178mm	263mm	440mm	960mm
203mm	253mm	430mm	950mm

The above figures relate to the maximum amount of adjustment taking into account the required length for engagement. The minimum length for all sizes is 50mm

## 15° Elbow

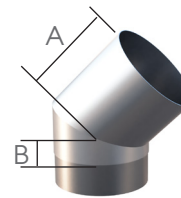
Used to provide a 15° change of direction or can be used in pairs as an offset.



Size	A (mm)	B (mm)	Code
127mm	100	50	9025405
152mm	100	50	9025406
178mm	100	50	9025407
203mm	100	50	9025408

## 30° Elbow

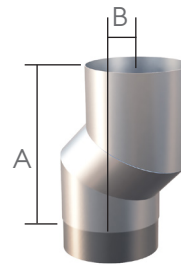
Used to provide a 30° change of direction or can be used in pairs as an offset.



Size	A (mm)	B (mm)	Code
127mm	100	50	9025505
152mm	100	50	9025506
178mm	100	50	9025507
203mm	100	50	9025508

## 30° Fixed Offset

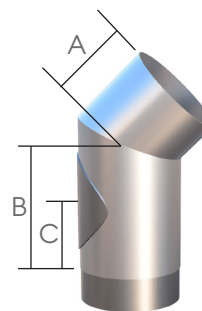
Used to provide a 50mm 30° fixed offset between two fixed centres.



Size	A (mm)	B (mm)	Code
127mm	209	50	9026805
152mm	216	50	9026806
178mm	222	50	9026807
203mm	229	50	9026808

## 30° Access Elbow

Used to provide a 30° change of direction and incorporates an inspection door.



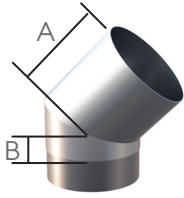
Size	A (mm)	B (mm)	C (mm)	Code
127mm	100	250	95	9025805
152mm	100	250	95	9025806
178mm	100	250	110	9025807
203mm	100	250	110	9025808

# Elbows

## Sigma Imm

### 45° Elbow

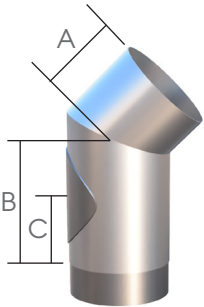
Used to provide a 45° change of direction or can be used in pairs as an offset.



Size	A (mm)	B (mm)	Code
127mm	100	50	9025705
152mm	100	50	9025706
178mm	100	50	9025707
203mm	100	50	9025708

### 45° Access Elbow

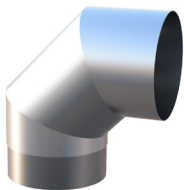
Used to provide a 45° change of direction and incorporates an inspection door.



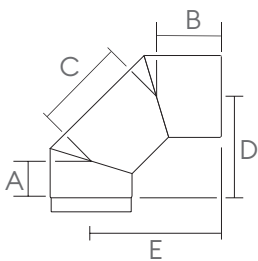
Size	A (mm)	B (mm)	C (mm)	Code
127mm	100	250	95	9025605
152mm	100	250	95	9025606
178mm	100	250	110	9025607
203mm	100	250	110	9025608

### 90° Elbow

Used to provide a 90° change of direction.



Size	Code
127mm	9025905
152mm	9025906
178mm	9025907
203mm	9025908



Size	Dimensions (mm)				
	A	B	C	D	E
127mm	46	86	102	68	158
152mm	51	91	112	80	170
178mm	57	97	125	95	185
203mm	62	102	133	105	195

Note: 90260XX 90° Access Elbow is dimensionally the same as the 90° Elbow.

### 90° Access Elbow

Used to provide a 90° change of direction and incorporates an inspection door.



Size	Code
127mm	9026005
152mm	9026006
178mm	9026007
203mm	9026008

### Aperture Size For Access Doors

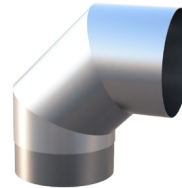
127ID - 152ID : 90mm X 135mm

178ID - 203ID : 120mm X 150mm

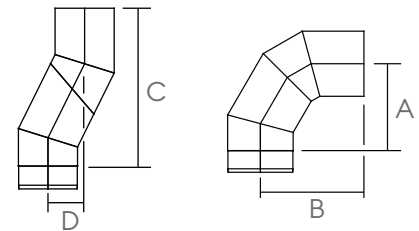
All other dimensions as standard 90° Elbow.

### 0° - 90° Adjustable Elbow

A fully adjustable elbow covering an angle from 0 to 90° for where flexibility of angle and offset are required.

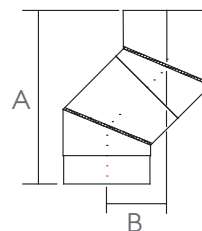


Size	Code
127mm	9021105
152mm	9021106



Size	A	B	C	D
127mm	130	175	245	70
152mm	145	185	255	85

### Elbow Offset Dimensions

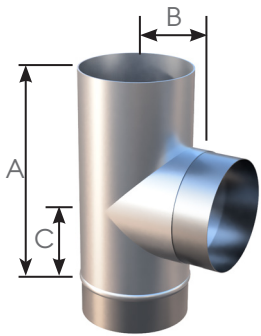


Angle	Dimensions (mm)	
	A	B
15°	295	39
30°	280	75
45°	256	106

Angle	Elbow / Length Offset Combination							
	150mm		300mm		480mm		1010mm	
	A	B	A	B	A	B	A	B
15°	440	78	585	116	759	162	1270	300
30°	410	150	540	225	696	315	1150	580
45°	362	212	468	318	595	445	970	820

# Tees & Tee Components

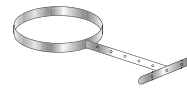
Sigma Imm



## 90° Equal Tee

Used to provide a 90° change of direction. Also used as an inspection / cleaning component or at the base of a vertical chimney.

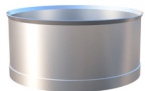
Size	Dimensions (mm)			Code
	A	B	C	
127mm	278	90	114	9023005
152mm	302	100	126	9023006
178mm	328	115	139	9023007
203mm	352	127	151	9023008



## Wall Guide

Used to laterally brace the connecting flue. This component can be cut as required to provide a clearance of between 50mm and 400mm between the outer flue and fixing surface.

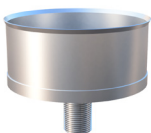
Size	Code
127mm	9020305
152mm	9020306
178mm	9020307
203mm	9020308



## Tee Cap

Used to close off the branch or base of a Tee. Supplied with a quick release Locking Band for easy removal.

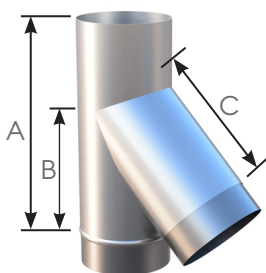
Size	Code
127mm	9029105
152mm	9029106
178mm	9029107
203mm	9029108



## Condensate Drain

Used for the removal of condensation and rain water at the base of a vertical chimney or at the outlet of the appliance. Supplied with a quick release Locking Band for easy removal.

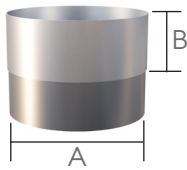
Size	Code
127mm	9026905
152mm	9026906
178mm	9026907
203mm	9026908



## 135° Equal Tee

Used to provide a 45° change of direction. Also used as an inspection / cleaning component at the base of a vertical chimney. Can be used with a Tee Cap or Condensate Drain (ordered separately).

Size	A	B	C	Code
127mm	325	191	164	5026505
152mm	360	221	221	5026506
178mm	395	252	252	5026507
203mm	430	283	283	5026508

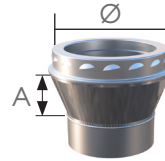


### Appliance Adaptor

Used to connect to an appliance outlet where the spigot diameter is smaller than the pipe size.

Tail: 50mm Long

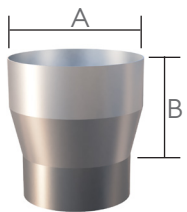
Size	A (mm)	B (mm)	Code
127mm	123	60	9028405
152mm	148	60	9028406
178mm	173	60	9028407
203mm	198	60	9028408



### Sigma to NOVA Adaptor

Used to connect the Sigma connecting flue pipe to a Nova® twin wall chimney system. Tapered design for smooth transition from single wall to twin wall.

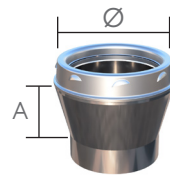
Size	Ø	A (mm)	Code
127mm	130	83	9029505
152mm	150	83	9029506
178mm	180	83	9029507
203mm	200	83	9029508



### Increaser Adaptor

Used to increase the appliance outlet spigot by one diameter to the SIGMA range.

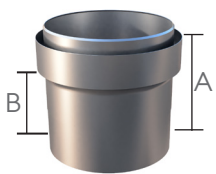
Size	A (mm)	B (mm)	Code
127mm	152	112	9029405
152mm	178	112	9029406
178mm	203	112	9029407



### Sigma to SFLUE / NEXUS Adaptor

Used to connect the Sigma connecting flue pipe to an Sflue twin wall chimney system. Tapered design for smooth transition from single wall to twin wall.

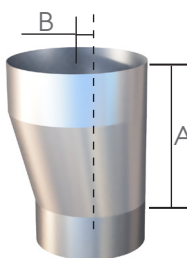
Size	Ø	A (mm)	Code
127mm	127	87	9029605
152mm	152	87	9029606
178mm	178	87	9029607
203mm	203	87	9029608



### Sigma to Generic Flex Adaptor

Use to connect from SIGMA single wall to a generic flexible flue liner.

Size	A (mm)	B (mm)	Code
127mm	187	110	9029705
152mm	187	110	9029706
178mm	187	110	9029707
203mm	187	110	9029708



### Eccentric Increaser (127-152)

A tapered eccentric increasing adaptor offering a slight (15mm) offset between the two sizes. Provides additional flexibility, allowing a slight offset when connecting from the appliance outlet to a register plate

Size	Dimensions (mm)		Code
	A	B	
127mm	160	15	9020605

# RESIDENTIAL

Vitreous Enamel

**SVIT**



Quick Installation



Brand Compatibility



No Sealant Required



Year Product Warranty

**SVIT®** is a vitreous enamel-coated steel connecting flue pipe designed to facilitate the connection between a multi-fuel appliance, an existing brick chimney or a prefabricated twin wall chimney system. It offers a smooth, aesthetically pleasing joint, without the need for additional locking bands or fire cement and is available in 100mm, 125mm, 150mm, 180mm & 200mm.

Twin Wall / Air Gap Insulation

**IL**



125-150mm Diameter



T250 Rating



Multi-Fuel Appliances

**IL®** is a twin wall air gap insulated prefabricated domestic and light commercial gas vent system suitable for gas appliances, with draught-hoods or with a flue gas temperature not exceeding 250°C and zero or negative pressure in the flue. Lengths and fittings push and twist lock together to provide strong rigid flue systems and ensure maximum ease of site assembly.

Flexible Liner

**SELFLEX**



V2 Corrosion Resistant



P1 / N Rating



Brand Compatibility



Year Product Warranty

**SELFLEX®** is a double skin multi-fuel flexible chimney liner suitable for multi-fuel, gas, and oil-fired applications up to a maximum flue gas temperature of 600°C. CE marked to EN 1856-2. The SELFLEX® family range is suitable for the relining of masonry flues and used with wood, multi-fuel stoves and open fires and is available in three different specifications including 0.1mm 904L, 0.12mm 316L and 0.1mm 316L.

Insulated Flexible Liner

**TUBEX PLUS**



V2 Corrosion Resistant



Brand Compatibility



125-150mm Diameter



Product Warranty

**TUBEX PLUS®** is a unique insulated flexible liner for multi-fuel applications that allows maximum flexibility and ease of installation, the insulated core offers excellent thermal resistance to maximise natural draft to ensure optimum efficiency of the appliance with its 13mm high density insulation layer. Ideal for use on modern high-efficiency wood burning and multi-fuel appliance and application.

Single Wall / Connecting Flue

**SIGMA**



Quick Installation



Brand Compatibility



T600 Rating



Year Product Warranty

**SIGMA®** is a stainless-steel single wall connecting flue pipe for use with multi-fuel appliances, brick chimneys, twin wall systems and flexible liners. Available in four diameters 127mm, 152mm, 178mm and 203mm manufactured for wood and multi-fuel burning appliances it has a gas-tight joint that negates the need for fire cement or rope. Manufactured from 1mm 316L for optimum long term performance.

Twin Wall / Twist Lock

**SFLUE**



T450 Rating



Brand Compatibility



127-203mm Diameter

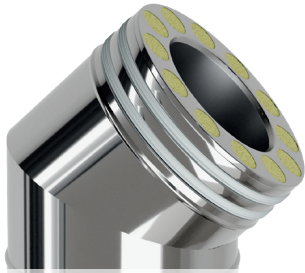


Year Product Warranty

**S-FLUE®** is a stainless steel insulated twin wall chimney system. Ideally suited for use on multi-fuel stoves and heating equipment. Offered in natural stainless steel or a satin black finish. Features an 8-barb twist lock jointing system for added strength and ease of installation.

# COMMERCIAL

Twin Wall / Push Fit



5000Pa  
T600 Dry



Easy To  
Install



No Bellows



Ideal For  
Gen-Sets

Single Wall / Push Fit

**SUPRA  
PLUS**



Multi-Fuel  
Appliances



Up To  
5000Pa



T600 Dry  
T200 Wet



Quick  
Installation



Year Product  
Warranty

KEPLER HPT is a push-fit twin wall insulated high pressure generator exhaust system suitable for high temperature / high pressure dry non-condensing applications. Supplied as standard with a 50mm high density insulated annulus. Due to its unique design, the KEPLER HPT generator system does not require expansion components, such as expansion bellows. Available in a range of sizes covering Ø80 - Ø600.

**SUPRA PLUS®** is a British built single wall chimney system designed specifically for today's modern high efficiency appliances that operate under positive pressure and condensing conditions.

Manufactured in 9 diameters ranging from 80mm to 350mm and consists of a range of lengths and fittings which simply push-fit together, and which are secured with a locking band. Seals are factory fitted and bonded for ease of installation. Available with a wide range of support components that cater for both lateral and vertical structural loading of the product. Extended range available from 400mm to 600mm.

Twin Wall / Twist Lock

**NOVA**



EI90  
Fire Rated



Up To  
5000Pa



T600 Dry  
T200 Wet



Multi-Fuel  
Appliances



Year Product  
Warranty

**NOVA®** is a pre-fabricated, factory-made twin-wall, insulated stainless steel chimney system. Suitable for condensing and positive pressure applications and is specifically designed to meet the demands of the latest high-efficiency heating appliances as well as traditional gas and oil-fired combustion equipment. With its unique multi-barb twist-lock jointing system.

Manufactured in 8 internal diameters, ranging from 100mm to 355mm and consists of a wide range of components, together with a strong 16-barb twist lock jointing system, NOVA offers the ultimate in ease of installation and functionality. With its strong joint design, NOVA can achieve a maximum unsupported height of 3.0 metres above the last support (2.0 m for DNI100), without the need for structural locking bands.

NOVA is fire resistance tested to BS EN 1366-13 and holds the following classification:

EI 90 (o → i) h<sub>o</sub> v<sub>e</sub>

NOVA has also been fire resistance tested for a period of 4 hours under the integrity criteria of BS476 Part 20.

Twin Wall / Flanged

**EUROPA  
PLUS**



EI180  
Fire Rated



14,945Pa @ 760°C  
T600 Dry & Wet



CE, UKCA,  
UL ULc



Ø100 - Ø1200mm  
Diameters



Year Product  
Warranty

**EUROPA PLUS®** is a high pressure and high temperature chimney / exhaust system suitable for continuous operating temperatures of up to 600°C continuous and 750°C intermittent. Suitable for positive pressure systems up to 5000Pa (H1) and UL tested up to 14,945Pa.

It is offered as a double walled prefabricated 316L stainless steel chimney system, available in a range of insulation thickness to meet the most demanding applications. As standard, EUROPA PLUS incorporates a 25mm high performance insulated cavity, with the option to increase the cavity thickness to 50mm and 100mm for applications that demand critically controlled surface temperatures.

**EUROPA PLUS®** is fire resistance tested to the requirements of BS EN1366-13 up to 600mm:

EI 180 (o → i) h<sub>o</sub> v<sub>e</sub>

Above 600mm EUROPA PLUS is fire resistance tested to the integrity and stability requirement of BS 476 Part 24 for a period of 4 hours.

# About SFL

**British manufacturer of flues & chimneys for residential & commercial applications for more than 50 years.**

## Commercial Solutions and Project Assistance

For large-scale installations in commercial buildings, we manufacture a range of flue systems with ease of install at the centre of your design. From complex header configurations to large-diameter stacks, we can accommodate almost every requirement for any application.

At SFL, we work with carefully selected installation partners to ensure your turnkey package is carried out on time within budget by seasoned professionals.

We're committed to offering industry-leading technical support services, throughout the whole process of design, manufacture, and supply of your upcoming project. Our experienced team are on hand to assist you at every stage of your project. From initial product selection to flue routing and calculations.

## Residential Solutions

From wood burning & multi-fuel stoves to gas fires & oil boilers, our time-honoured brands of flues and chimneys have been a mainstay of domestic heating for decades. We work with a network of distribution partners providing high-quality residential flue and chimney components for easy installation. With fast delivery times and comprehensive product warranties, we ensure that your requirements are met with quality and reliability.

## SFL Head Office & Manufacturing Facility

SFL Flues & Chimneys  
Pottington Business Park  
Barnstaple  
Devon  
EX31 1LZ

Tel: +44 (0) 1271 326633  
Email: [info@sflchimneys.com](mailto:info@sflchimneys.com)  
Web: [www.sflchimneys.com](http://www.sflchimneys.com)



## At the forefront of flue and chimney manufacturing and technology.

Since 1969 SFL have been leading the way in flue and chimney innovation and technology. Our portfolio of trusted chimney and flues brands are known throughout the world for their engineering excellence. We offer industry-leading technical support services throughout the whole process of design, manufacture, and supply for commercial, domestic, and industrial applications, with uncompromised customer service.

We are proud of our British built heritage at SFL. Our manufacturing centre is based in Barnstaple, Devon, UK, alongside our extensive R&D centre, ensuring continuous product development and testing to the latest Standards.

SFL is part of the Sphering group, Sphering is an EU market maker with renowned expertise in design, manufacturing and distribution of advanced air and flue care systems.

### WeLab®

As a committed company determined to play an active role towards the environment and society, the Group has its own R&D centre: WeLab®. This facility has allowed the group to comply with the newest European standards (including the NZEB: nearly zero energy building) in terms of security and performance of appliances, but also to adopt a responsible innovation approach. With our WeLab®, we have developed test rigs based on minimum requirements in order to guarantee our clients the highest levels of security and performance.

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

NOVA®

SUPRA PLUS®

EUROPA PLUS®

SFLUE®

NEXUS®

SVIT®

SELFLEX®

TUBEX PLUS®

IL®

SIGMA®

**Over 50 years** of industry leading experience in the flue and chimney market.



[www.sflchimneys.com](http://www.sflchimneys.com)

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