SUPRA PLUS

Stainless Steel Single Wall
Chimney System

SFL Sphering

INSTALLATION INSTRUCTIONS

SUPRA PLUS is British built and specifically designed for today's modern high efficiency appliances that operate under positive pressure and condensing condition.

Manufactured in the UK

Always check on line that you are using the latest version of the installation instruction. This is identified by the publication date on the front cover.

Publication Date: 200426

General

The SUPRA PLUS chimney system has been specifically designed for today's modern high efficiency appliances that operate under positive pressure and condensing conditions. SUPRA PLUS offers a number of design advantages, including factory fitted and bonded elastomer seals, heavy and light duty Locking Bands and minimum dimensioned components for today's wall hung and modular commercial appliances.

SUPRA PLUS is 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. The entire system is manufactured from corrosion resistant grade 316L (1.4404:X2CrNiMo 17-12-2) stainless steel and is manufactured using a fully laser welded construction, together with precision formed close tolerance joints. Condensate and pressure resistance is achieved by a three lip elastomer seal located in a recess within the female end.

The SUPRA PLUS product is available with a wide range of support components that cater for both lateral and vertical structural loading of the product. SFL does not recommend any other system of support being used with the SUPRA PLUS product, unless approved by SFL prior to installation.

Application

Heating Appliances

SUPRA PLUS has a wide range of applications and is suitable for use on gas and kerosene fired appliances where the flue gas temperature does not exceed 200°C and where any positive pressure created in the chimney system does not exceed that stated in the performance designations of Table A. This makes SUPRA PLUS an ideal solution for today's high efficiency condensing appliances and applications that require up to 5000 Pa positive pressure.

Chimney Liner and Connecting Flue Pipe

SUPRA PLUS can also be used as a chimney liner within an existing masonry chimney, or as a connecting flue pipe, where regulations permit. When used for flue gas temperatures greater than 200°C, the elastomer seals MUST be removed. When removed, SUPRA PLUS is soot-fire resistant and suitable for flue gas temperatures up to 450°C. With the seal removed, the chimney system must operate under negative draught conditions (N1).

Table A SUPRA PLUS® product designations to BS EN 1856-1/2

Product Description	Standard Number	Temperature Class	Pressure Class	D = Dry W = Wet	Corrosion Class	Material Specification	Soot-fire Resistance G= Yes O= No
SUPRA PLUS	BS EN 1856-1	T200	P1	W	V2	L50050	O(X)
SUPRA PLUS	BS EN 1856-1	T200	H1	W	V2	L50050	O(X)
(1) SUPRA PLUS	BS EN 1856-2	T200	P1	W	V2	L50050	O
(1) SUPRA PLUS	BS EN 1856-2	T200	H1	W	V2	L50050	O
(2) SUPRA PLUS® (SR)	BS EN 1856-2	T450	N1	D	V2	L50050	G
(3) SUPRA PLUS® (SR)	BS EN 1856-2	T450	N1	D	V2	L50050	G(450)M

UKCA 0168-CPR-91455

CE 0036-CPR-91455

Notes
(1) Installed as a rigid liner within a masonry shaft - T200 P1 / H1 O
(2) Installed as a rigid liner within a masonry shaft - T450 N1 G
(3) Installed as a connecting flues where regulations permit -T450 N1 G450 M
(SR) Denotes Seals Removed
(X) Distance To Combustible (DN80 - DN300) = 200mm (DN350) = 300mm Tested Configuration - Unenclosed in open environment

Approvals

SUPRA PLUS is CE and UKCA certified to BS EN 1856-1 & 2, certificate No. 0036-CPR-91455 and 0168-CPR-91455, respectively to the performance designations as detailed in Table A above.

Quality

All components are manufactured under a quality management system, certificate No. FM557622, administered by British Standards in accordance with ISO 9001: 2015. In addition, SFL operate a CE approved factory production control system as required under the Construction Products Regulation.

Application Guide

Construction

The entire SUPRA PLUS system is manufactured from 0.5mm thick corrosion-resistant grade 316L stainless steel and is manufactured using a fully laser welded construction together with precision formed close tolerance joints. Condensate and pressure resistance is achieved by a three lip elastomer seal located in a recess within the female end.

Warranty

SUPRA PLUS is backed by a comprehensive 20-year product defects warranty. The 20-year warranty is a measure of our confidence in the manufactured quality and installed reliability of our flue systems and gives added peace of mind for any installation. Sacrificial components such as elastomer seals are limited to a 12 month defects warranty.

Mandatory requirements

Connection to an appliance which is not connected to the fuel supply, should only be carried out by a competent person. SFL recommend the use of HETAS registered installers for solid fuel applications. If installation is carried out by a non HETAS registered installer, the installation must be certified by a local Building Control Inspector. Connection to an appliance that is connected to the fuel supply must be carried out by a Gas Safe (Gas) or OFTEC (Oil) registered installer, depending on the fuel type being used.
This document must be read in conjunction with any other installation manuals relating to components and appliances forming part of the installation, e.g. appliance installation instructions etc. The system chimney must be installed in accordance with all local and national regulations and requirements, please see key referral documents below:

Approved Document J:
Combustion appliances and fuel storage systems (England & Wales).

DFP Technical Booklet L:
Combustion appliances and fuel storage systems (NI).

Technical Handbook (Domestic & Non Domestic), Section 3 - Environment (Scotland).

BS EN 1856-1:
Chimneys - System Chimney Products.

BS EN 1856-2:
Connecting Flue Pipes and Chimney Liners.

BS EN 1859:
Metal Chimneys - Testing Methods.

BS EN 1443:
Chimneys - General Requirements.

BS EN 15287-1:
Chimneys. Design, installation and commissioning of chimneys. Chimneys for non-room sealed heating appliances.

BS 5440-1:
Flueing and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases). Specification for installation of gas appliances to chimneys and for maintenance of chimneys.

BS 13384-1/2:
Chimneys - Thermal and fluid dynamic calculation methods.

Appliance Installation Instructions and related standards and Associated Standards.

Planning and Listed Building Consent

When considering the installation of a prefabricated chimney system, especially externally to the building or where the building is of listed status, it is very important to seek advice as to whether planning permission or listed building consent is required prior to commencing planning and installation of the system.

Application Guide

Condensing and Positive Pressure Appliances (Wet) Systems

Where SUPRA PLUS is serving a high efficiency condensing appliance, adequate provision must be made for the removal of condensation from the system. It is important that horizontal sloping runs are angled not less than 3°, but preferably 5°. Failure to provide an adequate fall may lead to premature failure of the seals, as well as potential corrosion of the product. Various components including 93° / 95° tees and 87° / 85° elbows are available within the range to facilitate a 3° or 5° fall. Drainage components must be placed strategically within the system to facilitate the removal of condensation to a suitable drain or gully, see Typical Installation on page 16. When sizing a SUPRA PLUS chimney system for positive pressure applications, the maximum over pressure in the system must not exceed 5000 Pa at a maximum flue gas temperature of 200°C. Where used on positive pressure applications, drainage points should be adequately trapped to compensate for the over pressure within the chimney system. When sizing the chimney system, it is important that the diameter of the system maintains the pressure within the capabilities of the product and appliance, as well as correctly venting the products of combustion to atmosphere. When installing a cascade system on multiple appliances, it is important to understand whether the appliances are fitted with internal flue gas non-return valves to prevent reflux / spillage of combustion products back through the appliance when operating under positive pressure. Where non-return valves are not part of the appliance, suitable motorised dampers may need to be fitted to the connecting flue pipes, or the chimney sized accordingly to prevent reflux / spillage. In all cases the chimney system MUST be calculated and sized in accordance with the calculation method of BS EN 13384-1/2. Only components rated at H1 or P1, depending on pressure requirement should be used for such applications.

SUPRA PLUS When Used As A Chimney Liner

Where SUPRA PLUS is used to reline an existing masonry chimney, it is imperative that a Support Length is initially used as the base fixing to which the block and tackle is attached, with additional straight lengths added as it is being lowered. Location Bands must be used at intervals not exceeding 3.0 metres to provide lateral stability and to centrally brace the product within the chimney. If required, SFL can custom manufacture the Location Bands to suit the dimensions of the chimney. Please contact SFL Technical Sales for further information.

Accidental Human Contact

Care should be taken where there is a risk of accidental human contact with the product. Where there is this possibility and where the surface temperature is likely to exceed 70°C, either a twin wall insulated system such as the SFL NOVA product should be used or provision is made to shield the product.

External Applications

Where SUPRA PLUS is used externally, consideration must be given to the external environment and the possibility of sub-zero temperatures, which could potentially cause freezing of condensates. In all cases, for external installations, SFL would only recommend that insulated products, such as the SFL NOVA are used. It is a requirement of BS 5440 that single skin chimneys should only be used when passing through a roof, for all other external routings, a twin wall insulated product like the SFL NOVA brand should be used.

Distance to Combustible Materials

Where local regulations permit, SUPRA PLUS can be used as a connecting flue pipe to serve both traditional solid fuel as well as modern pellet fuelled appliances. Where the flue gas temperature is greater than 200°C, the seals MUST be removed from the product before installation commences. In all cases the required distance to combustible materials as detailed in the performance designation Table A MUST be observed.

High Pressure (H1) Applications

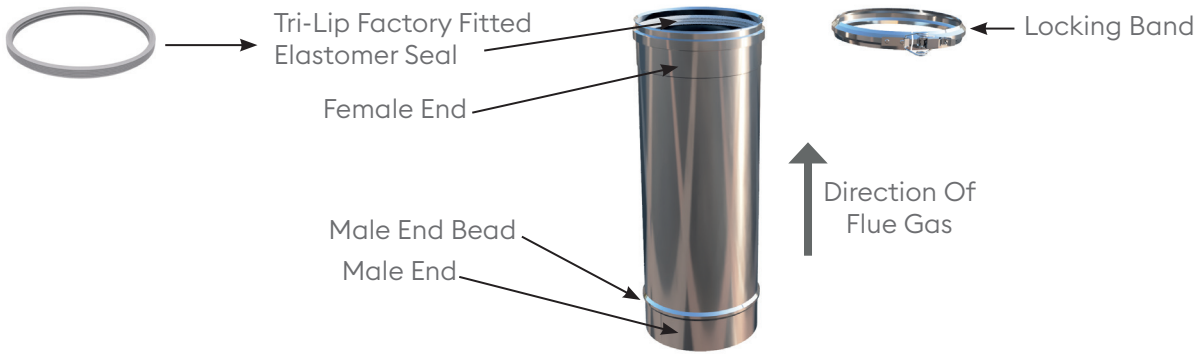
SUPRA PLUS is suitable for applications where any positive pressure created within the chimney system does not exceed 5000Pa (H1) and where the maximum flue gas temperature does not exceed 200°C (T200). Please note that there are certain components within the range that are not suitable for H1 applications and these are labelled as either N1 or P1 within the product brochure. When considering positive pressure systems, consideration must be given to reflux of flue gases back through non-operational appliances. It is also important that any drainage points are adequately trapped to resists the over pressure of the system and to prevent flue gases exiting through the drain outlets.

Chemical Contamination of Combustion Air
Under no circumstances should SUPRA PLUS be used where there is the possibility of chemical contamination of the combustion air. Environments where processes such as de-greasing and dry cleaning should be avoided as well as any other environment where low level contamination of the combustion air supply is possible. Such environment can lead to accelerated corrosion of the SUPRA PLUS system and premature failure of the product and associated seals. Special consideration should also be given to leisure centres with swimming pools where Chlorine is used or any processes using halogen based chemicals.

SUPRA PLUS Installation Guide

General Construction

Each component features an expanded female end with a machined form which seats the elastomer seal. The elastomer seals is factory fitted and bonded into the recess in the female end and ensures pressure and condensate resistance of the system. The male end consists of a 50mm spigot and bead.



Joint Assembly

All SUPRA PLUS components feature a simple push-fit joint design, allowing ease and speed of installation, while maintaining a secure and pressure tight joint. To assemble the joint, simply follow the steps below.

Step 1

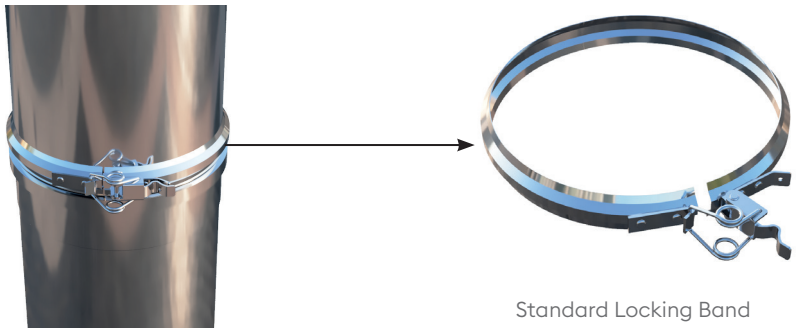
SUPRA PLUS is always installed with the female spigot facing up towards the terminal and the male end facing towards the appliance. Having checked the correct orientation of the product, clean both the male and female ends with a suitable cloth to ensure they are free from dirt and grit.

Apply a generous amount of SFL Seal Lubricant around the outer circumference of the male end. Do the same around the inner circumference of the Elastomer Seal, while also checking the seal for any potential signs of damage.

Once the SFL Lubricant has been applied, align the male end into the female and push the joint together using a slight twisting action.

Step 2:

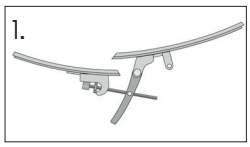
With the joint assembled, locate the Locking Band around the joint as detailed below. The Locking Band must be installed so that the toggle only closes from left to right. SFL offer two types of Locking Bands, the Heavy Duty can be used where additional strength is required, for example on offsets etc., whereas the Standard is generally used throughout the installation. A Locking Band MUST always be used to finish the joint and MUST be ordered separately.

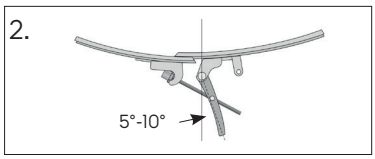


Standard Locking Band

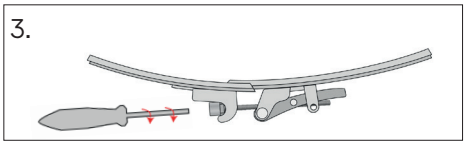
Heavy Duty Locking Band

Assembly of the Heavy Duty Locking Band



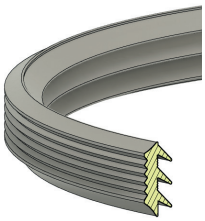


Screw toggle Locking Bands should be adjusted so that when the rod end is engaged in the strike, the lever pin is between 5° and 10° past the centre line.



The closed toggle can be tightened if necessary with a 3mm hex key

Installing Replacement Seals



Ensure seal vanes are positioned so they face down towards the male end.

As standard, SUPRA PLUS is supplied complete with factory fitted and bonded seals. Although the design of the seal should offer many years of trouble free service, they are classed as sacrificial, and like most gaskets, may, over time need to be replaced.

Step 1

When fitting a replacement seal, it is important that the old seal is fully removed and the seal location groove in the product is fully cleaned to remove any residue.

Step 2

Apply a small thin run of silicone sealant around the internal circumference of the seal groove, making sure that there is just enough to bond the seal to the product.
Note: To much sealant may result in the joint being extremely tight when trying to assemble.

Step 3

Position the new seal in the seal groove of the female end, ensuring that the vanes of the seal are facing down towards the male end as detailed in the image.

Step 4

Once in position, ensure the rear of the seal is firmly located back against the rear of the seal groove. Make sure that any excess silicone sealant is removed from the vanes, as failure to do so could impact the pressure and condensate resistance of the joint. Once complete, allow approximately 24 hours to cure or as advised on the sealant manufacturers installation instructions.

IMPORTANT
Where SUPRA PLUS is used for high temperature applications above 200°C, the seals MUST be removed prior to installation. When the seals are removed, the range of applications is limited only to negative / natural draught operation and non-condensing applications as per Table A.

SUPRA PLUS Fittings

Straight Lengths

Available in standard sizes of 1245mm, 974mm, 474mm, 224mm and 98mm. Standard lengths should not be cut down or modified on site. Where a degree of flexibility is required, use an adjustable length.

Probe / test Point Length

A 224mm installed length featuring a 1/4" internal threaded test point, complete with screwed cap. Used for flue gas analysis, draught measurement etc.

Inspection Length (P1 W)

Designed to be installed within the system to allow for access and cleaning. Must only be used where the flue gas temperatures do not exceed 200°C. For higher temperature applications, the door seal must be removed, thereby changing the classification to N1 D.

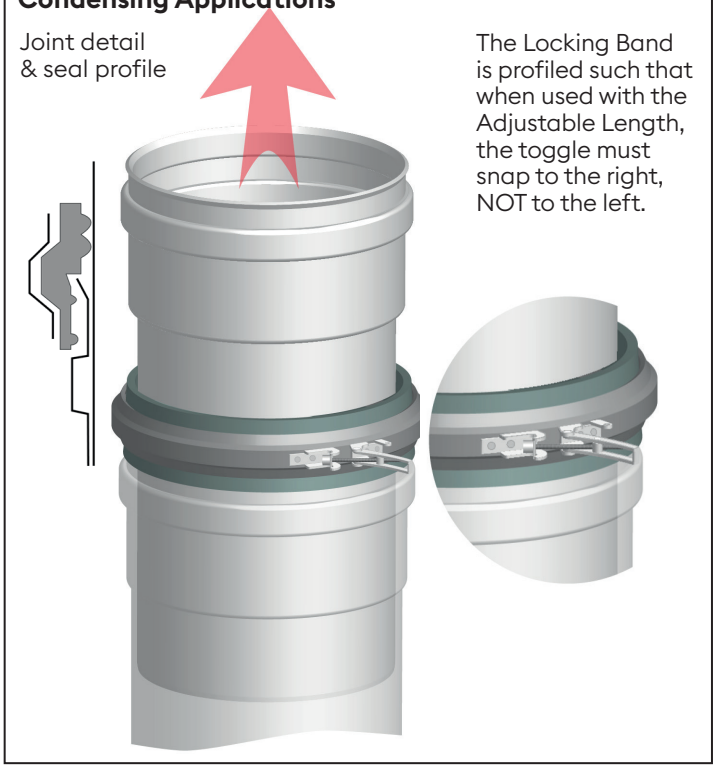
Adjustable Length

The Adjustable Length consists of a slip section of SUPRA PLUS, the lower non-beaded end of which is designed preferably to be located into a standard length and must engage to a depth equivalent to at least half of the diameter of the SUPRA PLUS being used.

Adjustable Lengths are supplied with a special Gasket Set which must be used for positive pressure and condensing application up to 200°C.

For temperatures above 200°C the Gasket Set must be removed and a standard Locking Band used to secure the joint. This changes the classification to N1 D.

Locking Band detail for the Adjustable Length for Condensing Applications



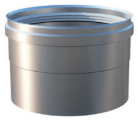
The illustration above shows the joint detail. Locate the Seal over the female end of the length before inserting the male end and then pull the seal up so that the angled notch on its inside locates over the turned end of the female socket as shown. To facilitate easier assembly, apply SFL Seal Lubricant to the seal prior to installation. The profile of the Locking Band is such that it must only be applied one way round. If it is located incorrectly, the joint will be both insecure and inadequately sealed.

Adjustable lengths can also be cut to length on site providing adequate care is taken. Where this is undertaken, it is important that the cut end is linished smooth. Failure to remove any sharp edges could lead to the integrity of the seal being compromised.

Adjustable Lengths are only to be used on standard lengths. Under no circumstances should they be used to engage into Elbows and Tees. The Adjustable Length is not load bearing, always use a support directly above the component.

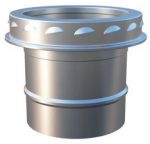
Adaptors

A wide range of adaptors are available both to allow connection to the appliance and to adapt to other SFL products, including our NOVA and SELFLEX brands. The standard male end of the SUPRA PLUS can also be used for direct connection to the appliance, assuming the outside diameter is compatible with the internal diameter of the appliance outlet spigot.



Appliance Adaptor

Used if required to connect SUPRA PLUS to the appliance. The interface between the adaptor and appliance outlet should be sealed with a suitable sealant when used on condensing appliances, unless the appliance incorporates a sealed outlet spigot.



SUPRA PLUS to NOVA Adaptor

Designed to facilitate connection from the SUPRA PLUS to NOVA chimney system.

NOVA to SUPRA PLUS Adaptor

As above, but to connect from the NOVA to SUPRA PLUS chimney system.

Adaptor to Generic Flexible Liner

Use to connect from SUPRA PLUS to a flexible chimney liner. Where use for P1 applications, a generous application of silicone sealant must be applied around the base of the upper cup. The flexible liner is then inserted, making sure that the end embeds into the sealant to create a joint and allow to cure for 24hrs or as directed by the manufacture.

Adaptor from a Generic Flexible Liner

As per the above adaptor, but to allow a connection from a flexible chimney liner to the SUPRA PLUS chimney system. For P1 applications, see Adaptor to SELFLEX.

80mm SUPRA PLUS to 100mm SELFLEX Adaptor

Used to connect from 80mm SUPRA PLUS into a 100mm flexible chimney liner. For P1 applications, see Adaptor to SELFLEX.

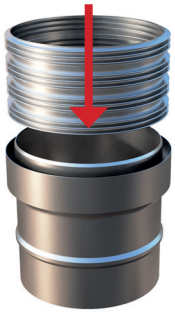
Adaptor SUPRA PLUS to SFL SELFLEX Flexible Liner

Adaptor from SUPRA PLUS to SELFLEX Flexible Chimney Liner. Supplied complete with a screwed connection for ease of installation.

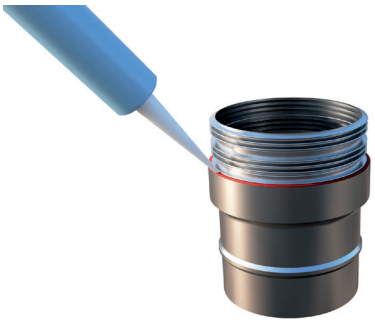
Flexible Liner Adaptor Assembly (P1 W)

Positive pressure and condense resistance are achieved by using a high temperature silicone sealant as per the instructions below for the two types of adaptor fittings.

Puch-Fit Adaptors

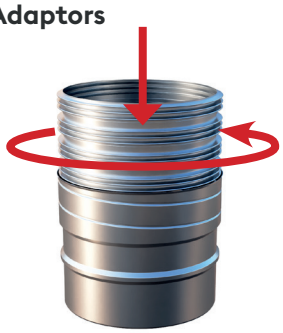


Push flex down into adaptor so the inner liner of the adaptor passes up into the flexible liner.



Apply high temperature sealant down into the gap between the adaptor and the flexible liner. Ensure there are no gaps and allow to cure according to the manufacturers installation instructions. If the adaptor is supplied with a clamp band fix in place. It is acceptable to uses self tapping screws; however, care is required to ensure integrity of seal is maintained.

Screw-Fit Adaptors

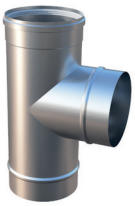


Ensuring the liner is nicely trimmed at the end, position the adaptor concentrically to the liner. Using a slight upward force twist the adaptor anti-clockwise ensuring the screw thread engages with the liner. Continue screwing on the adaptor until the liner is fully engaged into its housing.

Apply high temperature sealant around the circumferential interface between the flexible liner and the top of the screwed adaptor, ensuring there are no gaps. Allow the sealant to cure as per the manufacturers installation instructions.

Tees

SUPRA PLUS offers a large range of tees, covering various angled branches as well as reducing and equal tees.



Equal Tees

Available in branch angles of 90°, 93°, 95° and 135°. Can be used to provide an angled connection in a system, as an access / inspection point when fitted with a tee cap, or as a base tee for a vertical chimneys when fitted with a tee cap with drain. The 93° and 95° are designed specifically for condensing appliances to allow drainage through the system.

Reducing Tees

Available in branch angles of 90°, 93°, 95° and 135°. Ideal for use in the design of cascade systems where multiple appliances enter into a common chimney manifold.

Dimensions

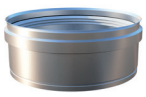
For full dimensional information, please refer to the sales brochure.

Custom Made

SFL, as a UK manufacturer can offer bespoke and custom made tees to suit specific applications.

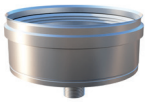
Tees Accessories and Drainage Components

The removal of condensation from the system is a critical requirement to ensure the longevity of the product. SUPRA PLUS has a full range of component specifically design to aid the removal of condensation from the system. Drains should be positioned strategically throughout the low parts of the system and especially under long vertical runs, such as at the base of a vertical chimney.



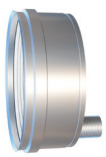
Tee Cap

Used to close off the branch / base of a tee or the end of a header / manifold and is held in position by a locking band.



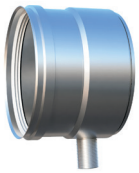
Tee Cap and Drain

Used at the bottom of a vertical run, usually under a tee, to facilitate the removal of condensation and potential rain water from the system. This component is fitted with a 316L stainless steel 1" BSP connection to allow the connection of drainage pipework.



Tee Cap with Offset Drain

As per the tee cap and drain, but with the drain offset to the outer rim of the component. Can be used on the end of a manifold to allow drainage or on a vertical system where the drain needs to be offset to allow for easier connection of drainage pipework.



Horizontal Duct Drain c/w End Cap

Used as an in-line drainage point on the end of an inclined manifold or incline run. Incorporates a 316L stainless steel 1" BSP drain connection and cap. The end cap cannot be removed. Where a removable end cap is required for access or inspection, use the Horizontal Duct Drain and a separate Tee Cap.

Horizontal Duct Drain

Used as a drainage connection point within an inclined run or manifold. Incorporates a 1" BSP stainless steel externally threaded drain connection and an internal dam to aid condensate removal.

Vertical In-Line Drain

Used either vertically in line or with the Appliance Adaptor. The design helps to divert condensates through an external connection, preventing excessive quantities of condensates from entering back into the appliance. The drain connection is provided with a standard 1" BSP externally threaded pipe to facilitate connection to suitable drainage pipe work.

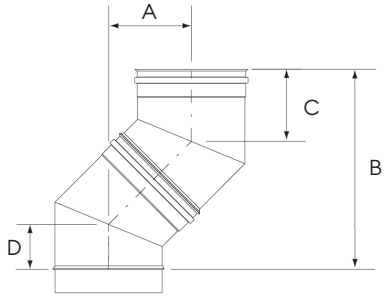
Vertical In-Line Drain c/w Test / Probe Point

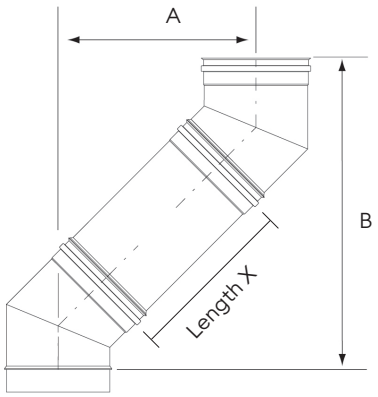
As per the Vertical In-Line Drain but with the addition of a 1/4" BSP internally threaded test point and cap. Ideally located above the appliance spigot, allowing for drainage and sampling of combustion gases and draught measurement.

Elbows

SUPRA PLUS has an extensive range of two and three segment elbows covering 15°, 30°, 45°, 85°, 87° and 90° angles. The use of elbows within the system are ideal for managing changes of direction and producing offsets. When designing chimney systems serving condensing appliances, the use of 85° and 87° elbows allows the designer to achieve either a 3° or 5° slope, allowing any condensation to flow back through the system to a suitable drainage component. The angle of the slope should be a high as possible, but not less than 3°, which can lead to premature failure of the seals and potential corrosion of the product. When installing inclined runs within a system, adequate support must be provided over its length, usually by using Split Bands suspended from the ceiling. See the Support section for further details.

Elbow Offset Dimensional Data





	Elbow To Elbow				Elbow To Elbow With Standard Length X									
15°					98mm		224mm		474mm		974mm		1245mm	
Ø	A	B	C	D	A	B	A	B	A	B	A	B	A	B
80mm	27	206	77	28	53	303	85	423	150	664	279	1147	335	1297
100mm	28	212	78	30	54	309	86	429	151	670	280	1153	335	1301
130mm	29	222	81	32	55	319	87	439	152	680	281	1163	336	1307
150mm	30	226	82	33	56	323	88	442	152	684	282	1167	336	1309
180mm	31	234	84	35	57	331	89	450	153	692	283	1175	337	1313
200mm	31	238	85	36	57	334	89	454	154	696	283	1179	337	1317
250mm	33	252	88	40	59	348	91	468	156	709	285	1192	339	1326
300mm	40	303	100	54	66	399	98	519	163	761	292	1244	343	1360
350mm	42	317	105	56	68	413	100	533	164	774	294	1257	344	1366

30°					98mm		224mm		474mm		974mm		1245mm	
Ø	A	B	C	D	A	B	A	B	A	B	A	B	A	B
80mm	59	218	83	34	109	305	171	412	296	629	546	1062	681	1297
100mm	62	230	86	37	112	316	174	424	299	640	549	1073	684	1308
130mm	66	244	90	41	116	331	178	438	303	655	553	1088	688	1323
150mm	68	252	92	43	118	339	180	446	305	662	555	1095	690	1330
180mm	72	267	96	47	122	353	184	461	309	677	559	1110	694	1345
200mm	75	278	99	50	125	365	187	472	312	689	562	1122	697	1356
250mm	82	300	106	57	132	391	194	498	319	715	569	1148	704	1382
300mm	98	364	122	73	148	450	210	558	335	774	585	1207	720	1440
350mm	105	390	129	80	155	477	217	584	342	800	592	1234	727	1466

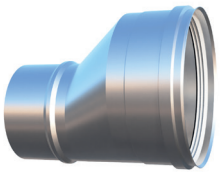
45°					98mm		224mm		474mm		974mm		1245mm	
Ø	A	B	C	D	A	B	A	B	A	B	A	B	A	B
80mm	91	219	88	40	161	289	249	377	426	554	779	907	972	1102
100mm	94	227	93	40	165	298	252	385	429	562	783	916	972	1102
130mm	103	248	99	46	173	318	261	406	438	583	791	936	981	1123
150mm	108	261	103	50	179	332	267	420	443	596	797	950	986	1136
180mm	117	283	109	57	188	354	276	442	453	619	806	972	996	1160
200mm	123	297	113	61	194	368	281	455	458	632	812	986	1002	1174
250mm	138	333	124	71	209	404	296	491	473	668	827	1022	1016	1208
300mm	169	408	144	95	240	479	327	566	504	743	858	1097	1050	1290
350mm	183	442	154	105	254	513	342	601	518	777	872	1131	1064	1324

Increaser's and Reducers

SUPRA PLUS incorporates a range of increasing and reducing adaptors to allow changes of diameter within the system. The eccentric increaser is ideal for condensing systems, as it provided a clear flow path for condensation and prevents potential pooling of condensation around the component. In most systems, it is less common to reduce the diameter, always ensure sizing calculations have been undertaken to BS EN 13384-1/2 to ensure correct venting of the flue gases, as well as checking compliance with appliance manufacturers installation instructions and regulations.

Increasing Adaptor

Reducing Adaptor



Eccentric Increasing Adaptor

Support Components

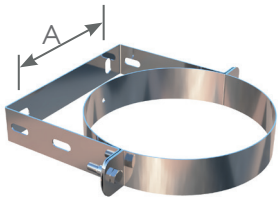
A range of support components are available to cover both vertical and lateral loading of the chimney system. All vertical loading components are design to withstand a maximum of 30 metres of product, where as lateral supports must be positioned every 2.5 metres. Under no circumstances should the maximum loadings be exceeded. Lateral support components are not load bearing and must be used in conjunction with a load bearing support when the chimney is installed vertically.

Lateral Support Components

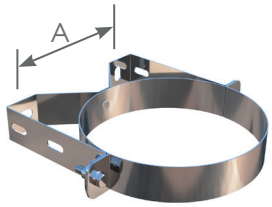
Wall Band

The wall band provides lateral stability for both vertical and horizontal installations and must be used at intervals not exceeding 2.5 metres. Manufactured from 304BA stainless steel. When installed in the vertical, a vertical load bearing support must be used to take the full weight of the chimney system. As standard, the wall band positions the chimney 50mm from the structure to which it is attached. Where the structure is of a combustible material, the wall bands must be positioned away from the structure of the declared distance to combustible as detailed in Table A based on the intended application and flue gas temperature.

80mm-100mm



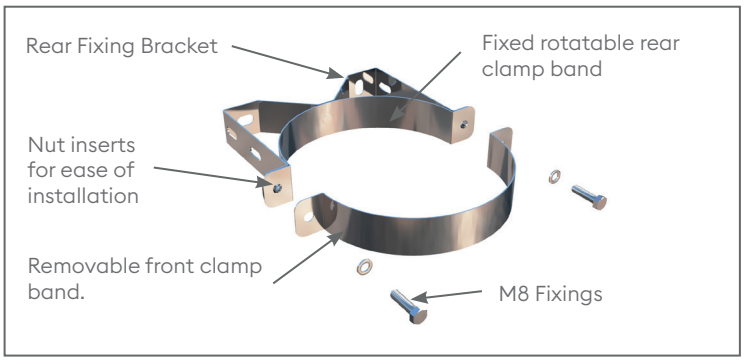
130mm-350mm



Provides 50mm clearance to from surface of chimney to structure.

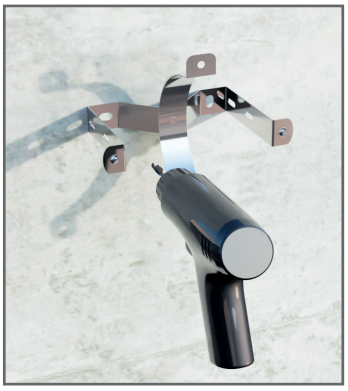
Fixing Centres

Size	A(mm)
80mm	63.5
100mm	83.5
130mm	92
150mm	112
180mm	142
200mm	162
250mm	212
300mm	266
350mm	316



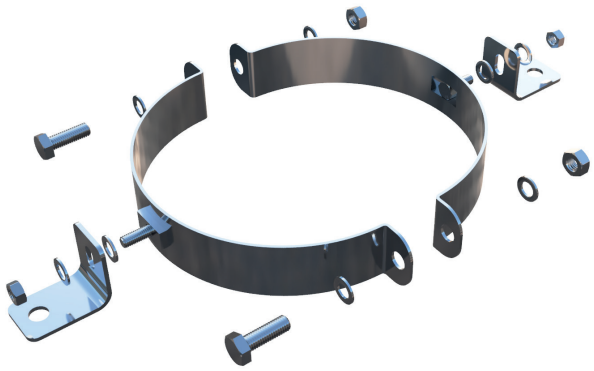
Installation

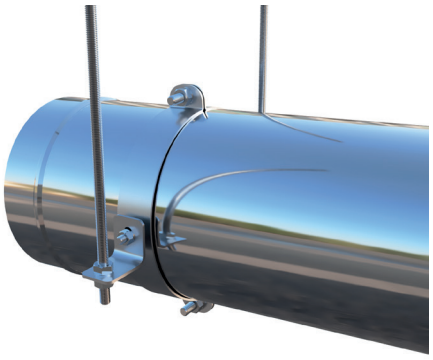
1. Rotate the rear clamp band 90° to allow easy access to the rear fixing holes. Ensuring the wall band is level, mark hole positions, drill and fix to structure using suitable fixings.
2. Rotate the rear clamp band back to it correct position and offer up the chimney so that it sits back against the rear clamp band.
3. Position the front clamp band over the chimney and align with the front fixing hole on the bracket. Using the supplied M8 fixings, fix the front clamp to the rear bracket to complete the installation.
4. When the band is tightened, it is normal for a gap of between 2-4mm between the rear and front clamp band.



Universal Split Band

Offers support to the chimney system when suspended from the ceiling on drop rods etc. The split band has adjustable brackets to allow for inclined runs. Designed for use with M10 threaded drop rods.





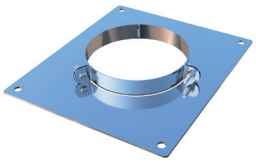
Location Band

This component consists of a strap which must be secured underneath a joint. It is designed to centrally locate and brace a system within an existing masonry chimney. Bespoke sizes can be manufactured to order to suit the dimensions of the chimney.

Vertical Support Components

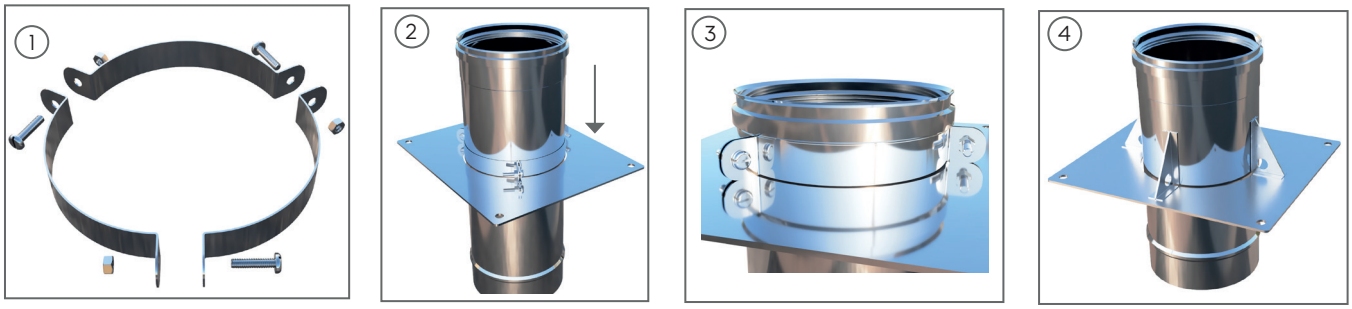
Support Length

The support length is a versatile component that can serve multiple applications. It can be used for lowering the SUPRA PLUS product down an existing masonry shaft or as a vertical support component when used with a support plate. It can also be used as a lateral support component for the attachment of guy wires or stays. When used to lower a SUPRA PLUS liner down an existing masonry chimney, all the fixing lugs on the support length must be used. The maximum length of product that can be supported by the support length is 30 metres.



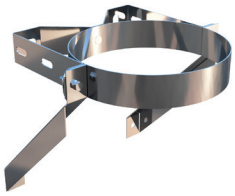
Support Plate

Consists of a stainless steel plate with a three part support collar. The collar rests on the plate and is located under the female end form of the joint. The three fixing points of the collar rest on the plate, the hole in which being large enough to permit the passage of the male end. The plate must be adequately supported and secured to a suitable bracket (By others). This component can also be used in conjunction with a Support Length, but the collar would be discarded for this application.
A support must always be used above an Adjustable Length where applied in a vertical application, or where the Adjustable Length would be otherwise liable to load. The maximum length which can be supported by this component is 30 metres.



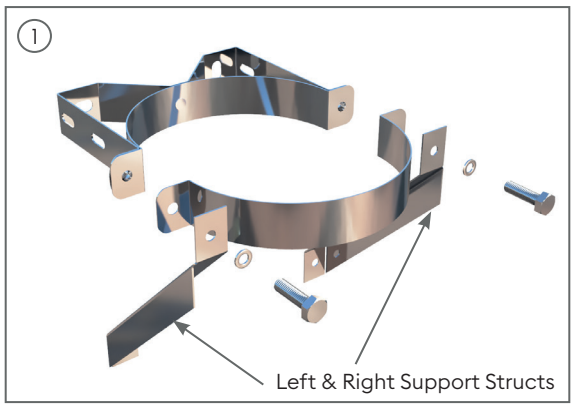
Installation

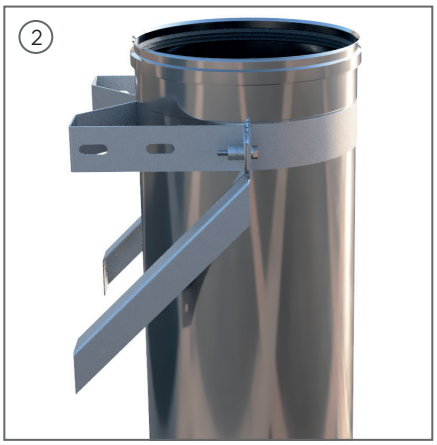
1. Loosely assemble the three brackets using the fixings provided (1).
2. Place the SUPRA PLUS length through the assembled support collar and down onto the support plate(2).
3. The seal bead of the SUPRA PLUS length should sit on top of the support collar (3).
4. Once in place tighten all fixings.
5. Where used with a support length (4), the support legs sit flush on the support plate, there is no need for additional fixings.
6. Secure the support plate to the intended structure. In all cases ensure that the attaching structure can support the required load and any clearance to combustible material is observed.



Wall Support Bracket

This component uses the standards Wall Band but incorporates additional side support struts which can be located below or above the band. In either case the band is located under the female form at a joint between the components. Provides 50mm clearance from the wall. The maximum length which can be supported is 30 metres. Constructed from stainless steel. Strut holes are suitable for M8 fixings.



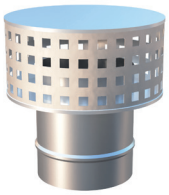


Installation

1. Follow the installation instructions on page 10 for installing the wall band.
2. With the wall band in position, but with the front clamp band removed, offer up the SUPRA PLUS chimney, so that it is position slightly below the female end so that the clamp sits under the seal bead (2).
3. Position the wall band front clamp band over the chimney and align with the screw holes in the rear clamp band.
4. Position the left wall strut, aligning the fixing hole in-line with the front clamp band. Secure the left hand side using the supplied M8 washer and hex screw and hand tighten. Do the same for the right hand side.
5. Position and align the bottom end of each support struct against the structure and mark position. Using suitable fixings for both the structure and loading, fix and secure each support struct to the structure.
6. Fully tighten the M8 front clamp screws to finish the installation.

Terminals

SUPRA PLUS is offered with a range of standard terminals to suit a variety of applications. Where used on condensing appliances, the Tapered Top Stub with Mesh would be preferable, as this offers little additional resistance to the flue gases. The same Top Stub but without the mesh would also be the preferred option for solid fuel, when used as a rigid liner, providing there is a drainage point at the base of the chimney. As an alternative for solid fuel, the Rain Cap could also be used to help reduce rain ingress into the chimney system. For natural draught gas fired appliances the Gas Terminal should be used.



Conventional Gas Terminal

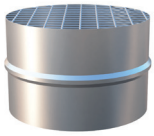
A terminal designed for use where SUPRA PLUS serves conventional gas fired equipment. Incorporates a bird screen/mesh. For condensing and positive pressure applications, a Tapered Top Stub with Mesh is recommended.

Top Stub

This terminal offers minimal resistance to the evacuation of flue gases and helps to minimise the effects of pluming by slightly increasing the exit velocity. Can be used on oil and solid fuel applications, where SUPRA PLUS is used as a rigid liner within a masonry chimney.

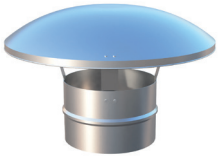
Top Stub With Mesh

As per the top stub but fitted with a 10mm gas mesh for use on gas condensing appliances. Not for use on solid fuel.



Parallel Vent Terminal

Suitable for gas condensing appliances. Parallel flow to minimise back pressure on appliance and maintain system velocity. Fitted with 10mm welded stainless steel mesh.



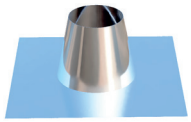
Rain Cap

A basic terminal that offers a degree of protection against rainwater ingress. Not suitable for gas appliances.

Flashings & weathering Components

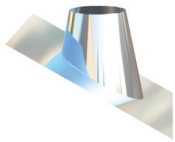
SFL provide a range of aluminium flashing to cover various roof pitches.

Flat flashing



Manufactured from malleable aluminium for use on flat roofs. The lower end of the flashing should be covered by the roofing felt and then sealed. The base should be weathered using an external mastic sealant or weathered using a traditional method. The flashing must be used in conjunction with a storm collar.

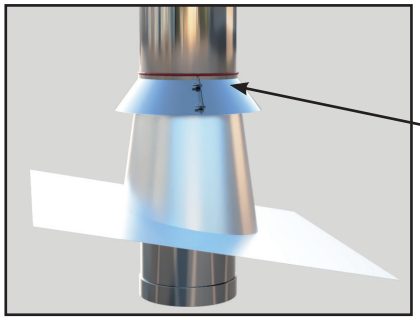
Angled flashing



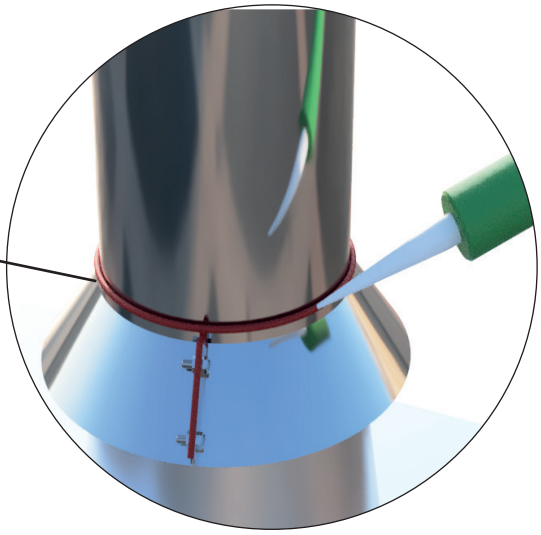
Two types of angled flashing are offered to suit different roof pitches, these are adjustable between 3° - 30° and 32° - 45°. Manufactured from malleable aluminium, these are for use on pitched roofs. The base of the flashing should be nailed or screwed to the roof batons prior to tilling. The front edge of the flashing should be hooked to the underside of the batons to prevent lifting. This component should be weathered using an external mastic sealant or weathered using a traditional method. The flashing must be used in conjunction with a storm collar.

Storm collar

The storm collar is located over the outside of the chimney, directly above the upper cone of the flashing and secured using the fixings provided. Weather the interface between the storm collar and chimney using the sealant provided. Check to ensure there are no gaps around the storm collar and it is watertight.



Flashing and storm collar assembly



Weather the storm collar as above using external grade sealant or that supplied with the component.

Post Installation

Provision for Inspection, maintenance, Sweeping and Cleaning

Adequate provision should be made for inspecting and cleaning the chimney system. Components are provided within the range to allow access for cleaning and inspection and should be incorporated strategically within the system to facilitate this requirement. It is important as part of the routine maintenance of the system, that a visual inspection of the chimney is undertaken at the same time to ensure all joints are sound. Elastomer Joint Seals are sacrificial and may need replacing over time as part of the routine maintenance of the chimney.

Testing and Commissioning Prior To First Use

Firstly check back through the system and ensure all joints are correctly fitted, lateral bracing and vertical support are correct and in accordance with the manufactures installation instructions and that the product performance designation meets the requirements of the system performance as calculated to BS EN 13384-1/2 and that of the appliance installation instructions.

The general requirement for commissioning and testing are as detailed and described in BS EN 15286 Parts 1 & 2, with reference to the appropriate appliance type.

For gas appliances, further guidance can be found in IGEM-UP-10.

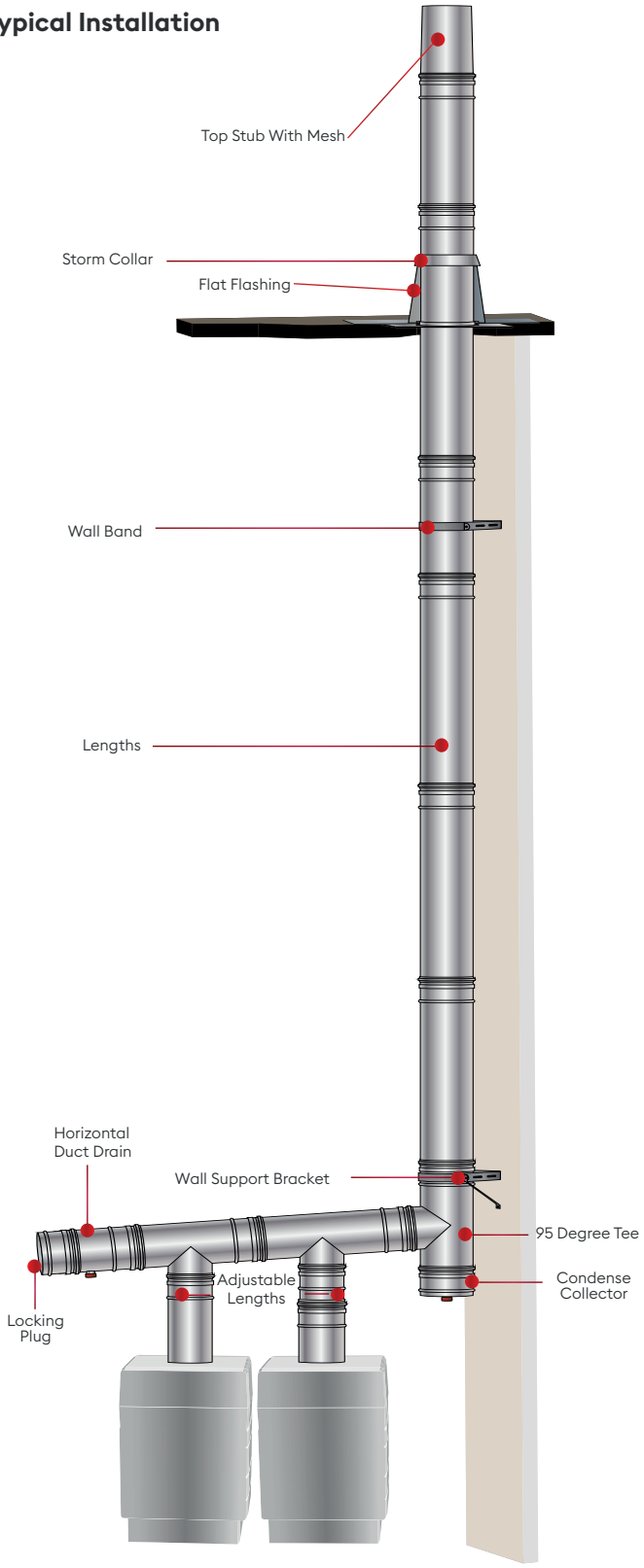
Handling

The product is 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.

Notice Plate

It is a mandatory requirement that a data / notice plate detailing the performance data of the chimney together with location, manufacture and product type installed. This should be marked up in indelible ink and fixed in an unobtrusive but obvious position within the plant room / building etc.

Typical Installation



Notes:

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