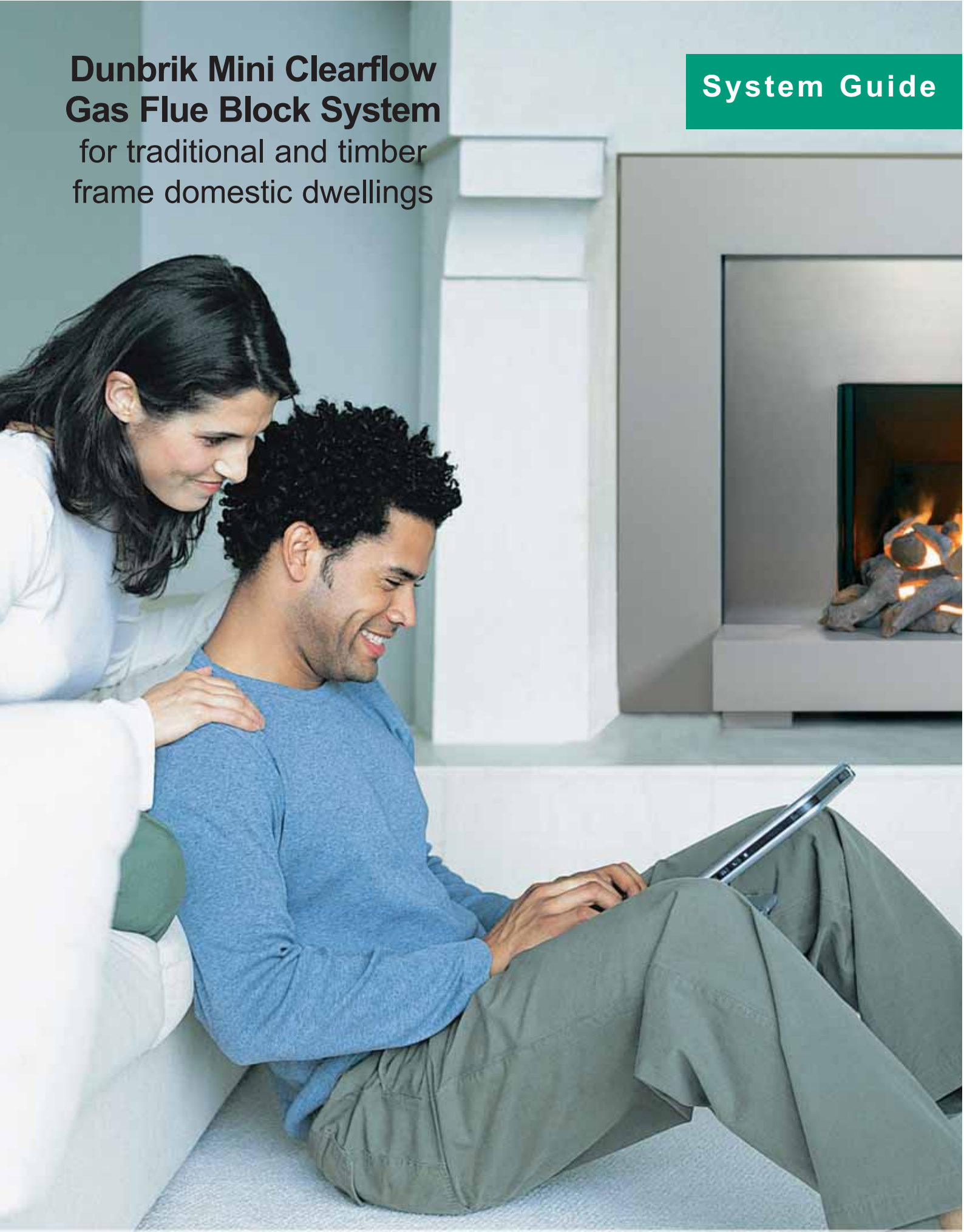
Dunbrik Mini Clearflow Gas Flue Block System

for traditional and timber frame domestic dwellings

System Guide



dunbrik flues

domestic flue & chimney systems

BSRIA

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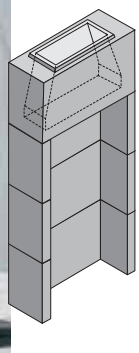
Certificate No.FM24104

Dunbrik Mini Clearflow Gas Flue Block System

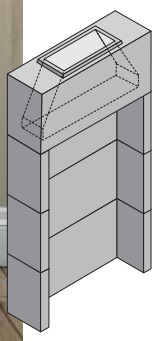
General system details and design guidance

Standard Set



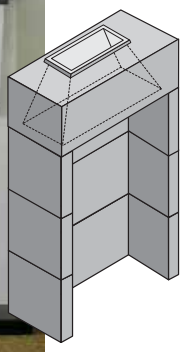
Recess - width, depth, height
315 x 115 x 675mm

Red Set



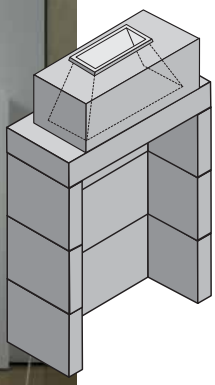
Recess - width, depth, height
400 x 115 x 675mm

M Set



Recess - width, depth, height
450 x 220 x 675mm

B Set



Recess - width, depth, height
800 x 315 x 844mm

Gas Fire Recess

Four sizes of recess opening are available to match the size of appliance likely to be fitted. The Standard Set and Red Set usually needs no chimney breast. The larger recess M Set and B Set accept a wider choice of appliances.

The appliance manufacturers' literature states whether their gas appliances are suitable for "pre-cast flues". They include gas fires under 7kW input, including many live fuel effect gas fires, some fires may need the fire manufacturers spacer plate (rebated surround) to create extra depth.

Gas Flue Blocks

The flue blocks are made of concrete and comply with British Standard BSEN 1858. The flueway is rectangular 185mm by 90mm giving a flue cross sectional area of 16,650 sq mm. The flue block walls have a minimum thickness of 25mm and are installed with the tongue pointing upwards.

The gas flue blocks are designed for ease of installation. The tongue and socket detail provide a tight concrete-to-concrete internal joint and an external compressive seal using Dunbrik 1581 silicone sealant, allowing approximately 5 joints per cartridge. The bonding nib has a 10mm cut-out to assist coursing with the adjacent blockwork.

Flue Offsets (Not required for timber framed houses)

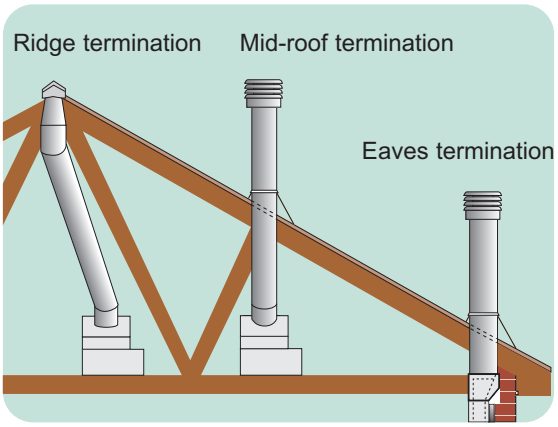
Although the best performance is achieved with a straight flue, lateral offsets can be created using the 3ME lateral offset blocks (with patented internal sweep design). Each 3ME moves the flue across by 95mm to align to the desired outlet or to avoid obstructions such as windows, pad stones, triple joists etc.

We advise that at least three 2M straight gas flue blocks are used above the gather block before any 3ME lateral offset blocks. Offsets should be used as high in the flue run as possible.

Termination options

Most flue outlets are made to a Dunvent ridge terminal. If the fireplace location or the roof trusses prevent the ridge being reached with flue pipe at no more than 45 degrees to the vertical, termination at the eaves or through the roof slope may be needed. Flue pipe to the terminal must be metal twinwall of 125mm internal diameter to BSEN 1856. Three terminal outlet positions are shown below. Terminals should be at least 1500mm from any higher structure, including horizontally from the underside of the flue terminal to the roof slope, and a minimum of 300mm away from other terminals. Exposed flue pipe over 1 metre high above the roof breakout point should be braced against the wind using rigid angle iron stays attached with an STWGWB bracket clamped to the pipe. Calculations of local wind loading should be made by your structural engineer.

Three outlet positions using twinwall flue pipe

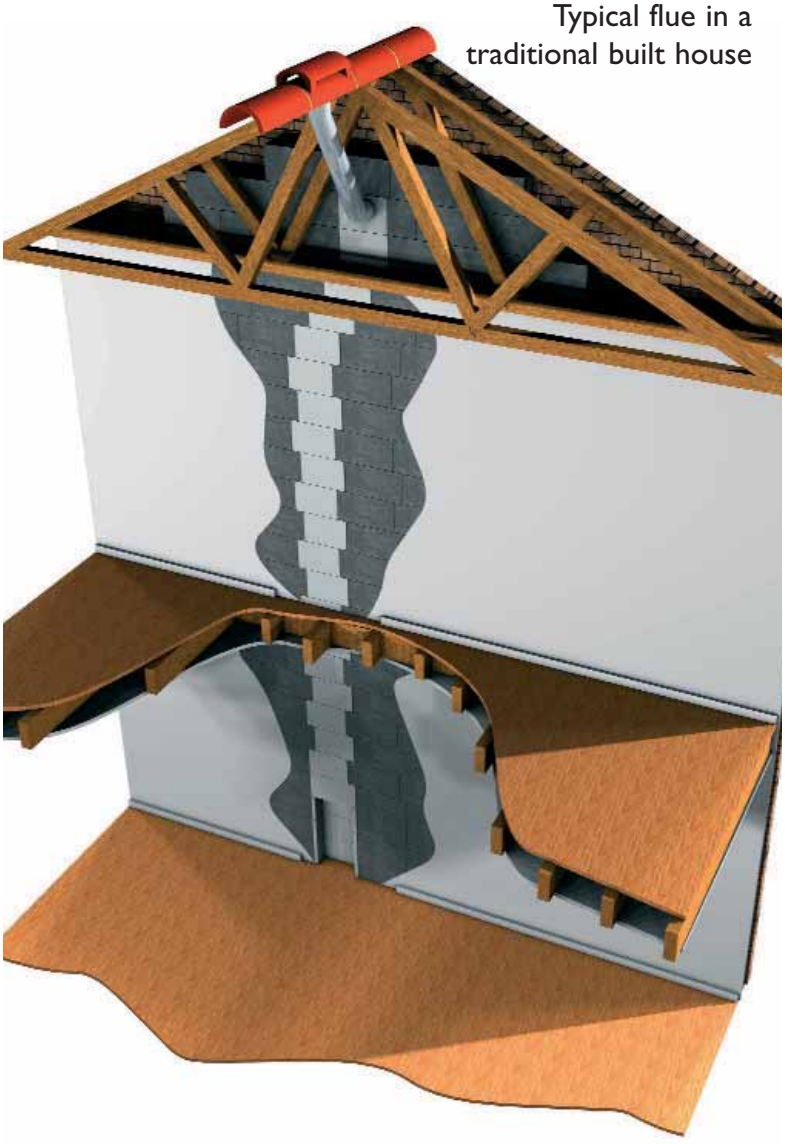


Sample fire images supplied courtesy of Brilliant Fires

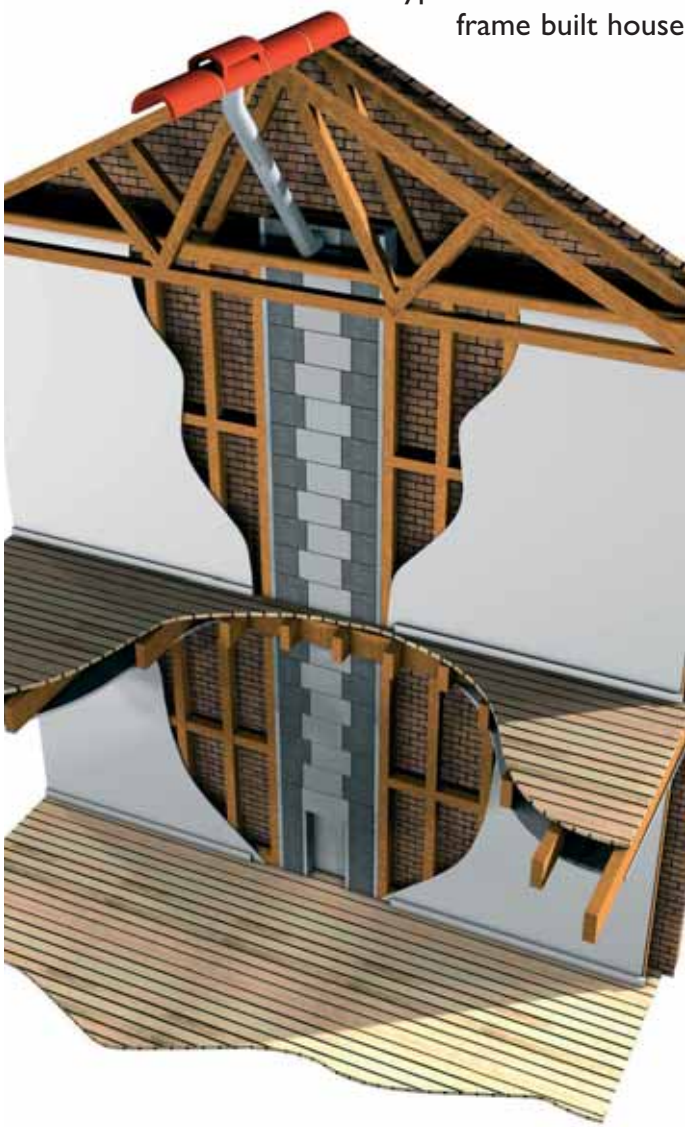
Dunbrik Mini Clearflow Gas Flue Block System

The Dunbrik Mini Clearflow gas flue block system is a neat efficient method of providing a flue in a new domestic dwelling. Gas fires suitable for "pre-cast flues" may be fitted. The outlet depends upon the house design. It is usually through twinwall flue pipe in the roof space to a ridge vent or to a gas terminal at eaves or through the roof slope.

Typical flue in a traditional built house



Typical flue in a timber frame built house



Dunbrik Mini Clearflow

Gas Flue Block System

The gas flue blocks are built into and bonded with house walling. This can be into the inner leaf blockwork of an external wall, into a party wall or partition wall. In many cases there is no chimney breast intruding into the living area.

The gas flue blocks are designed for ease of installation. The tongue and socket detail provide a tight concrete-to-concrete internal joint and an external compressive seal using special heat resistant sealant. The bonding nib has a 10mm cut-out for mortar jointing with the adjacent blockwork - this assists coursing.

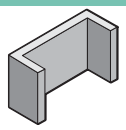
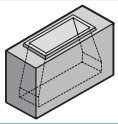
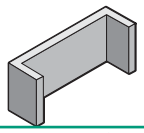
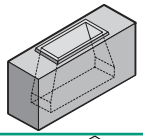
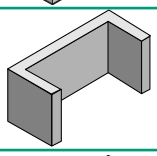
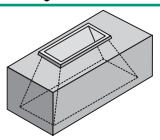
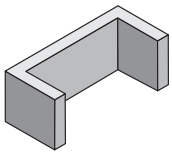
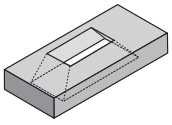
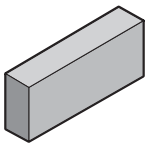
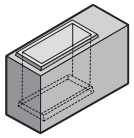
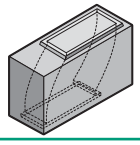
Dunbrik Triple 7

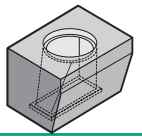
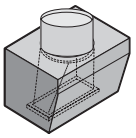
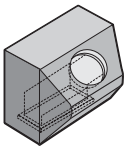
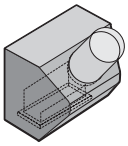
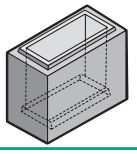
Gas flue block fittings for timber framed houses

The Triple 7 Panel fittings have been designed to allow the Mini Clearflow gas flue block system to be installed within the inner leaf of a Timber Frame construction by using specially designed flanking blocks and fixing channels. The system is also suitable for other forms of modular build.

The gas flue blocks are bonded with the special flanking blocks into the vertical steel U channels. This can be in the inner leaf blockwork of an external wall, a party wall or partition wall. In many cases there is no chimney breast intruding into the living area.

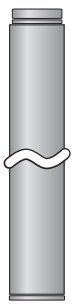
Gas flue components

	Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm
	**Standard recess block (3 per flue)**			
	1ZM	7.2	381 x 140 x 222	225
	**Gather block for standard recess**			
	2GM	12.9	381 x 140 x 222	225
	**Red set wide recess block (3 per flue)**			
	1RM	7.5	460 x 140 x 222	225
	**Red set wide gather block**			
	1GM	16.5	460 x 140 x 222	225
	**M set recess block for larger recess (3 per flue)**			
	MS	22.9	554 x 272 x 222	225
	**M set gather block**			
	MG	53.9	554 x 272 x 222	225
	**B set recess block for special recess (3 per flue)**			
	BRU	40.9	900 x 367 x 268	278
	**B set gather block**			
	BTL900	59.8	900 x 367 x 150	160
	**Dense back-up block**			
	MD100	25.6	525 x 100 x 215	225
	**Straight bonded gas flue block**			
	2M	12.0	320 x 140 x 225	225
	2M/150	7.8	320 x 140 x 150	150
	2M/75	4.0	320 x 140 x 75	75
	**Lateral 95mm offset gas flue block**			
	3ME	12.8	340 x 140 x 225	225
	**35mm backset gas flue block**			
	3MS	12.5	245 x 175 x 225	225
	**25mm backset gas flue block**			
	3MU	12.0	245 x 165 x 225	225
	**125mm backset gas flue block (requires 2MDT190)**			
	2BM	22.9	245 x 265 x 260	260

	Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm
	**Top exit gas flue transfer block**			
	4M	10.4	265 x 200 x 160	160
	**Top exit block with connector pipe**			
	4MP	11.0	265 x 200 x 230	230
	**Side exit gas flue transfer block**			
	5M	24.6	285 x 280 x 290	290
	**Side exit block with connector pipe**			
	5MP	26.8	285 x 295 x 290	290
	**Gas flue block without bonding nib**			
	2MN225	7.1	245 x 140 x 225	225
	2MN150	4.9	245 x 140 x 150	150
	2MN75	2.7	245 x 140 x 75	75

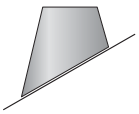
127mm id Twinwall Flue Pipe & accessories

Twinwall flue pipe is used to connect the Dunbrik gas flue block system through the roof space to a gas flue terminal outlet, either at the ridge, the eaves or through the roof slope.

	Code	Weight kg	Connected length mm
	**Flue block connector / adaptor**		
	STWBC	0.3	132
	**Flue pipe 1524mm (60") length**		
	STW60	3.0	1486
	Flue pipe 914mm (36") length		
	STW36	1.8	876
	Flue pipe 457mm (18") length		
	STW18	0.9	419
	Flue pipe 305mm (12") length		
	STW12	0.7	267
	Flue pipe 152mm (6") length		
	STW6	0.4	114
	**Adjustable pipe length**		
	STW18A	0.9	75 to 356
	**0 to 90 degree**		**adjustable bend**
	STW090	0.8	use to a maximum 45 degrees

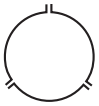
Code	Weight kg		Code	Weight kg	

Adjustable wall bracket
STWB245 0.3 adjustable to 245mm wall clearance

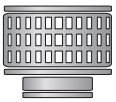


Adjustable flashing (requires storm collar)
STWAF0530 0.6 **5 to 30 degree pitch**
STWAF3245 0.6 **32 to 45 degree pitch**

Storm collar and sealant
STWSC 0.1 for use with adjustable flashing



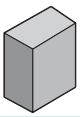
Guy wire bracket for attaching stays
STWGWB 0.3 for attaching stays



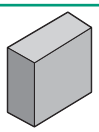
Gas vent terminal
STWGVT 0.4 overall height 163mm

Triple 7 - Timber Frame fitting components

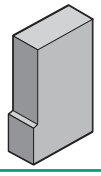
Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm	Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm



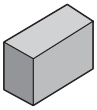
Small flue flanking block
P1D 7.3 170 x 100 x 215 225



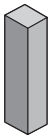
Large flue flanking block
P2D 10.4 245 x 100 x 215 225



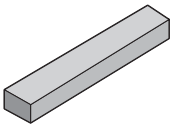
Angled exit flanking block
P3D 19.8 240 x 100 x 430 440



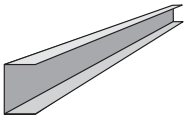
Top exit flanking block
P4D 6.6 230 x 100 x 150 160



Recess unit flanking block
P5D 7.2 90 x 100 x 440 450



Top sealing lintel
P6D 7.5 767 x 100 x 50 60



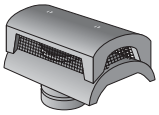
Steel U Channel 1250mm
U1 3.6 75 x 110 x 1250

Chimney pots, terminals and ancillary Items

Code	Weight kg	Colour	Code	Weight kg	Overall size mm Width x Depth x Height

Cannon head chimney pot 300mm tall
Cann300 9.2 red or buff colour

Stellgas terminal insert 185mm external spigot
Stell380 10.8 red or buff colour



Dunvent low profile ridge vent terminal
Dunvent angled 30° pitch
DVA 16.6 6 colours
Dunvent half round
DVH 16.6 6 colours
Dunvent segmental-third round
DVS 16.6 6 colours

Gastyle II ridge vent terminal
Gastyle angled 30° pitch
GTA 16.6 6 colours
Gastyle half round
GTH 16.6 6 colours
Gastyle segmental-third round
GTS 16.6 6 colours

Suitable for connection to Dunbrik 127mm id Twinwall Flue Pipe
Antique Brown AB Old English Red OE Olive Green OG
Slate Grey SG Terracotta Red TR Black BK

Topguard steel cowl with fixing straps red or buff colour
TG260 1.6 -

Flue block silicone sealant
1581 0.4 -

Blakbord insulation panel
Blakbord 1.0 600 x 25 x 900

Smoke pellet tube (6 per tube)
Smoke - -

Flue notice plate
Plate - 147 x 160

BENEFITS

- Full system from the specialist manufacturer
- Detailed flue costings prepared
- Flue blocks system meet latest standards
- Expert technical backup

KEY SYSTEM FEATURES

- Designed for ease of installation
- For gas fires under 7Kw input
- Four recess sizes to suit different fire sizes
- Three outlet options depending upon house design
- Comply with British Standards BSEN 1858

BUILD METHODS

- **Traditional Build:** Interlocking with blockwork in house walling
- **Timber Frame Build:** Built into 777mm gap in timber frame supported by flanking blocks in U channels fixed to frame
- Butt up to existing wall

SERVICES

- Flue costing service
- Installation guides on the web or by post
- Products can be obtained through merchant suppliers in the UK

Dunbrik (Yorks) Ltd
Ferry Lane,
Stanley,
Wakefield,
West Yorkshire.
WF3 4LT

Telephone: 01924 373694
Fax: 01924 383459
email: flues@dunbrik.co.uk
web: www.dunbrik.co.uk

December 2008

Dunbrik Mini Clearflow Gas Flue Block System

General system details and design guidance

Heat Insulation in External Walls

Flue blocks are deeper than standard 100mm building blocks, which results in the cavity behind the flue blocks being reduced. For a flue in an external wall, insulation board is needed in the reduced cavity to prevent cold bridging and damp penetration. This is achieved with Blakbord insulation panel, which also acts as a damp proof membrane.

Sound Insulation in Party Walls

New standard of sound insulation in dwellings under UK Building Regulations Part E 2003 came into effect in July 2004 requiring the demonstration of the sound insulation properties of separating walls by using standard RSD configurations or by pre-completion acoustic testing.

For staggered or single flues in masonry party walls, dense backup walling blocks (code MD100) are required behind the fire recess to meet the standard RSD configurations E-WM-3, 4, 5, 8, 11 & 14. Details are available from Robust Details Ltd on 0870 2408210 or www.robustdetails.com

Flues in apartments and timber framed separating walls would need pre-completion acoustic testing. For flues within the separating wall outside England and Wales please contact the Dunbrik technical department.

Flue Height and Equivalent Height

Each gas fire has a manufacturer's designated "flue height" required for satisfactory operation based on a standard straight metal chimney. Dunbrik technical staff can calculate the equivalent "flue height" of a gas flue design to check against that required for the fire to be installed. The low resistance of Dunbrik flue blocks and the unique internal sweep of the 3ME offset block maximise the equivalent height for Dunbrik systems. A gas flue should not normally exceed 12 metres in length from the fire to the outlet.

Internal Wall Finishes

As the flue blocks may reach relatively high temperature using some gas appliances, the flue wall should be lined with plasterboard on dabs with a 10mm air space from the flue blocks to avoid plaster cracking. Plaster and plaster dabs should not be applied directly to the flue blocks otherwise plaster cracking may occur. The gap between the face of the recess and the plasterboard should be sealed with non-combustible sealing rope. Plaster dabs should not be applied directly to the flue blocks.

Twinwall metal flue pipe

125mm internal diameter twinwall flue pipe to BSEN 1856 is used in the roof space to connect the concrete flue block system to a gas flue terminal. Single wall or flexible pipe is not insulated and should not be used.

Clearance to combustible materials

When planning the design, allow for a 50mm clearance between the inner flue face and structural timbers. These include joists and trusses but not floorboards, skirting, dado and picture rails. For twinwall flue pipe, the required clearance is 50mm from the pipe, including at the ridge.

Flue costing

We can produce a flue costing to suit your house design. Please send us your floor plans, sections, elevations and choice of gas fire recess.

Component Supply and Installation

Components are listed overleaf. Dunbrik products can be obtained through merchants in the UK. Please telephone 01924 373694 for details of your nearest supplier. Product installation guides are available on our website at; www.dunbrik.co.uk or by post.