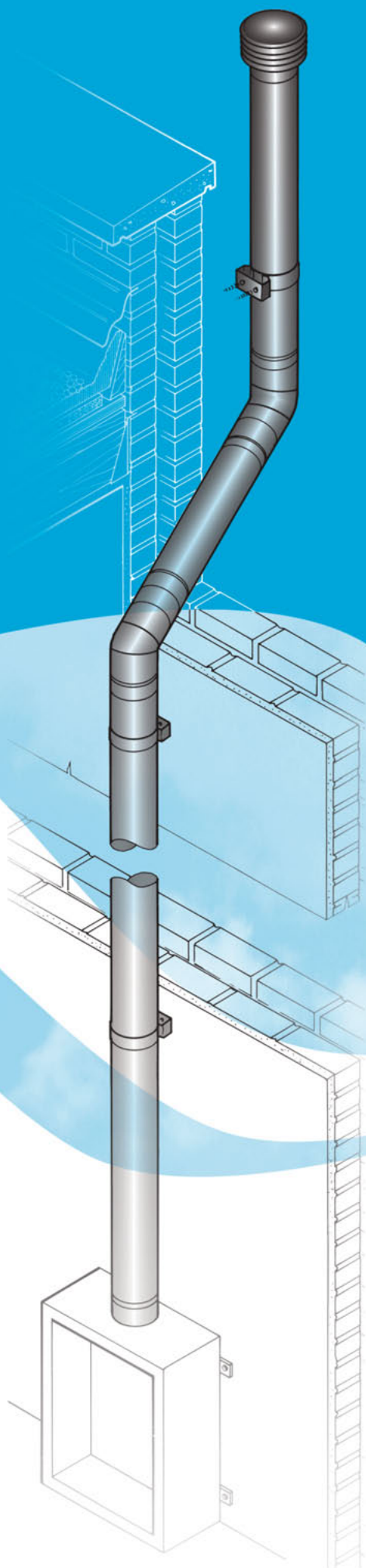


IL

Twin wall  
Air gap insulated  
Zalutite & Aluminium  
Residential  
Gas vent system



## PRODUCT INFORMATION

### INTRODUCTION

IL is a factory-made twin-wall gas vent system comprising a range of straight pipe lengths and associated fittings and accessories. It is constructed with an aluminium liner protected by an outer casing of Zalutite.

An air gap between the outer casing and the inner lining insulates the vent and thus ensures a strong draft at the start of firing to minimise condensation. The resulting low external temperature under operating conditions permits installation with only 50mm (2in) clearance to combustible materials.

Lengths and fittings lock together positively to provide a strong rigid flue system and to ensure maximum ease of site assembly. Available in three diameters from 100mm to 150mm (4in to 6in).

The IL gas vent is suitable for gas appliances, typically in domestic or small commercial installations, with draught-hoods or with a flue gas temperature not exceeding 250°C and zero or negative pressure in the flue.

If the gas appliance is of the Vertex type, do NOT use this system. BS 5440: Part 1, now requires such systems to be served with a stainless steel flue, such as the Supra System.

The IL gas vent system can be used to serve gas fired water heaters in Caravan Holiday Homes. A separate leaflet is available on request.

**Note: The system is unsuitable for Decorative gas fires, unless they are manufactured to comply with BS 7977-1, or have specific flue diameter/type references in their respective approval documentation.**

### Authority

The IL gas vent system must be installed to comply with the requirements of BS 5440 Part 1. Code of practice for flues and air supply for gas appliances of rated input not exceeding 70kW, the requirements of Approved Document J of the D.O.E. Building Regulations and Section F of The Building Standards (Scotland) Regulations.

### Quality/Approvals

The IL product is manufactured and certified to BS EN 1856-1 and tested to BS EN 1859 to the performance designations as defined in Table A. Products unless otherwise stated are CE certified under our FPC Certificate 0086-CDP-496040.



All components are manufactured under a Quality Assurance Scheme, certificate No. FM01079, administered by British Standards in accordance with BS EN 9001:2000. In addition, SFL operates a CE approved Factory Production Control System as required under the Constructions Products Directive 93/68/EEC.

## DESCRIPTION

### Composition and manufacture

All lengths and fittings are available with the outer casing fabricated from Zalutite. The flue liner is aluminium. Vertical seams are rolled and securely locked. The inner and outer casing are joined at one end only and a 6mm (1/4in) air gap is incorporated: the inner liner is thus free to expand as the temperature changes in the vent.

### Size range

The system comprises three diameters to provide for appliances rated up to 75kW (63,000kcal/h, 250,000Btu/h). Unless otherwise stated, all fittings and accessories are available in the three sizes.

### Table A - IL Product Designations To BS EN 1856-1

Cert. No: 0086-CPD-496040	IL	BS EN 1856-1	T250	N1	D	Vm	L11030	0(50)
Product	[Diagram showing connections from IL to T250, N1, D, Vm, L11030, 0(50)]							
Standard Number	[Diagram showing connections from BS EN 1856-1 to T250, N1, D, Vm, L11030, 0(50)]							
Temperature Class	[Diagram showing connections from T250 to N1, D, Vm, L11030, 0(50)]							
Pressure Class	[Diagram showing connections from N1 to D, Vm, L11030, 0(50)]							
Condense Resistance D=Dry W=Wet	[Diagram showing connections from D to Vm, L11030, 0(50)]							
Corrosion Class	[Diagram showing connections from Vm to L11030, 0(50)]							
Material Specification Liner: EN AW - 1200A Aluminium Liner Thickness: 0.3mm	[Diagram showing connections from L11030 to 0(50)]							
Sootfire Resistance G=Yes O=No	[Diagram showing connections from 0(50)]							

### INSTALLATION

Installation instructions will be found on pages 6 & 7 and are provided with Terminals, Ridge Tile Adaptors, Draughthood Connectors and Flue Gas Boxes.

### Jointing

All lengths and fittings are designed to be installed with the male coupling uppermost. The female swaged coupling of the next component is simply pushed into place and twisted to provide a firm and secure connection by a simple locking device. See fig 2 on page 6.

### Supports and clearance from combustibles

Wall bands are available in the full range of sizes to suit the vents and, for wall-fixed installations should be used at 3m (10ft) centres. The bands give a nominal 50mm (2in) clearance to the wall and provide lateral stability.

**Note: Where the Gas Vent extends more than 1 metre above last support, (excluding the terminal), it MUST be braced.**

A Support Plate is available which, together with the Flanged Collar, provides support for the vent at floor penetrations. The heavy Support Plate is fixed on top of the floor joists or slab and the Flanged Collar is clamped around the vent. The flange rests on the plate. A Firestop Plate is used on the underside of the ceiling penetration. Both components provide a 50mm (2in) minimum required air gap clearance from combustibles.

The maximum height of vent that can be supported is 18m (60ft).

### Lengths of vent

Five lengths are available from 152mm to 1524mm (6in to 5ft) and these may be used in combination to make-up the required height. The installed length of each unit is 38mm (1 1/2in) less than the overall length.

In addition, two adjustable lengths are available to provide sufficient flexibility to obtain an exact required height of vent. These units telescope over any standard length to permit extension from 75mm to 356mm (3in to 14in) for the 457 (18in) unit and 75mm to 203mm (3in to 8in) for the 305mm (12in) unit.

### Roof penetrations

Flat and Adjustable Flashings of sheet aluminium are available to provide suitable weather cover where the vent penetrates a roof.

The Flat Flashing is suitable for flat or nearly-flat roofs. The adjustable flashings are suitable for pitches from nearly-flat to 45°. The Adjustable Flashings are available to order with a malleable base for shaped tile flashing.

**INSTALLATION**

Aluminium Storm Collars are provided separately from Flashings and should be fitted to the vent immediately above the Flashing. The Collars are a tight fit to the vent and should be sealed with the silicone sealant provided. Seldek Flashings are also ideal for the IL Gas Vent system. See separate literature.

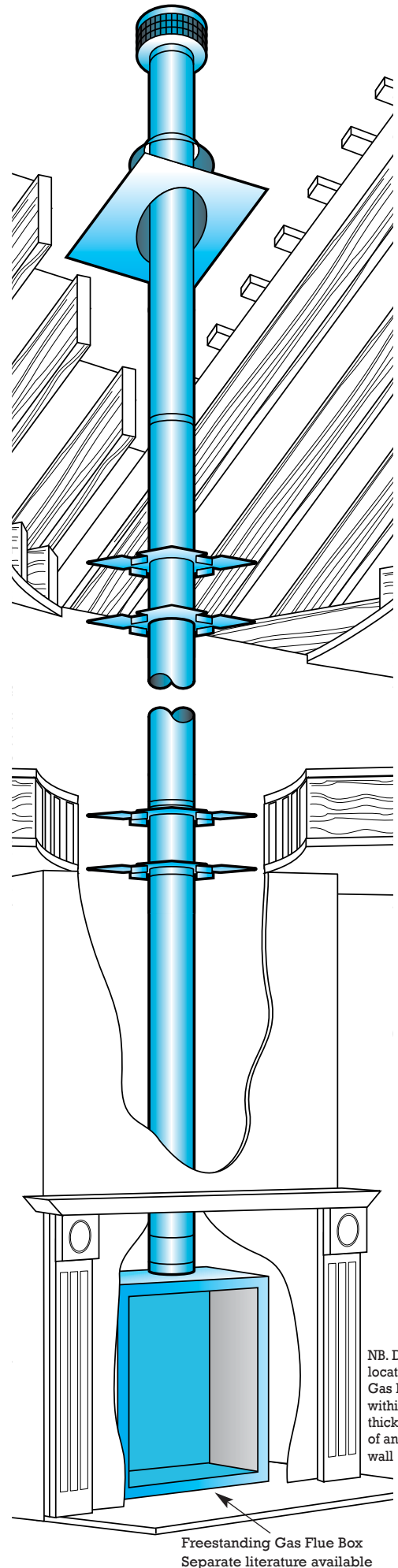
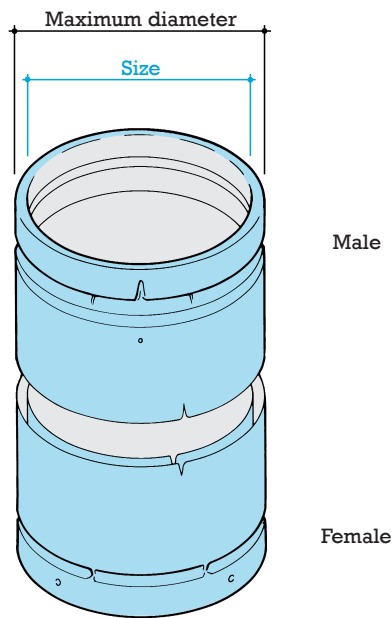
**Note: If a lead flashing is used, make sure that the seal is thoroughly made so that the risk of moisture influenced corrosion cannot occur where the lead touches the outer skin of IL Gas Vent.**

**Terminations**

Terminating components include Ridge Tile Adaptor and a fabricated aluminium Gas Vent Terminal. Terminals have been designed for effective exclusion of rainwater while permitting rapid exit of gases.

**PRINCIPAL DIMENSIONS**

Size (internal diameter)	Maximum outside diameter
100mm (4in)	114mm (4 1/2in)
125mm (5in)	140mm (5 1/2in)
150mm (6in)	165mm (6 1/2in)



**LENGTHS**

**Straight Lengths**

Fixed straight lengths are available in five sizes: 152mm, 305mm, 457mm, 914mm and 1524mm (6in, 12in, 18in, 36in and 60in). Installed effective length is 38mm (1<sup>1</sup>/<sub>2</sub>in) less than stated actual length.

152mm (6in) lengths

Size	Code number
100mm 4in	21304
125mm 5in	21305
150mm 6in	21306

305mm (12in) lengths

Size	Code number
100mm 4in	21204
125mm 5in	21205
150mm 6in	21206

457mm (18in) lengths

Size	Code number
100mm 4in	21104
125mm 5in	21105
150mm 6in	21106

914mm (36in) lengths

Size	Code number
100mm 4in	20304
125mm 5in	20305
150mm 6in	20306

1524mm (60in) lengths

Size	Code number
100mm 4in	20104
125mm 5in	20105
150mm 6in	20106

**Adjustable Lengths**

Available in two sizes to ensure that an exact required vent length can be obtained.

305mm (12in) adjustable length

Size	Code number
100mm 4in	21504
125mm 5in	21505
150mm 6in	21506

457mm (18in) adjustable length

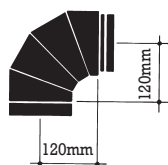
Size	Code number
100mm 4in	21604
125mm 5in	21605
150mm 6in	21606

**FITTINGS**

**Draughthood Connector**

This component *must* be used to connect the system to an appliance spigot and also where the system is connected to a Transfer or Adaptor block for a BS 1289 Flue Block system. It cannot be used as a substitute for the Adaptor to Flue Liner.

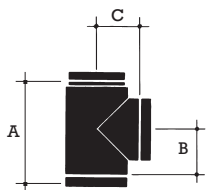
Size	Code number
100mm 4in	29304
125mm 5in	29305
150mm 6in	29306



**90° Adjustable Elbow**

Provides variable angles or offset to be made but must not be used to exceed 45° from the vertical.

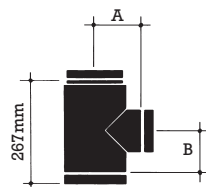
Size	Code number
100mm 4in	22104
125mm 5in	22105
150mm 6in	22106



**Equal Tee**

A Tee cap is supplied.

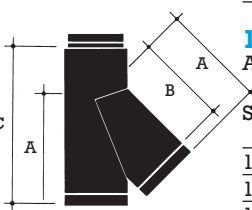
Size	Dimensions			Code number
	A	B	C	
100mm 4in	210	83	102	24304
125mm 5in	241	96	102	24305
150mm 6in	267	102	108	24306



**Reducing Tee**

A Tee cap is available; it is not normally included unless specified.

Size	Dimensions		Code number
	Branch	A B	
125mm 5in 100mm 4in	79	83	25801
150mm 6in 125mm 5in	100	96	25803
150mm 6in 100mm 4in	108	102	25802



**135° Tee**

A Tee cap is supplied.

Size	Dimensions			Code number
	A	B	C	
100mm 4in	285	247	419	24404
125mm 5in	285	247	419	24405
150mm 6in	315	277	419	24406

**Tee Cap**

Size	Code number
100mm 4in	05304
125mm 5in	05305
150mm 6in	05306

**Disconnecter Section**

Located immediately above the Appliance Connector, this component provides maintenance access without disturbing the flue system.

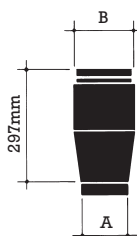
Size	Code number
100mm 4in	20804
125mm 5in	20805
150mm 6in	20806



**Increases**

Size	Dimensions		Code number*
	A	B	
100mm x 125mm	4x5in	28101	
100mm x 150mm	4x6in	28102	
125mm x 150mm	5x6in	28115	

\*size should also be specified when ordering



**76mm to 100mm Connectors**

Smaller end is straight connector for 75mm (3in) appliance spigot.

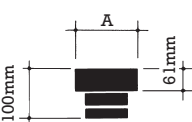
Size	Code number
76mm x 100mm	3x4in 28304



**Adaptor to flexible flue liner**

Lower end of this all aluminium component connects to standard product, upper end fits over fibre cement flue liner. Also used to connect to flexible flue liner.

Size	Dimension	Code number
	A	
100mm 4in	115	71604
125mm 5in	144	71605
150mm 6in	169	71606



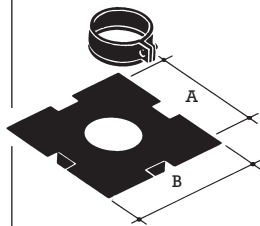


### Flexible liner to IL Connector

Designed to be secured into the top of a stainless steel flexible flue liner at the point where the liner exits an existing masonry, or similar chimney. Connection would normally be in the roof space, and the IL Gas Vent continues to termination in the normal manner.

Size	Code number
100mm 4in	21004
125mm 5in	21005
150mm 6in	21006

## FIXINGS & SUPPORTS

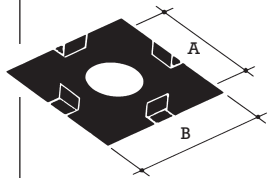


### Support Plate

Used to support vents at floor penetrations in conjunction with the Support Flange (supplied).

Size	Dimensions		Code number
	A*	B**	
100mm 4in	224	254	03204
125mm 5in	249	304	03205
150mm 6in	270	304	03206

\*framing spacing  
\*\*overall size of square plate



### Firestop Spacer

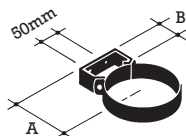
Used at floor or ceiling penetration or in conjunction with the Support Plate to maintain the required clearance to combustible materials.

Size	Dimensions		Code number
	A*	B**	
100mm 4in	224	254	08704
125mm 5in	249	304	08705
150mm 6in	270	304	08706

\*framing spacing  
\*\*overall size of square plate

### Wall Band

Use at intervals not exceeding 3m to provide lateral support. If used externally, the galvanised component will require suitable weather protection.

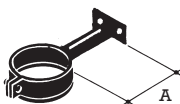


securing holes are 7mm diameter

Size	Dimensions		Code number
	A	B	
100mm 4in	109	52	28804
125mm 5in	126	56	28805
150mm 6in	140	58	28806

### Stand-Off Wall Bracket

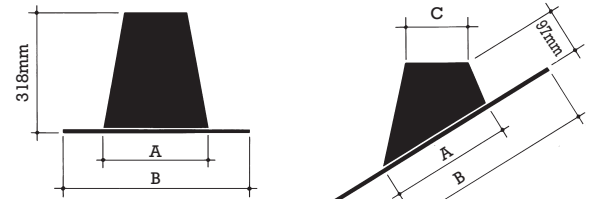
Made from galvanised steel, this component is designed to provide internal lateral bracing support off a wall or structure. The strut can be cut to length to provide variation in wall clearance.



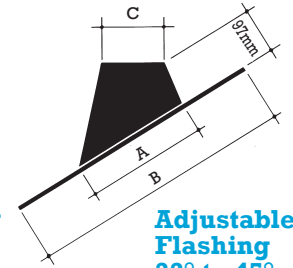
Size	Dimensions		Code number
	A max	A min	
100mm 4in	238	80	29804
125mm 5in	240	80	29805
150mm 6in	237	80	29806

## FLASHINGS & TERMINALS

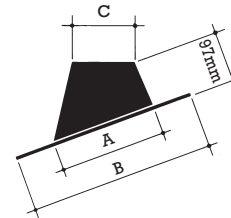
**Note:** Flashings and Storm Collars (with sealant supplied) must be ordered separately.



Tall-Cone Flat Flashing



Adjustable Flashing 32° to 45°



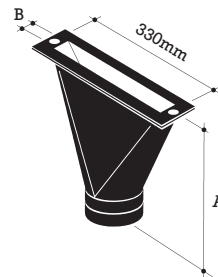
Adjustable Flashing 5° to 30°



Storm Collar

To find the appropriate component, combine the Family, Pitch and Identifier Codes to obtain the Part Order Code. Eg: Storm Collar for 125mm IL is 70-1234-03: Part Order Code is 70123403.

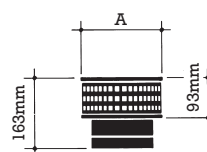
Family Code	Pitch Code	Identifier Code	Product	A	B(sq)	C(diam)
<b>STORM COLLAR</b>						
70	1234	02	100mm IL	-	-	-
70	1234	03	125mm IL	-	-	-
70	1234	08	150mm IL	-	-	-
<b>FLAT FLASHING</b>						
70	0000	02	100mm IL	190	495	-
70	0000	03	125mm IL	190	495	-
70	0000	08	150mm IL	279	495	-
<b>5° - 30° FLASHING</b>						
70	0530	02	100mm IL	200	495	120
70	0530	03	125mm IL	238	495	145
70	0530	08	150mm IL	279	495	171
<b>32° - 45° FLASHING</b>						
70	3245	02	100mm IL	277	660	120
70	3245	03	125mm IL	308	660	145
70	3245	08	150mm IL	362	660	171



### Ridge Tile Adaptor

Designed to be used with any approved ridge tile vent.

Size	Dimensions	Code number
	A B	
Fabricated aluminium:		
100mm 4in	285 45	01804
125mm 5in	305 45	01805



### Gas Vent Terminal

Fabricated aluminium.

Size	Dimension	Code number
	A dia	
100mm 4in	184	07304
125mm 5in	211	07305
150mm 6in	238	07306



GENERAL

**THE IL GAS VENT SYSTEM, WITH THE EXCEPTION OF THE DRAUGHTHOOD CONNECTOR AND THE ADJUSTABLE LENGTH, MUST NOT BE CUT, DRILLED OR ALTERED IN ANY WAY.**

**1 MANDATORY REQUIREMENTS**

Building Regulations and BS 5440 Part 1 stipulate the minimum criteria for all types of chimney systems serving gas fired appliances. These instructions embody appropriate requirements.

**2 LOCATION**

IL GAS VENT has an aluminium liner and a ZaluTite outer skin, and can be applied both internally and externally. However, care should be taken to site the chimney so that it is not excessively cooled. Long external runs of Gas Vent must be avoided and where external runs exceed 3 metres, ILS must be used. ILS is an insulated venting system and is totally interchangeable with IL Gas Vent without the need for adaptors. Any galvanised components used externally should be suitably weather protected.

**3 FIXED FLUE SYSTEMS**

Where IL is used to connect to a BS 1289 Gas Flue Block system, connection into the Transfer or Adaptor block must be made with a Draughthood Connector, and the joint thoroughly sealed with a fire cement or high temperature silicone sealant. However, it is known that a badly constructed flue gas block system can result in a significant drop in flue gas temperature, such that condensation will occur. For that reason, where such systems are contemplated, it is advisable to ensure that the flue gas blocks have been correctly assembled, ie no leaks or projecting sealant/mortar into the flue way. Note that BS 5440: Part 1, prohibits the connection of some types of gas-fired appliance to gas flue block systems, unless they have been specifically assessed for such application. If in doubt, consult the appliance manufacturer, CORGI, or BS 5440.

**4 APPLICATION**

A straight and vertical flue provides the most effective evacuation of the products of combustion. Whilst the IL Gas Vent System is extremely flexible, excessive changes of direction and angles greater than 45° from the vertical in any flue system must be avoided, as they will create considerable resistance to the movement of the flue gases. **HORIZONTAL RUNS MUST NOT BE USED** whatever the configuration. Always ensure that the first section of vent rises vertically from the appliance, (or the Flue Gas Box), a distance of not less than 600mm (2ft). As a general rule, the vertical distance between the appliance and the flue terminal should always be twice the horizontal distance between the appliance and terminal. See Fig 1.

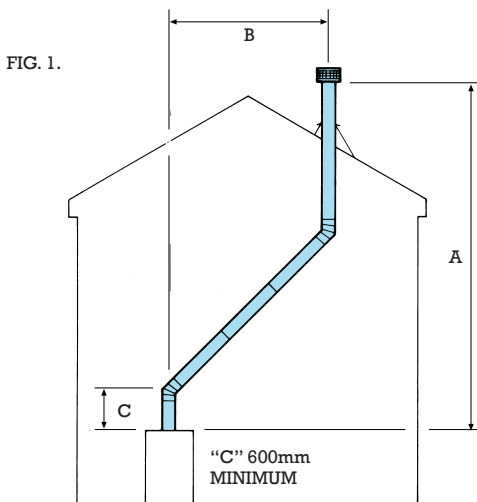


FIG. 1.

"A" should not be less than 2 x "B" or should be sized either in accordance with available Vent Tables, or the equivalent height data in BS 5440 Part 1.

**5 CLEARANCE FROM COMBUSTIBLES**

Support components provide a 50mm (2in) clearance from all combustible materials and this clearance MUST be maintained throughout the system.

**6 JOINTING COMPONENTS**

Vent pipe lengths and fittings must be installed with the male coupler upwards and female coupler downwards, fitting over the male. Make sure that the joining ends are round and undamaged, if any component is out of round, hand manipulation to correct the shape is recommended before attempting to fit the components.

To assemble the components, line up the three dimples on the male and female couplers, push the lengths together and turn to lock firmly. See Fig 2.

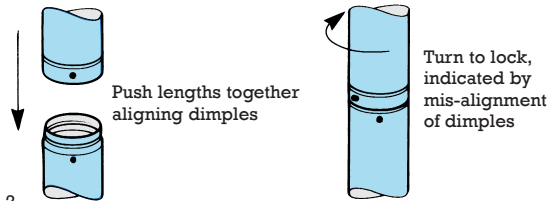


FIG. 2.

NB: For clarity the dimples are illustrated larger than actual size.

**7 CONNECTING TO THE APPLIANCE**

Always use a Draughthood Connector to connect the IL system to the appliance spigot or draughthood. The inner lining must be fitted inside, but NOT project below the spigot/outlet and can be cut to an appropriate length.

**8 CONNECTING TO THE APPLIANCE - Gas Flue Boxes**

Freestanding and Recessed Gas Flue Boxes accept a straight connection **WITHOUT A DRAUGHTHOOD CONNECTOR**. The Back Boiler Flue Box requires a Draughthood Connector to be attached to a straight length and passes through the hole in the top of the Box and into the boiler draughthood spigot. Both joints should be sealed with fire cement. **Handling** - The product is relatively easy to handle, but care should be taken when holding, fitting or assembling any part of the system. Users are advised to take suitable precautions, gloves etc., to avoid injury on any sharp exposed edges.

COMPONENT APPLICATION

**9 DISCONNECTOR SECTION**

This component may be used close to the appliance, preferably immediately above the Draught Hood Connector. Unclipping the lock band, will permit removal of the gas appliance without dismantling the remainder of the flue system.

**10 ADJUSTABLE LENGTHS**

These provide flexibility in the height or length of a vent run and allow for adjustment between two fixed points. Position the Adjustable Length over the top (male) of a straight length and adjust to the required dimension. Position the separate band towards end of the component and tighten the fixing.

**11 TEES**

These may be used at the base of the vent configuration, (with a Tee Cap in the base or branch), so as to provide access for inspection or cleaning.

**12 ELBOWS**

The Adjustable Elbow can be used to form variable angles and Fig 4 is for demonstration purposes as the elbow must not be used to set an angle of more than 45° measured from the vertical. Angles can be set by manipulating the segments. Elbows are usually used in pairs or singly to create an offset as shown.

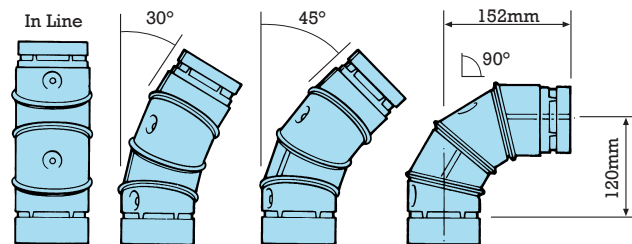


FIG. 3.

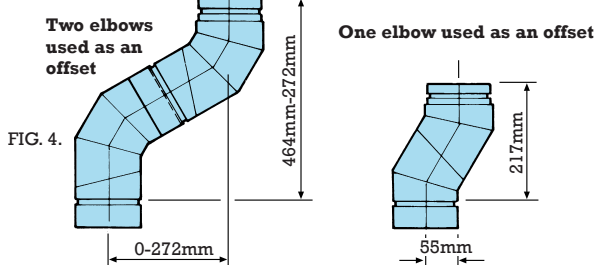


FIG. 4.

### 13 CEILING PENETRATION

Where the vent passes through a floor or ceiling without support, a Firestop Spacer must be used on both sides of the penetration to provide a barrier to fire and maintain a minimum 50mm (2in) air gap clearance to combustible materials. If the Gas Vent is required to be supported where it penetrates the floor/ceiling Support Plates should be applied. These square heavy gauge galvanised plates must be fixed through the corner holes on top of the floor joist or slab through which the chimney is passing. The flanged collar is clamped to the vent so that the lower flange rests on the support plate. A Firestop Spacer must be used on the underside of the opening at ceiling level. The **MAXIMUM** height that can be supported, including any suspended lengths, is 18m (60ft). The combination of lengths and fittings used should be such that no joint occurs within the floor space.

### 14 ADAPTOR TO FLEXIBLE FLUE LINER

This is a fitting for connecting an IL Gas Vent to a flue liner. The adaptor makes a normal joint to the top (male) of the gas vent length. The flue liner then sits in the 60mm deep socket and is secured with self tapping screws (not provided). Seal the joint with fire cement.

### 15 WALL FIXING

In addition to structural support, the IL Gas Vent system **MUST** be secured with wall bands at intervals not exceeding 3m (10ft). Use fixings which ensure adequate attachment and support.

### 16 ROOF PENETRATION

The system must be braced with a Wall Band where it passes through the roof line. Three Flashings are available for flat and pitched roofs. Tall Cone (for flat), and 5°-30° and 32°-45° (for pitched). Position the flashing over the projecting IL Vent, and flash to the tiles or slates as appropriate. Fix the Storm Collar over the Flashing and seal the joint with the silicone sealant provided. 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 outer skin. Seldek Flashings can also be used with IL Gas Vent, please refer to separate brochure for details.

### 17 TERMINATIONS

Three methods of terminating the IL Gas Vent are available:

**Gas Vent Terminal.** An aluminium terminal/cap, with a perforated sheet metal bird screen, which allows rapid exhaust of combustion products.

**18 Ridge Tile Adaptor** Used to adapt the vent to the rectangular opening or Ridge Tile Vents which exhaust the combustion products only at the apex of the roof. Separate instructions are provided with this component. See Fig 5.

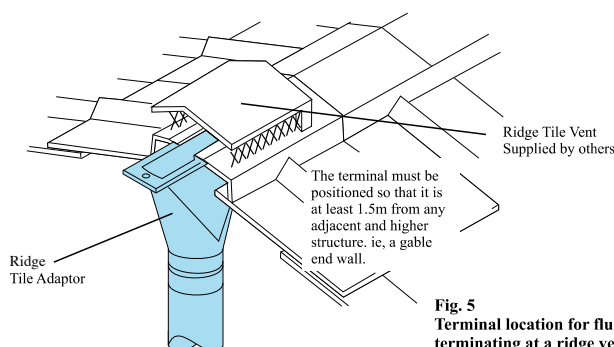
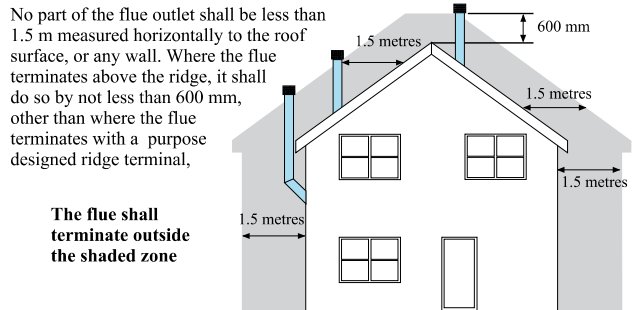


Fig. 5 Terminal location for flues terminating at a ridge vent.

### 19 TERMINAL LOCATION

Terminals should be sited to allow the products of combustion to disperse freely at all times. To avoid adverse wind or pressure effects which might impede vent flow, the termination must be correctly located in relation to the roof and any nearby structures. Building Regulations, via BS 5440, stipulate the legal requirements shown in Figs 5 to 8. NB A ridge tile vent terminal must be positioned so that it is not less than 1.5m from any adjacent structure. i.e. the gable end wall of an adjacent and higher dwelling. See Fig 5.



The flue shall terminate outside the shaded zone

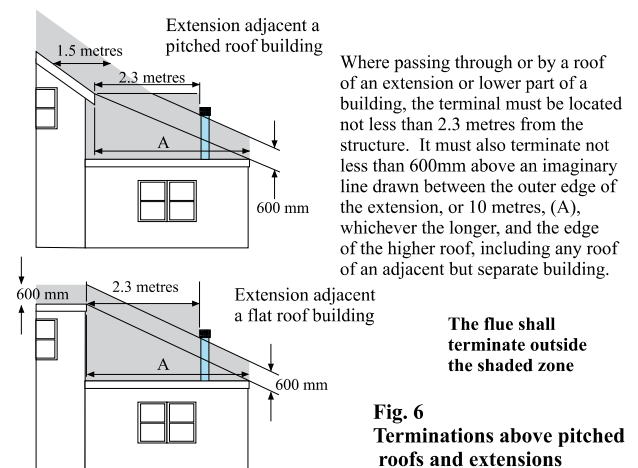


Fig. 6 Terminations above pitched roofs and extensions

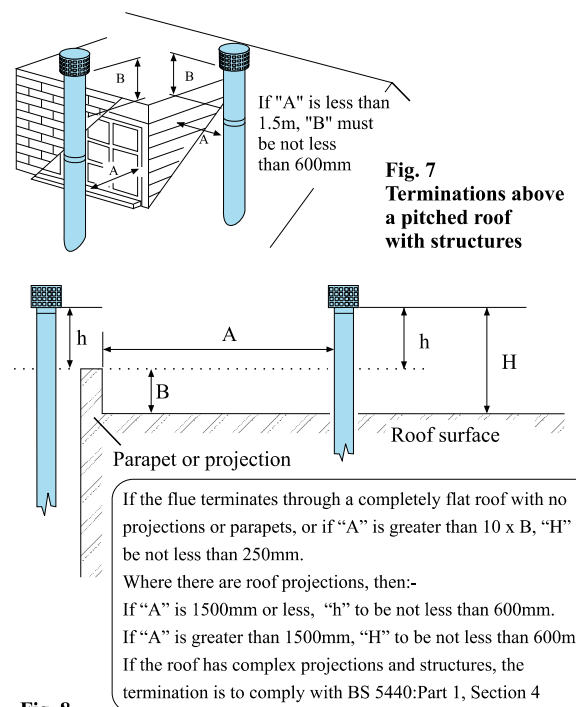


Fig. 8 Terminations above a flat roof with structures

NB. Where the system extends more than 1m, but no more than 1.5m above the last support, (excluding the terminal), joints must be braced with a Joint Support Band, Product Code 04289. If it extends more than 1.5 metres, the extension above that level must also be braced with rigid stays.

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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