

B VENT

*Twin Wall Gas Venting System
and Flue Box Range*



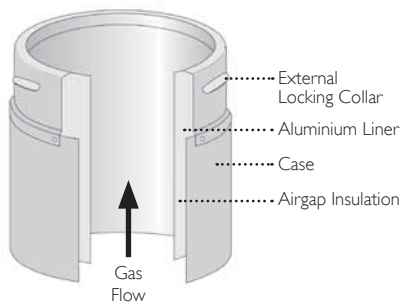
Application

Twin wall gas heating system designed for cost-effective venting of residential and small commercial atmospheric gas appliances with input up to 60kw. It is suitable for both internal and external use, either as a complete system or in combination with masonry, i.e. flue blocks or brick chimneys.

Note that BS 5440-1 requires the use of a stainless steel insulated flue on external runs exceeding 3 metres.

Eco ICID or ICS should be used for this type of application.

Product Description



- Twist-lock bayonet jointing system.
- No locking bands required.
- Aluminium inner liner and aluzink outer case which can be painted if required.
- 12.5 mm air gap between case and liner keep case temperature low.
- 0-90° adjustable bend.
- When joint is made, the liner covers the jointing collar, shielding it and permitting easy drain-down of any moisture in the flue.

FLUE SIZE SELECTION

B Vent is available in 100, 125 and 150mm internal diameters. The flue size must be as recommended by the appliance manufacturer and **must not** be reduced, and never smaller than the appliance spigot.

This information is provided as a guide only, and for exact flue sizing recommendations, refer to appliance manufacturer's installation instructions and design guide.

	100mm	125mm	150mm
Gas Central Heating Boiler (Wall hung/Freestanding)			
Input up to 25kW	•		
Input 25kW - 40kW		•	
Input 40kW - 60kW			•
Gas Fires			
Radiant to BS 7977-1		•	
Inset to BS 7977-1		•*	
Backboiler to BS 7977-2		•	
Gas Water Heaters			
Input up to 25kW	•		
Input 25kW - 55kW		•	
Input 55kW - 60kW			•
Gas Stove/Cooker (AGA/Rayburn/Stanley etc.)	•	•	•
Gas Flue Blocks			
Connection IN	•	•	
Connection OUT		•	
Gas Warm Air Unit			
Input up to 18 kW	•		
Input 18kW - 35kW		•	
Input 35kW - 60kW			•

*When the fire has been tested and relaxed to 125" the appliance manufacturer should be consulted.

FLUE ROUTING

Systems should be vertical as far as possible for most efficient evacuation and should not exceed 45° from the vertical, otherwise resistance to flue gas flow will result. Bends should be kept to a minimum and a vertical rise of 600mm minimum should be allowed for immediately above the appliance.

As a general rule, the vertical distance (A) between the appliance and the flue terminal should always be at least twice the horizontal distance (B) between the appliance and the terminal (see Fig B).

The B Vent range includes 0° - 90° fully adjustable bends which can be used where the flue system needs to be offset e.g. to avoid trusses and terminate to a ridge terminal. These bends can be rotated 360° after the angle has been set to achieve the correct direction of flue parts.

AIR SUPPLY

Provision for ventilation to supply air to the appliance must be arranged in accordance with the appliance manufacturers instructions. This is necessary to ensure correct and safe operation of the appliance and to ensure correct venting and avoid spillage of flue gases.

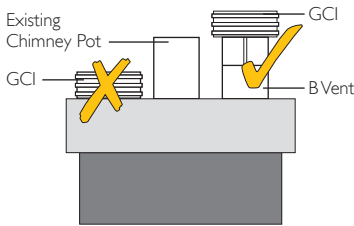
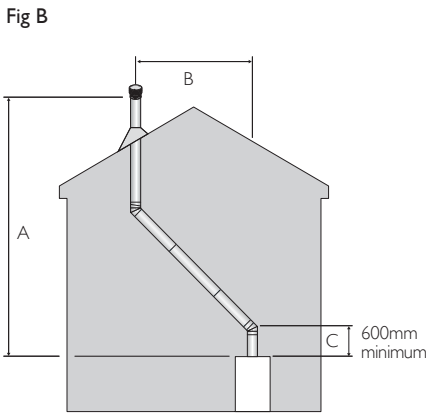
USE OF B VENT ON CONDENSING APPLIANCES

B Vent is not suitable for this application. Prima Plus and ICS Plus are the products in the Rite-Vent range specifically designed for condensing applications.

TERMINATION BESIDE EXISITNG CHIMNEY POTS

A commonly encountered situation is the need to site the termination of a gas appliance amongst chimney pots on an existing stack. The termination should be made such that the bottom of the terminal is at the same level as the top of the surrounding pots. This is to ensure maintenance of suitable draught conditions.

Schiedel Chimney Systems supply a British Gas approved Terminal extension kit for this purpose.

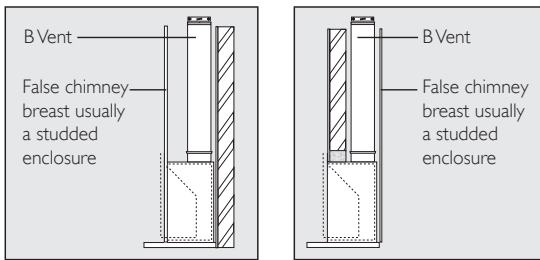


Terminal Extension Kit BVTERMEXTKIT
To comply with BS5440-1:2000 clause 5.1.6.

Fitting a gas fire where no suitable chimney exists

For rooms without a chimney a gas fire can be fitted using a flue box and a rigid twin wall chimney. B Vent is ideal for most situations, although some decorative gas fires require a larger flue in which case an ICS or Eco ICID chimney (see separate brochures) should be used.

- With the appropriate flue box the flue can be routed either in the same room or an adjoining room.
- The flue box has a twin wall construction to provide insulation and minimise the risk of condensation.



Approvals

B Vent is CE certified to EN1856-1 with the designation T250 NI DVm LI 1040 050 (certificate number 0036 CPD9195013).

System Design

OUTLET TERMINATION

Flue terminations for gas in domestic situations are governed by BS5440-1 Section 4.2. The figure alongside illustrates recommendations for the most common terminations.

Adjacent taller structures may require increased height. The minimum flue projection through the roof is 600mm to the underside of the terminal.

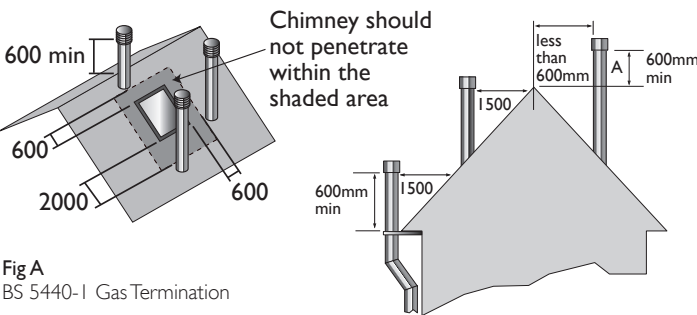


Fig A
BS 5440-1 Gas Termination

Which flue box and flue to choose

Type of Fire	Specification	Standard	Type of Flue Box	Flue Type & Size
Radiant	Safety of Domestic Gas Appliances - Specification for Gas Fires 1st, 2nd and 3rd family gases for radiant and convector radiant.	BS 7977-1 2002	Standard B Vent Recessed B Vent	125mm B Vent
Back Boiler Unit	Safety of Domestic Gas Appliances - Combined Appliances: Gas fires/Back Boiler.	BS 7977-2 2003	Back Boiler Box	125mm B Vent
Living Flame Fires	Safety of Domestic Gas Appliances - Specification for inset Live Fuel Effect Gas Fires up to 7kW.	BS 7977-1 2002	ILFE Box	180mm Conforming to BS 4543 Pt 3 can be relaxed to accept 125mm flue to BS 715 (see appliance manufacturer's installation specifications for appliance), e.g. Eco ICID, ICS or B Vent

This information is provided as a guide only. In all cases for exact flue sizing recommendations refer to the appliance manufacturer's instructions and design guide.

Flue Boxes

Standard Flue Box

Old Code 0185125
SAP Code 125096

Designed for use with radiant and decorative gas fires complying to BS 7977-1 2002. Constructed with an aluminium liner and coated steel outer case.

Recessed Flue Box

Old Code 0184125
SAP Code 125085

Designed with the spigot at the rear, for use with larger radiant and decorative gas fires, or with B Vent installed in an adjoining room to the fire. For gas fires to BS 7977-1 2002.

ILFE Flue Box

Old Code 0189125
SAP Code 125088

For use with Inset Live Fuel Effect gas fires complying to BS 7977-1 2002, with a heat output not exceeding 7kw.
Note: For fires requiring a larger flue normally 180 or 200 mm, use ICS or ICID flue boxes. See separate brochure.

Large Flue Box for Back Boiler

Old Code 0165125
SAP Code 125062

Adjustable in depth from 358mm to 480mm to accommodate a wide range of back boilers. Suitable for fires complying with BS 7977-2 2003.
Universal opening allowing connection to the boiler with B Vent or Flex.

Dimensions

The internal and external dimensions of the flue are:

Int Ømm	100	125	150
Ext Ømm	127	152	178

Starting Components

Appliance Connector Economy 1246

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	113	113	113
B	104	130	156
SAP Code	124662	125081	125801

B Vent to Flex Connector 1279

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	75	75	75
SAP Code	124675	125102	125811

Flex to B Vent Connector 1278

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124701	125133	125824

B Vent to Flue Box 0180

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	190	190	-
B	127	154	-
SAP Code	124664	125084	-

Flue Box Adaptor 0145

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	90	90	-
B	114	138	-
SAP Code	124661	125080	-

Vitreous Enamel Connector 1243

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	113	113	113
B	99	125	151
SAP Code	124660	125068	125800

Connector (IL to B Vent) 0148

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	130	95	130
SAP Code	124540	125167	125868

Connector (B Vent to IL) 0149

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	111	138	-
SAP Code	124651	125069	-

Increaser 1271

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	160	160	-
B Ømm	100	126	-
C Ømm	125	152	-
SAP Code	124666	125089	-

Pipes

1470mm Effective Length 1201

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124654	125072	125794

570mm Effective Length 1203

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124515	125039	125775

270mm Effective Length 1206

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124655	125074	125795

Telescopic Pipe 50-380mm Effective Length 1208

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124650	125066	125791

Slide over male of pipe below, tighten jubilee clip. Min. 40mm overlap. Do not use after bend or tee since insufficient overlap.

870mm Effective Length 1202

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124658	125077	125798

420mm Effective Length 1205

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124656	125075	125796

120mm Effective Length 1207

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124653	125071	125793

Telescopic Pipe 50-230mm Effective Length 1209

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124649	125065	125790

Slide over male of pipe below, tighten jubilee clip. Min. 40mm overlap. Do not use after bend or tee since insufficient overlap.

Bends

Adjustable 0° - 90° Bend 1218

Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124648	125063	125789

Rotate segments to create any angle. Bottom segment rotates, enabling exact alignment of bend.

30° Offset

45° Offset

60° Offset

90° Offset

45° Offset (using 2 bends)

Tees

90° Tee 1220

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	360	360	360
B	145	152	160
C	180	180	180
SAP Code	124657	125076	125797

135° Tee 1221

Int Ømm	100	125	150
Ext Ømm	127	152	178
A	360	360	360
B	275	275	275
C	205	225	265
SAP Code	124652	125070	125792

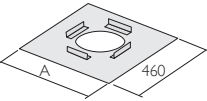
Tee Cap 1224

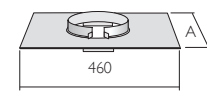
Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	124673	125100	125809

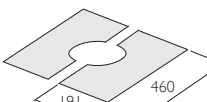
Tee Cap & Drain 0229

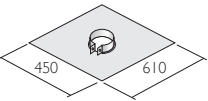
Int Ømm	100	125	150
Ext Ømm	127	152	178
SAP Code	COA	COA	COA

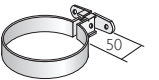
Support Components

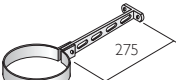
	Firestop Plate		0166		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	279	305	330	
	SAP Code	124663	125083	125802	

	Support Assembly		0160		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	279	305	330	
	SAP Code	124671	125098	125807	

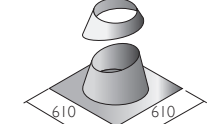
	Roof Plate (2 Piece)		0167		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124668	125093	125805	

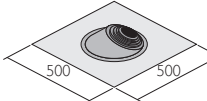
	Debris Plate		0164		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124695	125123	125819	

	Wall Band 50mm Extension		0173		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124678	125105	125814	

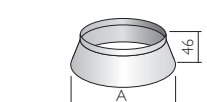
	Wall Band 275mm Adjustment		0174		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124676	125103	125812	

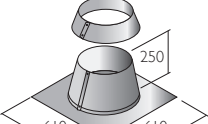
Flashings (supplied complete with Storm Collar and Sealant)

	Angled Flashing Kit 5° - 30°		0151		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124659	125079	125799	

	Uniflash 80 - 200mm		9454001		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	112198	112198	112198	

Storm Collar not required

	Storm Collar		0156		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	220	248	270	
	SAP Code	124670	125097	125806	

	Flat Flashing Kit		0152		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124672	125099	125808	



Standard Pipe



Upstand



Adjustable Pipe



Flashing

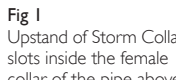


Fig 1
Upstand of Storm Collar slots inside the female collar of the pipe above

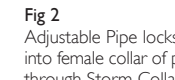
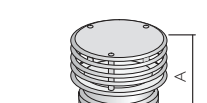


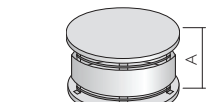
Fig 2
Adjustable Pipe locks into female collar of pipe through Storm Collar



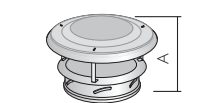
Fig 3
In situ

Terminals

	GCI		0130		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	100	100	85	
	SAP Code	124665	125086	125803	

	Anti Splash Anti Downdraught		0128		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	-	130	170	
	SAP Code	-	124997	125762	

	CVTA (Combined Vent Tile & Adaptor)		0139		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	330	330	-	
	B	380	380	-	
	C	330	330	-	
	SAP Code	124629	124998	-	

	Raincap		0133		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	A	127	150	178	
	SAP Code	124667	125091	125804	

	Ridge Tile Top		0142		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	-	130684	-	

	Ridge Tile Adaptor		0135		
	Int Ømm	100	125	150	
	Ext Ømm	127	152	178	
	SAP Code	124669	125094	-	

	Ridge Tile Adaptor Extension Box To fit apex of steeply pitched roofs.		0136		
	SAP Code		130683		

Installation

MANDATORY REQUIREMENTS

Connection to an appliance which is not connected to the fuel supply may be carried out by a competent person. However, connection to an appliance that is connected to the fuel supply **must** be carried out by a Gas Safe registered installer. The flue system must be installed to comply with Building Regulations Document J (in England, Wales and Northern Ireland) for gas appliances having a flue gas temperature of 250°C max, and the Building Regulations for Scotland. The installation must also comply with BS5440 pt 1 for gas flues up to 60 kW in the UK and IS813 Domestic Fuel Installations in Ireland.

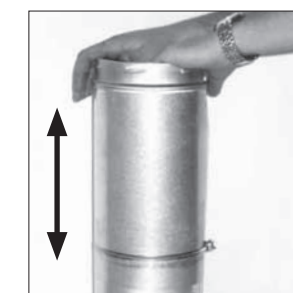
JOINTING

All pipe lengths and flue gas carrying components are joined together by a twist lock, bayonet system (see Fig.1). The system should be installed with the visible male collar pointing upwards, this is reaffirmed by the directional arrow pointing upwards, indicating the directional flow of flue gases. Taping of joints is unnecessary. B Vent is for atmospheric appliances which have negative pressure flues meaning that when the system is primed and running at normal operating temperatures, air is drawn into the flue via the joints, assisting safe evacuation of flue gases.

Fig 1



Fig 2



ADJUSTABLE LENGTH

Within the range is an adjustable length which is used to telescope over standard pipe lengths to provide the exact flue lengths required. It should not be used directly after a bend since there is insufficient overlap to insure a sound joint. A wall band must be used above an adjustable length as this component is not loadbearing - see Fig 2.

CONNECTION TO APPLIANCE/FLUEBOX

Always use an appliance connector, sealed using fibre rope and fire cement or high temperature sealant. The liner should not project below the appliance outlet spigot and can be cut to length if required.

APPLIANCE REMOVAL

Use of a pipe and an adjustable length immediately above the appliance enables removal of the appliance later without dismantling the full system.

PAINTING OF B VENT

If required to be painted, simply clean the surface with a solvent cleaner (White Spirit), apply a coat of primer and a top coat of high temperature paint e.g. enamel.

RECOMMENDED DISTANCES TO COMBUSTIBLES

In accordance with the Building Regulations, a minimum of 50mm distance to combustibles must be maintained. B Vent support components provide a 50mm clearance. At the maximum flue gas temperature of 250°C, the outer case will be in the region of 75-85°C.

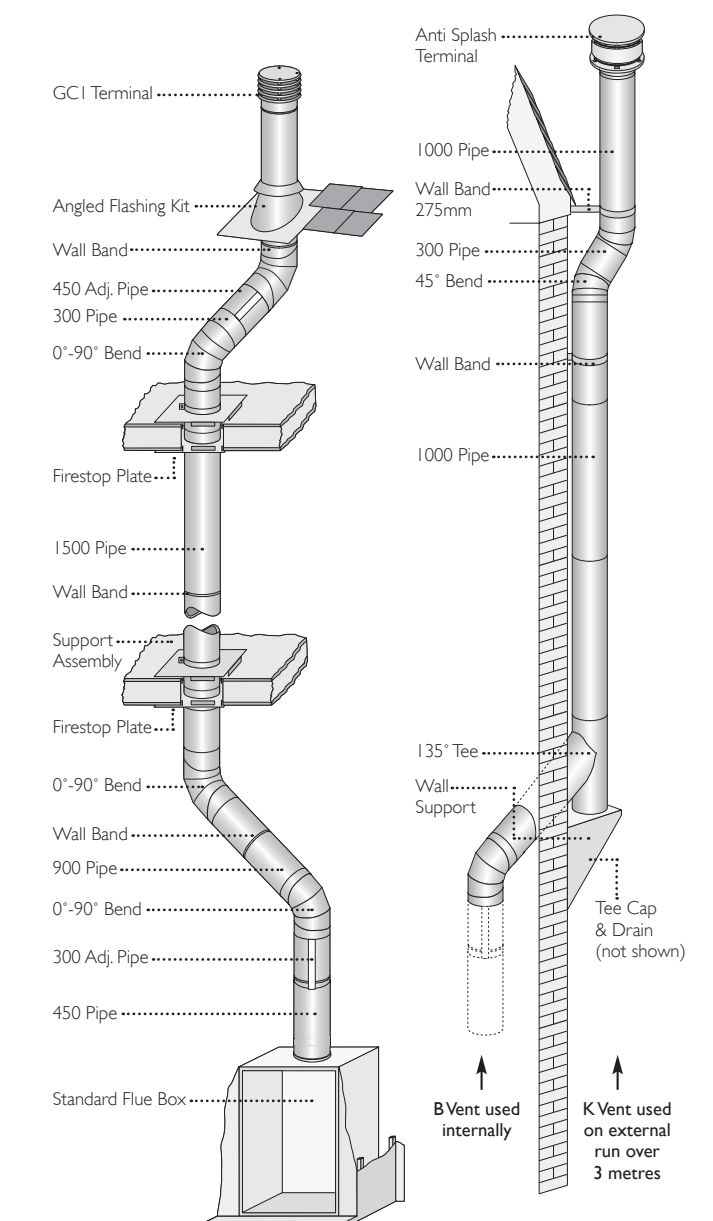
SUPPORT COMPONENTS

Internal systems should be supported by using a support assembly fixed on top of the first floor/ceiling joist. A Firestop plate is also required fixed to the ceiling below. The clamp plate and firestop have tags fixed to ensure 50mm distance to combustibles. In a normal house, when passing through the second floor the only requirement is two firestop plates because the system is adequately supported at first floor level.

Wallbands are not load bearing and give lateral support only. Wallbands should be fitted every 3m to ensure the system is rigidly held. The system should be braced with a wallband immediately below passing through the roof line to ensure the flashing does not suffer lateral pressures.

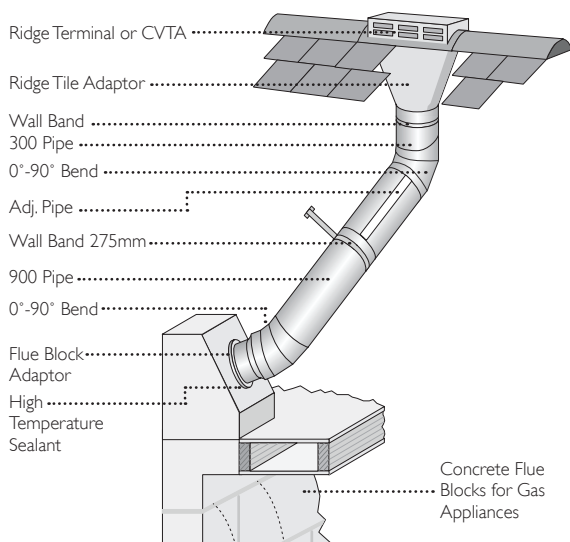
Ensure that no joint occurs within the floor space. A roof plate (2 piece) should be used on the underside of roof trusses where the system is terminated via a flashing.

The maximum height unsupported above the roof line is 1.5m. Where a joint is above the roofline it should be determined that in extreme wind conditions this joint would not be over exerted. If there is any doubt then a guy wire should be used. Beyond this guy wires should be installed every metre.



LOFT AND RIDGE CONNECTION

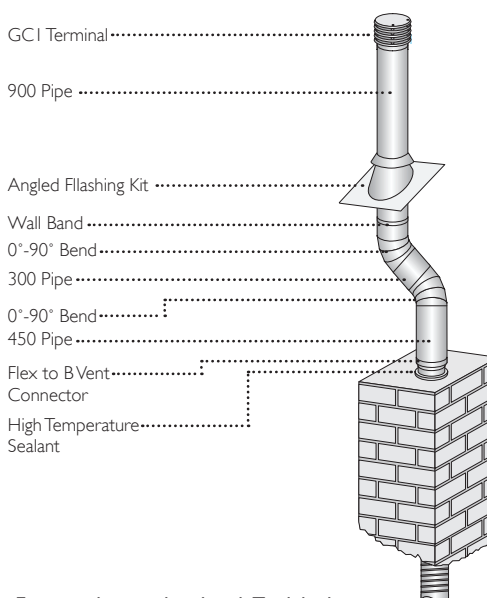
Use a flue block adaptor to start from the flue block. The connection to the ridge terminal should be sealed using a gasket (supplied on request) or high temperature sealant to provide a gas and condensate tight joint.



B Vent used on Gas Fire from top of flue blocks to Ridge Terminal

CONNECTION TO EXISTING CHIMNEY

B Vent is not for use as a chimney liner; however, it can be used to connect to and from a Triplelock flexible flue liner which may be lining an existing chimney, when used on appliances described in previous section.



Existing chimney lined with Triplelock and airspace backfilled around liner

After Installation

TESTING BEFORE USE

This is done by means of a flue flow test as described in BS EN 15287-1 parts 1 & 2 with reference to the appropriate appliance type.

MAINTENANCE

It is essential that the flue way be kept clear at all times. The system should be checked regularly during the appliance maintenance (refer appliance manufacturer's instructions).



INSTALLER HELPLINE
+44 (0) 191 416 6666

More information on www.schiedel.co.uk

Every effort is made to ensure accuracy at time of going to press. However, as part of our policy of continual product development, we reserve the right to alter specifications without prior notice. All installation drawings are graphical representations. Building regulations and relevant British standards must be adhered to.

Schiedel Chimney Systems

Crowther Estate
Washington
Tyne & Wear NE38 0AQ
Tel. +44 (0)191 416 1150
Fax. +44 (0)191 415 1263
info@schiedel.co.uk
www.schiedel.co.uk

Schiedel Chimney Systems

Washingbay Road
Coalisland
Co. Tyrone BT71 4ND
Tel. +44 (0)28 8774 0436
Fax. +44 (0)28 8774 7430
info@schiedel.co.uk
www.schiedel.co.uk

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