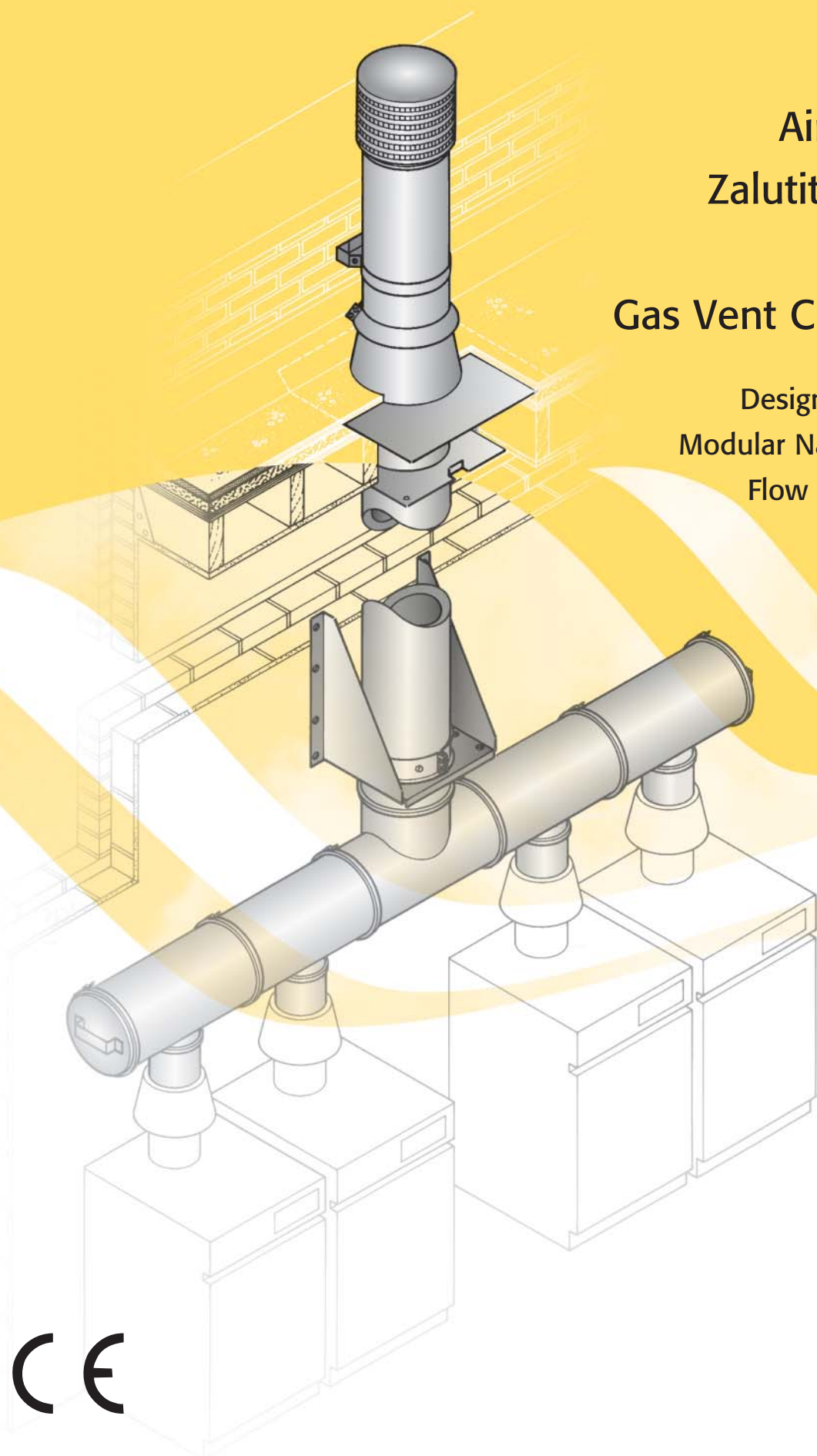


QC

Twin wall Air Gap Insulated Zalutite & Aluminium Commercial Gas Vent Chimney System

Designed for Individual and
Modular Natural Draught Gravity
Flow Chimney Applications



CE


SFL
flues & chimneys
Confidence In Quality

PRODUCT INFORMATION

INTRODUCTION

QC is a prefabricated factory-made twin-wall gas vent chimney system designed for use with naturally aspirated gas-fired appliances fitted with a draught hood / diverter and where the flue gas temperature does not exceed 250°C. The product is manufactured with a unique twist lock jointing system to allow for simple jointing and rapid installation of the chimney system.

APPROVALS AND QUALITY

QC has been assessed and CE marked to BS EN 1856-1 to the performance designations as detailed in Table 1.

All components are manufactured under a quality assurance scheme, certificate No. FM557622, administered by British Standards in accordance with BS EN 9001: 2008. In addition SFL operate a CE approved Factory Production Control (FPC) system as required under the Construction Products Directive 93/68/EEC and in accordance with the requirements of BS EN 1856-1.

DESCRIPTION

Composition and manufacture

QC is constructed with an external casing of ZaluTite and an aluminium inner lining, with a nominal 25mm insulating air gap between the walls. The outer casing carries the structural load while the inner aluminium lining resists the normally-corrosive products of combustion and is free to expand and contract independently as the temperature changes. The air gap between the two walls insulates the vent ensuring a strong draught at the start of firing to minimise condensation. Jointing is achieved using a multi barbed twist lock male and female coupler on either end of the product. Each joint must be finished with a Locking Band which is secured around the joint using a simple toggle latch.

Size range

With a choice of ten diameters ranging from 178mm to 600mm internal diameter, the QC Gas Vent Chimney System covers the widest possible range of applications. The tables given in this publication indicate the availability of the various fittings and accessories in the individual sizes.

Fire rating

The QC Gas Vent Chimney System has been assessed by the Loss Prevention Council as a fire rated product. QC has a 90 minute rating for integrity and stability and a 15 minutes insulation rating.

Applications

The QC System is suitable for naturally aspirated gas-fired appliances fitted with a draught diverter, draught break or draught hood. The product has been designed for a maximum flue gas temperature of up to 250°C where the chimney is operating under negative draught and dry conditions.

QC is designed primarily for internal use. The low external wall temperature under operating conditions permits installation with only 50mm clearance to combustible materials. Where the product is to be used externally, the maximum exposed run of vent must not exceed 3 metres. Where longer runs of externally applied chimney are required, it is recommended that the SMW Chimney system is used. The QC joint is fully compatible with the SMW Chimney System joint, and it is acceptable to use QC internally and convert to SMW prior to running the combined system externally. Under NO circumstance should the QC product be used on condensing or positive pressure systems. For this application where condensate resistance and positive pressure capability is required our Nova SM product should be used with seals.

Careful consideration should be given regarding the external installation of the QC product in coastal locations or internal locations where the air can become chemically contaminated. In these types of applications the SMW product would be preferred as it is manufactured from stainless steel which offers superior corrosion resistance in aggressive environments.

Table 1 - Chimney designation to BS EN 1856-1

QC Product Designation To BS EN 1856-1							
QC	BS EN 1856-1	T250	N1	D	Vm	L11040	O(50)
Standard number							
Temperature class							
Pressure class							
Condense resistance D=dry W=wet							
Corrosion class							
Material specification Liner grade Aluminium EN AW-1200A Liner thickness: 0.4mm							
Sootfire resistance G=yes O=no							

DIAMETER/SIZE RANGE

Nominal size (internal diameter)	Outside diameter (nominal)	Cross-sectional area
178mm (7in)	227mm (9in)	24 885mm ² (38in ²)
203mm (8in)	252mm (10in)	32 365mm ² (50in ²)
254mm (10in)	303mm (12in)	50 670mm ² (79in ²)
304mm (12in)	353mm (14in)	72 583mm ² (113in ²)
355mm (14in)	404mm (16in)	98 980mm ² (154in ²)
400mm (16in)	450mm (18in)	126 664mm ² (195in ²)
450mm (18in)	500mm (20in)	159 043mm ² (246in ²)
500mm (20in)	550mm (22in)	196 583mm ² (304in ²)
550mm (22in)	600mm (24in)	237 583mm ² (370in ²)
600mm (24in)	650mm (26in)	282 743mm ² (437in ²)

Installation

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

Jointing

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

Supports

It is very important that the maximum height of chimney supported by a single Wall Support does not exceed 18m including any suspended lengths.

The Wall Support should be used at the base of every chimney, and at suitable points in the height to provide structural support. The component consists of two triangular side plates and a support plate. A flanged collar is attached to the chimney and rests on the support plate. The side plates may be fixed above or below the support plate.

A separate Support Plate is available which must be used to support the vent on the joists or slab where it penetrates a floor.

A flanged collar is supplied with the component providing the same support mechanism as described for the Wall Support. Again, the Support Plate must not be used to support more than 18m of product. This component maintains the necessary 50mm clearance to combustible materials.

Wall fixing

In addition to the necessary structural support, Wall Bands should be used at maximum 3m centres between supports to provide lateral stability and to maintain the 50mm clearance to combustible materials.

Clearances

The relatively low external casing temperature experienced in normal operation, permits installation with only 50mm air gap clearance to combustible materials. However, where the chimney passes through a floor constructed of combustible material the Firestop Spacer must be used. The use of this component maintains the 50mm clearance as well as acting as a fire-stop.

Lengths of chimney

Standard Lengths of 1000mm and 533mm as well as an Adjustable Length are available and the individual tables provide details.

The Adjustable Length is intended for use in situations where dimensional restrictions require accurate linear adjustment. It can be adjusted on site to give an effective length of between 75mm and 400mm. This adjustment is obtained simply by telescoping the component over any Standard Length. Once the required overlap is obtained, the outer skins of the telescoped fittings must be secured by either self-tapping screws for diameters 178mm-350mm or a clamping band for the larger diameters. The greater the overlap, the more rigid the construction. In general The Adjustable Length should engage onto the preceding fitting a distance equal to at least half the diameter of the product used.

Modular Tees

Purpose-made Modular Tees are available for use with modular boiler installations or other applications where a manifold or horizontal header is required. The component is manufactured to order in any standard pipe size with the number, size and orientation of branches as required.

Lengths should be designed in relation to distances between appliance outlets so that the tee-to-tee connections and tee-to-appliance connections can be made either directly or by using standard pipe lengths. Where possible, opposing branch entries should be offset to avoid discharge from one branch to another.

Before installation, check that the proposed layout conforms to both the requirements of British Gas publication IM 11 and the installation instructions provided by the boiler manufacturer.

Roof penetrations

Both Flat and Adjustable Flashings are available to provide the appropriate weather cover where a chimney penetrates a roof. The Flat Flashing is fabricated wholly from sheet aluminium and is suitable for flat or nearly-flat roofs. The Adjustable Flashing is fabricated from sheet aluminium and is available to suit roof pitch of either 5°-30° or 32°-45°.

A Storm Collar and sealant is used to weather the top of the flashing and is ordered separately.

Terminations

A Gas Vent Terminal, Rain Cap or a Top Stub should always be used to provide weather protection and assist in the rapid evacuation of flue gases.

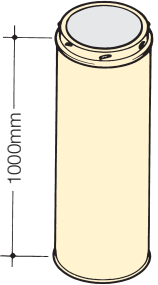
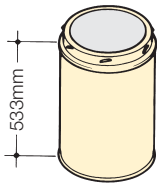
Chimney Sizing

The correct chimney diameter is critical for both the correct operation of the appliance and to ensure that the products of combustion are safely evacuated to atmosphere. Unless detailed information regarding chimney and size selection is provided by the appliance manufacturer, one of the following methods should be used.

1. BS 5440-1: Installation and maintenance of flues and ventilation for gas appliances of rated input not exceeding 70kW bet.
2. International Institution of Gas Engineers and Managers - Document IGE/UP/10 Part 1
3. BS EN 13384-1: Thermal and fluid dynamic calculation methods, chimneys serving one appliance
4. BS EN 13384-2: Thermal and fluid dynamic calculation methods, chimneys with multiple inlets and one inlet with multiple appliances.

SFL offer a full chimney sizing service using the latest thermal dynamic modelling software which calculates the chimney size to the required European Standard BS EN 13384-1/2.

LENGTHS



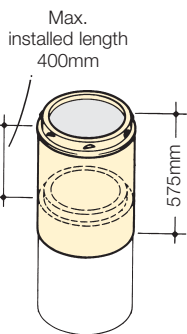
Straight Lengths

Fixed straight sections are available in two lengths, 533mm and 1000mm.

Size	Code number	
	533mm	1000mm
178mm	0845107	0840107
203mm	0845108	0840108
254mm	0845110	0840110
305mm	0845112	0840112
355mm	0845114	0840114
400mm	0845116	0840116
450mm	0845118	0840118
500mm	0845120	0840120
550mm	0845122	0840122
600mm	0845124	0840124

Adjustable Lengths

Provides an adjustable length between fittings of between 75mm and 400mm. There are two versions. Those for diameters 178mm-355mm telescope over the preceding fitting and are secured with self-tapping screws provided. For diameters of 400mm-600mm, the sliding section, which is split at the seam, slides over the preceding fitting and is secured with a separate band. The Adjustable Length should engage onto the preceding fitting a distance equal to at least half the diameter of the product used, however where carefully trimmed to length, which may be necessary if connected to a Tee or Elbow, the overlap should use as much engagement as possible, and be firmly secured at each end. This component **MUST** not load bear.



Size	Code number
178mm	0821607
203mm	0821608
254mm	0821610
305mm	0821612
355mm	0821614
400mm	0821616
450mm	0821618
500mm	0821620
550mm	0821622
600mm	0821624

Locking Band

Locking Bands must be ordered separately and must be used on every joint .

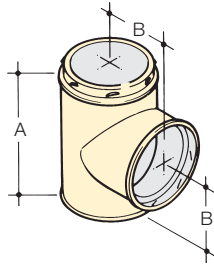


Size	Code number
178mm	0828607
203mm	0828608
254mm	0828610
305mm	0828612
355mm	0828614
400mm	0828616
450mm	0828618
500mm	0828620
550mm	0828622
600mm	0828624

FITTINGS

90° Standard Tee

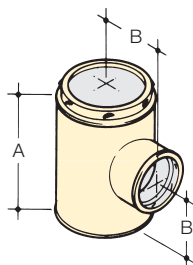
Used at the base of a vertical chimney, a locking cap, permits access through the base or branch. Where suitable, the Tee can be used to provide modular headers for a bank of gas boilers. Those sizes with a body length of 533mm can be used to provide a header configuration where the boiler centres have this dimension. Where boiler centres are 650mm, the Tee can be used with the 117mm Length, (available to order), for the same purpose. The Standard Tee has an equal branch and body diameter. If a smaller diameter branch connection is required, use a Reducing Tee, or use this Tee with a Stepped Reducer. The Tee will support 17m of product. Use a support component for longer runs.



Size	Dimensions		Code number
	A	B	
178mm	533	250	0824307
203mm	533	250	0824308
254mm	533	250	0824310
305mm	533	250	0824312
355mm	533	250	0824314
400mm	1000	500	0824316
450mm	1000	500	0824318
500mm	1000	500	0824320
550mm	1000	500	0824322
600mm	1000	500	0824324

90° Reducing Tee

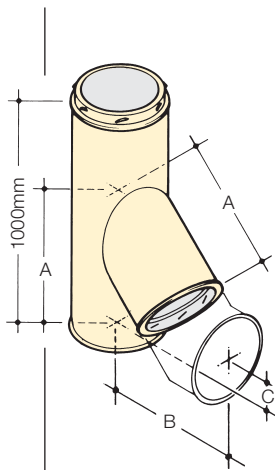
90° Tee with branch used at the base of a common chimney to connect an appliance with smaller outlet size. Also for manifolded connections in a horizontal header. Reduced branch size to order.



Those diameters with a body length of 533mm can be used to provide a header configuration where the boiler centres have this dimension. Where boiler centres are 650mm, the Tee can be used with the 117mm Length (available to order), for the same purpose. If the required configuration requires to be specially ordered, use the order form on page 8. The Tee will support 17m of product. Use a support component for longer runs.

Size	Dimensions		Code number*
	A	B	
178mm	533	250	TBA
203mm	533	250	TBA
254mm	533	250	TBA
305mm	533	250	TBA
355mm	533	250	TBA
400mm	1000	500	TBA
450mm	1000	500	TBA
500mm	1000	500	TBA
550mm	1000	500	TBA
600mm	1000	500	TBA

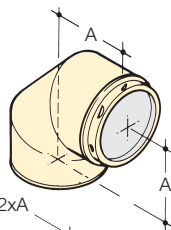
*Reduced branch size required should also be specified when ordering, eg, "Reducing Tee, 305mm to 203mm". On receipt of drawing a Special Part Number will be issue to order against.



135° Tee

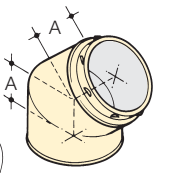
Used at base of vertical chimney. Can be used on the base or branch to provide access. The Tee will support 6m of vent for diameters 178mm-355mm and 4m for larger diameters. Use a support component for longer runs.

Size	Dimensions			Code number
	A	B	C	
178mm	378	433	42	0824407
203mm	408	463	47	0824408
254mm	466	522	57	0824410
305mm	526	584	66	0824412
355mm	588	645	77	0824414
400mm	594	866	30	0824416
450mm	655	909	19	0824418
500mm	715	951	36	0824420
550mm	775	993	54	0824422
600mm	836	1037	72	0824424



90° Elbow

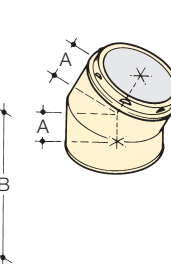
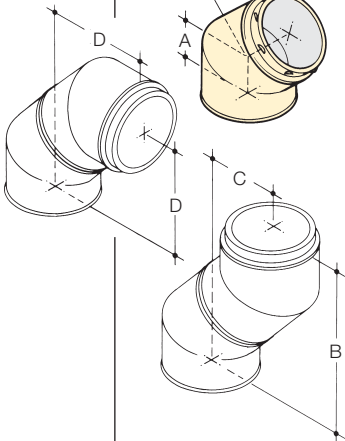
Size	Dimension A	Code number
203mm	246	0822108
254mm	273	0822110
305mm	299	0822112



45° Elbow

Provides a 45° change of direction. By using two, an offset can be obtained.

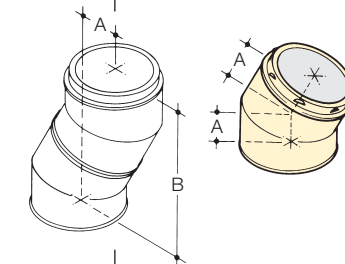
Size	Dimensions				Code number
	A	B	C	D	
178mm	97	331	137	234	0822207
203mm	102	348	144	246	0822208
254mm	113	386	160	273	0822210
305mm	124	423	175	299	0822212
355mm	134	458	190	324	0822214
400mm	261	891	369	630	0822216
450mm	261	891	369	630	0822218
500mm	261	891	369	630	0822220
550mm	261	891	369	630	0822222
600mm	261	891	369	630	0822224



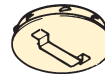
30° Elbow

Provides a 30° change of direction. By using two, an offset can be obtained.

Size	Dimensions		Code number
	A	B	
178mm	97	362	0822307
203mm	102	381	0822308
254mm	113	422	0822310
305mm	124	463	0822312
355mm	134	500	0822314
400mm	261	974	0822316
450mm	261	974	0822318
500mm	261	974	0822320
550mm	261	974	0822322
600mm	261	974	0822324



Please note that elbows of specific angle of between 5° and 90° are available to order. Photocopy and use the form on page 8 to indicate requirements.



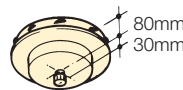
Locking Plug

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

Size	Code number
178mm	0119107
203mm	0219108
254mm	0219110
305mm	0219112
355mm	0219114
400mm	2414516
450mm	2414518
500mm	2414520
550mm	2414522
600mm	2414524

Condensate Collector

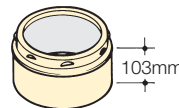
Whilst the QC system is not to be used for condensing applications, there are occasions when on initial ignition, flue-gas condensates may form on the wall of the chimney until the installation achieves equilibrium. If the Top Stub terminal is used, rainwater may also need to be drained. This component is available to provide drainage facilities as appropriate. The component is secured to the underside of a length or tee with a Locking Band. It incorporates a plastic cap protected aluminium drain tube with a 25mm bore and a 1" BSP external parallel thread for diameters up to 355mm, and 50mm bore with 2" BSP external thread for all larger diameters.



Size	Code number
178mm	0853207
203mm	0853208
254mm	0853210
305mm	0853212
355mm	0853214
400mm	0853216
450mm	0853218
500mm	0853220
550mm	0853222
600mm	0853224

Draughthood Connector

Provides connection to the flue collar or draughthood of the appliance. The inner sleeve slips inside the flue collar or draughthood. The outer casing fits over it. The joint should be sealed using a fire-cement compound.

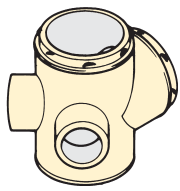


Size	Code number
178mm	0829307
203mm	0829308
254mm	0829310
305mm	0829312
355mm	0829314
400mm	0829316
450mm	0829318
500mm	0829320
550mm	0829322
600mm	0829324

Stepped Increaser

Available to order in required combination of sizes. Both connection sizes should be specified when ordering, eg. "increaser, 28107. 178mm to 203mm". Tapered increasers available to order.

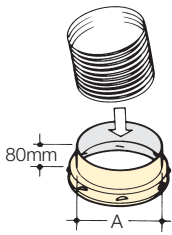




Modular Tees

Designed for use with modular boiler installations and other applications where a manifold or horizontal header is required. Can be manufactured to order in any standard pipe size, with appropriate jointing method: number, size and orientation of branches as required. Please read the section about Modular Tees in the installation instructions on page 10. Photocopy and use the form on page 8 to indicate the dimensional requirements.

Flexible liner

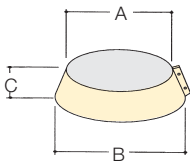


Flexible Liner Adaptor

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

Size	Dimension A	Code number
178mm	190	0821707
203mm	215	0821708
254mm	265	0821710
305mm	315	0821712
355mm	365	0821714
400mm	415	0821716
450mm	465	0821718
500mm	515	0821720
550mm	565	0821722

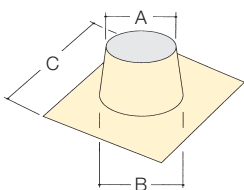
FLASHINGS & TERMINATIONS



Storm Collar

Used as a weathering over flashing and supplied with sealant.

Size	Dimensions			Code number
	A	B	C	
175mm	227	330	70	70123410
200mm	252	351	70	70123411
250mm	302	401	70	70123412
300mm	352	451	70	70123413
350mm	402	501	70	70123414
400mm	452	625	150	70123415
450mm	502	675	150	70123416
500mm	552	725	150	70123417
550mm	602	775	150	70123418
600mm	652	825	150	70123419



Flat Flashing

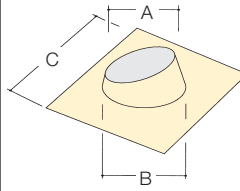
For flat or nearly-flat roofs.

Size	Dimensions			Code number
	A	B	C*	
175mm	240	330	610	70000010
200mm	260	350	610	70000011
250mm	310	400	610	70000012
300mm	360	450	660	70000013
350mm	410	500	762	70000014
400mm	460	550	862	70000015
450mm	510	600	914	70000016
500mm	560	650	965	70000017
550mm	610	700	1050	70324518
600mm	660	750	1066	70000019

*Base is square (C x C)

Adjustable Flashings

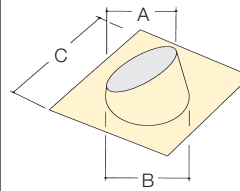
For pitches from 5°-30° and 32°-45°. Available in aluminium.



5°-30°

Size	Dimensions			Code number
	A	B	C*	
175mm	240	335	550	70053010
200mm	260	361	578	70053011
250mm	310	419	610	70053012
300mm	360	476	678	70053013
350mm	410	533	762	70053014
400mm	460	652	952	70053015
450mm	510	710	1010	70053016
500mm	560	766	1066	70053017
550mm	610	824	1124	70053018
600mm	660	880	1180	70053019

*Base is square (C x C)



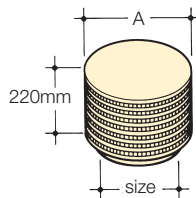
32°-45°

Size	Dimensions			Code number
	A	B	C*	
175mm	240	428	650	70324510
200mm	260	475	678	70324511
250mm	310	546	737	70324512
300mm	360	617	820	70324513
350mm	410	689	889	70324514
400mm	460	750	1041	70324515
450mm	510	812	1124	70324516
500mm	560	892	1220	70324517
550mm	610	963	1300	70324518
600mm	660	1034	1300	70324519

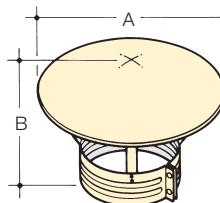
*Base is square (C x C)

Gas Vent Terminal

An enclosed aluminium cowl which allows rapid evacuation of combustion products, and helps prevent ingress of rain / debris. Available for diameters up to 355mm, and secured with a Locking Band.



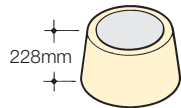
Size	Diameter A	Code number
178mm	295	0152407
203mm	322	0252408
254mm	370	0252410
305mm	422	0252412
355mm	472	0252414



Rain Cap

Used for diameters of 400mm and above. Secured with an integral clamping band. Note that diameters 400mm-500mm have a domed cap, whilst 550mm and 600mm have a flat cap.

Size	Dimensions		Code number
	A	B	
400mm	813	567	0807416
450mm	813	591	0807418
500mm	990	628	0807420
550mm	990	660	0807422
600mm	990	716	0807424

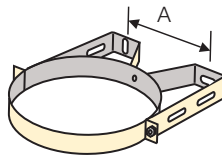


Top Stub

An open ended terminal.

Size	Code number
178mm	0807307
203mm	0807308
254mm	0807310
305mm	0807312
355mm	0807314
400mm	0807316
450mm	0807318
500mm	0807320
550mm	0807322
600mm	0807324

FIXINGS & SUPPORTS

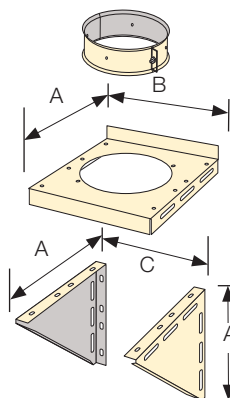


Wall Bands

Wall bands provide lateral support for the chimney and must be used at intervals not exceeding 3.0 metres above any load bearing support.

For external applications it is recommended that the stainless steel version is used.

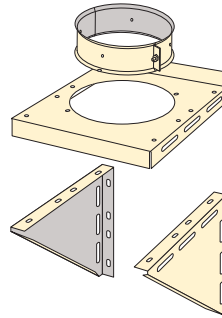
Size	A (mm)	Code number	
		Stainless	Galvanised
178mm	192	3115234	3116234
203mm	212	3115255	3116255
254mm	266	3115305	3116305
304mm	316	3115355	3116355
355mm	366	3115405	3116405
400mm	421	3115455	3116455
450mm	467	3115505	3116505
500mm	517	3115555	3116555
550mm	567	3115605	3116605
600mm	617	3115655	3116655



Wall Support

Used to take the vertical load of the chimney when supported from a wall. Requires M10 wall fixings. The flange collar rests on the Support Plate and is fixed to the chimney outer casing with self-tapping screws. Manufactured from galvanised steel. Dimension C relates to the fixing centres.

Size	Dimensions (mm)		
	A	B	C
178mm	331	360	314
203mm	355	384	347
254mm	403	432	384
304mm	453	482	434
355mm	504	533	485
400mm	551	580	528
450mm	602	631	579
500mm	651	680	628
550mm	702	731	679
600mm	751	780	728

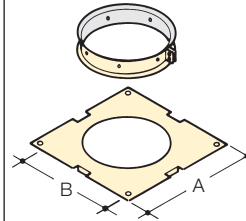


Wall Support

Size	Code Number
178mm	0806207
203mm	0806208
254mm	0806210
304mm	0806212
355mm	0806214
400mm	0806216
450mm	0806218
500mm	0806220
550mm	0806222
600mm	0806224

Support Plate

Fixed on top of floor joists or slabs to support vents at floor penetrations and to provide 50mm clearance from combustible materials. The flange collar rests on the Support Plate and is fixed to the QC outer casing with self-tapping screws. A Firestop Spacer should be used to cover the ceiling opening.



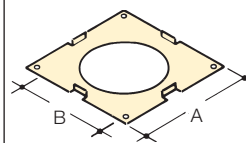
Size	Dimensions		Code number
	A**	B*	
178mm	381	331	0803207
203mm	406	356	0803208
254mm	457	407	0803210
305mm	507	457	0803212
355mm	558	508	0803214
400mm	605	555	0803216
450mm	655	605	0803218
500mm	705	655	0803220
550mm	755	705	0803222
600mm	805	755	0803224

*Frame sizing

**Overall size of square plate (AxA)

Firestop Spacer

Used at floor or ceiling penetrations to maintain 50mm clearance to framing and combustible materials. This component MUST be used where QC penetrates fire-rated floors.



Size	Dimensions		Code number
	A**	B*	
178mm	381	331	0808707
203mm	406	356	0808708
254mm	457	407	0808710
305mm	507	457	0808712
355mm	558	508	0808714
400mm	605	555	0808716
450mm	655	605	0808718
500mm	705	655	0808720
550mm	755	705	0808722
600mm	805	755	0808724

*Frame sizing

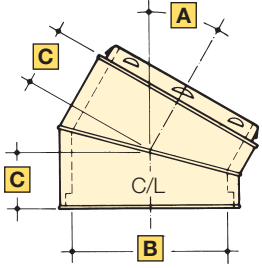
**Overall size of square plate (AxA)

QC GAS VENT CHIMNEY SYSTEM

IF ORDERING A MODULAR TEE OR AN ELBOW OF SPECIFIED ANGLE, PLEASE PHOTOCOPY THIS PAGE, COMPLETE THE APPROPRIATE DETAILS AND SEND WITH ORDER.
PLEASE DELETE SECTIONS NOT USED.

Special Angle Elbow

In addition to the standard 30°, 45° and 90° Elbows, elbows of between 5° and 90° are available to suit particular applications. Please enter details on this form.



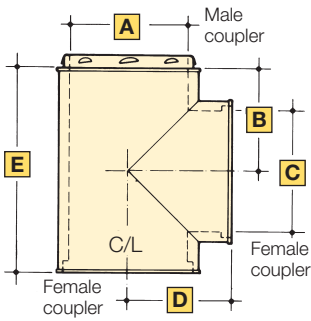
A Deviation Angle
_____ °
min 5°-max 90°

B Size
_____ mm
Diameter

C This is a FIXED dimension

Gas Vent Size									
178	203	254	305	355	400	450	500	550	600
Dimension (mm)									
97	102	113	124	134	261	261	261	261	261

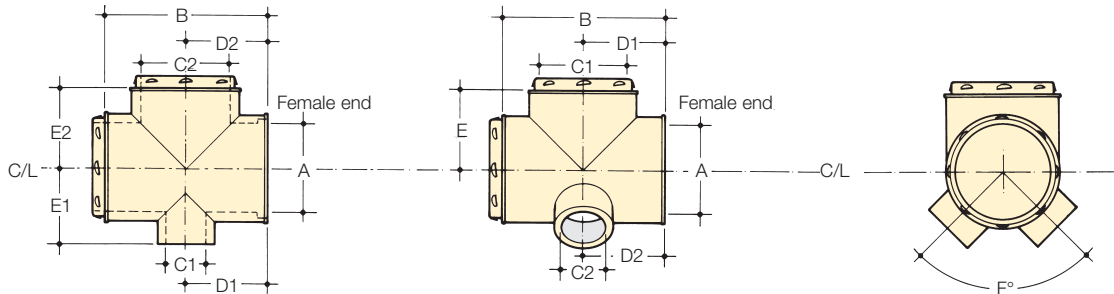
Modular Tee (One Branch)



A	B	C	D	E
Chimney Size mm	Male coupler to branch mm	Branch size mm	Body C/L to branch (installed) mm	Main Body Length (installed) mm

Modular Tee (Multi-Branch)

Typical multi-branch Modular Tees are illustrated here. When ordering these components, please provide a fully dimensioned sketch or drawing which provides the following information and which includes the dimensions indicated.



- | | |
|--|---|
| <p>A Main pipe size (vent internal diameter).</p> <p>B Installed length of main body.</p> <p>C Branch pipe size (vent internal diameter).</p> | <p>D Branch centre location from female end.</p> <p>E Length of branch from body axis C/L.</p> <p>F Angle between branches if not 90°.</p> |
|--|---|

ORDER REFERENCE No. (If applicable) _____

DATE / /

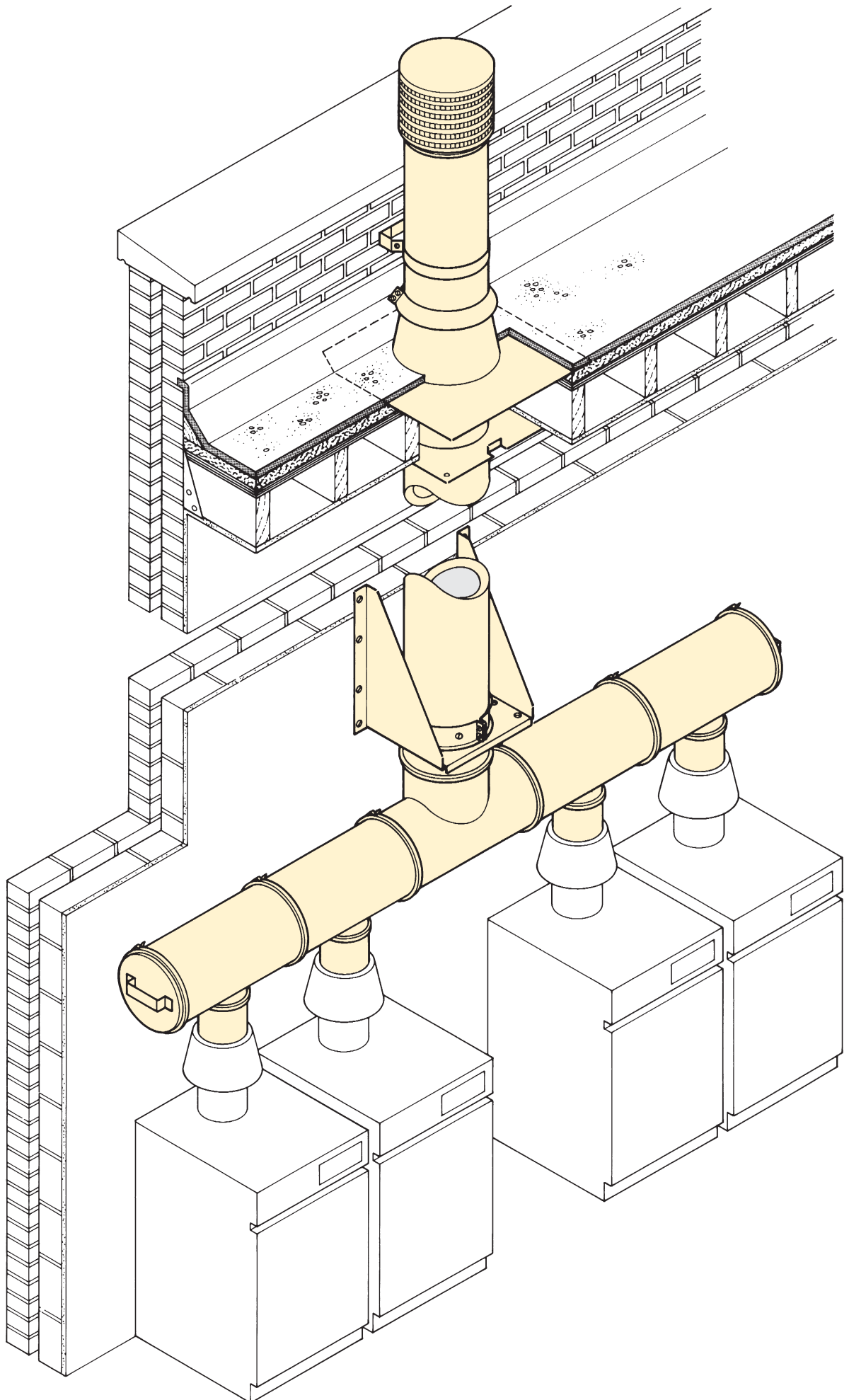
CUSTOMER _____

CONTACT _____

TELEPHONE No. _____

FAX No. _____

TYPICAL MANIFOLD / HEADER APPLICATION



INSTALLATION INSTRUCTIONS

GENERAL

1.1 The QC Gas Vent Chimney System must only be used for natural draught / gravity flow gas fired equipment where the flue gas temperature does not exceed 250°C and where the appliance is fitted with a draught diverter/hood. The System can be used for single or multiple appliance arrangements and with the exception of termination, should be applied internally.

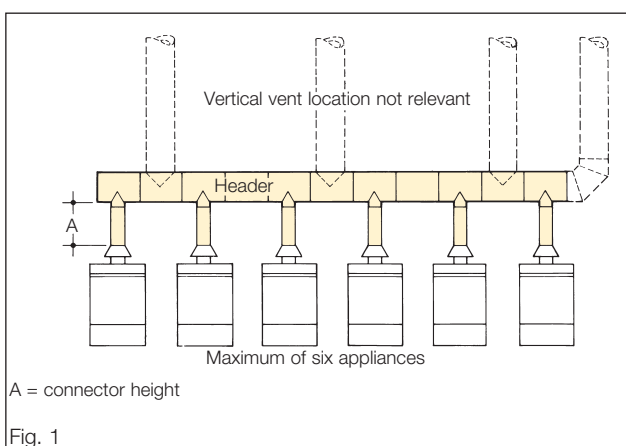
(Up to 3m of QC can be applied externally). For longer external runs, SMW can be used to connect from QC without adaptors. Under **NO** circumstances should QC be used on condensing or positive pressure appliances.

1.2 When used to service equipment where the appliance rating exceeds 150kW input, due regard must be taken of the discharge requirements which apply to ALL chimney types as dictated by the Clean Air Act Memorandum, Chimney Heights 3rd Edition 1956.

1.3 The flue system must comply with the minimum requirements of the appliance manufacturer. The internal diameter of the system should not be less than the flue gas exit spigot of the appliance. In any event, the chimney size and configuration should be calculated to safely evacuate all products of combustion. SFL can provide appropriate sizing and installation advice.

1.4 In addition to these instructions and of those provided by the appliance manufacturer, the requirements of the International Institution of gas Engineers and Managers, "IM/11 – Installation of gas appliances in industrial and commercial premises", should be met. Also reference to BS6644: 2005 Installation of gas fired hot water boilers of rated inputs between 70Kw (net) and 1.8MW (Net).

1.5 Where QC is used to provide a configuration such as the application shown on page 9, the maximum number of appliances that can be connected to any header configuration, **MUST** not exceed 6. The minimum height of the "connector" between the appliance and the "header" should be not less than 500mm. In some cases, appliance manufacturers will require a greater height. If the minimum connector height is ignored, the system is unlikely to operate. See Fig. 1. Unless otherwise stated by the appliance manufacturer, the chimney should be sized to the requirements of BS EN 13384-1 for single appliances or BS 13384-2 for multi inlet appliances as shown below or using other methods as offered on page 3.



1.6 Chimney route

Any change of direction in the chimney will create resistance to the flue gas movement. It is therefore desirable to keep the number of elbows and fittings to a minimum. Other than the header, horizontal runs should be avoided.

1.7 Clearance from combustible materials

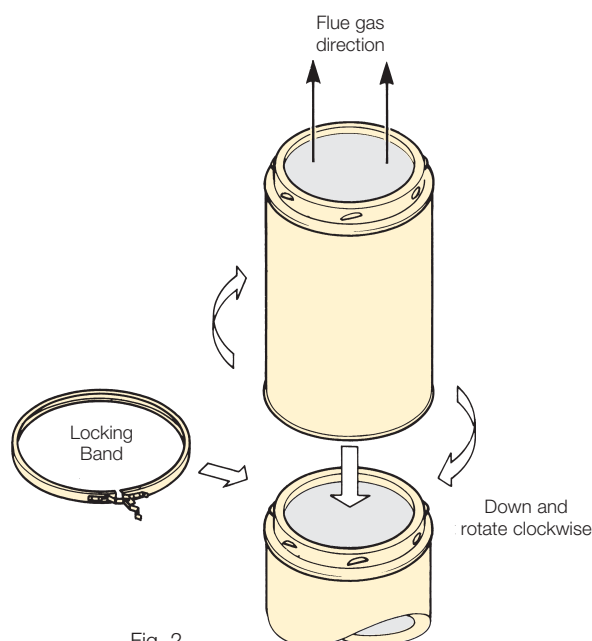
An air-gap clearance of not less than 50mm must be maintained from any combustible material.

INSTALLATION PROCEDURE

2.1 Each chimney section and associated fitting shall be used as manufactured for assembly on site without any alteration or cutting. The only exception is the Adjustable Length, which can be cut to a suitable length if it is too long as supplied, and the Draught Hood Connector, which can be cut to fit individual appliance spigots.

2.2 Jointing

Sections and components are easily secured together with an eighth of a turn twist-lock action, which provides a sturdy and neat joint. Make sure that the elements are installed the right way up, with the male coupler uppermost, ie downstream of the appliance. See Fig. 2. Each joint **MUST** be finished with a Locking Band. Where components are required to be secured to the outer case, **DO NOT USE SELF-TAPPING SCREWS LONGER THAN 15mm, OR ANY FIXING THAT WILL PENETRATE THE INNER LINER.**



2.3 Connection to the appliance

Always use the draught hood connector. The inner liner must be fitted inside the appliance outlet and can be cut to fit.

2.4 Adjustable Length

There are two versions. Those for diameters 178mm-355mm telescope over the preceding fitting and are secured with self-tapping screws provided. For diameters of 400mm-600mm, the sliding section, which is split at the seam, slides over the preceding fitting and is secured with a separate band. The Adjustable Length should engage onto the preceding fitting a distance equal to at least half the diameter of the product used, however where carefully trimmed to length, which may be necessary if connected to a Tee or Elbow, the overlap should use as much engagement as possible, and be firmly secured at each end. This component **MUST** not load bear.

2.5 Tees

These may be used at the base of the chimney, either singly, or in multiples for header configurations. Locking Plugs can be used to permit inspection and/or cleaning.

2.6 Elbows

Elbows do not have locating barbs on the female coupler, so that alignment is infinitely adjustable. The Elbows can also be used singly or in pairs to form offsets. See Fig. 3. Offsets should always be braced top and bottom to prevent lateral movement using suitable fixings such as Wall Bands.

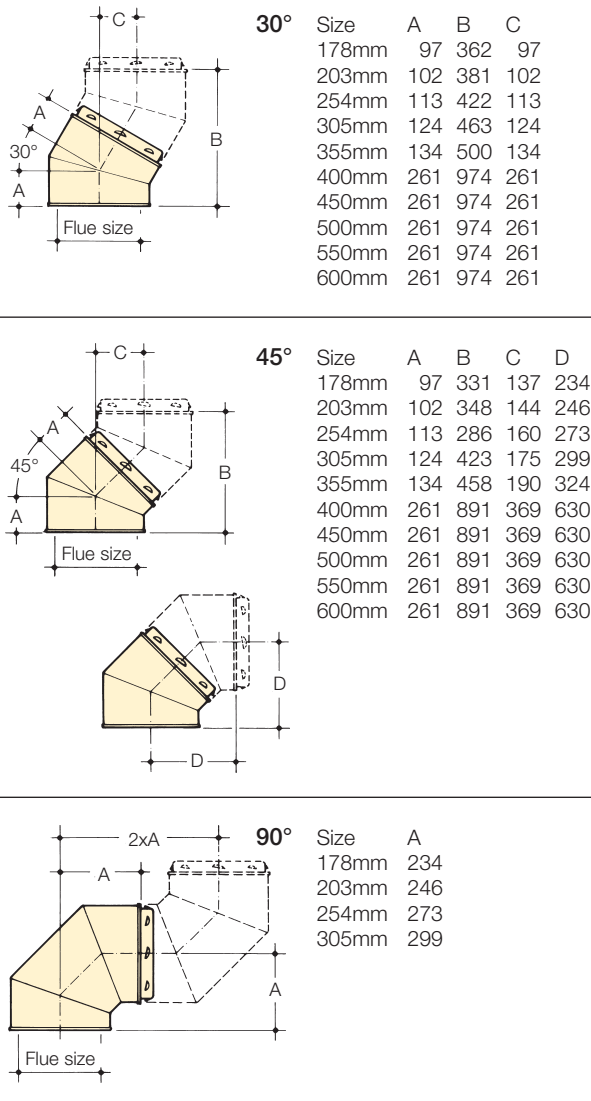


Fig. 3

2.7 Support

Only those items within the QC catalogue can be used to support the system. Wall supports, Wall Bands or Support Plates must be located at intervals as detailed within this literature. The length of chimney extending past the point of final support, MUST NOT exceed 1.5m. Where an application requires a higher termination, suitable rigid bracing must be applied.

2.8 Floor penetration

Where the vent passes through a horizontal internal structure into a separate compartment, the penetration point should be fire-stopped. Use the Firestop Spacer on both sides of the penetration, making sure that there is an air-gap of 50mm clearance to any combustible material. If the vent has to be load borne at the penetration, use a Support Plate instead of the upper Firestop Spacer. Make sure that fixings of sufficient strength are used to ensure an adequate and secure attachment to the structure. The heavy duty plate is provided with a Support Collar which must be secured to the outer skin of the QC with self-tapping screws through the 3mm holes provided. Diameters 178mm to 355mm must be secured with 4 self-tapping screws, and larger diameters, with 8 self-tapping screws. The screws are provided. See Fig. 4. The maximum height of chimney that the Support Plate can carry is 18m.

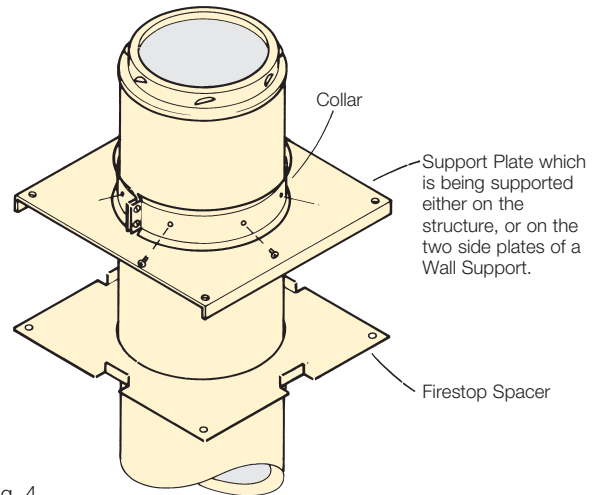


Fig. 4

2.9 Wall Support

This component consists of two side plates, a Support Plate and a flanged Support Collar. The Assembly can be fitted with the side plates above or below the Support Plate using the fixings provided. Secure the Support Collar to the outer skin of the QC as described in the previous paragraphs. Make sure that the fixings are of sufficient strength to ensure an adequate and secure attachment to the structure. The maximum height of chimney supported by the Wall Support **MUST** not exceed 18m, including any suspended lengths.

2.10 Wall Bands

These are designed to provide lateral bracing and do not load bear. Locate at intervals not exceeding 3m, using fixings which provide adequate attachment to the structure. Where QC installed externally, the stainless steel Wall Bands should be used.

2.11 Roof penetration

All three types of available flashing should be positioned over the QC vent and be secured and flashed to the roof surface as appropriate. Fix the Storm Collar over the flashing, and seal the joint with the silicone sealant provided. Do not rely upon the flashing to provide lateral support where it exits the roof structure; use an appropriately located Support. NB. If a lead flashing is used, make sure that the seal is thoroughly made so that the risk of moisture influenced corrosion cannot occur where the lead touches the QC outer skin.

2.12 Termination

Use only the QC Gas Vent Terminal, Rain Cap or Top Stub to terminate the QC system. The height of the chimney will be determined by a combination of operating requirements, the location of the terminal relative to surrounding structures, and the Requirement of the Clean Air Act, where appropriate. Generally, the terminal should always be at least 1m above both the roof penetration point, and/or any surrounding structure within 2.5m of the chimney, as per BS 6644. Where the boiler plant input, (not the individual boilers), exceeds 150kW, the position of the gas vent discharge **MUST**, (as with any type of chimney), comply with the provisions of the Clean Air Act.

2.13 Weathering

The QC Gas Vent Chimney System is constructed of materials which are weather resistant. However, it is strongly recommended that any galvanised support components that are externally applied, are thoroughly protected by painting or a suitable alternative.

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



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