A1 FLUE SYSTEMS

Product catalogue

Twin Wall TF

Twinwall TF

Twinwall is an insulated Stainless Steel chimney system designed for the conveyance of all associated waste products of combustion from solid and multi-fuel appliances that operate under natural draught and non-condensing conditions.

Twinwall is capable of withstanding continuous flue gas temperatures of up to 450°C (550°C intermittent) and has been designated as (N1) and (P1) for pressure resistance in accordance with BS EN 1856-1,2009.

The Twinwall systems are designed for use where;

- A four hour fire rating is specified
- A negative pressure, high temperature exhaust/duct system is specified

Application Examples;

- Steam Generator Exhausts
- Pressure Jet Burner
- Multi-Fuel Stoves
- Oil and Gas Fired Boilers
- Fan Assisted Flue System
- Kitchen Extract
- Smoke Extract

Quality Assurance;

The complete range of components are manufactured, tested, and where required, installed within scope of stringent quality controlled conditions in accordance with EN ISO 9001:2015 and BS EN 1856-1:2015. When requested, A1 Flue Systems shall submit copies of type test reports relating to product performance in addition to the “Certificate of Registration” administered by the British Standards Institute.

Fire Rating;

The Twinwall system has been successfully assessed by the Loss Prevention Council for Fire Resistance. A fire rating of 4 hours can be achieved in accordance with stability and integrity criteria of BS 476: part 20. If required, A1 Flue Systems shall submit all test reports in support.

Description;

Twinwall sectional lengths/fittings are double-walled with fully welded vertical seam joints. Twinwall also utilises options of four insulated/non-insulated annular variation options which are integrated into the external case to help provide a minimum required outer case temperature. The jointing of inner liner and external case is that one side shall remain free to expand and retract according to the operating conditions and flue gas temperature.

Joint Assembly;

Joint construction is achieved with the aid of male and female coupling profiles formed at either end of all components. Job specific sealant, available at A1 Flue Systems, is first applied to the male annulus retaining ring. Once achieved simply place the male connection spigot of the adjoining component into the female socket. Parts are secured in place using a profiled external Clamp Band which locates within the grooves formed in all outer cases.

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Clearance;

A standard 25mm annulus configuration insulated with a mineral V4 Grade Vermiculite compacted to a density of 90Kg/m³

Cleaning;

Conventional flue systems, once installed, require minimal maintenance. However, periodic cleaning of the flue connected to either a Solid or multi-fuel appliance should be done dependent on frequency of use. A regime of cleaning should be kept to ensure the chimney is clear of ash and debris build-up for continuous efficiency.

Caution;

Product handling, transporting and assembling should be undertaken with extreme care as all components consist of sharp coupler connections. Wearing protective gloves and other associated safety equipment is highly recommended to avoid injury on any exposed edges.

Storage;

Flue components stored on site must be in a vertical orientation on a flat surface which will not damage the male connection spigot or coupler jointing detail. To ensure the annulus insulation density is not compromised, all components must also be stored in a dry environment located away from any ongoing construction, emergency exits and high active public areas.

Material Specification;

150Ø - 600Ø Liner Sections and Fittings shall be manufactured using the following materials. Diameters above are manufactured using 0.7mm Grade.

0.6mm Grade

304	316
(1.4301 X5CrNi 18 - 10)	(1.4404 X2CrNiMo 17 - 12 - 2)

150Ø - 350Ø Elbow components shall be manufactured using the following materials. Diameters above are manufactured using 0.7mm Grade.

0.6mm Grade

304	316
(1.4301 X5CrNi 18 - 10)	(1.4404 X2CrNiMo 17 - 12 - 2)

Outer case associated parts are to be manufactured using (1.4301 X5CrNi 18 - 10) 304 Grade Stainless Steel

Performance Designations;

The relevant technical performance classifications and designations for Twinwall System chimney are ;

Standard	Product Designation					
BSEN 1856-1	T450	N1	D	Vml	20060	G(50)
				V2	50060	
				Vml	20070	
				V2	50070	
	T160	P1	W	Vml	20060	0(50)
				V2	50060	
				Vml	20070	
				V2	50070	
	Temperature Class	Pressure Class	Condense Resistance	Corrosion Class	Material Specification Liner Grade & Thickness	Soot Fire Resistance

The CE Designation Scheme

The compliance of a chimney system product to the relevant technical performance characteristics according to the designation scheme is described by the following example.

Product Description	Product Designation						
System Chimney Product	EN 1856-1	T450	H1	D	V1	L20091	G(50)
Metal Flue Lines	EN 1856-2	T160	P1	W	V1	L20056	0(50)
Connecting Flue Pipe	EN 1856-2	T200	P1	W	V2	L50056	G(50)
	Standard Number	Temperature Level °C	Pressure Level; N,P,H	Condensate Resistance	Corrosion Resistance	Flue Liner Specification	Soot Fire Resistance

Product Description- Standard Number:

EN 1856-1: The standard for System chimney products - requirements for metal chimneys. Comprising of a series of essential harmonised European Standards and elements for both single and multi-wall chimney products with rigid metallic liners. EN 1856-2: Requirements for metal chimneys- part 2: Metal flue liners and connecting flue pipes.

Relates to the essential harmonised European Standards and elements of all products used to convey the products of combustion from appliances to the outside atmosphere.

Temperature level:

Maximum continuous operating temperature (100-700°C). Example:

T160 (°C): suitable for Gas.

T200 (°C): suitable for Gas and Oil.

T450 (°C): suitable for Solid Fuel (multi-fuel).

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Pressure Level:

N: Negative pressure - natural draft. (Fireplaces-stoves, atmospheric boilers - type B gas appliances).

P: Positive pressure - forced draft.

(Fan flued boilers, type C gas appliances).

H: High pressure - industrial installations.

(Diesel generators)

Pressure Type	Test Pressure (Pa)	Leakage Rate / Flue Surface Area (1/sec.m²)
N1	40	<2.0
P1	200	<0.006
P2	200	<0.120
H1	200 and 500	<0.006
H2	200 and 500	<0.120
	Standard Number	

Condensate resistance:

W: Designates ability to contain condensate within the flue. (e.g. High efficiency condensing boilers).

D: Designates ability to operate under dry conditions only, usually meaning a flue gas temperature high enough to avoid condensate formation.

Corrosion resistance:

Durability of the flue liner against corrosion. This is fuel dependent having the following classes based on three available types of testing.

V1: Tested and approved as resistant to attack from gas combustion products.

V2: Tested and approved as resistant to attack from light oil and natural wood combustion products (sulphur content < 0.2%).

V3: Tested and approved as resistant to attack from heavy oil, solid fuels and peat combustion products (sulphur content > 0.2%). Vm: Not tested but rating declared by the manufacturer.

Flue Liner material specification:

The material specification of the flue liner is formed by the letter (L) followed by five digits. The first two digits represent the material type according to Table 4 within BS-EN 1856-1. The last three digits represent the material thickness in multiples of the unit 0.01 mm.

Example: L40045 represents a liner made of 1.4401 (316) Stainless Steel with a thickness of 0.45 mm.

Soot fire resistance:

G: Yes, the product has been tested at 1000°C for 30 minutes and has remained intact while the temperature of combustible material at the designated distance does not exceed 100°C at an ambient temperature 20°C.

O: No, All products with classification O mean the product is not rated as soot fire resistant. This is usually the case with low temperature applications such as condensing gas boilers, where seals are used, which would not withstand a soot fire.

Distance to combustible material:

Defined in soot fire resistance above. Distance between the outside surfaces of the chimney and adjacent combustible material, expressed in (mm).Example:

O30 = not soot fire resistant with minimum installation distance of 30mm from adjacent combustible material.

Product Technical Information According to BS EN 1856-1 Par. 7 and Annex ZA.1

Essential Characteristics: Requirements according to BS EN 1856-1	Levels and/or classes: Informative data	Document	Additional Information
Internal diameters Par. 4 .b	Available in diameters of 100mm-1200mm	Manufacturer's declared	Product catalogue Factory Production Control (Continuous Surveillance)
Liner Material Par. 4 .a and Par. 6.7.2	304 (1.4301 X5CrNi 18-10) 0.6mm + 0.7mm 316 (1.4404 X2CrNiMo 17-12-2)0.6mm + 0.7mm	Manufacturer's declared	Product catalogue Factory Production Control (Continuous Surveillance)
Wind Load Resistance Par. 7.2 .d and Par. 6.2.3.2	Limitations of height location of exposed section of the chimney shall be 2.5 meters Maximum distance between lateral supports shall be 3.0 meters. Complied with the applied load of 312Kg on 200 Ø sections and fittings.	Manufacturer's declared Test report 19404/1/2/5 Test report 56495/1	Annex A + Typical Installation
Compressive strength Par.7.2.e and Par.6.2.1			
Chimney sections and fittings Par.6.2.1.1 Chimney support Par.6.2.1.2	Chimney sections, fittings and Supports shall withstand an intensity of load of at least 3 x the declared design load, as per EN 1859 (Designated by the distance between supports)	Test report 19404/1/2/5 + test report AL3484 Test report 56495/1	Annex A + Typical Installation
Tensile strength Par.6.2.2	Chimney shall withstand a load of at least 1.5 x manufacturer's declared, as per EH 1859	Test report 19404/1/2/5 Test report 56495/1	
Lateral strength Par.6.2.3	Non-vertical installation. Maximum distance unsupported at 45° of 1.5 meters Vertical installation. Maximum spacing of lateral supports of 3.0 meters	Manufacturer's declared	Annex A + Typical Installation
Distance to combustibles, temperature related Par.7.2.f and Par.6.6.1	T450: 50mm	Test report 19404/5 Test report 56495/1	
Flow resistance Par.7.2.g and Par.6.6.7	Mean value of roughness as per EN 13384-1:2002 Table B.4. 0.001mm	Manufacturer's declared Test report 19404/1/5	
Thermal resistance Par.7.2.h and Par.6.6.3			
Thermal performance Par.6.61	Performance tests for designations	Test report 19404/1 Test report 56495/1	Appendix A tests 4, 5, 6, 9, 10, and 11
Accidental human contact Par.6.6.2	Provide protective shield and/or place warning signs in access areas	Test report 19404/1 Test report 56495/1	Appendix A tests 1, 2, 3, and 8
Gas tightness Par.6.5 and Table 1	The leakage rate for gas tightness 0.00597 l/s/m². Designation (N1)	Test report 19404/5 Test report 56495/1	
Sootfire resistance Par.6.4	G(50):Yes Applies O(50):No	Test report 19404/5 Test report 56495/1	
Water vapour diffusion resistance Par.6.6.4	D(Dry) T450 +T600 W(Wet)T200	Test report 19404/1/2/5 Test report 56495/1	
Durability against corrosion Par.6.7	Stainless steel 304 (1.4301) or 316 (1.4404) 0.6mm and 0.7mm grades	Manufacturer's declared	Product catalogue

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The tables below provide the weight of essential Twinwall components and the maximum Design Load (Kg)/number of metre lengths that can be applied to standard support assemblies.

Weight per metre (Kg):

Diameter	150	200	250	300	350	400	450	500	550
	6.9	8.86	10.82	12.79	14.75	16.72	18.68	20.64	24.23
Diameter	600	650	700	750	800	850	900	950	1000
	28.02	30.26	32.5	34.74	36.98	39.22	41.46	43.7	45.94
Diameter	1050	1100	1150	1200					
	48.18	50.42	52.66	54.9					

Base Support Plates (Kg):

Diameter	150	200	250	300	350	400	450	500	550
	1.56	2.12	2.94	3.36	3.94	4.38	5.22	5.94	6.88
Diameter	600	650	700	750	800	850	900	950	1000
	7.72	8.52	9.34	9.55	10.46	11.32	12.16	13.04	13.94
Diameter	1050	1100	1150	1200					

B-Types (Kg):

Diameter	150	200	250	300	350	400	450	500	550
	0.5	0.6	0.71	0.87	0.97	1.1	1.2	1.32	4.76
Diameter	600	650	700	750	800	850	900	950	1000
	2	2.44	2.86	3.01	3.08	3.3	3.48	3.72	3.9
Diameter	1050	1100	1150	1200					

Annex A

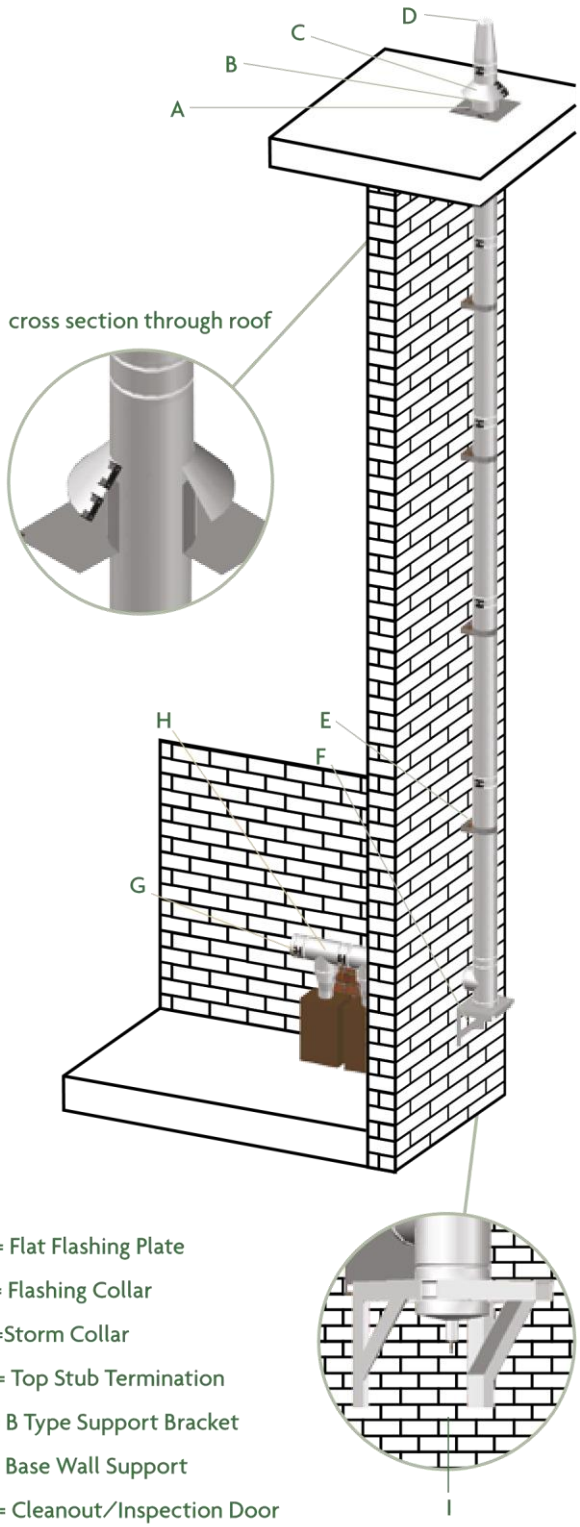
Base Support Design Load (Kg) & Lengths excepted (m):

Design loads stated have been calculated in accordance with BS EN 1856-1 and BS EN 1859, therefore any information obtained shall only be used as a guide. Adequate fixing to a suitable structure must also be achieved on installation to obtain maximum load acceptance.

Diameter	150	200	250	300	350	400	450	500	550
Load	62.1	79.74	97.38	115.11	132.75	150.48	168.12	185.76	218.07
Lengths	9	9	9	9	9	9	9	9	9
Diameter	600	650	700	750	800	850	900	950	1000
Load	252.18	272.34	292.5	312.66	332.82	352.98	373.14	393.3	413.46
Lengths	9	9	9	9	9	9	9	9	9
Diameter	1050	1100	1150	1200					
Load	433.62	453.78	473.94	494.1					
Lengths	9	9	9	9					

Twinwall TF

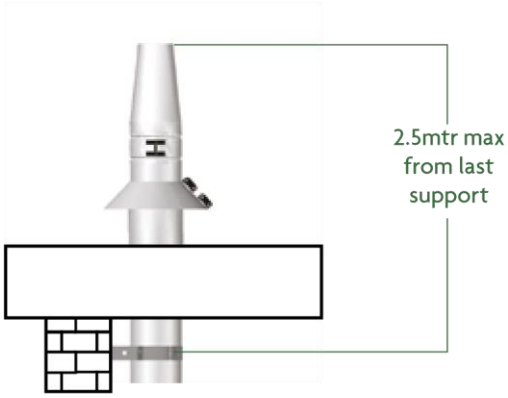
Typical Installation:



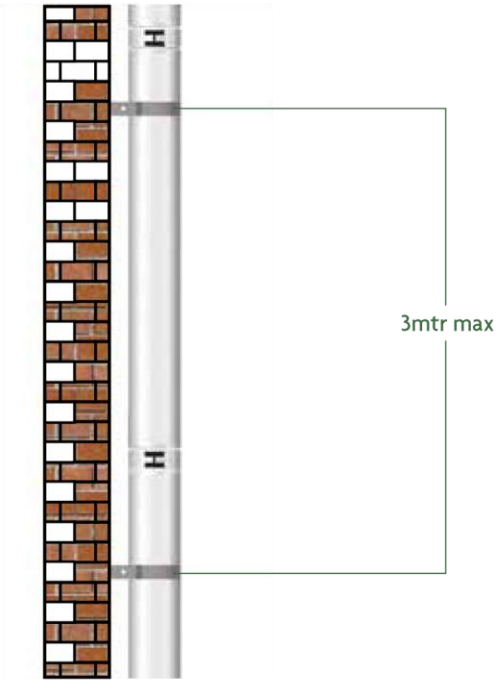
A= Flat Flashing Plate
B= Flashing Collar
C=Storm Collar
D= Top Stub Termination
E= B Type Support Bracket
F= Base Wall Support
G= Cleanout/Inspection Door
H= Standard 90° Tee

I= Cleanout Door with drain point

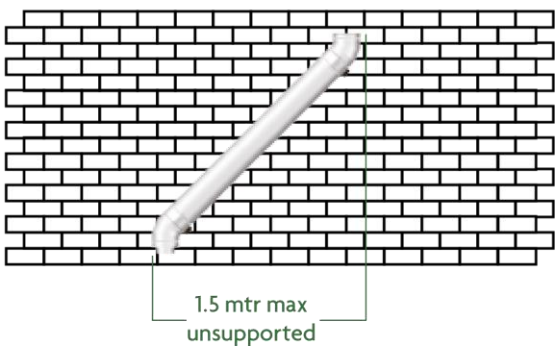
Termination assembly



Support assembly



Offset assembly



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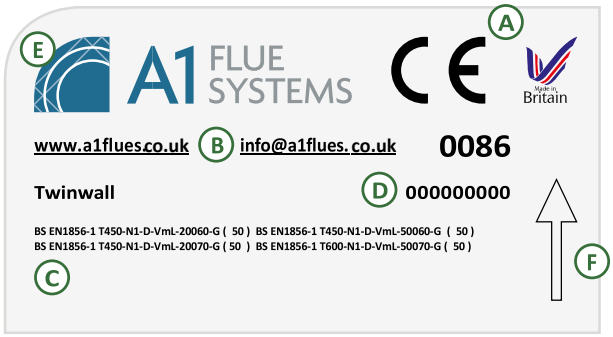
Product Marking: According to BS EN 1856-1: 2009 Chimney Identification Plate Example:

In accordance to BS EN 1856-1: 2009, chimney identification plates retaining information related to product specifications and designations are to be permanently secured to a chimney system and/or in close proximity to it, in an un-obstructive but visible location. Suitable fixing positions would be either to/or near any Clean-Out Doors, Draught Stabilisers, Manual Dampers or boiler connection components.

It is also extremely important that this plate is not removed or defaced at any point.

Non-Working Label Example Below :-



A = CE Conformity Mark & Identification Number

B = Manufacturer's Contact Details

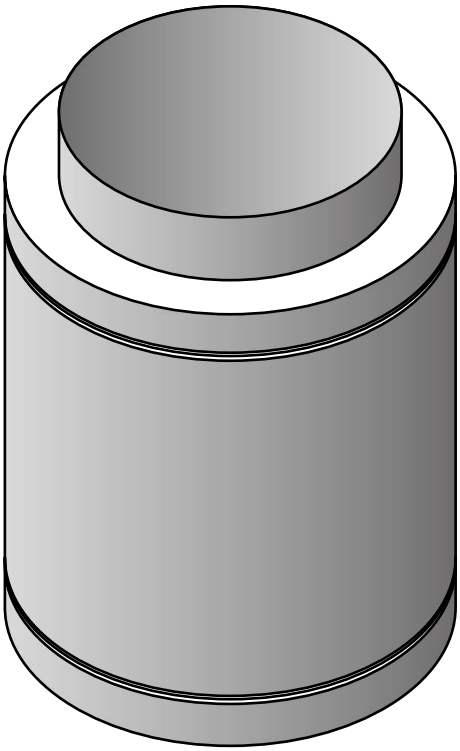
C = Product Designators

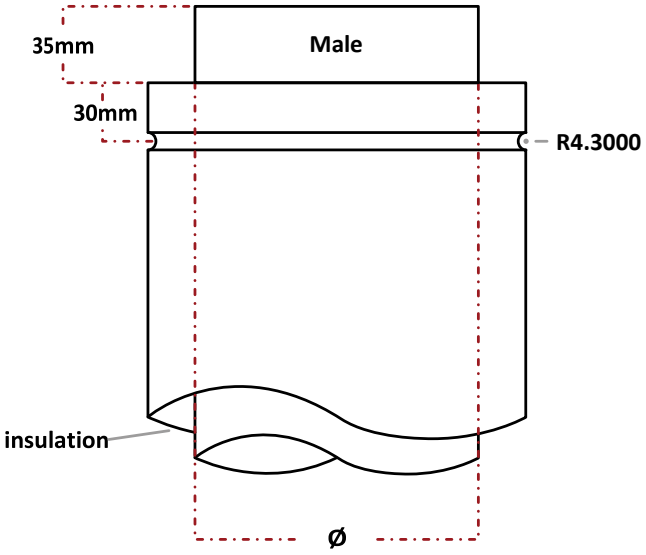
D = Factory Production Control Certificate Number

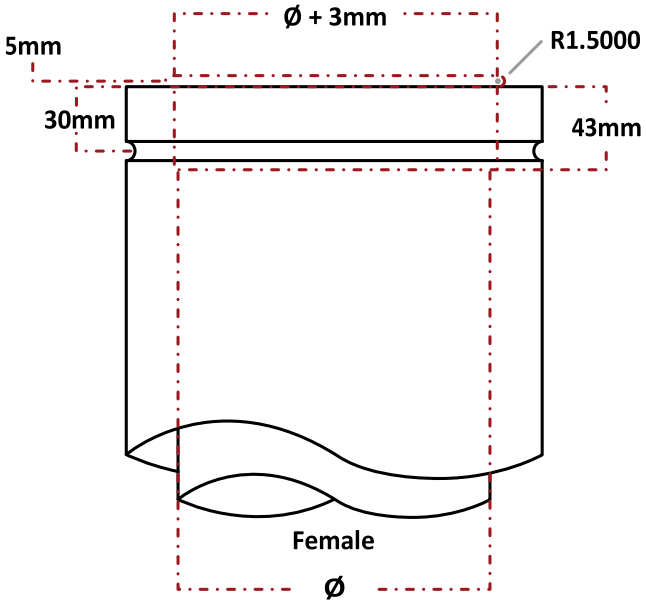
E = Manufacturer's Name & Trademark

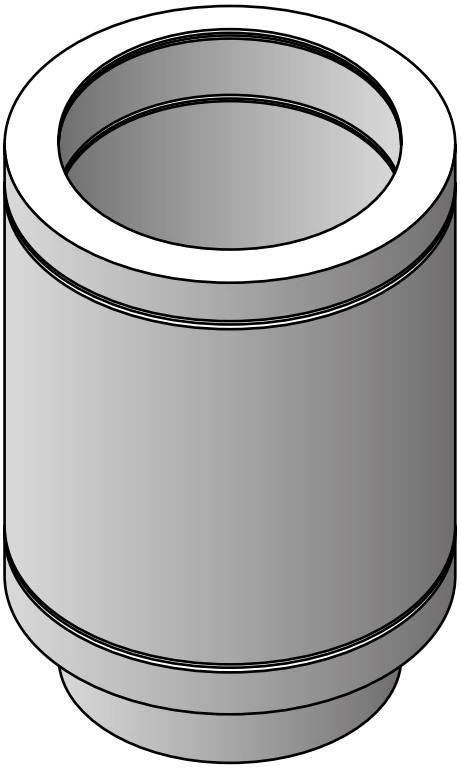
F = Gas Flow Direction

Construction of Twinwall Flue









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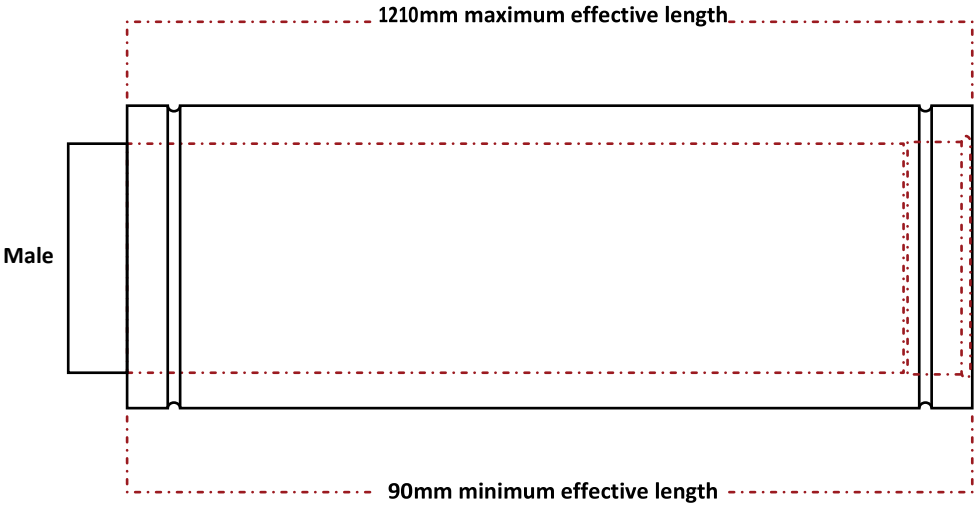
Straight Lengths.

Straight Lengths are available as standard in 150mm, 300mm, 420mm, 570mm, 760mm, 875mm and 1210mm lengths, with exception to 100m diameter pipe which has a maximum effective length of 875mm.

We also manufacture any fixed length between the Standard Lengths to your specification.



Prior to Installation

Before the installation of the Twinwall flue you must be aware, in a vertical application it is essential that the components are installed with the male spigot down against the flow of gases. This will allow condensates, if any, to remain within the flue.

The Twinwall system also uses two types of sealant. For low temperature systems, 150 degrees and below, a high durability/low temp silicone sealant is used and for systems with temperatures in excess of 150-350 degrees, high temperature sealant is used. The correct sealant must be used to ensure the durability and strength of the joints. Sealant is chosen according to the flue type and gas temperature.

Sealants for all applications are available and are supplied with the product. Where Twinwall is used externally, sealant must be applied under the external joint bands, (in the grooves of the outer case) to prevent the ingress of water.

Installation

Ensure all components that require sealant are clean from any dirt, grease and other contaminants.

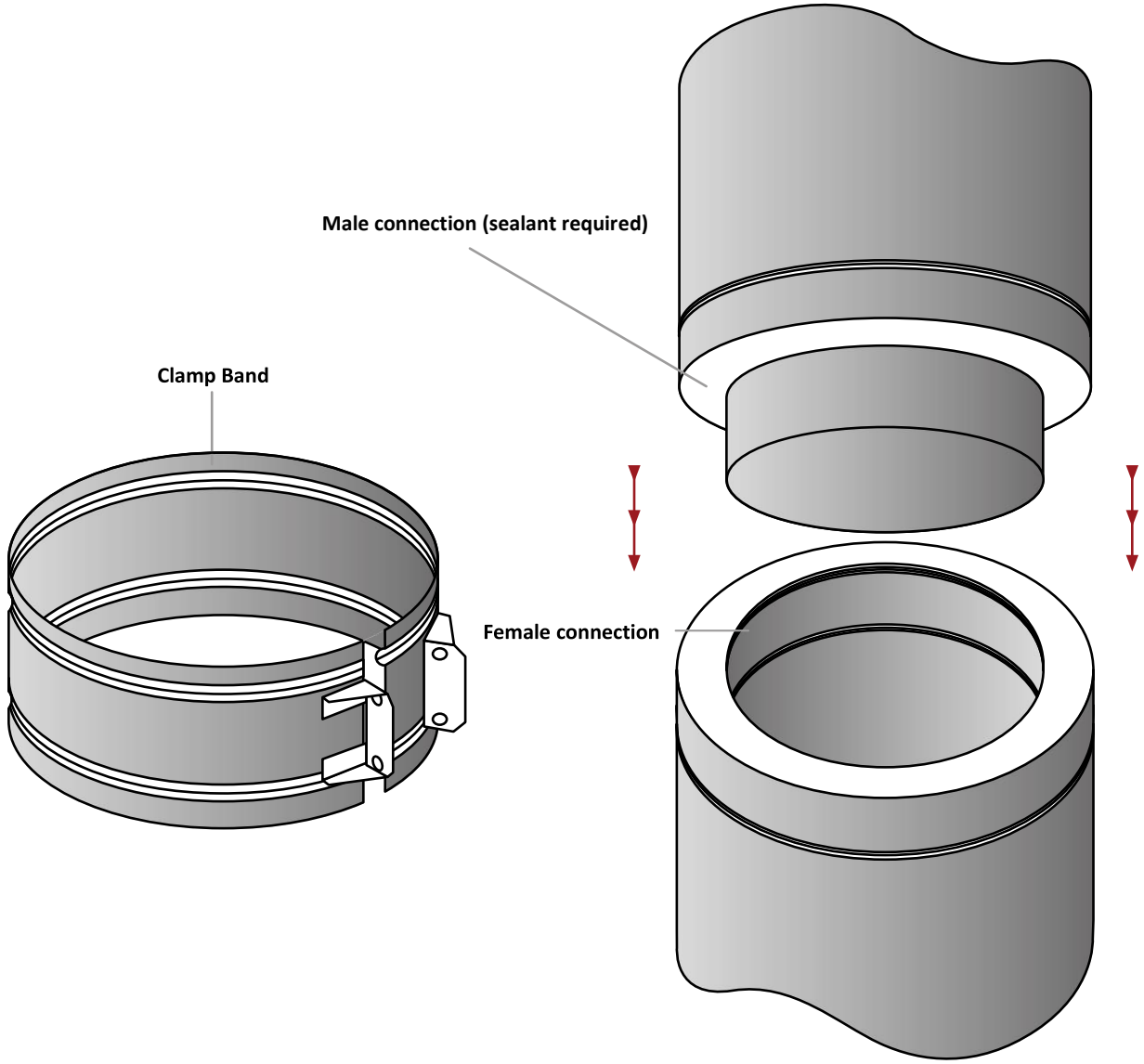
Once the decontamination has been achieved, apply an adequate amount of sealant around the male locating spigot. (Refer to illustration)

Using the locating spigot of the male as a guide, simply push/ slot the two parts of Twinwall together. (male spigot runs down).

CAUTION: It is extremely important for nothing to pierce either the internal liner or outer at any time of installation.

The final process of assembly is fitting the Clamp Band. This has been designed to connect both outer flue parts together using a groove either end for location and is secured into position using the Stainless Steel nuts and bolts provided.

NOTE: If Twinwall is exposed to external elements i.e., (rain or snow) it is essential that a bead of sealant is also applied into the grooves underneath the Clamp Band to prevent the ingress of moisture.



NOTE: Do not pull or bend the Clamp Band in any way when installing , as this will alter the shape of it's profile. Simply slide the Clamp Band along the two adjoining lengths. Once the band is situated in the correct position tightly fasten the joint using the nuts and bolts provided.

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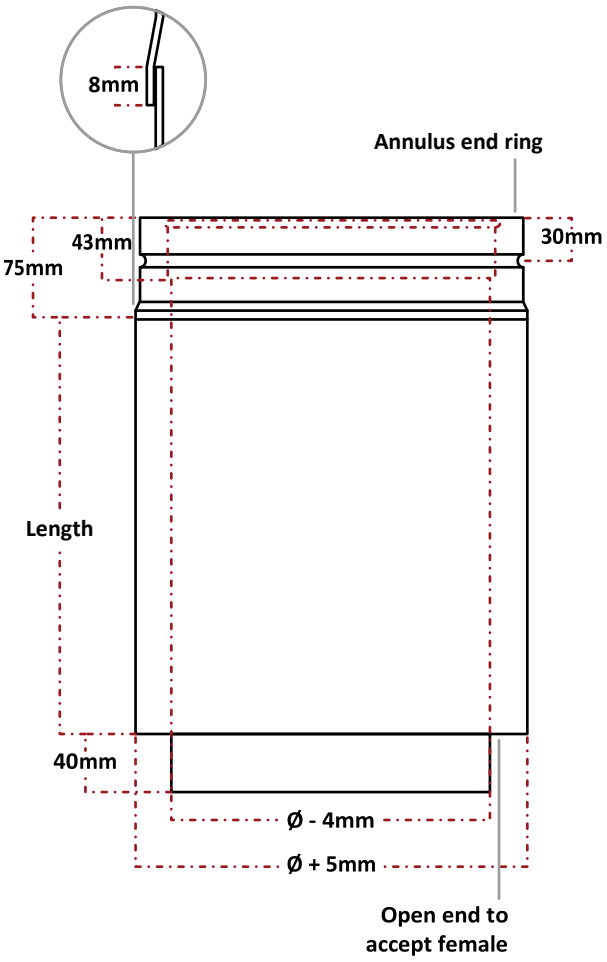
Twinwall Adjustable Lengths.

Twinwall Adjustable Lengths have been successfully designed to allow for greater flexibility when measuring or installing a chimney system.

The effectiveness of this component is established with both internal liner and outer case being manufactured in irregular diameters. This enables the Adjustable Length to become telescopic, enabling you to achieve the desired length.

Once the Adjustable Length is in position and the length required has been achieved, it is then secured by means of a Clamp Band.

Adjustable Lengths are available with either a 25mm, 50mm, 75mm or 100mm annulus (as standard) and in lengths comprising of 150mm, 300mm and 450mm. Specifications above can also be accommodated.



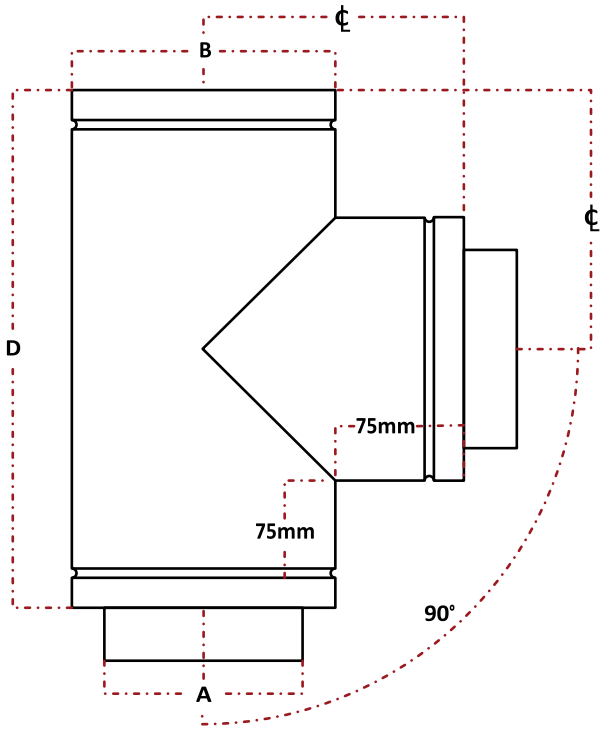
CAUTION: Adjustable Lengths DO NOT LOAD BEAR and should never be placed in a vertical rise unless sufficient support is in place.

Twinwall Tees

90 Degree Tees

The 90° Tee is designed specifically to provide a change in chimney flue direction and to accommodate accessibility points for inspections/cleaning or moisture release drain points. This component is frequently used at the base of a vertically rising flue system and can also be assembled in multiples to create complete header configurations.

All dimensions given below are standard. However, manufacturing and supplying a non-standard Tee with or without a reduced branch diameter, and at values greater than those given, is available on request.



Twinwall 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
C	150	163	175	188	200	213	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600
D	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200

Twinwall 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
C	175	188	200	213	225	238	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	
D	350	375	400	425	450	475	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	

Twinwall 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050		
C	200	213	225	238	250	263	275	300	325	350	375	400	425	450	475	500	525	550	575	600		
D	400	425	450	475	500	525	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200		

Twinwall 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050			
C	225	238	250	263	275	288	300	325	350	375	400	425	450	475	500	525	550	600	600			
D	450	475	500	525	550	575	600	650	700	750	800	850	900	950	1000	1050	1100	1200	1200			

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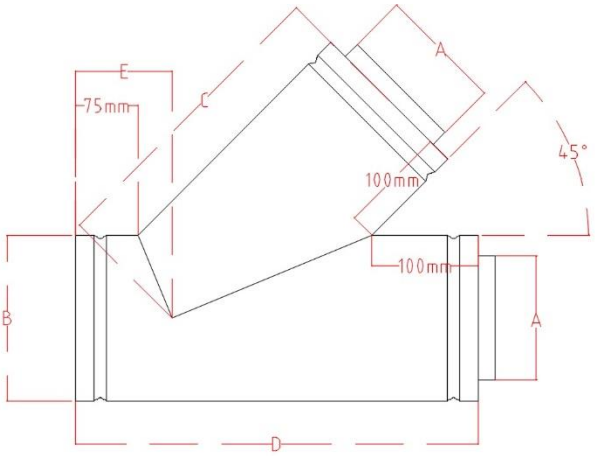
45 Degree Tees

The 45° Tee is also designed to provide a change in chimney flue direction but with the added advantage of a swept entry or exit to reduce resistance to the flow of flue gases.

All dimensions given below are the standard minimum. However, the possibility of manufacturing a nonstandard Tee with or without a reduced branch diameter and at any angle can also be accommodated.



To calculate Tee Body length;
Ø / cos angle + 175 + (insulation + cos angle).

Twinwall 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750
C	281	311	341	372	402	432	462	522	583	643	704	764	824	885	945	1005
D	387	423	458	494	529	564	599	670	741	812	882	953	1094	1094	1165	1236
E	106	111	116	122	127	132	137	147	158	168	179	189	210	210	220	230

Twinwall 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	
C	341	372	402	432	462	492	522	583	643	704	764	824	885	945	1005	
D	458	494	529	564	599	635	670	741	812	882	953	1023	1094	1165	1236	
E	116	122	127	132	137	142	147	158	168	179	189	199	210	220	230	

Twinwall 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750		
C	402	432	462	492	522	553	583	643	704	764	824	885	945	1005		
D	529	564	599	635	670	705	741	812	882	953	1023	1094	1165	1236		
E	127	132	137	142	147	153	156	168	179	189	199	210	220	230		

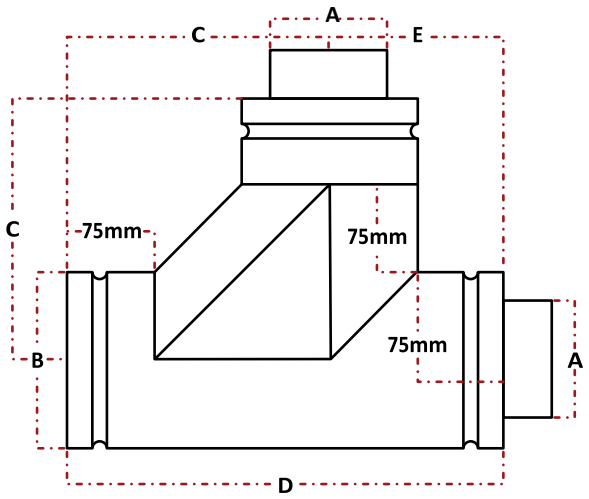
Twinwall 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700
B	300	325	350	375	400	425	450	500	550	600	650	700	750			
C	462	492	522	553	583	613	643	704	764	824	885	945	1005			
D	599	635	670	705	741	776	812	882	953	1023	1094	1165	1236			
E	137	142	147	153	158	163	168	179	189	199	210	220	230			

90 Degree Booted Tees

The 90° Booted Tee is designed to provide a change in chimney flue direction but with the added advantage of a swept entry or exit to reduce resistance to the flow of flue gases.

This equal Tee can be manufactured to dimensions above those given, with or without a reduced branch diameter and at certain angles.



Twinwall 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950
C	225	238	250	263	275	288	300	325	350	375	400	425	450	475	500	525	550	575	600	625
D	375	403	425	449	475	504	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175
E	150	163	175	188	200	213	225	250	275	300	325	350	375	400	425	450	475	500	525	550

Twinwall 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	800	850	900	950	
C	250	263	275	288	300	313	325	350	375	400	425	450	475	500	525	550	575	600	625	
D	425	449	475	504	525	551	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	
E	175	188	200	213	225	238	250	275	300	325	350	375	400	425	450	475	500	525	550	

Twinwall 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	800	850	900	950		
C	275	288	300	313	325	338	350	375	400	425	450	475	500	525	550	575	600	625		
D	475	504	525	551	575	601	625	675	725	775	825	875	925	975	1025	1075	1125	1175		
E	200	213	225	238	250	263	275	300	325	350	375	400	425	450	475	500	525	550		

Twinwall 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950			
C	300	313	325	338	350	363	375	400	425	450	475	500	525	550	575	600	625			
D	525	551	575	601	625	651	675	725	775	825	875	925	975	1025	1075	1125	1175			
E	225	238	250	263	275	288	300	325	350	375	400	425	450	475	500	525	550			

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TF Twinwall Elbows

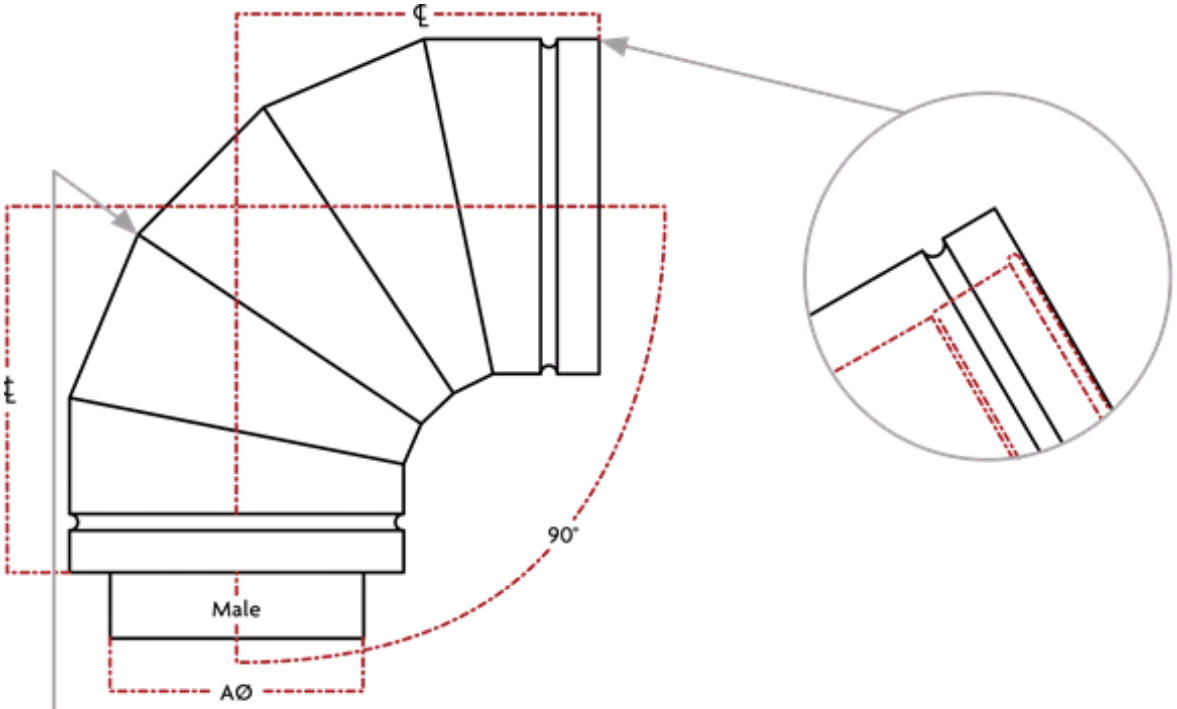
TF Twinwall Elbows are used when a change in direction is required within a chimney system. By adjoining and incorporating Elbows with various straight lengths and adjustable lengths, offsets can be tailor made to suit your requirements.

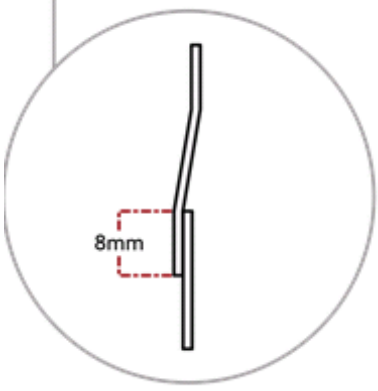
All information provided below is the standard minimum. However, the possibility of manufacturing and supplying Elbows with one or both centre lines extended and at any angle is available on request.

The entire range of TF Twinwall Elbows consist of fixed internal liner segments which are joined with an 8mm overlap joint, Spot Welded together.

CAUTION: TF Twinwall Elbows DO NOT LOAD BEAR.

Green = Made from 2 x Non-Standard 45 Degree Elbows
Blue = Made from 3 x Non- Standard 30 Degree Elbows





TF Twinwall 90° – Annulus 25

ø A	100	125	150	175	200	225	250	300	350	400	450	475-750	775-1150
C	155	173	180	195	210	225	255	280	310	335	375	447-773	786-974

TF Twinwall 90° – Annulus 50

ø A	100	125	150	175	200	225	250	300	350	400	425-700	725-1100
C	180	195	210	225	255	260	280	310	335	375	447-773	786-974

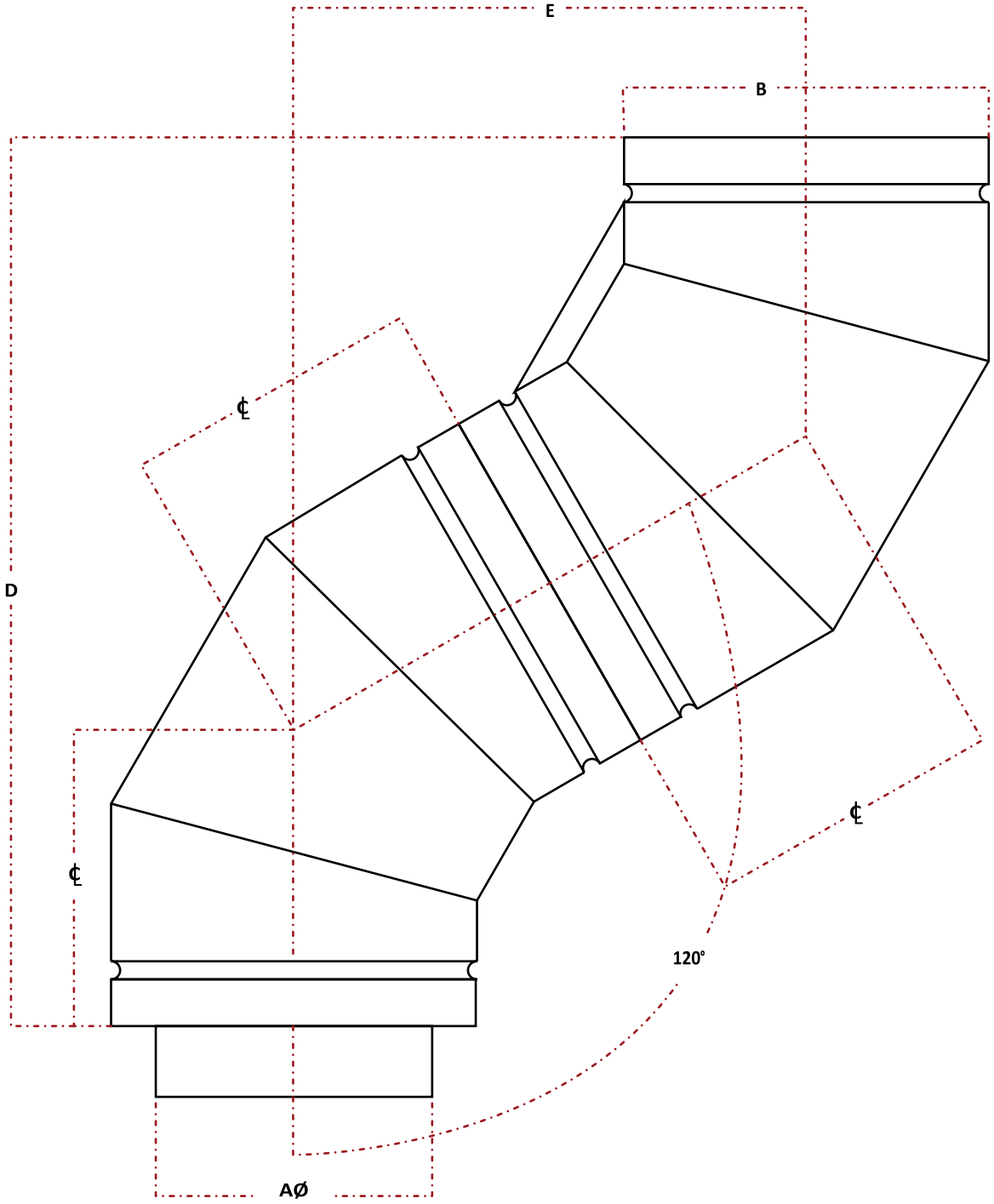
TF Twinwall 90° – Annulus 75

ø A	100	125	150	175	200	225	250	300	350	375-650	675-1050
C	210	225	255	260	280	290	310	335	375	447-773	786-974

TF Twinwall 90° – Annulus 100

ø A	100	125	150	175	200	225	250	300	325-600	625-1000
C	255	260	280	290	310	325	335	375	447-773	786-974

Twinwall TF



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Blue = Made from 2 x Non- Standard 30 Degree Elbows
Green = Made from 4 x Non- Standard 30 Degree Elbows
D & E = Refer to previous page illustration.

Twinwall 60˚ – Annulus 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	725-1150
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	775-1200
C	115	120	125	130	140	150	160	170	200	220	230	240	260	300	320	340	417-563
D	345	360	375	390	420	450	480	510	600	660	690	720	780	900	960	1020	1251-1689
E	199	208	217	225	242	260	277	294	346	381	398	416	450	520	554	589	722-975

Twinwall 60˚ – Annulus 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	675-1100
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	775-1200
C	125	130	140	150	160	165	170	200	220	230	240	260	300	320	340	417-563
D	375	390	420	450	480	495	510	600	660	690	720	780	900	960	1020	1251-1689
E	217	225	242	260	277	285	294	346	381	398	416	450	520	554	589	722-975

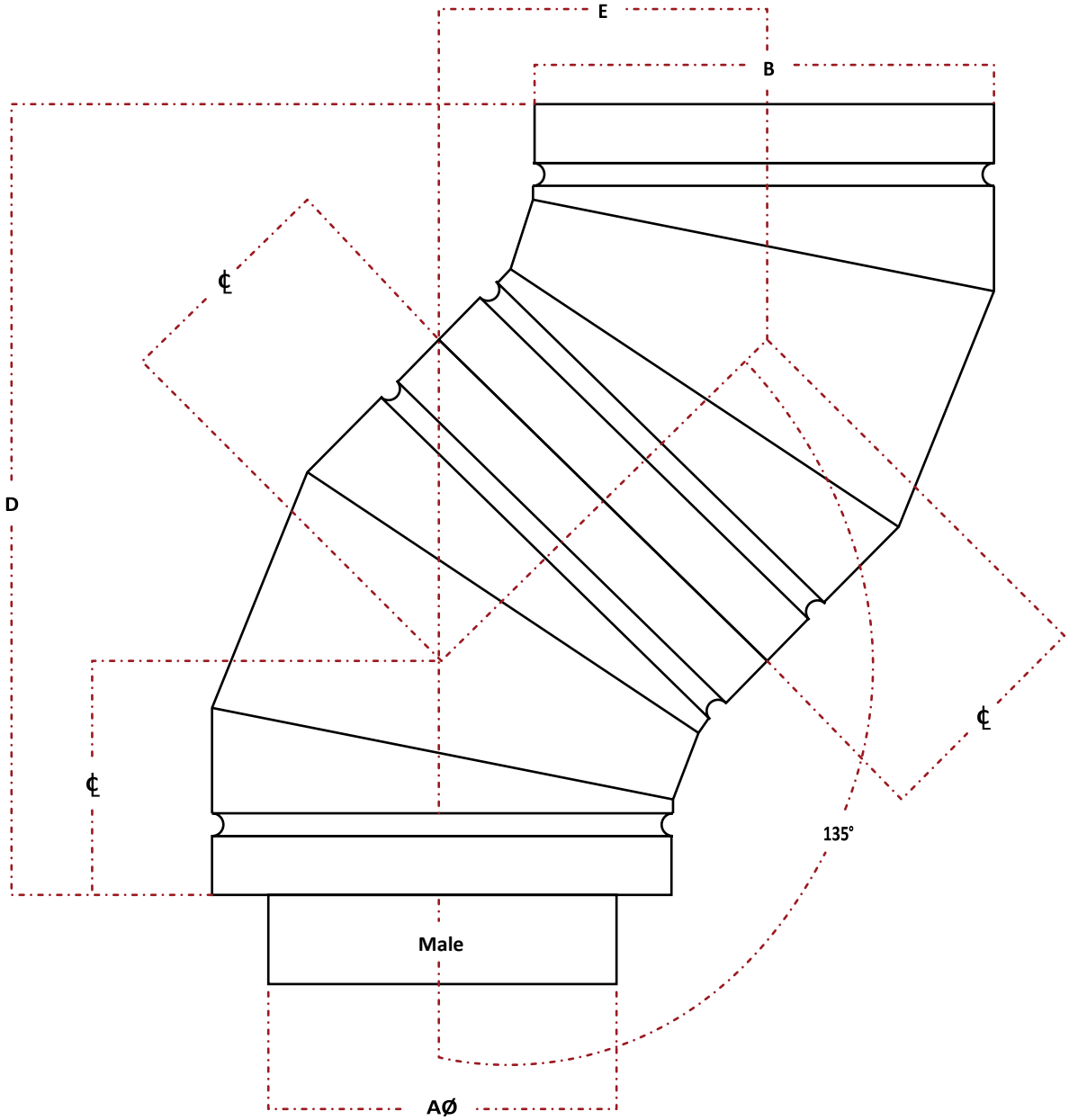
Twinwall 60˚ – Annulus 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	625-1050
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	775-1200
C	140	150	160	165	170	175	200	220	230	240	260	300	320	340	417-563
D	420	450	480	495	510	525	600	660	690	720	780	900	960	1020	1251-1689
E	242	260	277	285	294	303	346	381	398	416	450	520	554	589	722-975

Twinwall 60˚ – Annulus 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	575-1000
B	300	325	350	375	400	425	450	500	550	600	650	700	750	775-1200
C	160	165	170	175	200	210	220	230	240	260	300	320	340	417-563
D	480	495	510	525	600	630	660	690	720	780	900	960	1020	1251-1689
E	277	285	294	303	346	364	381	398	416	450	520	554	589	722-975

Twinwall TF



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Blue = Made from 2 x Non- Standard 22.5 Degree Elbows
Green = Made from 4 x Non- Standard 22.5 Degree Elbows
D & E = Refer to previous page illustration.

Twinwall 45° – Annulus 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000-1150
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050-1200
C	90	95	100	105	110	115	130	140	150	160	175	195	200	210	230	240	320	330	341	351	361	373-402
D	307	324	341	358	376	393	444	478	512	546	597	666	683	717	785	819	1093	1127	1164	1198	1233	1274-1373
E	127	134	141	148	156	163	184	198	212	226	247	276	283	297	325	339	453	467	482	496	511	528-569

Twinwall 45° – Annulus 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950-1100
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050-1200
C	100	105	110	115	130	135	140	150	160	175	195	200	210	230	240	320	330	341	351	361	373-402
D	341	358	376	393	444	461	478	512	546	597	666	683	717	785	819	1093	1127	1164	1198	1233	1274-1373
E	141	148	156	163	184	191	198	212	226	247	276	283	297	325	339	453	467	482	496	511	528-569

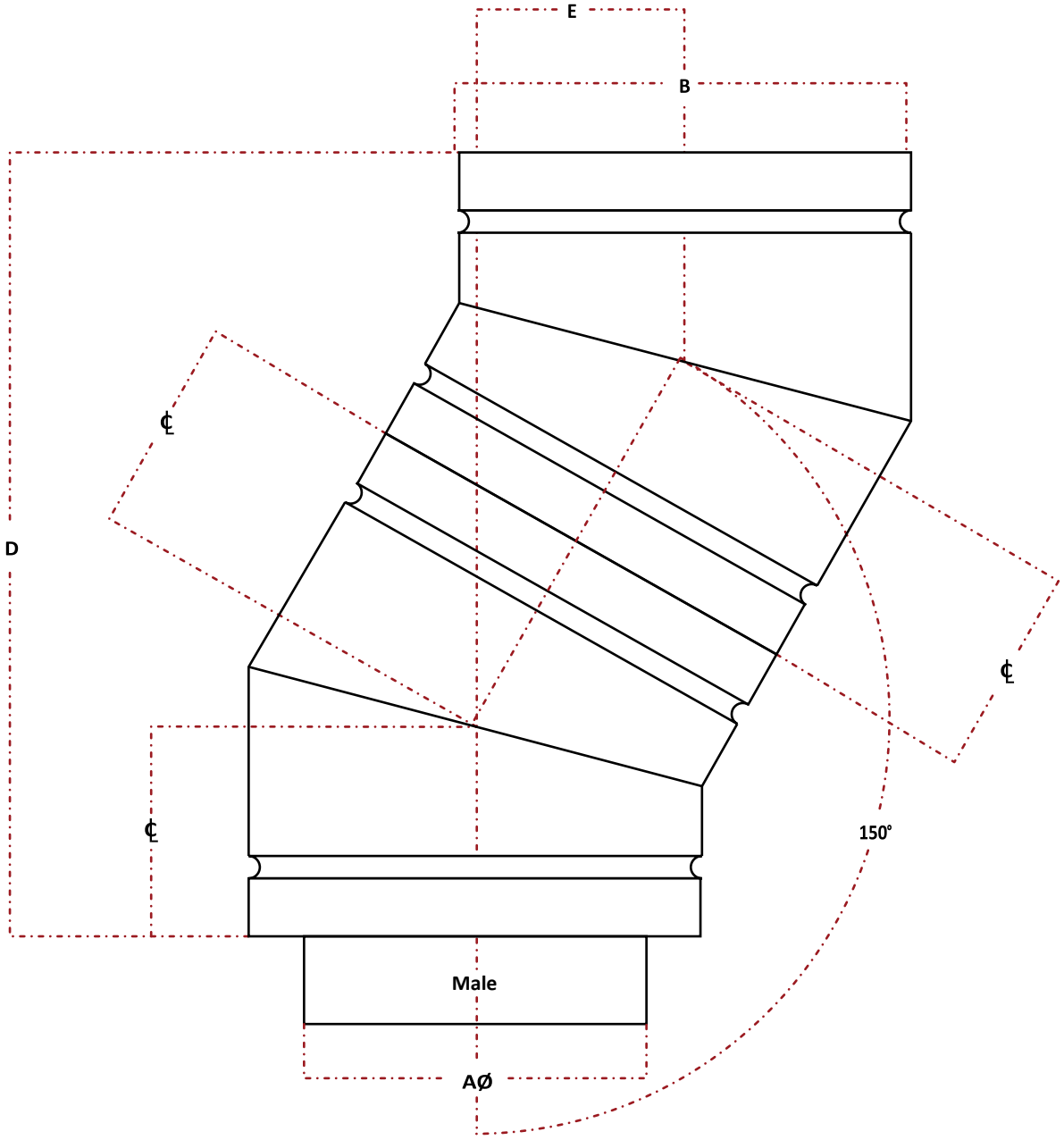
Twinwall 45° – Annulus 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900-1050
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050-1200
C	110	115	130	135	140	145	150	160	175	195	200	210	230	240	320	330	341	351	361	373-402
D	376	393	444	461	478	495	512	546	597	666	683	717	785	819	1093	1127	1164	1198	1233	1274-1373
E	156	163	184	191	198	205	212	226	247	276	283	297	325	339	453	467	482	496	511	528-569

Twinwall 45° – Annulus 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850-1000
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050-1200
C	130	135	140	145	150	155	160	175	195	200	210	230	240	320	330	341	351	361	373-402
D	444	461	478	495	512	529	546	597	666	683	717	785	819	1093	1127	1164	1198	1233	1274-1373
E	184	191	198	205	212	219	226	247	276	283	297	325	339	453	467	482	496	511	528-569

Twinwall TF



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Twinwall 30˚ – Annulus 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	75	79	82	85	90	93	102	108	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261
D	280	292	306	317	336	347	381	403	429	455	478	504	522	597	634	672	773	799	725	847	873	899	922	948	974
E	75	79	82	85	90	93	102	108	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261

Twinwall 30˚ – Annulus 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	82	85	90	93	102	105	106	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261
D	306	317	336	347	381	392	403	429	455	478	504	522	597	634	672	773	799	725	847	873	899	922	948	974
E	82	85	90	93	102	105	108	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261

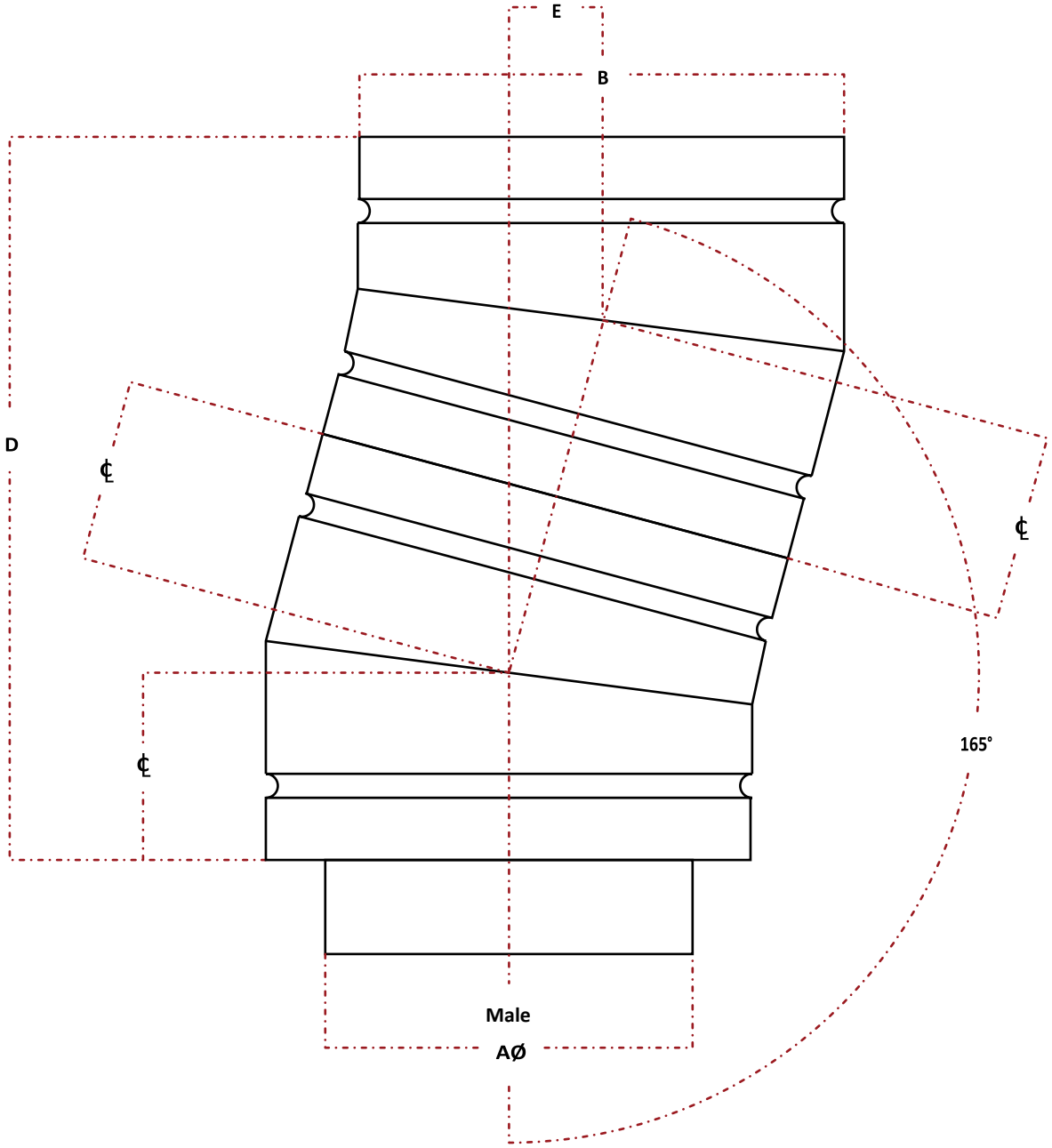
Twinwall 30˚ – Annulus 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	90	93	102	105	108	110	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261
D	336	347	381	392	403	411	429	455	478	504	522	597	634	672	773	799	725	847	873	899	922	948	974
E	90	93	102	105	108	110	115	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261

Twinwall 30˚ – Annulus 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	102	105	108	110	115	119	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261
D	381	392	403	411	429	444	455	478	504	522	597	634	672	773	799	725	847	873	899	922	948	974
E	102	105	108	110	115	119	122	128	135	140	160	170	180	207	214	221	227	234	241	247	254	261

Twinwall TF



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Twinwall 15˚ – Annulus 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	65	69	69	70	72	74	77	84	87	91	94	97	101	114	123	125	153	156	159	163	166	169	172	176	180
D	257	272	272	274	282	290	303	328	342	367	371	381	396	448	485	493	601	614	624	639	653	663	676	692	707
E	34	36	36	36	37	38	40	43	45	47	49	50	52	59	64	65	79	81	82	84	86	87	89	91	93

Twinwall 15˚ – Annulus 50

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
B	200	225	250	275	300	325	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	69	70	72	74	77	80	84	87	91	94	97	101	114	123	125	153	156	159	163	166	169	172	176	180
D	272	274	282	290	303	315	328	342	367	371	381	396	448	485	493	601	614	624	639	653	663	676	692	707
E	36	36	37	38	40	41	43	45	47	49	50	52	59	64	65	79	81	82	84	86	87	89	91	93

Twinwall 15˚ – Annulus 75

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
B	250	275	300	325	350	375	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	72	74	77	80	84	85	87	91	94	97	101	114	123	125	153	156	159	163	166	169	172	176	180
D	282	290	303	315	328	334	342	367	371	381	396	448	485	493	601	614	624	639	653	663	676	692	707
E	37	38	40	41	43	44	45	47	49	50	52	59	64	65	79	81	82	84	86	87	89	91	93

Twinwall 15˚ – Annulus 100

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
C	77	80	84	85	87	89	91	94	97	101	114	123	125	153	156	159	163	166	169	172	176	180
D	303	315	328	334	342	350	367	371	381	396	448	485	493	601	614	624	639	653	663	676	692	707
E	40	41	43	44	45	46	47	49	50	52	59	64	65	79	81	82	84	86	87	89	91	93

Drain Lengths

The purpose of a Drain Length is to relieve the flue system from any unwanted moisture (condensate). Introducing such items in the design is paramount for prolonging reliability of an appliance.

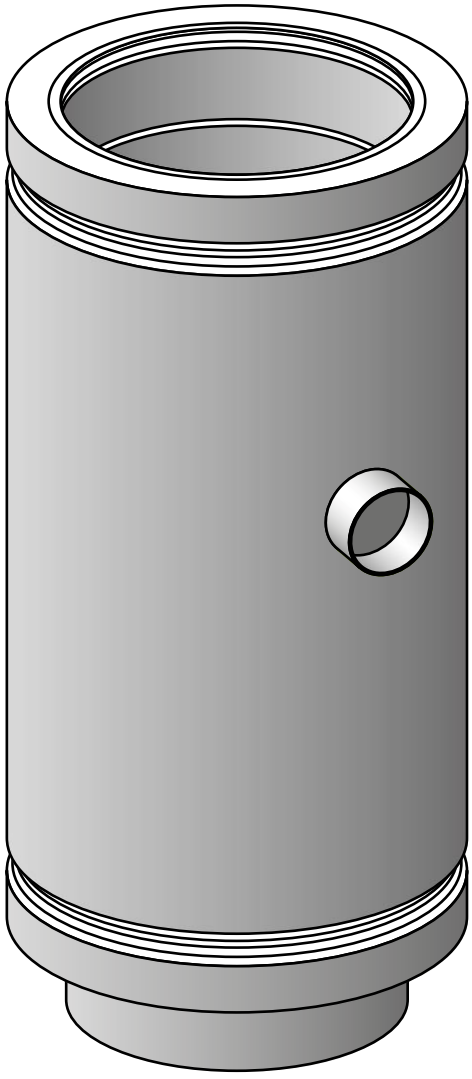
Drain Lengths consist of a 1inch Stainless Steel B.S.P threaded socket which is fully welded onto the inner liner. Drains are obtainable in Twinwall Standard Lengths and can also be fitted to non-standard lengths above our minimum. (Refer to illustration)

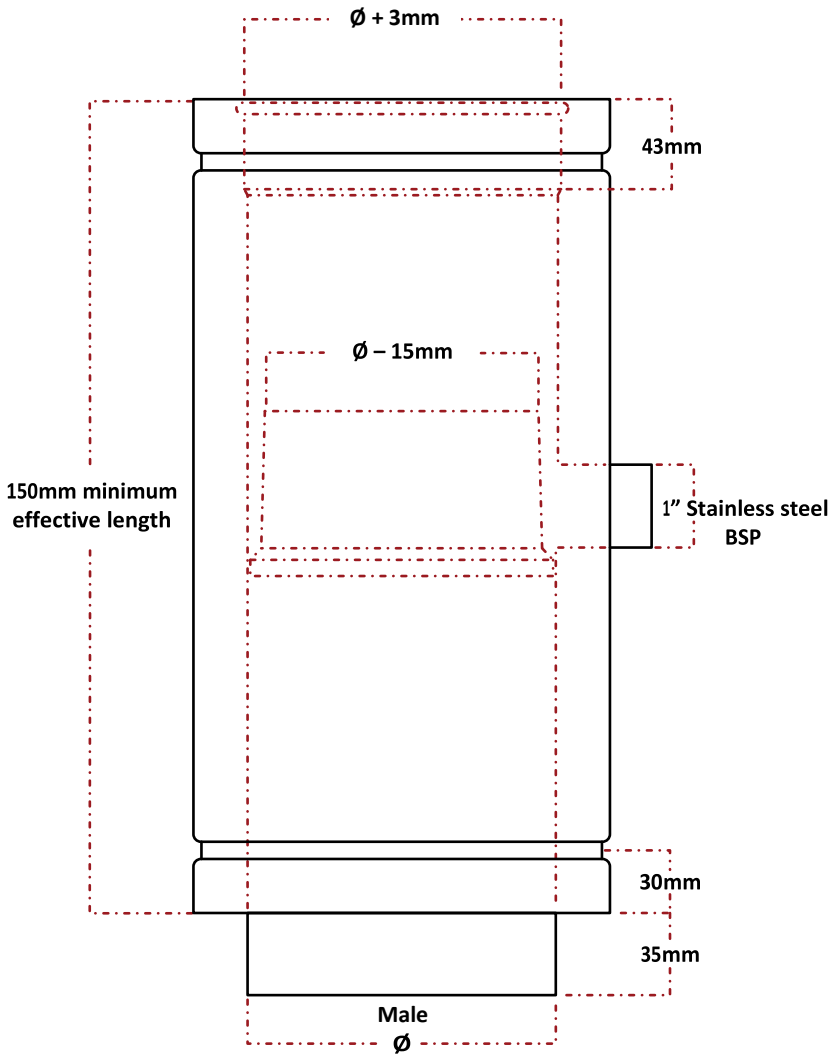
Vertical

Vertical Drain Lengths are manufactured and supplied complete with Drain Traps integrated within the internal liner. This “Trap” collects and diverts all moisture directly to, and out of the drain.

Horizontal

Horizontal Drain Lengths do not have the Internal Drain Trap fitted and should be incorporated, either at the end or in several positions within a run assembled with a 3-5° incline.





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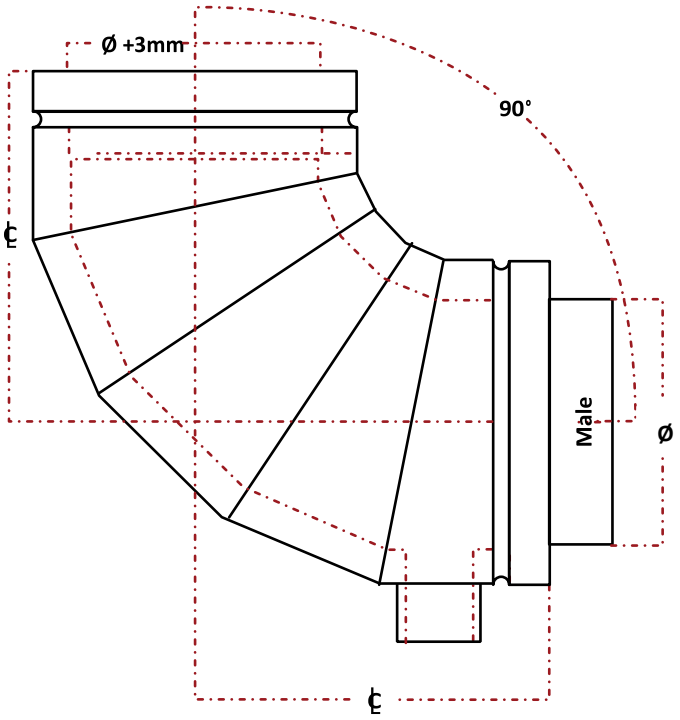
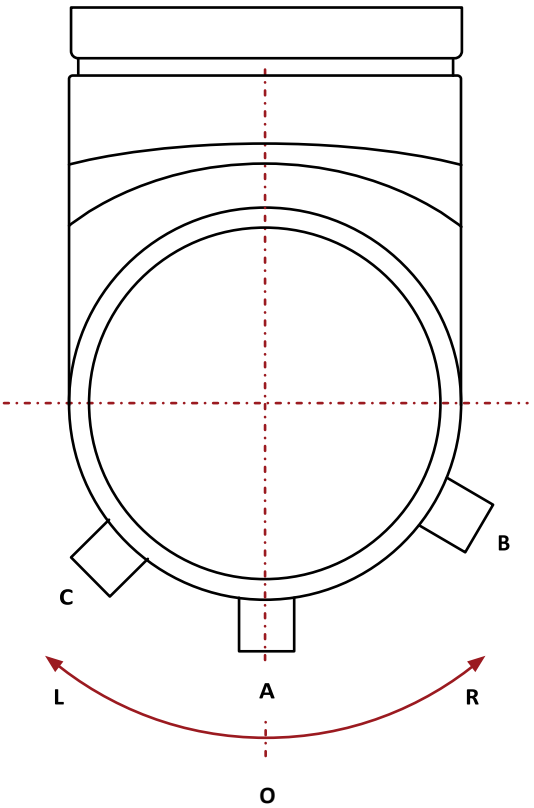
Drains in Elbows

Incorporating drains with Elbows can also be an effective method of moisture (condensate) removal from within a flue system. This component allows for drain positions to be achieved where space is at a minimum.

When drains are to be fitted within a male end of an Elbow its position should be established using the method shown below.





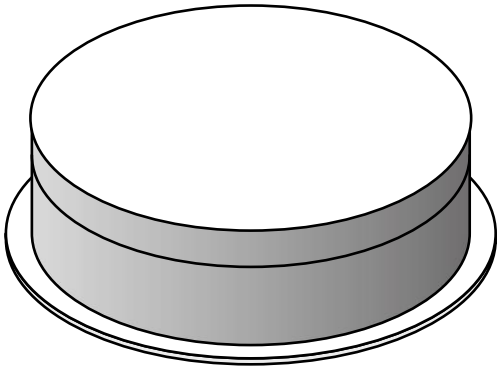
Elbows viewed on male end

Drain for an upright Elbow (drain “A”) will be designated O.

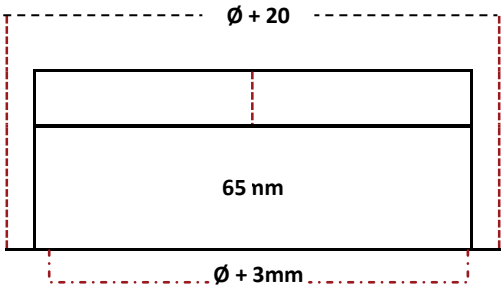
Other drains will be designated either L (left) or R (right) and the angle from position O. i.e. Drain “B” will be R60 and “C” will be L45.

Clean-Out Door (C.O.D)

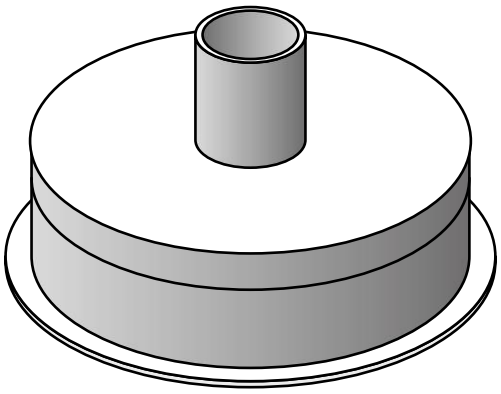
This component is used to close off the unused openings within a Twinwall flue system, and are secured in position either horizontally or vertically using the silicone sealant and Stainless Steel rivets provided.



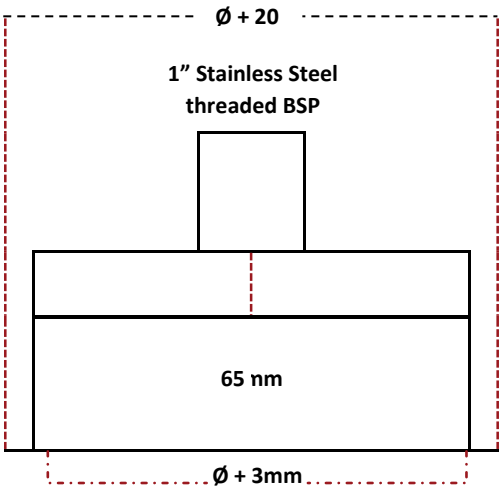
Female



Although the Twinwall product is not for use on condensing appliances, certain factors i.e. open outlets (Top Stubs) allow access to the driving rain resulting in moisture build-up. Therefore, the ability to manufacture and supply a C.O.D complete with a 1 inch Stainless Steel threaded B.S.P connection is available on request. These caps are positioned to close off the unused opening on the underside of the Base Tee, permitting pipe work to be attached for the removal of any moisture (rain).



Female



NOTE: All dimensions provided above are the standard minimum. Non-standard C.O.Ds consisting of dimensions greater than those given can also be accommodated to your requirements.

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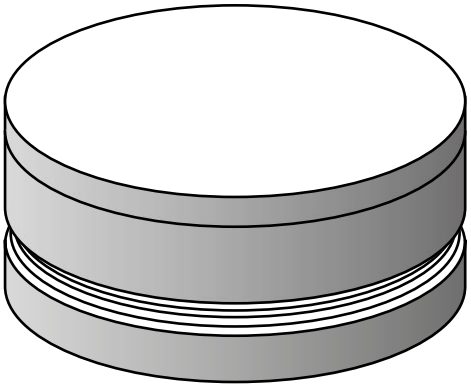
Insulated C.O.D

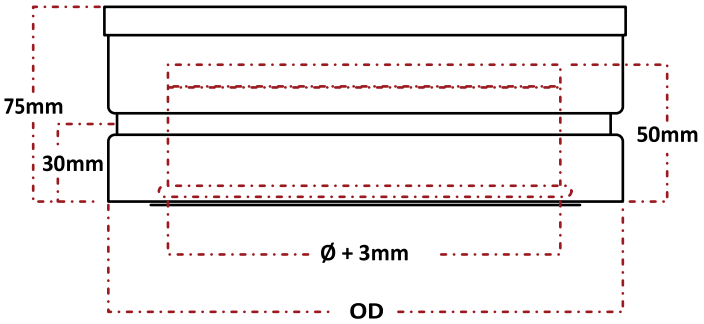
In some cases a relatively high internal and low external temperature is required. Therefore, A1 Flue systems have successfully developed and manufactured an insulated Clean-Out Door which can be supplied with or without a drain connection and is available with either a 25mm, 50mm, 75mm or 100mm annulus.

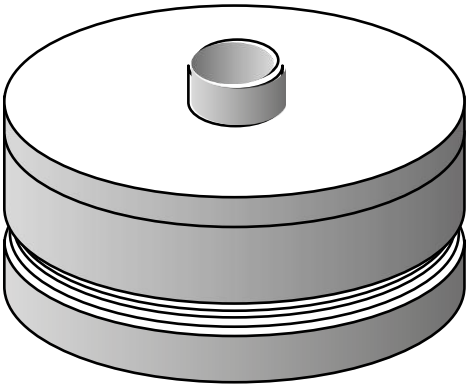
This C.O.D can also be installed either horizontally or vertically and will be fixed in position using the external locking Clamp Band method.

NOTE: All dimensions provided below are the standard minimum. Non-standard C.O.Ds consisting with dimensions greater than those given can also be accommodated to your requirements.

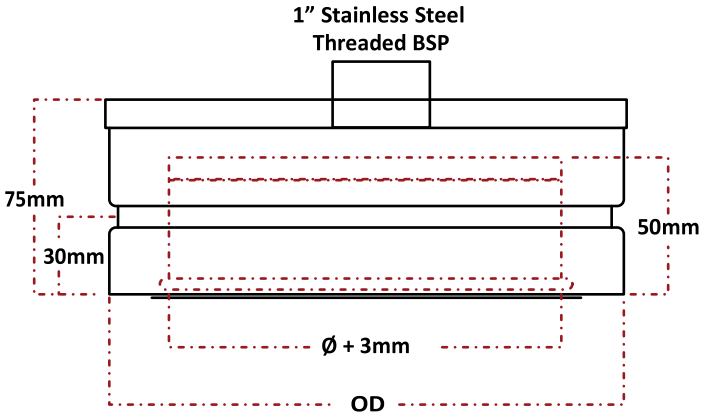


Female





Female



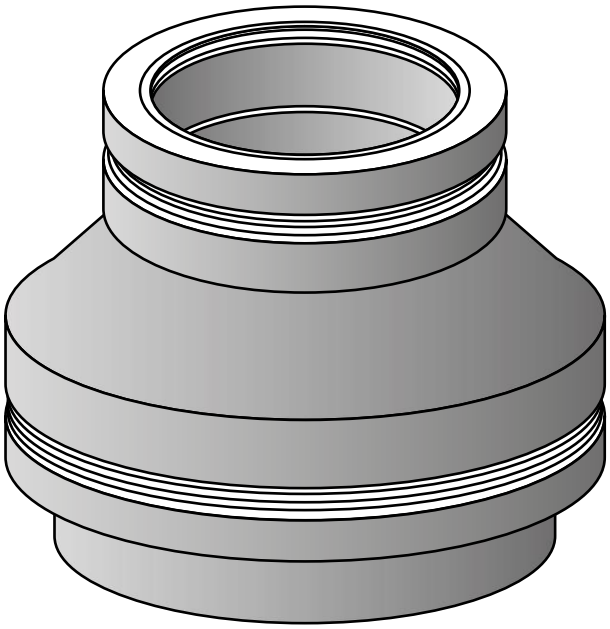
Reducers and Increasers

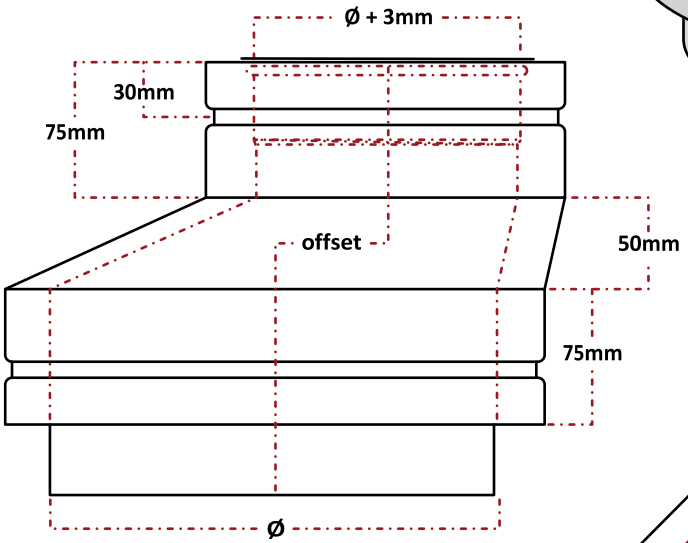
A Reducer/Increaser is the most effective and efficient method of diameter change within a flue system.

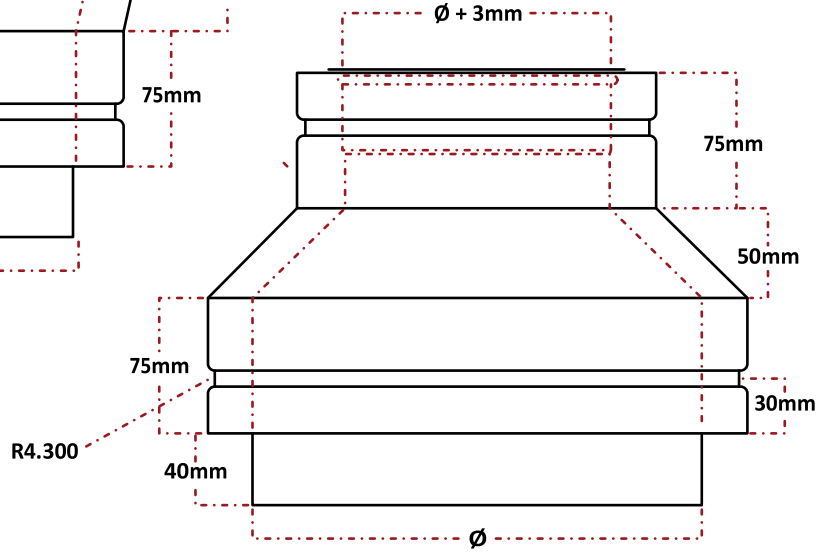
This special item from the Twinwall range allows for the steady transition of flue gases to limit resistance and is available to order in all diameters and at custom lengths above those given.

Reducers and Increasers are processed and manufactured using the same method, so the location of its male or female profile determines the application of use.

A1 Flue Systems acknowledge that there may be certain times where space is restricted. Therefore, the possibilities of developing unique items such as; offsets, reduced offsets or increased offsets is often achievable, however the degree of offset may result in the lengthening of the Reducer or Increaser.
(refer to illustration)







NOTE: All dimensions given are (standard minimum).

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Appliance Adapters

Two types of Appliance Adapters are available for this product, both of which are designed to facilitate (assist) the connection of the vertically or horizontally positioned Twinwall to an appliance outlet.

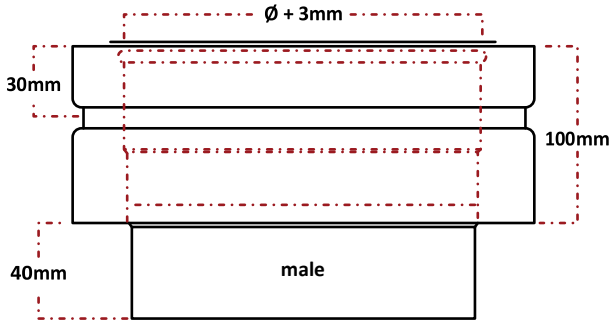
Manufacturing capabilities allow for the male connection spigot on either design to be supplied in all regular and irregular diameters and at increased lengths above those given.

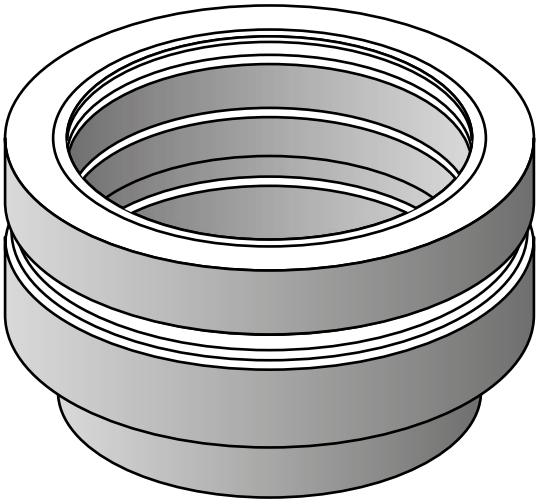
NOTE:

- **All dimensions provided are standard minimum**
- **All Appliance Adapters consisting of diameters under 150mm are to be manufactured using, 0.7/0.6mm Grade 304 or 316 Stainless Steel.**

2 - Piece Inner

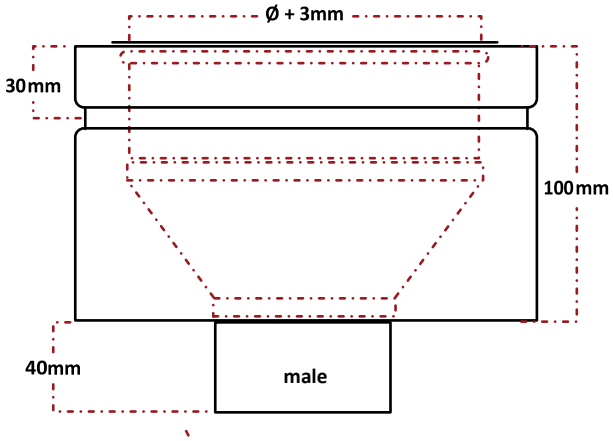
Use where boiler female connections within +/- 10mm of flue liner ø

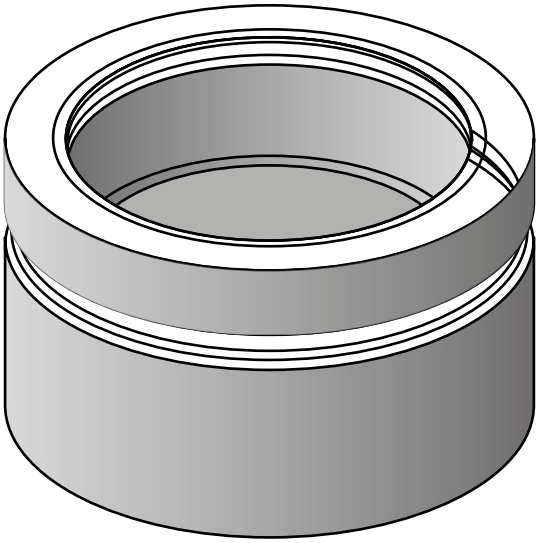




3-Piece Inner

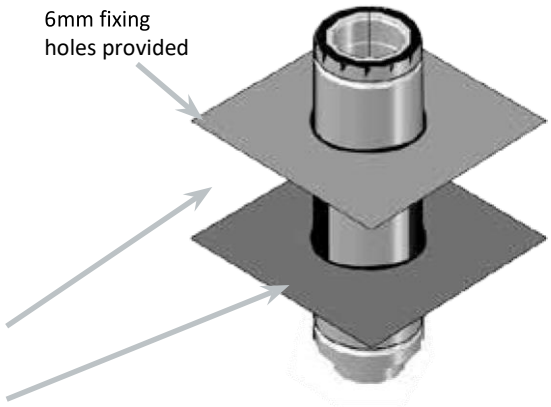
Use where boiler female connection exceeds +/- 10mm of flue liner ø





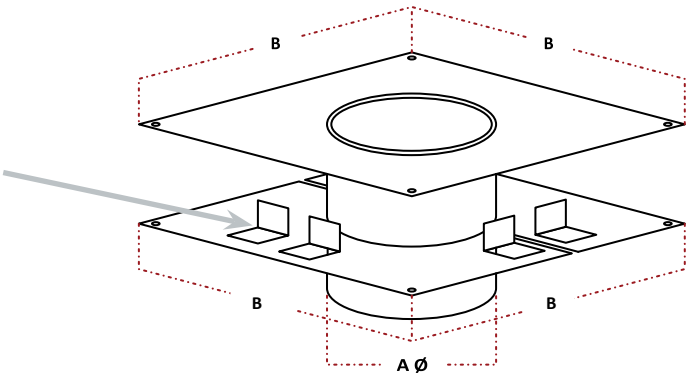
Solid Firestop Kits (where specified or required)

Designed to be applied where the Twinwall chimney system requires a compartmental fire rating for both horizontal and vertical structure penetrations of up to four hours All dimensions below relate to the 25mm annulus Twinwall. However, dimensions for the 50, 75, and 100 mm can also be established using this table:



Tags

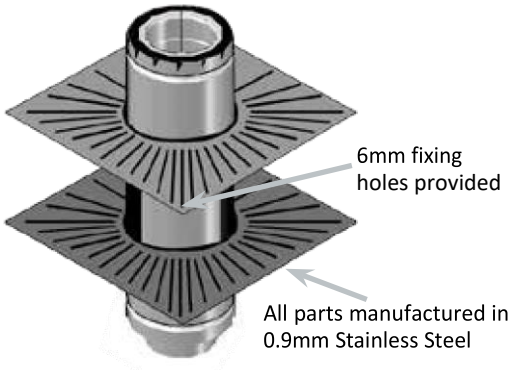
Applied when chimney system passes through a combustible structure to achieve a 50mm air gap clearance.

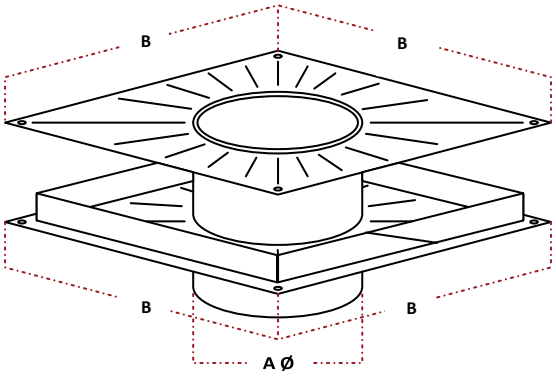


ø	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	181	206	231	256	281	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256
B	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400

Ventilated Firestop Kits

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





ø	125	150	175	200	225	250	300	350	400	450	500
A	181	206	231	256	281	306	356	406	456	506	556
B	325	350	375	400	425	450	500	550	600	650	700

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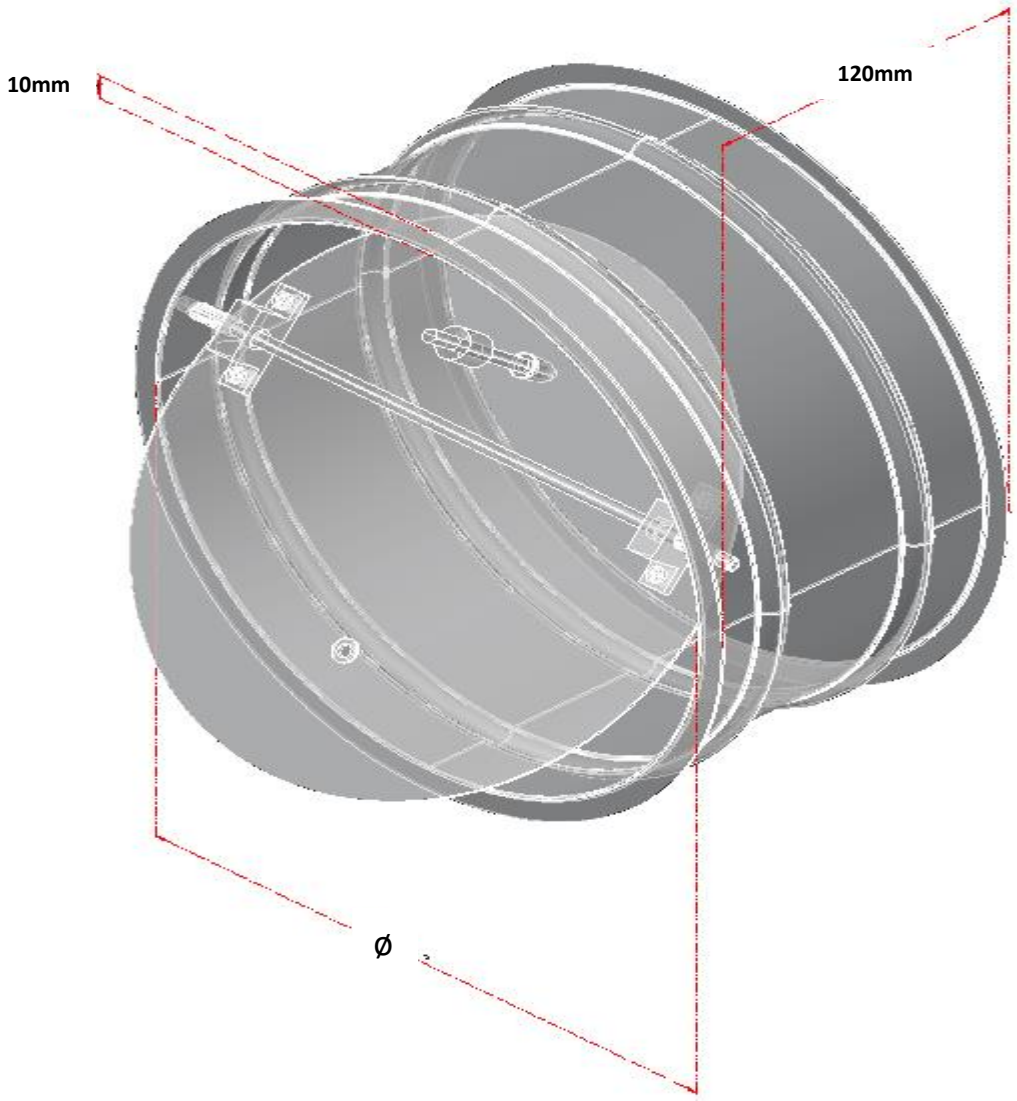
Draught Stabiliser

Draught Stabilisers are used for the control of draught within a Twinwall chimney system caused by the effect of lighter flue gases rising within the chimney stack.

The effectiveness of the Draught Stabiliser is established using a swinging vertical gate pivoted slightly above centre, such that under static conditions the gate will hang vertically down. This gate can be weighted accordingly so that it is lighter or heavier to move, and in doing so varies the draught (suction) level.



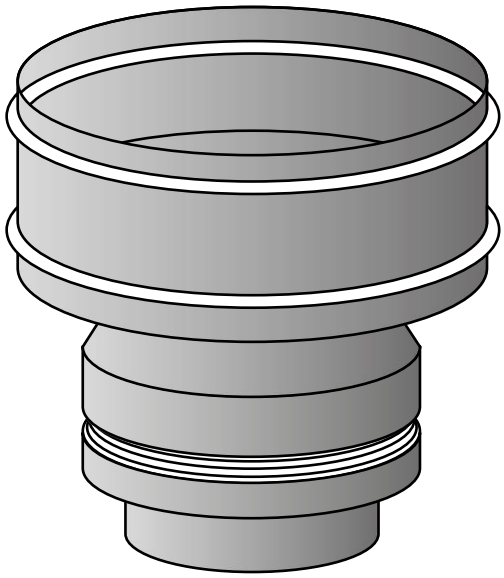
This component is manufactured (as standard) to the values provided using either 0.9mm Grade 304 or 0.9mm Grade 316 and is secured into position with a V-Band. This enables frequent easy access for both cleaning and inspections.

NOTE : **There are certain locations where these devices are best situated, for example; within a vertical part of the boiler connection for effect on the individual appliance, at the end of a combined header or below the Base Tee of the riser for overall effect.**

Twinwall Terminations

Five types of terminations are available for the Twinwall product, all of which have been designed to allow/aid the safe release of flue gases whilst giving a decorative end finish.

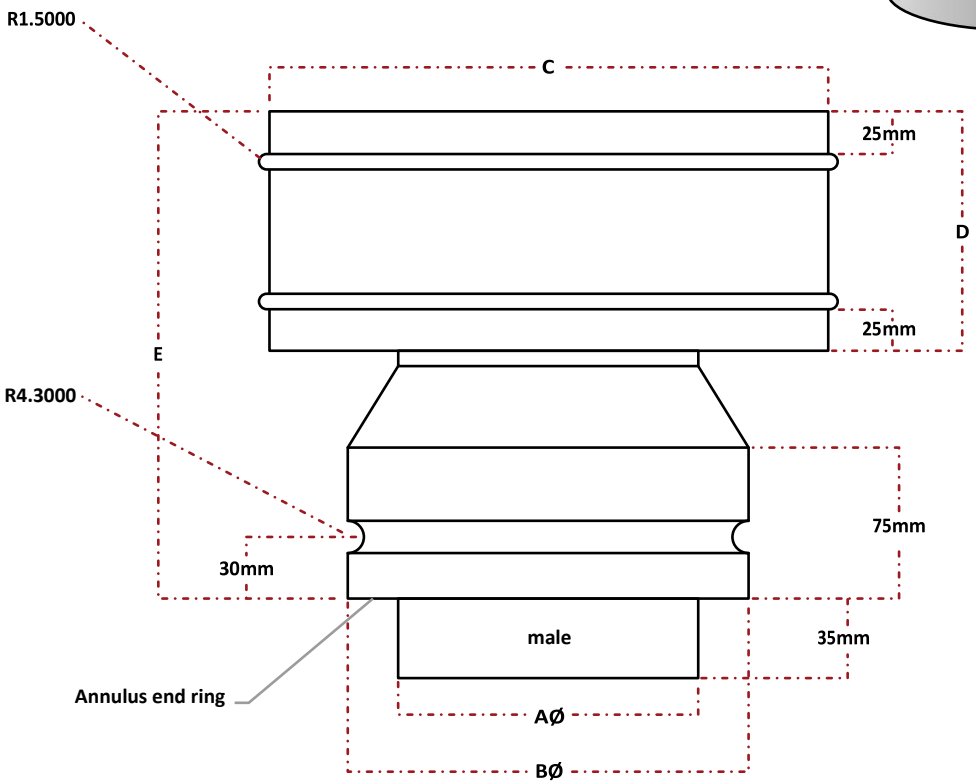
Twinwall Terminations all comprise of male locating spigots and are fixed/secured to the top section of a vertical rise using the locking Clamp Band provided.



Universal Terminals

Designed for the use with atmospheric gas burning appliances with a restrictive outlet to prevent bird access.

All dimensions given below are the standard minimum Universal Terminals, however larger diameters or dimensions can be accommodated to suit your requirements.



Twinwall 25

ø A	100	125	150	175	200	225	250	300	350	400	450	500	550	600
B	150	175	200	225	250	275	300	350	400	450	500	550	600	650
C	234	259	284	309	334	359	404	454	554	638	722	802	891	1030
D	121						172		202	222	241	260	280	305
E	230						260		331	350	369	415	434	459

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Rain Cap Terminations

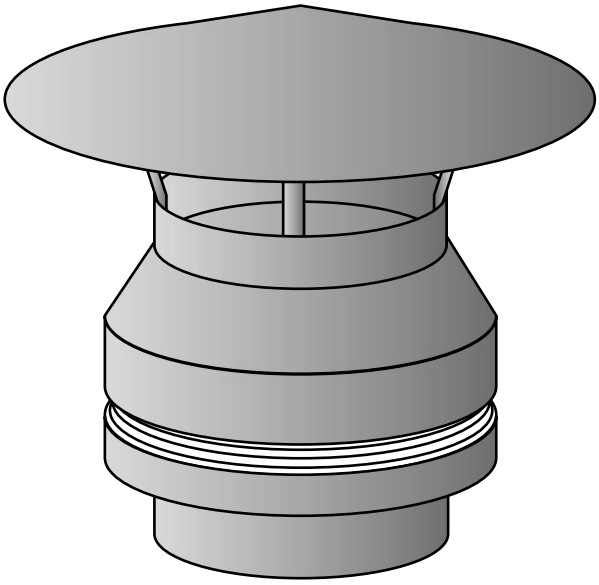
Rain Caps

Designed for multiple appliances as well as providing a less restrictive all weather protected vent into the atmosphere.

Double-Inverted Rain Caps

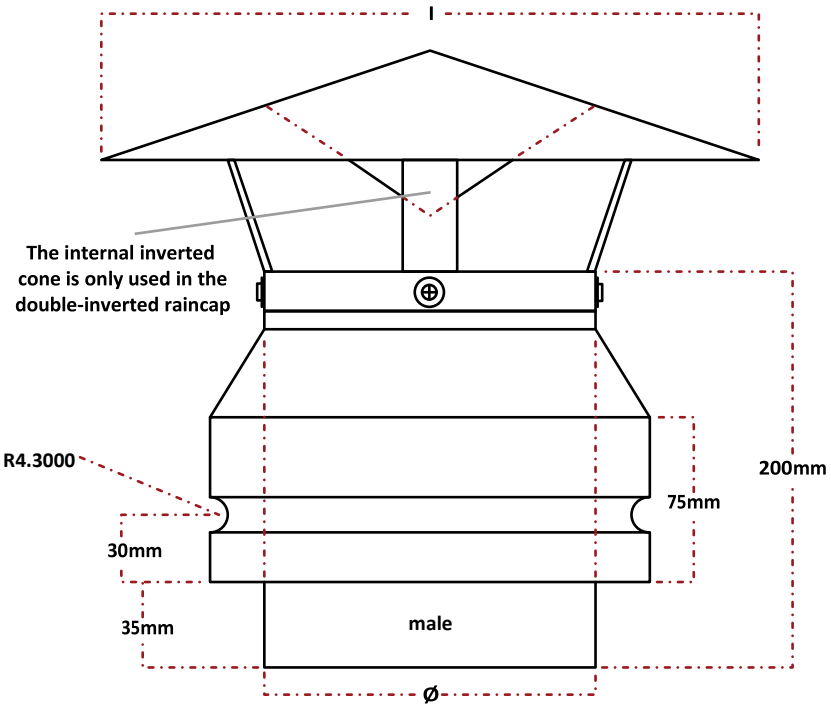
For the use on induced draught systems to prevent back pressure within the flue.

NOTE: Picture illustrations and values provided refer to the standard minimum. However, unique non-standard Rain Caps consisting of values greater than those given can also be accommodated if required.



100Ø -300Ø I = Ø x 2

350 Ø - Above I = Ø x 1.75



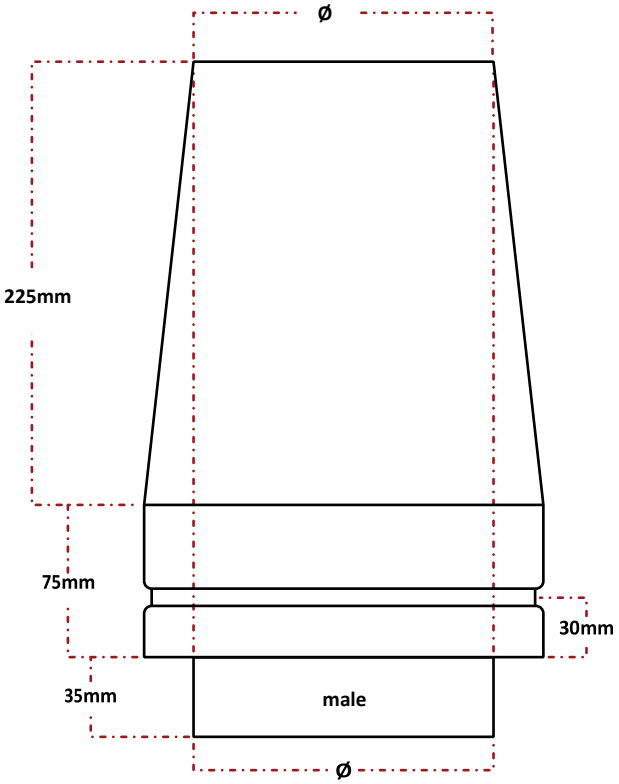
Top Stub Terminations

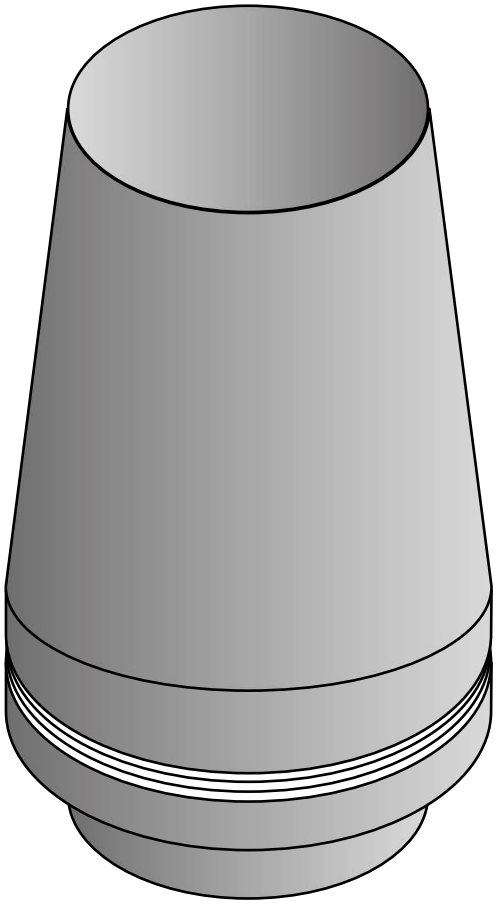
Top Stubs allow for the unrestricted rapid release of flue gases into the atmosphere.

The effectiveness of the Twinwall Terminal is established by its outlet diameter (free surface area). This outlet can be manufactured and supplied with or without Stainless Steel mesh and at a reduced diameter (if required), which will increase velocity of its existing gases.

Due to the nature of this open outlet design it is recommended that the Twinwall Top Stub should always work in conjunction with either a moisture (condensate) release point at the base of a vertical rise or with a vertical Drainage Length fitted with an Internal Drain Drip.

NOTE: All dimensions given are standard minimum.





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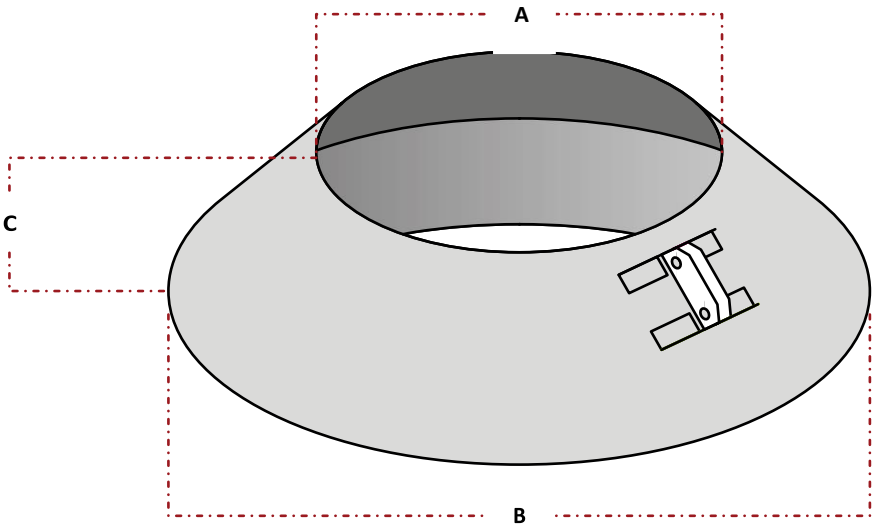
Storm Collars

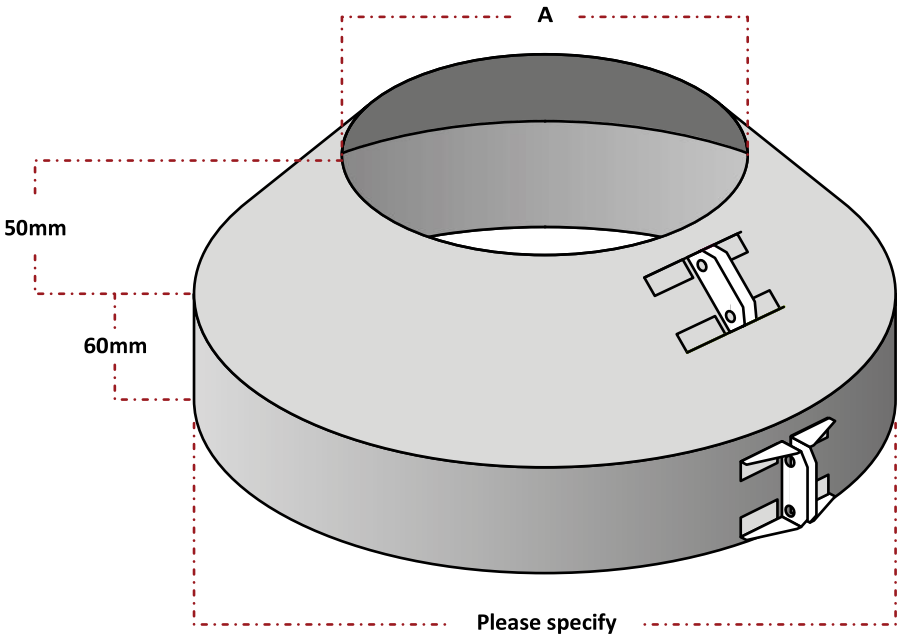
Storm Collars are obtainable in two well established designs which are to be used to apply an all weather impermeable seal around a Twinwall vertical rise immediately after the exit through a Flashing.

Once the positioning has been achieved (directly above a Flashing) the angled profile of the Storm Collar will divert and deny any access between the chimney flue case and Flashing upstand.

All dimensions provided below are a standard minimum. However, non-standard dimensions and diameters can also be accommodated if required.



ø	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
B	300	325	350	375	400	425	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
C	80									100			150													

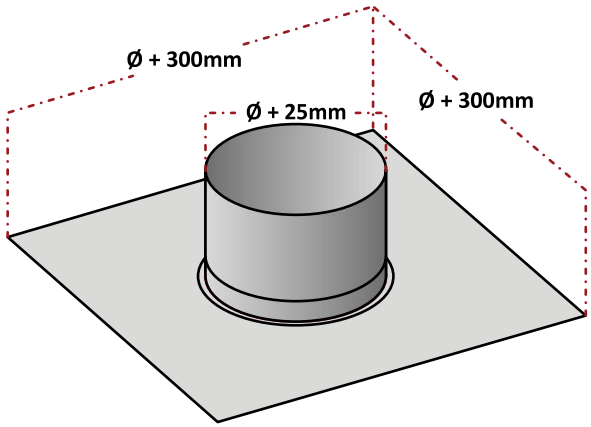


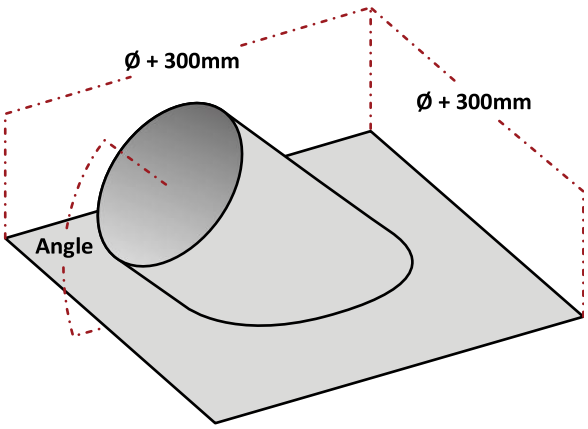
Flashings

Flashings are to be used as an effective method of providing weather protection to all building structures immediately after roof or chimney penetration of a vertically rising Twinwall chimney.

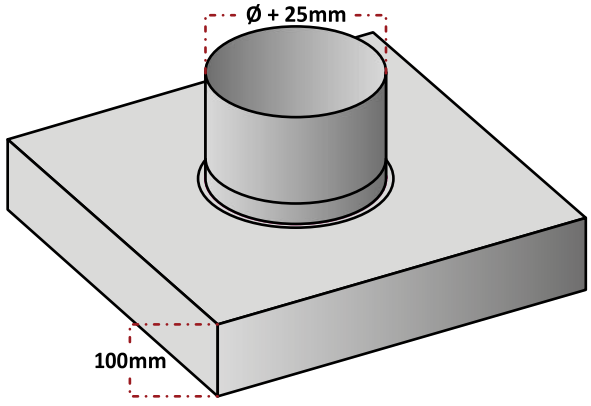
Two types of Flashings are obtainable for this system, both of which can be fabricated and supplied to suit all roof angles and chimney flue diameters including the irregular.

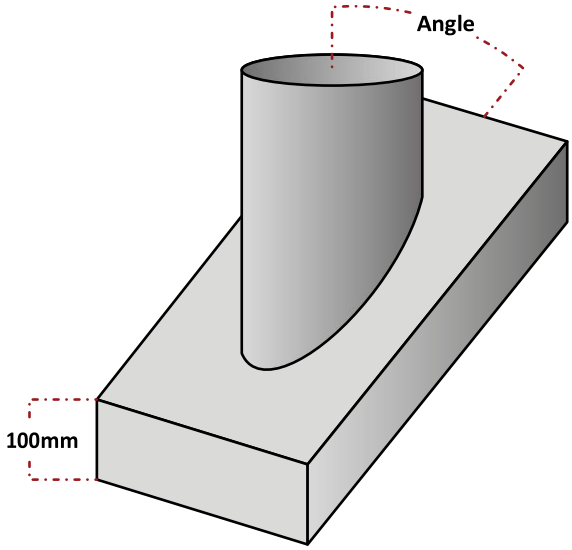
Flat Flashings





Box Flashings





NOTE: Picture illustrations and values provided are for standard items. However, unique Flashings combined with multiple upstands and increased values can also be accommodated if required.

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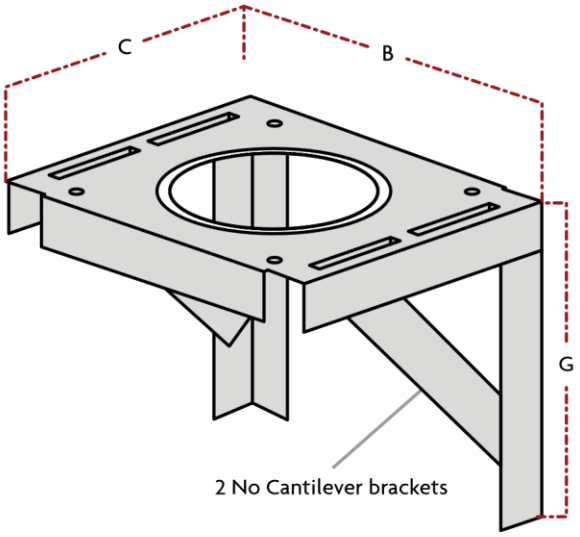
Support Components

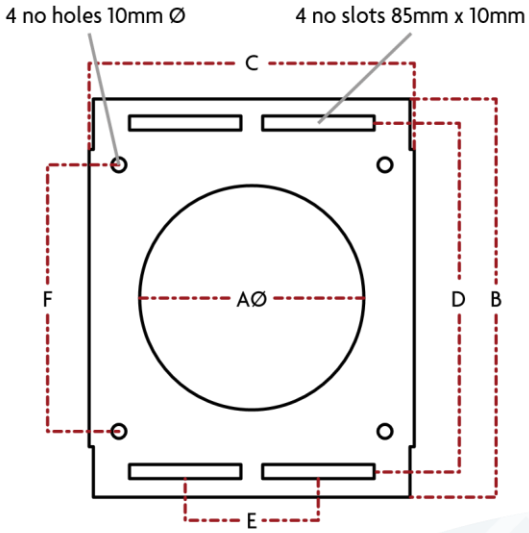
The complete range of support components listed below have been successfully designed and tested to accommodate the chimney weight whist providing flexibility and ease on installation.

Base Wall Support

Base Wall Supports provide load bearing lateral support for the vertically adjoined Twinwall. This component is suitable for supporting on both Uni-Strut or Cantilever Brackets and can be manufactured in either 3mm Stainless Steel (for external applications) or 3mm Galvanized Steel (for internal applications).

NOTE: Picture illustrations and values provided are for standard items. However, unique Base Wall Supports combined with multiple through holes and increased values can also be accommodated if required.



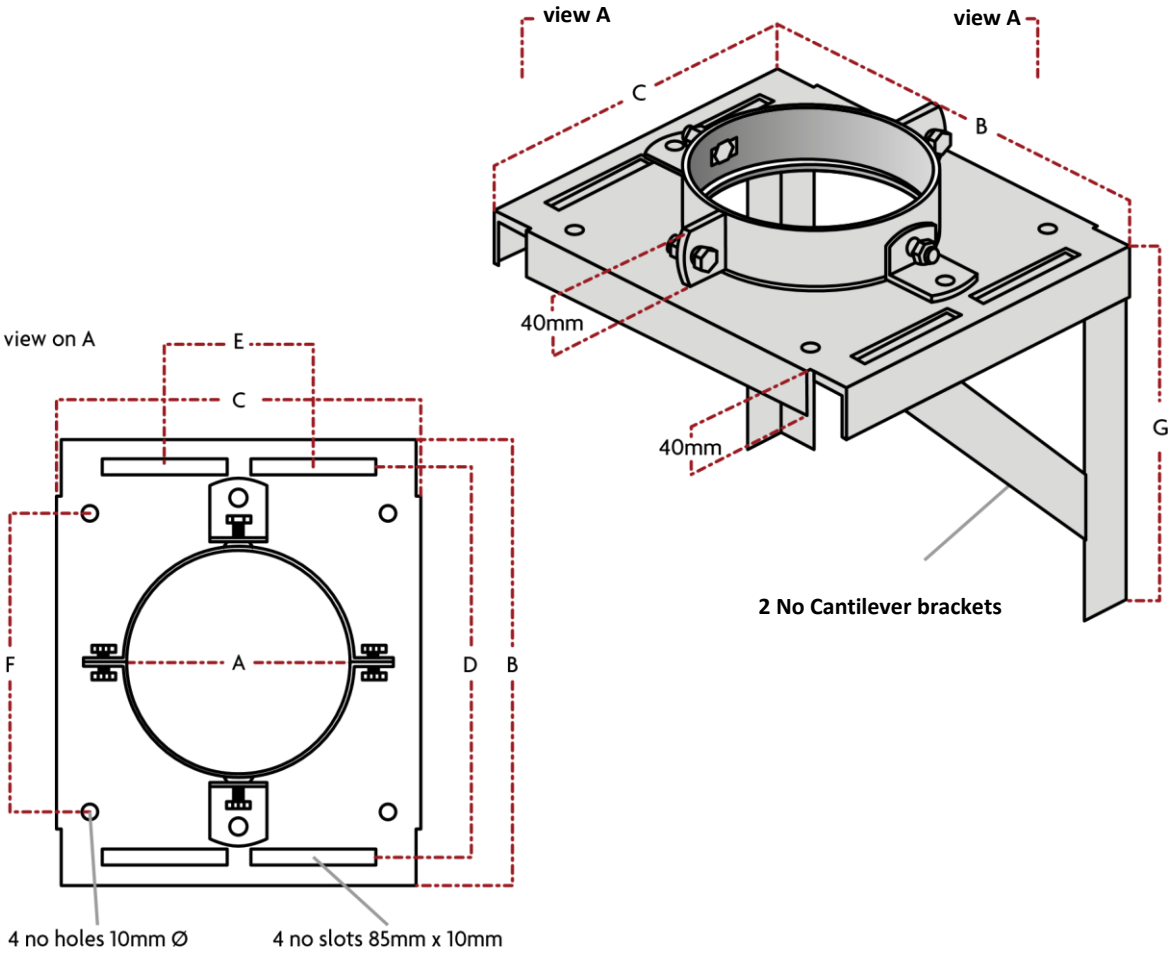


	100	125	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
ø A	106	131	156	181	206	231	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006
B	290	290	312	331	357	382	434	478	529	580	631	682	752	803	854	905	944	994	1044	1094	1144	1194
C	234	234	254	273	299	324	356	400	451	502	553	604	654	705	756	807	846	896	946	996	1046	1096
D	252	252	272	291	317	342	394	439	489	540	591	642	712	763	814	865	904	954	1004	1054	1104	1154
E	83	83	103	122	148	173	205	249	300	351	402	453	503	554	605	656	695	745	795	845	895	945
F	188	188	208	227	253	278	310	354	405	456	507	558	608	659	710	761	795	850	900	950	1000	1050
G	225	225	254	273	299	324	356	400	451	502	553	604	654	705	756	807	846	896	946	996	1046	1096

Intermediate Wall Support

Intermediate Wall Supports are to be incorporated where additional lateral and vertical support is required within a Twinwall vertical rise when weight loads exceed 450kg. This component is manufactured to the values provided below (as standard) in both Stainless Steel and Galvanized Steel. However, non-standard unique Intermediate Wall Support designs combining multiple chimney rises and increased values can also be accommodated to your requirements.

NOTE: The Intermediate Wall Support is also suitable for supporting of either Uni-strut or Cantilever brackets.



ø A	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	312	331	357	382	434	478	529	580	631	628	752	803	854	905	944	994	1044	1094	1144	1194
C	254	273	299	324	356	400	451	502	553	604	654	705	756	807	846	896	946	996	1046	1096
D	272	291	317	342	394	439	489	540	591	642	712	763	814	865	904	954	1004	1054	1104	1154
E	103	122	148	173	205	249	300	351	402	453	503	554	605	656	695	745	795	845	895	945
F	208	227	253	278	310	354	405	456	507	558	608	659	710	761	795	850	900	950	1000	1050
G	254	273	299	324	356	400	451	502	553	604	654	705	756	807	848	896	946	996	1046	1096

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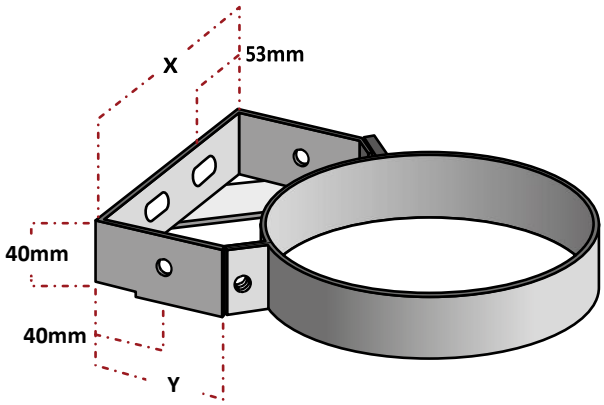
B-Type

B-Types have been designed to achieve lateral stability and the accurate alignment of a flue system. These brackets apply a 50mm clearance (as standard) between the adjacent structure and external case of the adjoining flue and must be used at intervals not exceeding 3 metres externally, or every floor level (not exceeding 6 metres) internally.

B-Types up to and including 700 diameter can be manufactured in both 2mm Stainless Steel (for external applications) or Galvanized Steel (for internal applications). 750 diameter and above are to be manufactured using 3mm Stainless or Galvanized Steel.



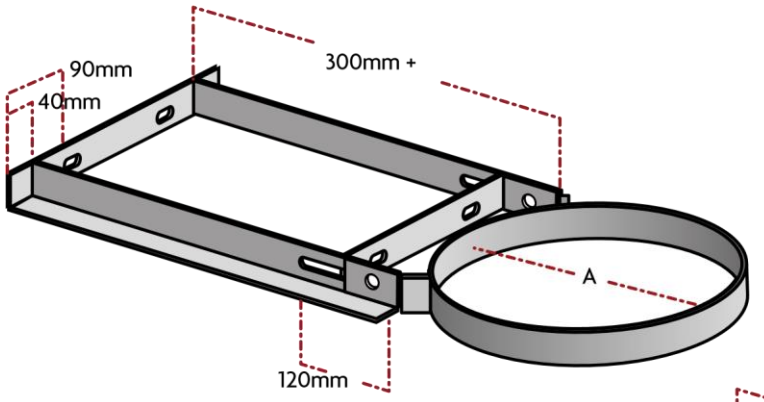
ø A	150	175	200	225	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
X	173	195	217	238	260	303	346	390	433	476	520	563	606	650	693	736	779	823	866	909	953	996	1039	1083
Y	90	96	102	108	115	127	140	152	165	177	190	202	215	227	240	252	265	277	290	302	313	326	338	351

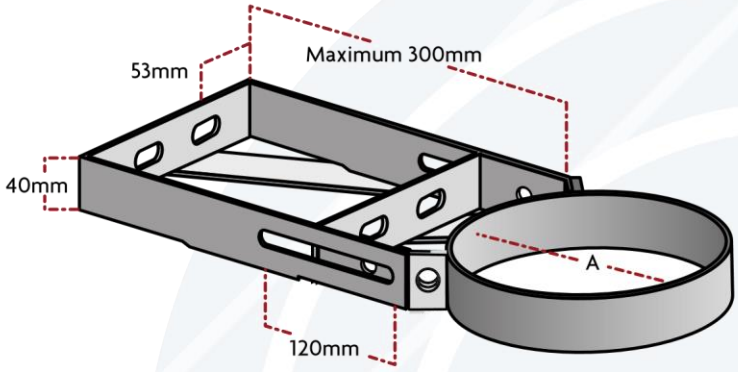
Adjustable B-Type

Adjustable B-Types have also been designed to provide lateral stability as well as allowing for a greater clearance (stand off) between the adjacent structure and the external case of adjoined flue.

This item consists of a standard B-Type bracket incorporated within an adjustable carriage which can be manufactured in both Stainless and Galvanized Steels and can be custom built to your requirements.

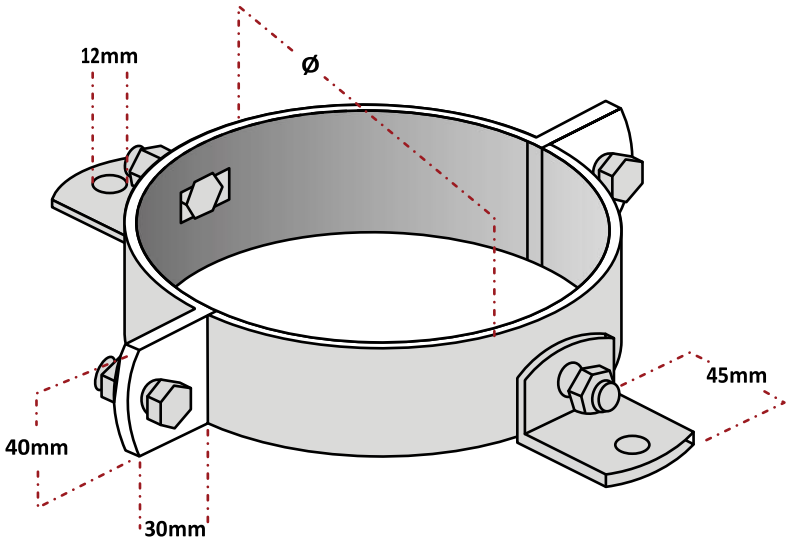
Universal Rings





Universal Rings are to be used to achieve the lateral stability and accurate alignment of a Twinwall chimney system. This component is available with or without swivel lugs incorporated and is suitable for supporting horizontal or inclined runs off 10mm Drop Rod at intervals not exceeding 3metres.

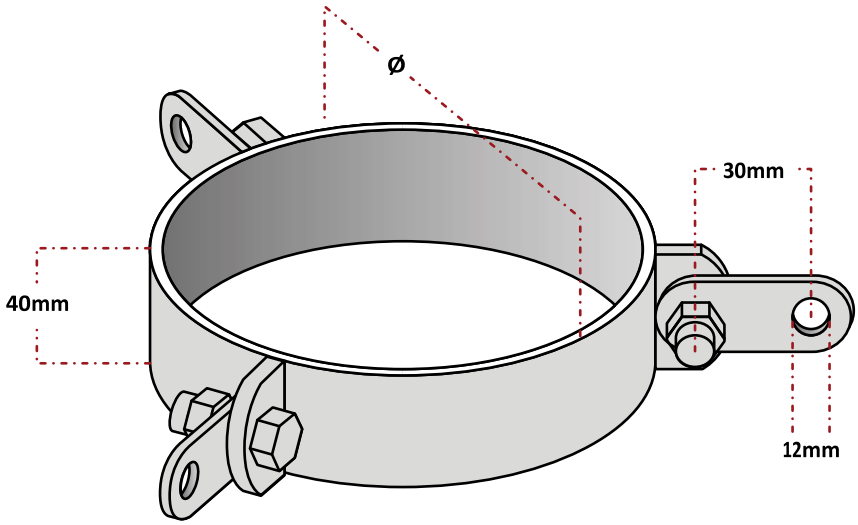
Universal Rings are manufactured using Stainless Steel and to the values provided below. However, non-standard unique items can also be accommodated if required.



Guy Wire Bracket

Guy Wire Brackets must be used to apply extra lateral support to the top section of a Twinwall vertical rise when the last fixing position above the roof is more than 2.5metres below the chimney termination.

This bracket component is available in Stainless Steel to the values provided below and will require either suitable wires/cables or support rods/bars to be fixed to part of the adjacent building or rigid structure.



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