

SUPRA Plus

Stainless steel single wall chimney system for condensing appliances





PRODUCT INFORMATION

The SUPRA Plus chimney system range is specifically designed to Approvals meet the demands of the latest high efficiency condensing heating appliances. SUPRA Plus is supplied complete with factory fitted and bonded elastomer seals, offering peace of mind and reduced installation time for the installer.

SUPRA Plus is a single-wall pre-fabricated stainless steel flue system, primarily designed for gas and kerosene (28Sec) oil fired appliances, which produce condensates and positive pressure conditions as a function of their operation, such as high efficiency condensing boilers.

SUPRA Plus is manufactured in 9 diameters ranging from 80mm to 355mm 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 welded construction and precision formed close tolerance joints.

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

The standard SUPRA Plus product is primarily designed for internal applications and for use on high efficiency gas / kerosene fired condensing appliances and for applications where the chimney could be under positive pressure conditions not exceeding 200Pa at a maximum flue gas temperature of 200°C.

SUPRA Plus can also be used as a rigid chimney liner within a masonry chimney. Where used in a lining capacity, SUPRA Plus can be used with the seals removed and is designated as sootfire resistant (G) whilst resistant to water vapour diffusion and condensate penetration (W). The pressure resistance, however, becomes N1 (40Pa) for atmospheric draught appliances. Applications include condensing biomass boilers and other situations where Quality condensation is expected from a natural draught appliance.

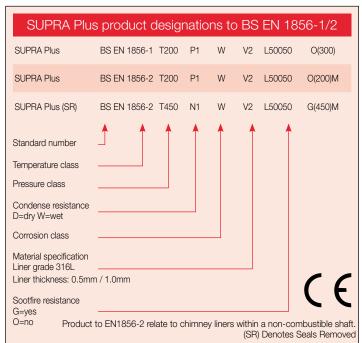
When flueing condensing appliances and where the chimney is external to the building, there is a risk that the condensates could freeze. In such cases, SFL would recommend that a twin wall insulated product such as NOVA® is used to prevent this. Regulations now require all domestic external flue runs over 3m are to be made from twin wall insulated product manufactured with a stainless steel liner.

Care should be taken where there is a risk of accidental human contact with SUPRA Plus. Although most condensing appliances produce flue gas temperatures in the region of 30-50°C, it is possible that in non-condensing mode the flue gases can achieve much higher temperatures. For instances where the flue gas temperature of the appliance can rise above 70°C and there is the possibility of accidental human contact, a twin wall insulated product such as NOVA® should be used.



The SUPRA Plus product is CE certified to BS EN 1856-1 & 2 certificate No. 0086-CPR-496040 & 0086-CPR-559419 to the performance designations as detailed in Table A below.

Table A



All components are manufactured under a quality assurance scheme, certificate No. FM 557622, administered by British Standards in accordance with BS EN 9001: 2008. In addition SFL operate a CE approved factory production control system as required under the Construction Products Directive 93/68/EEC.

Installation / Regulations

Connection to an appliance which is not connected to the fuel supply, may be carried out by a competent person. However, connection to an appliance that is connected to the fuel supply MUST be carried out by an approved and registered heating engineer, e.g. Gas Safe, HETAS (Solid Fuel) or OFTEC (Oil).

The Installation of the SUPRA Plus product must be in accordance with local building regulations and associated National Standards and Code of Practice. Relevant standards are as follows:

Document J - DOE Building Regulations Section F - Building Standards (Scotland)

Section L - Building Regulations (Northern Ireland)

Solid Fuel & Oil Fired Appliances: BS EN15287-1:2007 + A1:2010

Domestic Gas Installations: BS5440: Part 1: 2009

Where SUPRA Plus is used to reline an existing stack, it is imperative that the product is not supported by suspending from the top of the stack. In all instances the liner must be lowered down the stack using a Support Length at the bottom. Location Bands must be used at intervals not exceeding 3.0 metres. The Location Bands are to be secured underneath a joint and are designed to centrally locate and brace the system when lowered into an existing chimney or shaft. When required, the Location Bands can be manufactured to bespoke dimensions provided by the customer to suit the required chimney / shaft dimensions.

For condensing (WET) applications it is important that horizontal sloping runs are angled not less than 3° to the horizontal where head room is limited, but preferably 5°. Various components are available to facilitate either a 3° or 5° incline from the horizontal. Drainage components MUST be used strategically within the system to facilitate the removal of condensation, see Fig 3. Prior to making the joint, ensure that both mating ends are clean and free of dirt and apply a generous amount of SFL Seal Lubricant around the face of the seal to aid installation.

Commercial Applications

The SUPRA Plus Product is suitable for commercial applications up to and including 355ID. Due to the complexity of most installations, SFL can manufacture to order bespoke components including special angled elbows, tees and multi-inlet manifolds. Please forward your requirements complete with detailed dimensioned drawing to SFL Technical Department who will assess your requirements.

SFL also employ state of the art software to model the thermodynamic and flow characteristics of the proposed system, allowing the most economic system design to be achieved. All designs are calculated in accordance with EN 13384 parts 1 & 2. SFL can also offer advice on the Clean Air Act requirements and calculate chimney heights to the requirement of the Clean Air Act Memorandum. For further information please contact SFL Technical Department.

Key Features



Factory bonded seals



Manufactured from corrosion resistant grade 316L (1.4404:X2CrNiMo 17-12-2) stainless steel 0.5mm



Fully welded



Screw-toggle locking band adjustment for added security



Designed for gas & oil (28sec) fired condensing appliances



Suitable for flue gas temperatures up-to 200°C



Designed for positive pressure application (200Pa)



Designed for condensing (wet) application



Soot fire resistant (seals removed)



Suitable for flue gas temperatures up-to 450°C (seals removed)



Suitable for negative pressure applications (seals removed)



Designed for internal installation



Part 2 tested for installation as a chimney liner & connecting flue where building regulations permit



10 Year limited manufacturing defect warranty

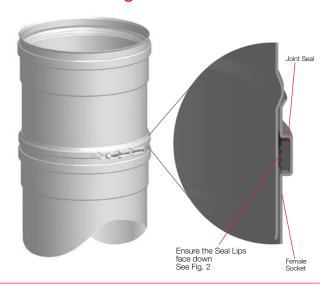
Elastomer Seal (P1 / W Applications)

The Elastomer Seal is located in the recess of the female end of the SUPRA Plus chimney system as detailed in Fig 1. The product is supplied complete with the Elastomer Seal factory fitted and bonded. Where SUPRA Plus is being used for condensing (WET) / positive pressure (P1) applications up to 200Pa at a maximum flue gas temperature of 200°C, Elastomer Seals MUST be fitted at each joint within the system.

Note: Joint Seals are only suitable for gas and 28Sec oil applications within the above limits.

Where Elastomer Seals are being used, the chimney system must be installed with a minimum of 3° or preferably 5° incline to the horizontal to ensure adequate back drainage of condensation. Failure to maintain an adequate incline and lack of drainage component in the system may lead to premature failure of the product / seals.

SUPRA Plus Jointing Details



Elastomer Seals (P1)





Elastomer Seals Supplied bonded on 80mm - 355mm Standard SUPRA Plus. Replacement Seals for all diameters are also given below. These items are considered sacrificial and may need to be replaced from time to time.

SUPRA Plus requires a Locking Band to complete each joint. To calculate the number of Locking Bands required, count the number of female sockets on the system.

Seal diameter	Code Number
80mm	4006308
100mm	4006310
130mm	4006313
150mm	4006315
180mm	4006318
200mm	4006320
250mm	4006325
300mm	4006330
355mm	4006335

Seal Lubricant (P1)



This must be applied around the circumference of the fitted seal to provide a lubricated interface between the seal and the liner when the product is used for positive pressure and wet applications. A single bottle will lubricate many seals and will be sufficient for several system installations.

Only SFL lubricant should be used as it has been specially formulated for use with both silicone and EPDM seal materials. Failure to use SFL Lubricant when installing seals in SUPRA Plus product may invalidate the product warranty and limit the lifetime of the seals

Locking Bands

This component must be used on every joint between components and needs to be ordered separately. A locking band is required for each female socket on a component.



Ø	Code
80mm	4117008
100mm	4117010
130mm	4117013
150mm	4117015
180mm	4117018
200mm	4117020
250mm	4117025
304mm	4117030
355mm	4117035



Straight Length

Available in 'nominal' installed lengths as detailed in

the tables below					
Ø	Installed Length	974mm	474mm		
80mm		4110108	4110208		
100mm		4110110	4110210		
130mm		4110113	4110213		
150mm		4110115	4110215		
180mm		4110118	4110218		
200mm		4110120	4110220		
250mm		4110125	4110225		
304mm		4110130	4110230		
355mm		4110135	4110235		
50011111		4110100	4110233		
Ø	Installed Length	224mm	100mm		
	Installed Length				
Ø	Installed Length	224mm	100mm		
ø 80mm	Installed Length	224mm 4110308	100mm 4110708		
ø 80mm 100mm	Installed Length	224mm 4110308 4110310	100mm 4110708 4110710		
Ø 80mm 100mm 130mm	Installed Length	224mm 4110308 4110310 4110313	100mm 4110708 4110710 4110713		
80mm 100mm 130mm 150mm	Installed Length	224mm 4110308 4110310 4110313 4110315	100mm 4110708 4110710 4110713 4110715		
80mm 100mm 130mm 150mm	Installed Length	224mm 4110308 4110310 4110313 4110315 4110318	100mm 4110708 4110710 4110713 4110715 4110718		



355mm

A 224mm installed length featuring a test point, closed via a 1/4" BSP screw.

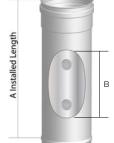
4110335 4110735

Ø	Code
80mm	4110908
100mm	4110910
130mm	4110913
150mm	4110915
180mm	4110918
200mm	4110920
250mm	4110925
304mm	4110930
355mm	4110935

Damper Length (P1 / W)

Used to increase resistance or reduce draught in a system or at appliance connection. This is not a reflux device and is manually set. The damper blade provides a maximum closure of 70%.

Ø	А	Code
100mm	217	4119610
130mm	217	4119613
150mm	217	4119615
180mm	217	4119618
200mm	217	4119620
250mm	217	4119625



For replacement door seal, use code 4100043 for diameters 80-130mm and 4100044 150-350mm

Inspection Length
Designed to be installed within the system to allow access for inspection and cleaning. The door closes on an elastomer seal to provide a water and pressure resistant joint and must only be used where the flue gas temperature will NOT exceed 200°C. For high temperature applications the door seal must be removed prior to installation.

Ø	Α	В	Code
80mm	475	100	4111008
100mm	475	100	4111010
130mm	475	180	4111013
150mm	475	200	4111015
180mm	475	200	4111018
200mm	475	200	4111020
250mm	475	200	4111025
304mm	475	200	4111030
355mm	475	200	4111035

Adjustable Length

Designed to be used to make up a required length between two components. It should be used with a standard length which MUST be ordered separately. Minimum engagement is to be half of the flue diameter. Adjustable Lengths are also supplied with a special Locking Band and Seal which must be used for condensing applications.

Ø	A MIN	A MAX	Code
80mm	63	306	4114408
100mm	63	296	4114410
130mm	63	286	4114413
150mm	63	276	4114415
180mm	63	256	4114418
200mm	63	246	4114420
250mm	63	221	4114425
304mm	63	194	4114430
355mm	63	168	4114435

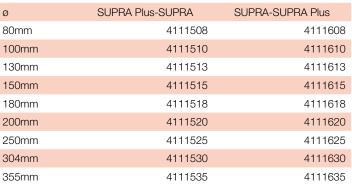


For replacement Seal and Locking Band set, use code 40072XX, where XX is the diameter code

Retrofit adaptors SUPRA Plus-SUPRA / SUPRA-SUPRA Plus

Adaptors to enable system retrofit to and from existing supra installations







Don't forget **Locking Bands!**

One locking band is required for every female socket in the system

Use code 41170XX XX = diameter e.g. 13 = 130mm



Ø	A(mm)	B(mm)	OD	Code
80mm	55	170	81	4119308
100mm	55	170	101	4119310
130mm	55	170	131	4119313
150mm	55	170	151	4119315
180mm	55	170	181	4119318
200mm	55	170	201	4119320
250mm	55	170	251	4119325
304mm	55	170	305	4119330
355mm	55	170	356	4119335



NOVA®- SUPRA Plus adaptor

Designed to facilitate connection from the NOVA® to SUPRA Plus chimney system.

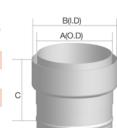
	Ø	Code
	100mm	4179710
	130mm	4179713
	150mm	4179715
	180mm	4179718
	200mm	4179720
	250mm	4179725
	304mm	4179730
	355mm	4179735



Appliance Increaser Adaptor A conical increaser from the appliance spigot by one

flue size.

Ø	A(mm)	B(mm)	OD	Code
80mm	55	170	61	4119306
130mm	55	170	110	4119311
130mm	55	170	125	4119312



Adaptor to Flex

Used to connect the SUPRA Plus product to SELFLEX® flexible liner or a generic liner providing it meets the dimensions of the adaptor. Supplied with easy fit clamping band.

Ø	A(mm)	B(mm)	C(mm)	Code
100mm	96	113	98	4111710
130mm	121	138	98	4111713
150mm	146	163	98	4111715
180mm	171	193	98	4111718
200mm	196	213	98	4111720
250mm	246	263	98	4111725
304mm	296	313	98	4111730
355mm	346	363	98	4111735



Appliance Adaptor with Condensate Trap

Used to connect the SUPRA Plus product to the appliance and drain condensate from the system where used on high efficiency and condensing appliances. The interface between the Adaptor and the appliance outlet should be sealed with silicone sealant. The design helps divert condensates through a 15mm OD stainless steel tube to which a drain hose can be connected, prior to entering the appliance.

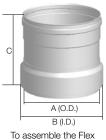
Ø	Code
80mm	4111408
100mm	4111410
130mm	4111413
150mm	4111415
180mm	4111418
200mm	4111420
250mm	4111425
304mm	4111430
355mm	4111435



80mm SUPRA Plus -100mm Flex Adaptor

Used to connect from 80mm SUPRA Plus to 100mm Selflex. Supplied with easy fit clamping band.

Ø	A(mm)	B(mm)	C(mm)	Code
100mm	96	113	117	4111708



Adaptor, push the flex

all the way into the cup on the adaptor body,

then fit the cover band

over the cup, tightening the screw toggle as required to prevent the flexible liner from escaping

Adaptor from Flex

Used to connect the SUPRA Plus product to our Selflex liner or a generic liner providing it meets the dimension of the adaptor. Supplied with easy fit clamping band.

	B(mm)	C(mm)	Code
96	113	98	4112110
121	138	98	4112113
146	163	98	4112115
171	193	98	4112118
196	213	98	4112120
246	263	98	4112125
296	313	98	4112130
346	363	98	4112135
1	21 46 71 96 246	21 138 46 163 71 193 96 213 246 263 296 313	121 138 98 146 163 98 171 193 98 196 213 98 1246 263 98 1296 313 98



SUPRA Plus - NOVA® Adaptor

Designed to facilitate connection from the SUPRA Plus to NOVA® chimney system.

Ø	Code
80mm SUPRA (to 100mm NOVA®)	4179608
100mm	4179610
130mm	4179613
150mm	4179615
180mm	4179618
200mm	4179620
250mm	4179625
304mm	4179630
355mm	4179635

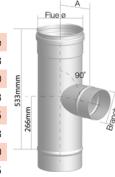




90° Tee

Used to provide a 90° connection in a system run or can be used as an access / inspection point when used with a Tee Cap

Ø	Α	В	С	Code
80mm	285	131	90	4110508
100mm	285	131	90	4110510
130mm	315	146	105	4110513
150mm	335	156	115	4110515
180mm	365	171	130	4110518
200mm	387	183	142	4110520
250mm	437	208	167	4110525
304mm	484	215	190	4110530
355mm	534	255	215	4110535



90° & 95° Reducing Tees

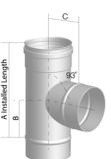
Standard tees with a reduced size branch for use in header arrangements, as an entry point to a larger sized stack or as an adaptor for standardised tee components.

	Flue ø	Branch ø	А	90°	95°
	100mm	80	82	4159001	4159501
0	130mm	80	32	4159004	4159504
5	130mm	100	98	4159005	4159505
	150mm	80	107	4159009	4159509
	150mm	100	108	4159012	4159512
	150mm	130	108	4159016	4159516
	180mm	80	122	4159017	4159517
	180mm	100	123	4159019	4159519
	180mm	130	123	4159022	4159522
	180mm	150	123	4159023	4159523
	200mm	80	132	4159024	4159524
	200mm	100	133	4159026	4159526
	200mm	130	133	4159028	4159528
	200mm	150	133	4159029	4159529
0	200mm	180	133	4159031	4159531
Ī	250mm	80	152	4159032	4159532
	250mm	100	158	4159033	4159533
	250mm	130	158	4159036	4159536
	250mm	150	158	4159037	4159537
	250mm	180	158	4159038	4159538
	250mm	200	158	4159039	4159539
	304mm	80	183	4159041	4159541
	304mm	100	183	4159042	4159542
	304mm	130	183	4159044	4159544
	304mm	150	183	4159046	4159546
	304mm	180	183	4159047	4159547
	304mm	200	183	4159048	4159548
	304mm	250	183	4159049	4159549
	355mm	80	208	4159051	4159551
	355mm	100	208	4159052	4159552
	355mm	130	208	4159054	4159554
	355mm	150	208	4159056	4159556
	355mm	180	208	4159057	4159557
	355mm	200	208	4159058	4159558
	355mm	250	208	4159059	4159559
	355mm	304	208	4159061	4159561



The tee is provided with a 3° connection on the branch to allow for condensate drainage where headroom is limited.

Ø	Α	В	С	Code
80mm	285	131	90	4110608
100mm	285	131	90	4110610
130mm	315	146	105	4110613
150mm	335	156	115	4110615
180mm	365	171	130	4110618
200mm	387	183	142	4110620
250mm	437	208	167	4110625
304mm	484	215	190	4110630
355mm	534	255	215	4110635



95° Equal Tee

The tee is provided with a 5° connection on the branch to allow for condensate drainage. Can be used at the base of a vertical stack or to facilitate a 5° incline

	С
A Installed	95°

Ø	Α	В	С	Code
80mm	285	131	90	4119108
100mm	285	131	90	4119110
130mm	315	146	105	4119113
150mm	335	156	115	4119115
180mm	365	171	130	4119118
200mm	387	183	142	4119120
250mm	437	208	167	4119125
304mm	484	215	190	4119130
355mm	534	255	215	4119135

Can't see what you need?

SFL can manufacture bespoke tees and components to your specific requirements. Please see page 13 for details

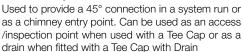
Don't forget Locking Bands!

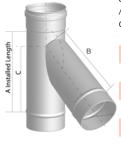
One locking band is required for every female socket in the system

Use code 41170XX XX = diameter e.g. 13 = 130mm

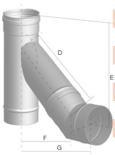
TEE COMPONENTS & DRAINS

135° Equal Tee





Ø	Α	В	С	Code
80mm	475	278	275	4112208
100mm	475	278	275	4112210
130mm	475	293	290	4112213
150mm	475	328	325	4112215
180mm	725	373	370	4112218
200mm	725	403	400	4112220
250mm	725	473	470	4112225
304mm	725	538	535	4112230
355mm	925	600	600	4112235



355mm	925	600	600	4	112235
Ø		D	Е	F	G
80mm		405	486	286	334
100mm		405	486	286	334
_E 130mm		427	487	302	357
150mm		466	480	330	389
180mm		515	719	364	429
200mm		551	715	390	459
250mm		632	702	447	527
304mm		693	680	490	574
355mm		770	919	544	634

TEE COMPONENTS & DRAINS



Tee Cap

Used to close off the branch or base of a tee or the end of a header/manifold. Held in position with a Locking band.

Ø	A(mm)	Code
80mm	70	4114908
100mm	70	4114910
130mm	70	4114913
150mm	70	4114915
180mm	70	4114918
200mm	70	4114920
250mm	70	4114925
304mm	70	4114930
355mm	70	4114935



Tee Cap with Drain

Used at the bottom of a vertical run, usually under a Tee, to facilitate drainage of condensates from the system. The component includes a stainless steel BSP connection to allow drainage pipework to be connected by others

Ø	Α	В	Code
80mm	70	1" BSP	4114308
100mm	70	1" BSP	4114310
130mm	70	1" BSP	4114313
150mm	70	1" BSP	4114315
180mm	70	1" BSP	4114318



Tee Cap with Drain Continued...

200mm	70	1" BSP	4114320
250mm	70	1" BSP	4114325
304mm	70	1" BSP	4114330
355mm	70	1" BSP	4114335

Tee Cap with Offset Drain

As previous item, but with drain on rim.



Ø	Α	В	Code
80mm	70	1" BSP	4116908
100mm	70	1" BSP	4116910
130mm	70	1" BSP	4116913
150mm	70	1" BSP	4116915
180mm	70	1" BSP	4116918
200mm	70	1" BSP	4116920
250mm	70	1" BSP	4116925
304mm	70	1" BSP	4116930
355mm	70	1" BSP	4116935

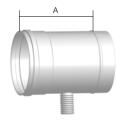
Horizontal Duct Drain

Used as a drainage point on the end of an inclined manifold or inclined run. Incorporates an internal condensate dam and BSP stainless steel connection for condensate drainage. This component is supplied with or without a fixed end cap. **Note: The cap cannot be removed.**

Mith Con



			with Cap
Ø	A(m	nm)	Code
80mm	18	32 4	1111808
100mm	n 18	32 4	4111810
130mm	າ 18	32 4	4111813
150mm	n 18	32 4	4111815
180mm	n 18	32	4111818
200mm	n 18	32 4	4111820
250mm	n 18	32	4111825
304mm	n 19	93 4	4111830
355mm	n 19	93 4	4111835
		\//i+	hout Can



		Without Cap
Ø	A(mm)	Code
80mm	132	4110808
100mm	132	4110810
130mm	132	4110813
150mm	132	4110815
180mm	132	4110818
200mm	132	4110820
250mm	132	4110825
304mm	143	4110830
355mm	143	4110835

15° Elbow

Used to provide a 15° change of direction from the



For more elbow dimensions and offset calculations, see page 12

Ø	A(mm)	B(mm)	Code
80mm	33	171	4112508
100mm	33	171	4112510
130mm	35	184	4112513
150mm	36	192	4112515
180mm	37	202	4112518
200mm	38	212	4112520
250mm	41	234	4112525
304mm	40	234	4112530
355mm	44	254	4112535

30° Elbow

Provides a 30° change of direction from the vertical.



Ø	A(mm)	B(mm)	Code
80mm	64	158	4112408
100mm	64	158	4112410
130mm	67	171	4112413
150mm	69	179	4112415
180mm	71	188	4112418
200mm	74	197	4112420
250mm	80	218	4112425
304mm	78	218	4112430
355mm	85	237	4112435

40° Elbow

Provides a 40° change of direction from the vertical.



Ø	A(mm)	B(mm)	Code
80mm	82	145	4119808
100mm	82	145	4119810
130mm	86	158	4119813
150mm	89	165	4119815
180mm	91	174	4119818
200mm	95	182	4119820
250mm	102	202	4119825
304mm	100	203	4119830
355mm	109	220	4119835

45° Elbow

Provides a 45° change of direction from the vertical.



Don't forget **Locking Bands!**

One locking band is required for every female socket in the system

Use code 41170XX XX = diameter e.g. 13 = 130mm

Ø	A(mm)	B(mm)	Code
80mm	90	138	4112308
100mm	90	138	4112310
130mm	95	150	4112313
150mm	98	157	4112315
180mm	100	165	4112318
200mm	105	174	4112320
250mm	112	192	4112325
304mm	110	194	4112330
355mm	120	210	4112335

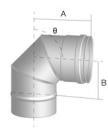
85° Elbow

Provides an 85° change of direction from the vertical. Also for use on condensing systems to allow a 5° incline to aid drainage of condensate back through the system.

Ø	A(mm)	B(mm)	Code
80mm	215	138	4112708
100mm	215	138	4112710
130mm	228	151	4112713
150mm	237	160	4112715
180mm	251	174	4112718
200mm	262	185	4112720
250mm	286	209	4112725
304mm	309	229	4112730
355mm	330	246	4112735

87° ElbowProvides an 87° change of direction from the vertical. Also for use on condensing systems, allowing a 3° incline to aid drainage of condensate back through the system if headroom is minimal.

Ø	A(mm)	B(mm)	Code
80mm	217	140	4113208
100mm	217	140	4113210
130mm	230	153	4113213
150mm	239	162	4113215
180mm	254	177	4113218
200mm	264	187	4113220
250mm	288	211	4113225
304mm	311	231	4113230
355mm	333	249	4113235



90° Elbow

Provides a 90° change of direction from the vertical.

Ø	A(mm)	B(mm)	Code
80mm	219	142	4112808
100mm	219	142	4112810
130mm	232	155	4112813
150mm	242	165	4112815
180mm	257	180	4112818
200mm	267	190	4112820
250mm	292	215	4112825
304mm	315	235	4112830
355mm	337	253	4112835

SUPPORT COMPONENTS

INCREASERS/REDUCERS



266mm

Reducers

Reducers are used to reduce the diameter of the preceding system by one diameter, e.g. 150ID to 130ID.

Ø	Flue ø A	B(mm)	Code
100mm	80mm	157	4112608
130mm	100mm	157	4112610
150mm	130mm	157	4112613
180mm	150mm	157	4112615
200mm	180mm	157	4112618
250mm	200mm	157	4112620
304mm	250mm	157	4112625
355mm	304mm	157	4112630



Increasers

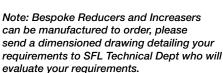
Increasers are used to increase the diameter of the preceding system by one diameter, e.g. 130ID to 150ID.

Ø	Flue ø A	B(mm)	Code
80mm	100mm	157	4113008
100mm	130mm	157	4113010
130mm	150mm	157	4113013
150mm	180mm	157	4113015
180mm	200mm	157	4113018
200mm	250mm	157	4113020
250mm	304mm	157	4113025
304mm	355mm	157	4113030
355mm	400mm	157	4113035



Eccentric Increasers
Used to increase diameter of the flue in a horizontal section whilst reducing the possibility of condensate pooling. It can also be used to maintain clearance on vertical runs.

Ø	Flue ø A	Code
80mm	100mm	4170808
80mm	150mm	4170608
100mm	130mm	4170810
100mm	150mm	4170610
150mm	180mm	4170715
150mm	200mm	4170615
200mm	250mm	4170720
200mm	304mm	4170620
250mm	355mm	4170625





Support Length

The Support Length can serve two applications, firstly allowing a SUPRA Plus liner to be lowered down a chimney and secondly as a Support Length when used with the Support Plate (with collar removed).

In all cases, ALL the lugs on the Support Length MUST be used when lowering the product. The maximum length of product that can be supported by the component is 30 metres.

Ø	Code
80mm	4110408
100mm	4110410
130mm	4110413
150mm	4110415
180mm	4110418
200mm	4110420
250mm	4110425
304mm	4110430
355mm	4110435

ı Brad

Bracing Bracket

Used to provide lateral stability back to support structure. This component must only be used with rigid stays and can be fitted anywhere on the pipe other than between the swages. Structural calculations must be made for each application. Rigid stays must be connected to the three fixing points of this three part component. The hole diameters for the M6 nuts and bolts are 7mm. Constructed from stainless steel.

Ø	I.D. (mm)	Code
80mm	82	4069208
100mm	102	4069210
130mm	132	4069213
150mm	152	4069215
180mm	182	4069218
200mm	202	4069220
250mm	252	4069225
304mm	302	4069230
355mm	352	4069235



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 bead/swage at a joint between components. The three fixing points of the collar rest on the plate, the hole in which being large enough to permit the passage of the swages of the SUPRA Plus construction.

The plate must be adequately supported and secured to an adjacent structure. 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.

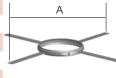
(Length not supplied)





Support Plate (Continued...)

Ø	A(mm)	Code
80mm	147	4051108
100mm	260	4051110
130mm	275	4051113
150mm	300	4051115
180mm	325	4051118
200mm	350	4051120
250mm	400	4051125
304mm	450	4051130
355mm	500	4051135



Location Band

This component consists of a strap which must be secured underneath a joint. It has four equally located stainless steel "spokes" designed to centrally locate and brace the system where lowered into an existing chimney or shaft, and should be used at intervals not exceeding 3 metres. Constructed from stainless steel. Bespoke Location Bands to facilitate non-standard shafts can be manufactured to order. Please refer to SFL's Technical Department with your requirement.

Ø	A(mm)	Code
80mm	-	-
100mm	375	4117110
130mm	390	4117113
150mm	410	4117115
180mm	540	4117118
200mm	560	4117120
250mm	610	4117125
304mm	660	4117130
355mm	850	4117135

Wall Support Bracket

This component is basically a Wall Band with additional side support struts which can be located below or above the band. In either case the band is located under the bead/swage at a joint between the components. Provides 50mm clearance from the wall. The maximum length which can be supported by this component is 30 metres. Constructed from stainless steel.

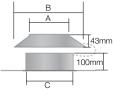
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		0	5	
1		ч	В	

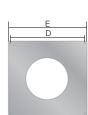
Ø	Α	В	С	Code
80mm	-	-	-	-
100mm	104	124	83.5	4051210
130mm	118	138	92	4051213
150mm	128	148	112	4051215
180mm	143	163	142	4051218
200mm	153	173	162	4051220
250mm	178	198	212	4051225
304mm	202	222	266	4051230
355mm	227	247	316	4051235

FLASHINGS & WEATHERING

Terminal Kit

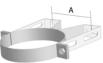
The SUPRA Plus Terminal Kit is designed for use where SUPRA Plus is located within a chimney or shaft. It consists of a plate and a 100mm upstand (drum) which is traditionally weathered to the top of the shaft. The "drum" is significantly greater in diameter than the SUPRA Plus product, to provide passive ventilation to the shaft / chimney. Four integral stainless steel straps centrally locate the SUPRA Plus when the unit is lowered over the product. The projecting length of SUPRA Plus above the "drum" is then rainproofed using the Storm Collar provided as part of the kit.







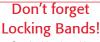
metres to provide lateral stability for both vertical and horizontal applications within the system. Manufactured from stainless steel and suitable for both internal and external applications. Provides 50mm clearance from the wall.



80mm - 100mm

130mm - 355mm

Ø	A(mm)	Code
80mm	63.5	3115084
100mm	83.5	3115104
130mm	92	3115134
150mm	112	3115154
180mm	142	3115185
200mm	162	3115205
250mm	212	3115255
304mm	266	3115305
355mm	316	3115355



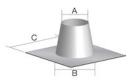
One locking band is required for every female socket in the system

Use code 41170XX XX = diameter e.g. 13 = 130mm



Ø	Α	В	Code
n 80mm	82	280	4005408
100mm	102	300	4005410
130mm	132	330	4005413
150mm	152	350	4005415
180mm	182	380	4005418
200mm	202	400	4005420
250mm	252	450	4005425
304mm	302	500	4005430
355mm	352	550	4005435
	_	_	_
Ø	С	D	Е
ø 80mm	280	D 298	348
-		_	_
80mm	280	298	348
80mm 100mm	280	298 298	348 348
80mm 100mm 130mm	280 300 330	298 298 472	348 348 522
80mm 100mm 130mm 150mm	280 300 330 350	298 298 472 472	348 348 522 522
80mm 100mm 130mm 150mm 180mm	280 300 330 350 380	298 298 472 472 472	348 348 522 522 522
80mm 100mm 130mm 150mm 180mm 200mm	280 300 330 350 380 400	298 298 472 472 472 472	348 348 522 522 522 522 522

Flat Flashing



Ø	Α	В	С	Code
80mm	90	180	495	7000000
100mm	110	200	495	7000001
130mm	140	230	495	70000005
150mm	160	250	495	70000006
180mm	190	280	495	70000007
200mm	210	300	495	70000009
250mm	260	350	660	70000011
304mm	310	400	660	70000012
355mm	360	450	660	70000013

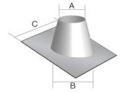
241mm | P

Tapered Top Stub This terminal offers least resistance to the

I his terminal offers least resistance to the evacuation of flue gases and helps to minimise the effects of pluming. Only to be used in accordance with building regulations.

Ø	A(mm)	Code
80mm	70	4115808
100mm	90	4115810
130mm	120	4115813
150mm	140	4115815
180mm	160	4115818
200mm	180	4115820
250mm	200	4115825
304mm	250	4115830
355mm	300	4115835

5° - 30° Angled Flashing



Ø	Α	В	С	Code
80mm	90	180	495	70053000
100mm	110	200	495	70053001
130mm	140	230	495	70053005
150mm	160	250	495	70053006
180mm	190	280	495	70053007
200mm	210	300	660	70053009
250mm	260	350	660	70053011
304mm	310	400	660	70053012
355mm	360	450	820	70053013



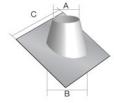
As above with the addition of 10mm welded mesh.

Not suitable for solid fuel applications

Tapered Top Stub and Mesh

A(mm)	B(mm)	Code
70	241	4116008
90	241	4116010
120	241	4116013
140	241	4116015
160	241	4116018
180	241	4116020
200	241	4116025
250	241	4116030
300	241	4116035
	70 90 120 140 160 180 200 250	70 241 90 241 120 241 140 241 160 241 180 241 200 241 250 241

32° - 45° Angled Flashing



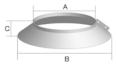
Ø	Α	В	С	Code
80mm	90	251	495	70324500
100mm	110	261	495	70324501
130mm	140	303	660	70324505
150mm	160	332	660	70324506
180mm	190	375	660	70324507
200mm	210	403	660	70324509
250mm	260	475	820	70324511
304mm	310	546	820	70324512
355mm	360	617	820	70324513

Rain Cap

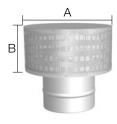
This is a basic terminal that offers a degree of protection against rainwater ingress

Ø	A (mm)	Code
80mm	200	4155208
100mm	200	4155210
130mm	255	4155213
150mm	305	4155215
180mm	365	4155218
200mm	406	4155220
250mm	507	4155225
304mm	614	4155230
355mm	716	4155235

Storm Collar



Ø	Α	В	С	Code
80mm	82	195	70	70123400
100mm	102	201	70	70123401
130mm	132	231	70	70123405
150mm	152	251	70	70123406
180mm	182	281	70	70123407
200mm	202	301	70	70123409
250mm	252	330	70	70123411
304mm	302	351	70	70123412
355mm	352	401	70	70123413



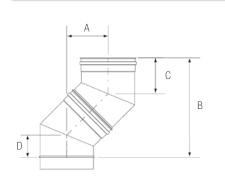
Not suitable for solid fuel applications

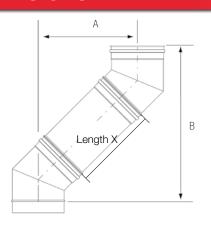
Gas Terminal

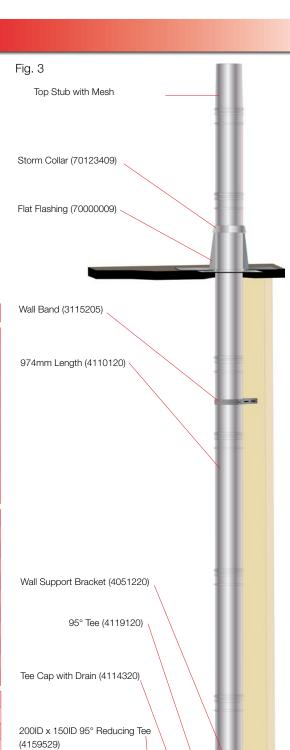
A terminal designed for use where SUPRA Plus serves conventional gas fired equipment. Incorporates a bird screen/mesh. For condensing and positive pressure applications a Tapered Top Stub with Mesh is recommended.

Ø	B(mm)	A(mm)	Code
80mm	90	210	4116108
100mm	90	210	4116110
130mm	115	235	4116113
150mm	115	235	4116115
180mm	220	293	4116118
200mm	220	320	4116120
250mm	198	365	4116125
304mm	234	416	4116130
355mm	288	468	4116135

ELBOW OFFSET DIMENSIONS







Horizontal Duct Drain (4110820)

Tee Cap (4114920)

Connection to drain/gully Adjustable Length (4114415) 474mm Length (4110215)

		Elbow-	-Elbow		Length X									
15°					100mm		224mm		474mm		974mm			
Ø	Α	В	С	D	Α	В	Α	В	Α	В	Α	В		
80mm	66	341	127	48	71	441	103	560	168	802	297	1285		
100mm	66	341	127	48	71	441	103	560	168	802	297	1285		
130mm	69	369	134	55	75	468	107	588	172	829	301	1312		
150mm	71	385	138	59	77	484	109	604	174	845	303	1328		
180mm	74	404	142	65	79	504	112	623	176	865	306	1348		
200mm	77	424	148	69	82	523	114	643	179	884	308	1367		
250mm	82	467	159	80	88	566	120	686	185	928	314	1411		
304mm	80	467	155	84	88	566	120	686	185	928	314	1411		
355mm	88	508	170	90	93	608	125	728	190	969	319	1452		

30°					100	100mm		224mm		474mm		974mm	
Ø	Α	В	С	D	Α	В	А	В	Α	В	Α	В	
80mm	127	316	127	48	138	413	200	521	325	737	575	1170	
100mm	127	316	127	48	138	413	200	521	325	737	575	1170	
130mm	134	342	134	55	145	439	207	547	332	763	582	1196	
150mm	138	357	138	59	149	454	211	562	336	778	586	1211	
180mm	142	376	142	65	154	473	216	580	341	797	591	1230	
200mm	148	394	148	69	159	492	221	599	346	815	596	1248	
250mm	159	435	159	80	170	533	232	640	357	856	607	1289	
304mm	155	436	155	84	170	533	232	640	357	856	607	1289	
355mm	170	474	170	90	180	572	242	679	367	896	617	1329	

40°			100mm		224mm		474mm		974mm			
Ø	Α	В	С	D	Α	В	Α	В	Α	В	Α	В
80mm	163	291	127	48	177	386	256	481	417	672	739	1055
100mm	163	291	127	48	177	386	256	481	417	672	739	1055
130mm	172	315	134	55	186	410	265	505	426	697	748	1080
150mm	177	329	138	59	191	425	271	520	431	711	753	1094
180mm	183	348	142	65	197	442	277	537	438	729	759	1112
200mm	190	365	148	69	204	460	283	555	444	746	766	1129
250mm	204	404	159	80	218	499	298	594	458	785	780	1168
304mm	199	405	155	84	218	499	298	594	458	785	780	1168
355mm	219	440	170	90	231	536	311	631	472	822	793	1205

45°					100mm		224mm		474mm		974mm	
Ø	А	В	С	D	Α	В	Α	В	Α	В	Α	В
80mm	180	276	127	48	194	369	282	457	459	634	812	987
100mm	180	276	127	48	194	369	282	457	459	634	812	987
130mm	190	300	134	55	204	393	292	481	469	658	822	1011
150mm	195	313	138	59	210	407	298	495	474	671	828	1025
180mm	201	331	142	65	217	424	305	512	482	689	835	1042
200mm	209	347	148	69	224	441	312	529	489	706	842	1059
250mm	225	385	159	80	240	479	327	566	504	743	858	1097
304mm	219	387	155	84	240	479	327	566	504	743	858	1097
355mm	240	420	170	90	255	515	342	602	519	779	873	1133

SPECIAL COMPONENTS

Although we manufacture an extensive range of components, SFL understands that there are times when a standard component will simply not work for the intended installation. Being a UK manufacturer, we are ideally placed to manufacture bespoke components in a timely and competitive manner. Please photocopy and complete the required dimensions for the required special component and fax, or email your requirements to SFL Customer Services who will be happy to offer a quotation and lead time.

Appliance Adaptors Standard & Reducing Tees Standard catalogue Flue Size mm dimensions apply unless specified Specify Angle Minimum 40mm Standard catalogue dimensions apply unless specified Specify if longer mm O.D. mm Flue Size Elbows Standard catalogue Specify Angle dimensions apply unless specified Min 5° Max 90° Flue Size For Standard 90° & 95° Reducing Tees please refer to pages 6 & 7 Flue Size mm **Customer Name Customer Address** Telephone Number **Email Address**

Specials for SUPRA Plus

Comments

Fax to 01271 334303

Mandatory Requirements

In all instances the requirements of the Building Regulations must be complied with and the appropriate references are: Document J of the DOE Building Regulations, Section F of the Building Standards (Scotland), Section L of the Building Regulations (Northern Ireland). Reference should also be made to the relevant British and European Standards governing the installation of flue and chimney products for the associated fuel and appliance types as detailed:

Solid Fuel and Oil Fired Applications: BS EN15287-1:2007 + A1:2010 Domestic Gas Installations: BS5440: Part 1: 2008

Note: In the UK, connection to an appliance which is not connected to the fuel supply, may be carried out by a competent person. However, connection to an appliance that is connected to the fuel supply must be carried out by an approved and registered Heating Engineer, e.g. Gas Safe, HETAS (Solid Fuel) or OFTEC (Oil).

General

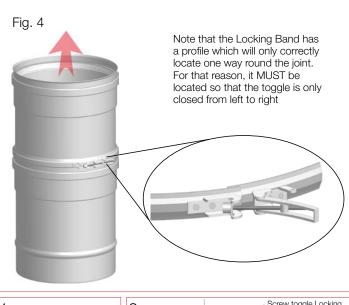
SUPRA Plus must be applied such that the system complies with local / national Building Regulations and applicable standards. Where used on condensing appliances, the range of components will permit deliberate drainage of condensate, either back to the condensate removal components within the SUPRA Plus System range, or through the heating appliance. No part of the flue system should be constructed to form an angle greater than 45° from the vertical. Although components are included that will permit horizontal applications, they should only be used for connection to the appliance. Where the system is being used for a condensing application, it is required that sloping connections run at an angle of 5° from the horizontal, using the Tees, Elbows and fittings designed for that purpose.

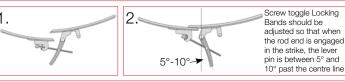
If the system is to be used within an existing chimney or purpose designed shaft, the range of support components will allow such configurations and can also be used to provide an independent and fully supported system both inside and outside a building.

Where SUPRA Plus is installed in exposed applications or where the external run is greater than 3.0 metres, SFL would recommend that NOVA® product is used. NOVA® is a twin wall insulated stainless steel system offering a high degree of protection against freezing. Adaptors are available to allow conversion between the two products (See Page 5).

Jointing

The SUPRA Plus system is jointed by pushing the male end into the female end of the preceding component, and then applying a Locking Band. The Locking Band must be installed so that the toggle is only closed from left to right. See Fig. 4.



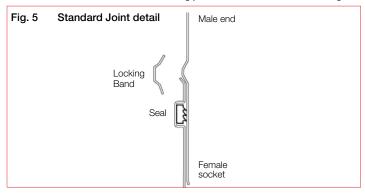


The closed toggle can be tightened if necessary with a 3mm hex key

SUPRA Plus is supplied complete with factory bonded elastomer seals.

Note that the lips of the seal must be positioned as shown in Fig. 5. As the seal is designed to provide a secure grip to the male end of the component, SFL Seal Lubricant should be used to facilitate ease of installation and to prevent potential damage of the Seal during installation.

Ensure that both ends of the connecting joint are clean and free of dirt / grit.



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.

Where pressure and moisture resistance are required a special Locking Band & Seal is required to make the joint. These are supplied as standard with the Adjustable Length.

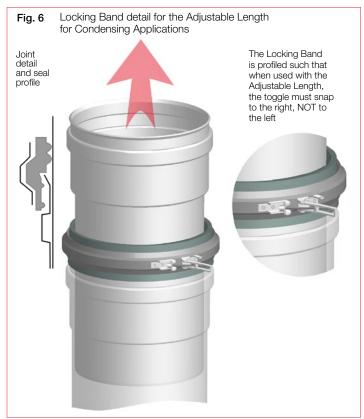


Fig. 6 illustrates the joint detail. Locate the Seal over the socketed female end of the length or component female end **before** inserting the male end and then pull the seal up so that the angled notch on its inside locates over the turned end of the female socket as shown. To facilitate easier assembly, 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.

IMPORTANT - Adjustable Lengths

Adjustable Lengths are not load bearing and must be supported from above. Always ensure that either a Support Plate or Wall Support Bracket is used directly above the Adjustable Length to support the chimney products above.

Support

SUPRA Plus must only be supported with the components in the system range. The maximum length of product run that can be supported by any component is 30 metres. Where lowered into an existing chimney or shaft, under no circumstances should the product be suspended from the top; always use a Support Length at the base of the chimney to attach lowering equipment. The Wall Band and Bracing Bracket provide lateral stability only, and should be used at centres not exceeding 2.5 metres. The Location Band, used to centralise SUPRA Plus where lowered into a chimney or shaft, should be used at intervals not exceeding 3 metres and secured immediately underneath a joint. Where used as a liner, either a Support Plate or Wall Support Bracket must be used at the base to take the vertical load of the stack. Where the SUPRA Plus product is free standing above the roof and its height exceeds 1.5 metres beyond the last support or the roof, a Bracing Bracket must be used and tied back to the structure..

Data Plate

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. Acceptable fixing positions would be next to the electricity consumer unit, water supply stop cock or gas meter within the building or by the chimney / hearth. The Data Plate detailed is provided by SFL, however many different data plates exist in the market and each design can be different and tailored to the supplying company.

Some Data Plates contain more or less information than detailed below in Fig. 7, however it is a requirement that all data plates have to provide the essential information deemed necessary under the regulatory requirement, as follows:-

Property address.

Where the chimney / hearth is installed.

What fuels the chimney is suitable for (firing capacity).

Is the chimney suitable for condensing appliances / applications.

Chimney internal diameter.

Installers name and address.

Date of installation.

Distance to combustible material.

Product designation of the chimney to EN 1443, if relevant.

Fig. 7



Provision for sweeping and cleaning

Adequate provision should be made for inspecting and cleaning the chimney system. This is particularly important for solid fuel applications. SFL would recommend that chimneys serving solid fuel appliances are swept as frequently as necessary but at least twice a year and possibly three times a year if the appliance is subject to long periods of slumbering. Access component are made available within the range and should be installed to suit the installation, unless sweeping can be undertaken through the appliance.

It is important that a visual inspection of the chimney is undertaken at the same time to ensure all joints are sound and there is no evidence of a chimney fire having occurred.

Terminal Types

The SUPRA Plus range offers a number of different terminal types to suit various applications. Where used on condensing appliances, the 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, providing there is a drainage point at the base of the chimney. As an alternative the Rain Cap could also be used to help reduce rain ingress into the chimney system. For gas fired appliances we would suggest that the Gas Terminal is used.

Testing

This is achieved by means of a flue flow test as detailed in BS5440: Part 1: 2009. This can be summarised as follows:

After completing a visual and physical check of the system and joints, and ensuring adequate air supply for combustion has been provided in accordance with the appliance requirements, close all doors and windows in the room in which the appliance is installed.

Carry out a flow visualization check using a smoke pellet that generates at least 5m³ of smoke in 30s by placing the smoke pellet in the intended location of the appliance. Ensure that there is discharge of smoke from the correct terminal only and no leakage into the room. When the chimney is tested, there should be:

- No significant escape of smoke from the appliance position.
- No seepage of smoke over the length of the chimney.
- A discharge of smoke from only the correct terminal.

If these conditions are not met, then the test has failed and all faults must be rectified and the system re-tested and passed before connection of the appliance to the fuel supply is undertaken. For further information please refer to the relevant standards and publications.

Note: A smoke test is subjective and by the nature of the product standards a chimney is allowed a degree of leakage as defined in BS EN 1856-1. For this reasons some wisps of smoke may be seen over the length of the chimney and this should not necessarily constitute a failure. It is therefore a matter of expert judgement as to the level of leakage that constitutes a failure in these circumstances. A product with a performance designation under EN 1856-1 with a leakage classification of N1 is allowed a maximum leakage rate of up to 2.0 l/s/m² at a positive pressure of 40Pa.

For further information and guidance please refer to Appendix E of the Building Regulations Part J.

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.

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.

Warranty

SUPRA Plus benefits from a 10-year limited manufacturing defect warranty which should be registered with SFL as soon as the product has been installed. Components such as seals, terminals, tee caps and drains are considered sacrificial and are subject to a 12 month manufacturing defect warranty. Please refer to the SFL warranty document for further details.















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