

Dunbrik Mini Clearflow Gas Flue Block System

for traditional and timber
frame domestic dwellings

System Guide



dunbrik flues
domestic flue & chimney systems



Certificate No.FM24104

Dunbrik Mini Clearflow Gas Flue Block System

General system details and design guidance

Gas Fire Recess

Three sizes of recess opening are available to match the size of appliance likely to be fitted. The 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)

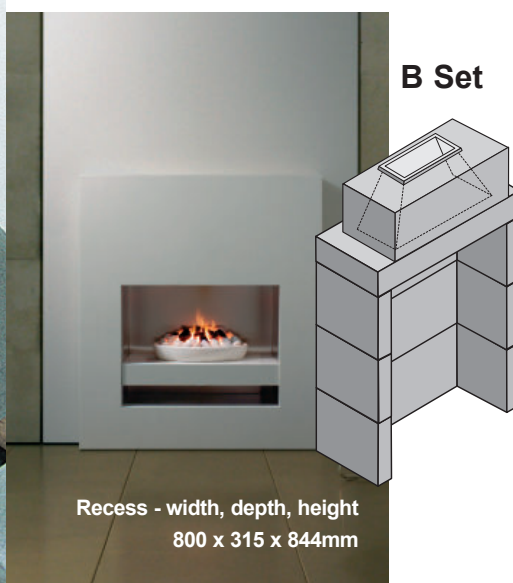
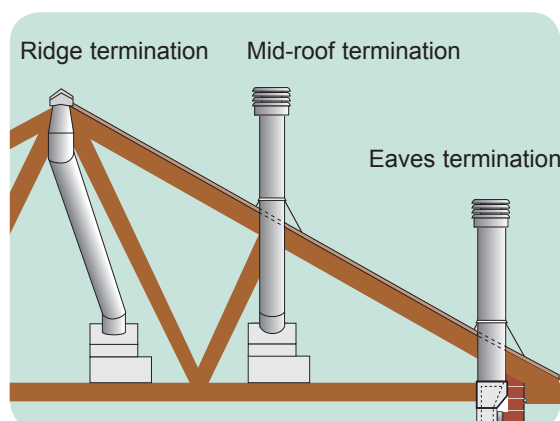
Although the best performance is achieved with a straight flue, lateral offsets can be created using the 3ME lateral offset blocks (with patented internal sweep design). Each 3ME moves the flue across by 95mm to align to the desired outlet or to avoid obstructions such as windows, pad stones, triple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

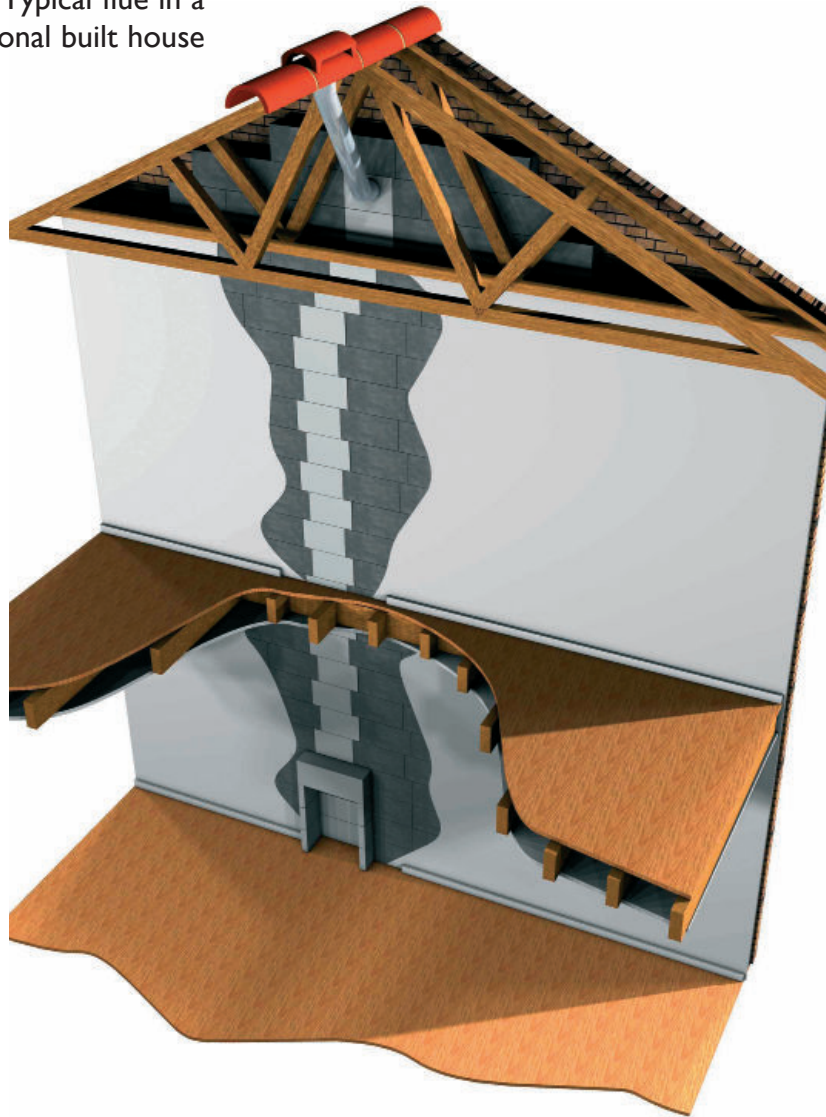


Sample fire images supplied
by Brilliant Fires

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

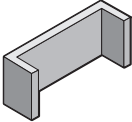
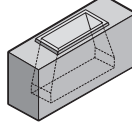
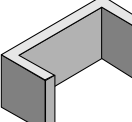
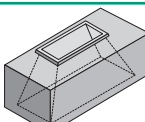
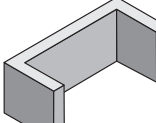
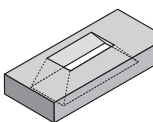
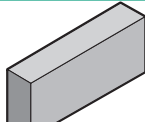
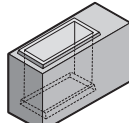
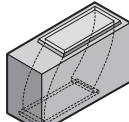
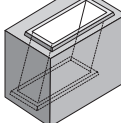
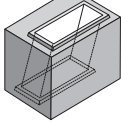
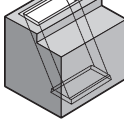
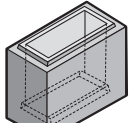


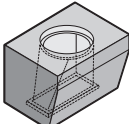
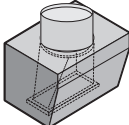
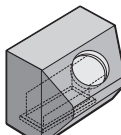
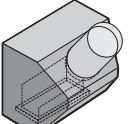
Dunbrik Mini Clearflow Gas Flue Block System

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.



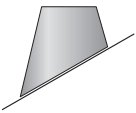
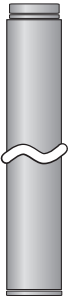

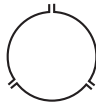
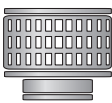


Mini Clearflow - Gas flue components

	Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm
	Red set wide recess block (3 per flue)			
	IRM	7.5	460 x 140 x 222	225
	Red set wide gather block			
	IGM	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			
	MDI00	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
	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





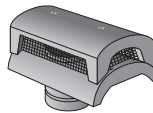

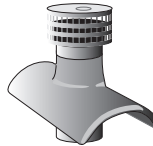


	Code	Weight kg	Overall size mm Width x Depth x Height	Coursing Height mm
	Top exit gas flue transfer block			
	4M	10.4	265 x 200 x 160	160
	Top exit block with connector pipe			
	4MP	11.0	265 x 200 x 230	230
	Side exit gas flue transfer block			
	5M	24.6	285 x 280 x 290	290
	Side exit block with connector pipe			
	5MP	26.8	285 x 295 x 290	290

127mm id Twinwall Flue Pipe & accessories

SFL IL 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	Code	Weight kg	
Flue block connector / adaptor					
 STWBC	0.3	132	Adjustable wall bracket STWB245 0.3 up to 245mm wall clearance		
Flue pipe 1524mm (60") length					
 STW60	3.0	1486	Adjustable flashing (requires storm collar) STWAF0530 0.6 5 to 30 degree pitch STWAF3245 0.6 32 to 45 degree pitch		
Flue pipe 914mm (36") length					
STW36	1.8	876	Storm collar and sealant STWSC 0.1 for use with adjustable flashing		
Flue pipe 457mm (18") length					
STW18	0.9	419	Guy wire bracket for attaching stays STWGWGB 0.3 for attaching stays		
Flue pipe 305mm (12") length					
STW12	0.7	267	Gas vent terminal STWGVGT 0.4 overall height 163mm		
Flue pipe 152mm (6") length					
STW6	0.4	114			
					
Adjustable pipe length STWI8A 0.9 75 to 356					
					
0 to 90 degree adjustable bend STW090 0.8 use to a maximum 45 degrees					

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 450mm tall Cann450 14 red or buff colour other heights available			Topguard steel cowl with fixing straps red or buff colour TG260 1.6 -		
					
Stellgas terminal insert 185mm external spigot Stell380 10.8 red or buff colour			Flue block silicone sealant 1581 0.4 -		
					
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			Blakbord insulation panel Blakbord 1.0 600 x 25 x 900		
					
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			Smoke pellet tube (6 per tube) Smoke - -		
Antique Brown AB	Old English Red OE	Olive Green OG			
Slate Grey SG	Terracotta Red TR	Black BK	Flue notice plate Plates - 147 x 160		

* Suitable for connection to SFL IL 127mm id twinwall flue pipe

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
- Three 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

SERVICES

- Flue costing service
- Installation guides on the web or by post
- Products are available in the UK

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

Telephone: 01924 373694
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web: www.dunbrik.co.uk

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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

UK Building Regulations Part E require 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 in the UK, please telephone 01924 373694 for details. Product installation guides are available on our website at; www.dunbrik.co.uk or by post.