



**RED BANK®** rediflow concrete gas flue system

# Rediflow the complete gas flue block system

Hanson Red Bank's range of Rediflow pre-cast concrete gas flue block system manufactured to BS EN 1858 Chimney - Components - Concrete flue blocks (Type B flue blocks).

The innovative tongue and groove design helps eliminate the possibility of escaping flue condensates and ensure the safe discharge of the flue gases.



Energy Efficiency Rating		
	Current	Potential
Very energy efficient – lower running costs		
(93-100) <b>A</b>		
(81-92) <b>B</b>		
(66-80) <b>C</b>		
(51-65) <b>D</b>		
(36-50) <b>E</b>		
(21-35) <b>F</b>		
(1-20) <b>G</b>		
Not energy efficient – higher running costs		
<b>UK 2008</b>	EU Directive 2002/91/EC	

## Energy Efficiency Requirements for New Dwellings

The latest 2006 revisions to Building Regulations Approved Document L1A include strict rules on the calculation of carbon emissions from all new dwellings. Under current legislation these are designed to ensure that carbon emissions are reduced by 20% compared to the 2002 Regulations.

As part of the Standard Assessment Procedures (SAP) secondary heating appliances have to be included in the calculations. These extend an opportunity to specify high efficiency gas fired appliances that will help meet the Governments target and gain carbon credits, whilst satisfying purchasers requirements for a 'fireplace' and focal point with associated comfort and lifestyle benefits.

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### **The Benefits of Installing a Chimney**

If secondary heating is not specified, the SAP calculation used to determine carbon emissions 'defaults' to electric as the secondary heating type.

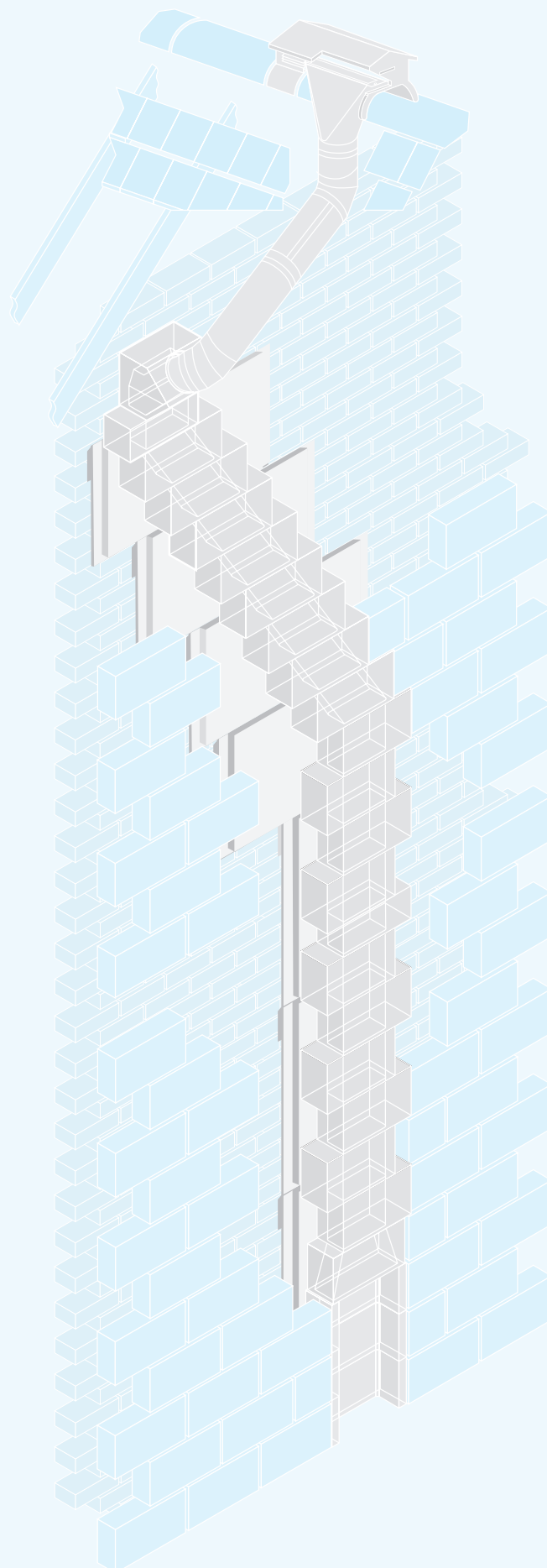
Electricity is a carbon intensive energy source and by specifying a modern high efficiency gas fire substantial carbon savings can be achieved. These carbon credits can then be used to offset costs of other aspects of the construction such as insulation and glazing.

### **Choosing the Secondary Heating Appliance at Planning Stage is Vital**

To maximise the potential carbon savings and benefits the correct flue size and secondary heating appliance must be specified at the design stage. Although this decision has usually been left until after completion of the building, it is essential that the most appropriate appliance is specified, if not the SAP calculation will default to carbon intensive electric heating or an inefficient open fire or appliance.

### **Appliance Choice and Application**

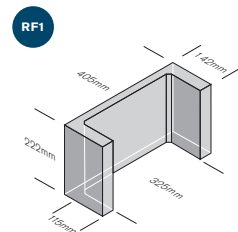
Rediflow concrete gas flue blocks are suitable for use with approved radiant and convector gas fires and appliances with flue outlets up to 125mm dia. These include many Inset Live Fuel Effect gas fires with a rated input of up to 7kW, dependent on the appliance manufacturers recommendations and approval for use with pre-cast flue blocks. Gas Flue Blocks are not suitable for use with Decorative Fuel Effect gas fires requiring a minimum 175mm int. da. flue. (see Hanson Red Bank's range of Concrete and Clay Flue Liners for Multi-Fuel Applications).



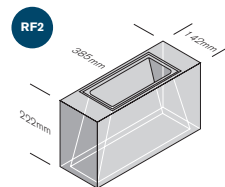


# The complete product range

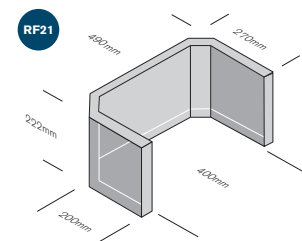
**RF1 Concrete Starter Block**



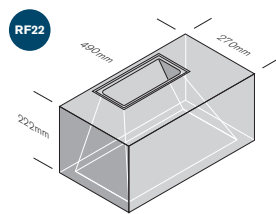
**RF2 Concrete Cover Block**



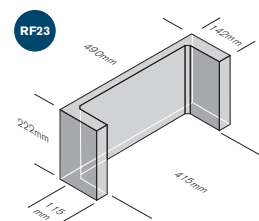
**RF21 Deep Recess Concrete Starter Block**



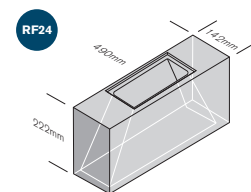
**RF22 Extra Wide Concrete Cover Block**



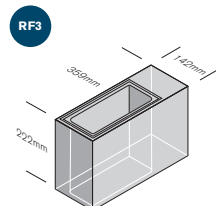
**RF23 Extra Wide Concrete Starter Block**



**RF24 Extra Wide Concrete Cover Block**

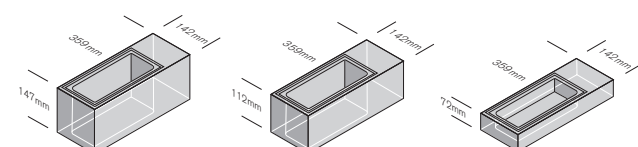


**RF3 222mm high coursing block with nib**



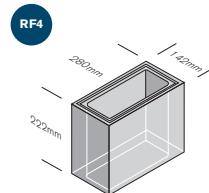
Also available as a coursing block in the following sizes:

72mm high Coursing Block with Nib  
112mm high Coursing Block with Nib  
147mm high Coursing Block with Nib



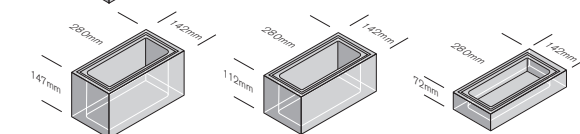
**RF4 high Plain Block without nib**

222mm high Coursing Block without Nib



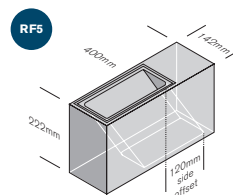
Also available as a coursing block in the following sizes:

72mm high Plain Coursing Block without nib  
112mm high Plain Coursing Block without nib  
147mm high Plain Coursing Block without nib



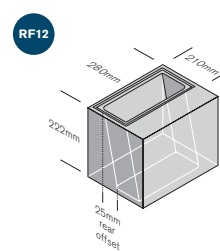
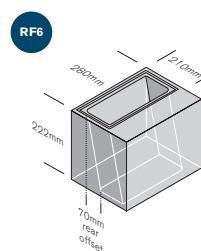
**RF5 Concrete Side Offset Block**

120mm side offset



**RF6 Concrete Rear Offset Block**

70mm rear offset

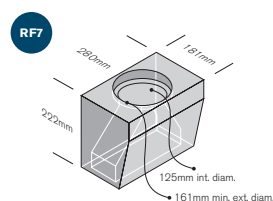


Also available:

RF12 25mm Concrete Rear Offset Block  
To be used in conjunction with starter blocks in party wall situations

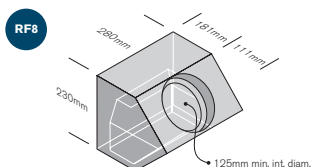
**RF7 Vertical Exit Block**

For connection to twin wall metal flue pipe



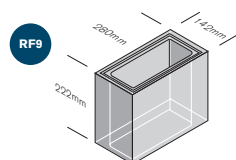
### RF8 Angled Exit Block

For connection to twin wall metal flue pipe.  
May be used as angled entry block in conjunction with RF9



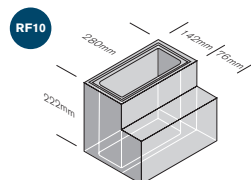
### RF9 Reverse Rebate Block

To be used in conjunction with inverted RF8



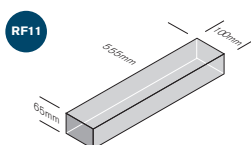
### RF10 Concrete Corbel Block

For extended corbel blocks see RF61, RF62 and RF63



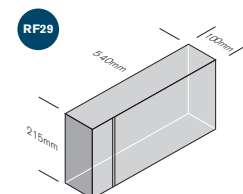
### RF11 Gas Lintel Block

May be used to carry single skin of brickwork in front of flue



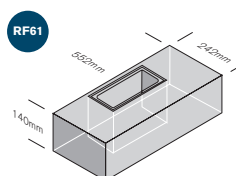
### RF29 High Density Block

To be used in conjunction with starter blocks in party wall situations



### RF61 Extended Corbel Block

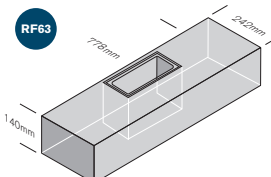
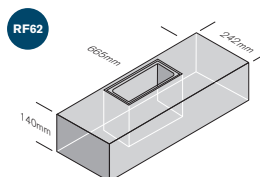
552mm wide Extended Corbel Block



#### Also available:

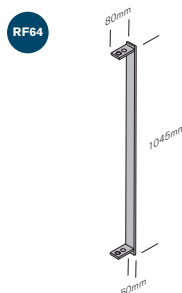
RF62 665mm wide Extended Corbel Block

RF63 778mm wide Extended Corbel Block



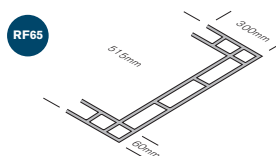
### RF64 Stainless Steel Strap Unit

To be used in conjunction with Extended Corbel Block and Stainless Steel Bed Reinforcement



### RF65 Stainless Steel Bed Reinforcement

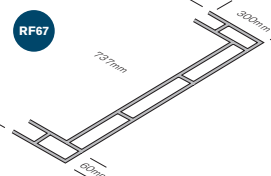
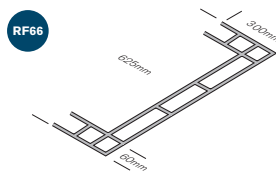
515mm wide Stainless Steel Bed Reinforcement



#### Also available:

RF66 625mm wide Stainless Steel Bed Reinforcement

RF67 737mm wide Stainless Steel Bed Reinforcement



### 114 Contemporary Canon Head ChimneyPot

300mm, 450mm and 600mm high



### 625 GC5 Insert Terminal

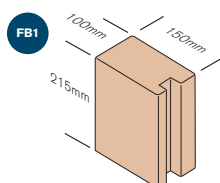
125mm int. dia.



## Timber frame products

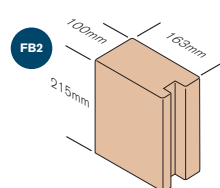
### FB1 150mm wide Flanking Block

To be used in conjunction with RF1 Starter Blocks



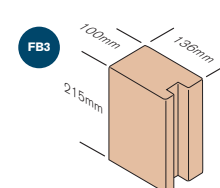
### FB2 163mm wide Flanking Block

To be used in conjunction with RF2 Cover Blocks



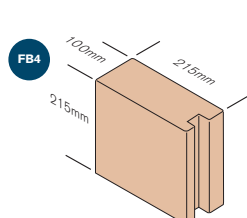
### FB3 136mm wide Flanking Block

To be used in conjunction with RF3 Bonded Blocks



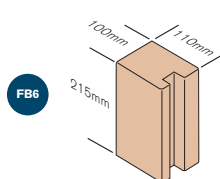
### FB4 215mm wide Flanking Block

To be used in conjunction with RF3 Bonded Blocks and RF8 Exit Block

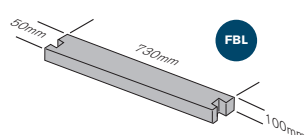


### FB6 Clay Flanking Block

To be used in conjunction with RF21, RF22, RF23 and RF24 Deep Recess and Extra Wide Starter and Cover Blocks



### FBL Top Lintel Block



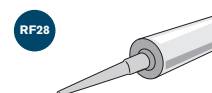
### FBZ Galvanised Steel 'Z' Section



## Add on range

### RF28 Rediflow Fireproof Mortar

580gm Tube Rediflow Fireproof Mortar



### RF30 Rediflow Damp Proof Insulation Mat

600mm (W) x 900mm (H) x 25mm (D)

To be inserted behind flue blocks in external wall situations



### RF31 Rediflow Damp Proof Insulation Mat

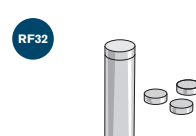
600mm (W) x 900mm (H) x 50mm (D)

To be inserted behind flue blocks in external wall situations



### RF32 Rediflow Smoke Pellets

6 13gm pellets per tube



### NP1 Notice Plate and Checklist Pack

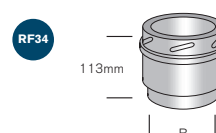


## 125mm int. dia. Twin wall metal gas vent

### RF34 Flue Block Connector

To be used in conjunction with RF7 and RF8

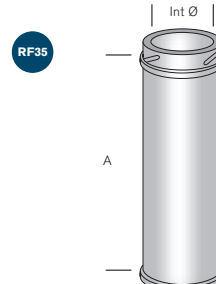
B = 125mm



### RF35 - RF39 Twin Wall Pipe 150mm to 1500mm

RF 35 1500mm length Twin Wall Flue Pipe  
RF 36 900mm length Twin Wall Flue Pipe  
RF 37 450mm length Twin Wall Flue Pipe  
RF 38 300mm length Twin Wall Flue Pipe  
RF 39 150mm length Twin Wall Flue Pipe

Int Ø 125mm

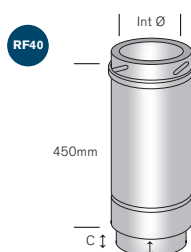


# 125mm int. dia. Twin wall metal gas vent

## RF40 450mm Length Adjustable Pipe

C = 50 - 380mm

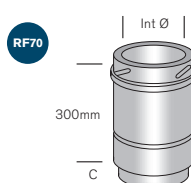
Dimension C is the amount another pipe can slide inside the adjuster



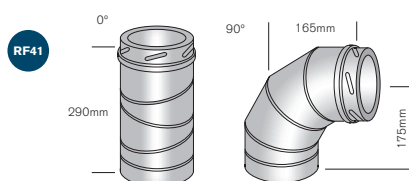
## RF70 300mm length adjustable pipe

C = 50 - 230mm

Int Ø 125mm



## RF41 Adjustable Bend



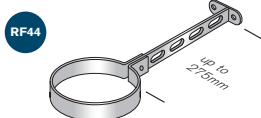
## RF43 Wallband

Ø 125mm



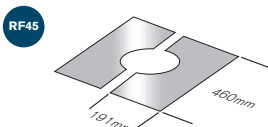
## RF44 Adjustable Wallband

Ø 125mm

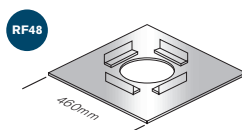


## RF45 Roof Plate

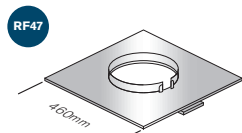
Two piece



## RF48 Firestop Plate

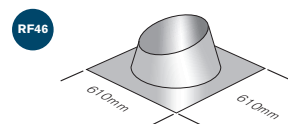


## RF47 Support Assembly



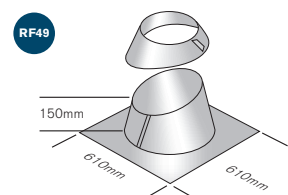
## RF46 Angled Flashing Kit 5° - 30°

Complete with Storm Collar and Sealant



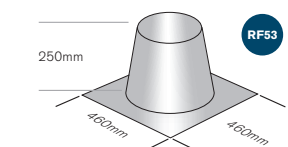
## RF49 Angled Flashing Kit 5° - 45°

Complete with Storm Collar and Sealant

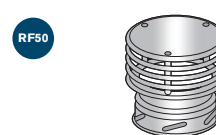


## RF53 Flat Roof Flashing Kit

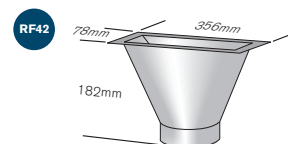
Complete with Storm Collar and Sealant



## RF50 GCI Terminal

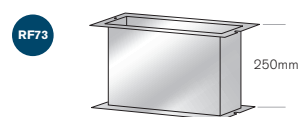


## RF42 Ridge Tile Adaptor



## RF73 Ridge Tile Adaptor Extension Box

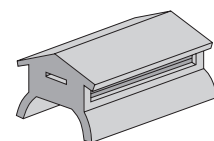
To fit apex of steeply pitched roofs



## Low Resistance Ridge Tiles

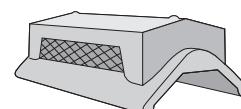
### 640- 646 Clay Low Resistance Ridge Tile

Available in Half Round, Angle and Pan Sections



### Concrete Low Resistance Ridge Tile

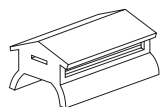
Available in Half Round, Curved Angle and Segmental Sections



# Detached property – typical flue construction

## 641 Low Resistance Terminal

Available in Half Round, Angle and Pan Sections



## RF42 Ridge Tile Adaptor



## RF44 Adjustable Wallband

Also available with 50mm extension



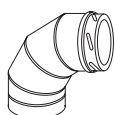
## RF35 1500mm length Twin Adjustable Flue Pipe

Also available in 900, 450, 300 and 150mm lengths



## RF41 Adjustable Bend

0 - 90° Bend



## RF34 Flue Block Connector

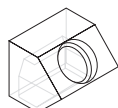


## RF30 Rediflow Damp Proof Insulation Mat

Also available with 50mm deep insulation mat

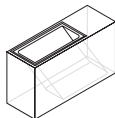


## RF8 Angled Exit Block



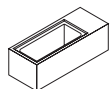
## RF5 Side Offset Block

120mm side offset



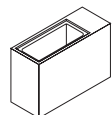
## RF3 147mm high Bonded Coursing Block with nib

Also available in 112 and 72mm high.



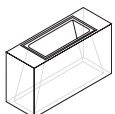
## RF3 222mm high Bonded Block with nib

Minimum of 2 straight blocks recommended above cover block before any offset blocks



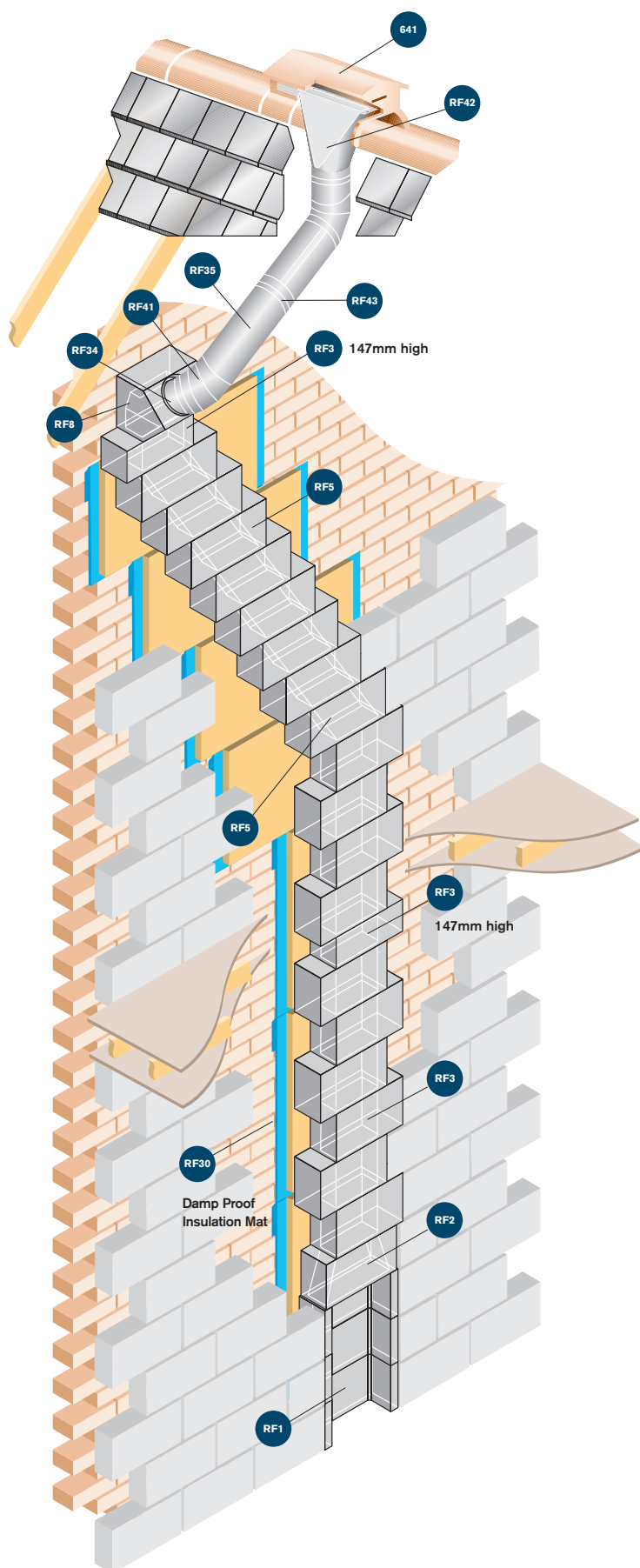
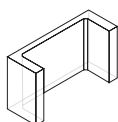
## RF2 Cover Block

Also available Deep Recess and Extra Wide cover blocks



## RF1 Starter Block

It is recommended that 3 starter blocks are used to form recess with a minimum 610mm high opening.



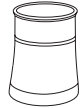


# Detached property - masonry chimney termination

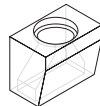
**625C GC5 Insert Terminal**  
125mm int. dia.



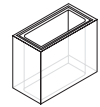
**114 Contemporary Cannon Head Chimney Pot**  
300mm, 450mm and 600mm high



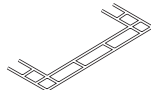
**RF7 Vertical Exit Block**



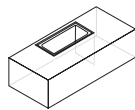
**RF4 222mm high Plain Block without nib**  
Also available 147, 112 and 72mm high  
Plain Coursing Blocks without nib



**RF65 515mm wide Stainless Steel Bed Reinforcements**  
Also available in 625 and 725mm wide



**RF61 552mm wide Extended Corbel Block**  
Also available in 665 and 778mm wide



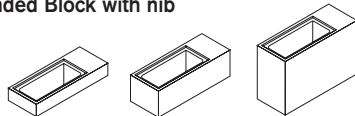
**RF64 Stainless Steel Strap Unit**



**RF3 72mm high Coursing Block with nib**  
Also available in 147 and 112mm high

**RF3 147mm high Bonded Coursing Block with nib**  
Also available in 112 and 72mm high

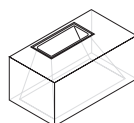
**RF3 222mm high Bonded Block with nib**



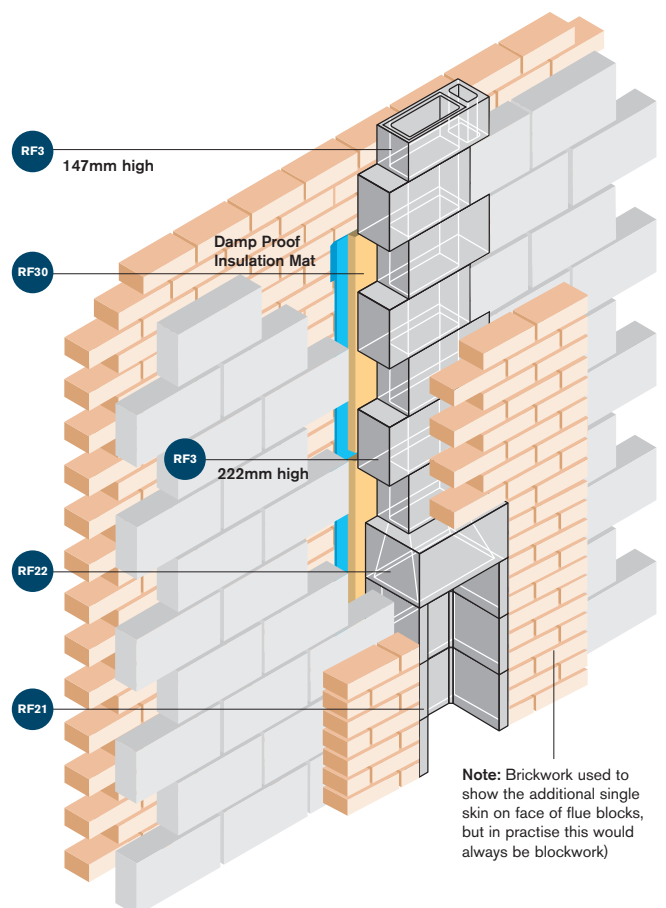
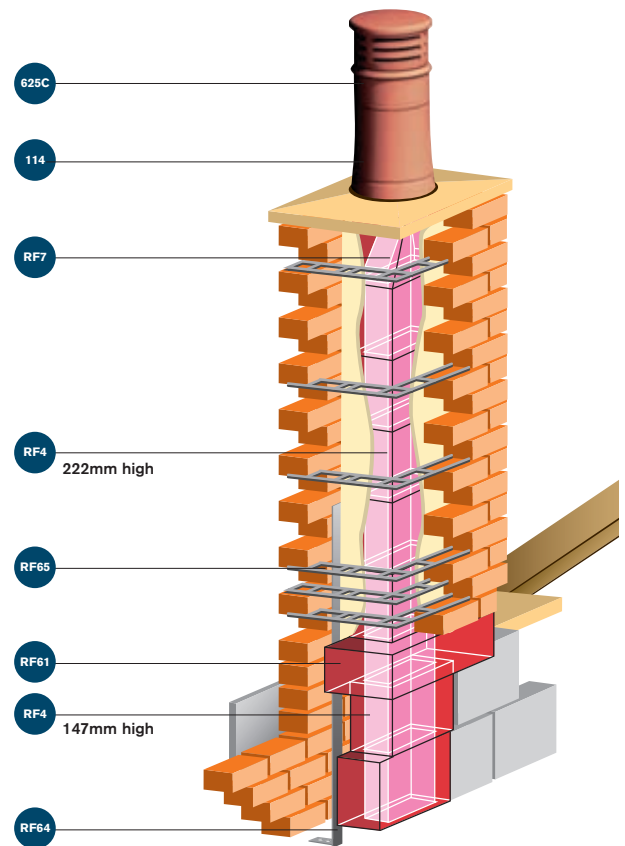
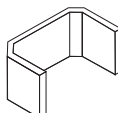
**RF31 RediflowDamp Proof Insulation Mat**  
Also available with 25mm thick insulation mat



**RF22 Deep Recess Cover Block**  
Also available Standard and Extra Wide cover blocks



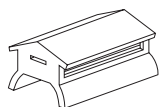
**RF21 Deep Recess Starter Block**  
Also available Standard and Extra Wide starter blocks



# Semi-detached property – typical flue system

## 641 Low Resistance Terminal

Available in Half Round, Angle and Pan Sections



## RF42 Ridge Tile Adaptor



## RF41 Adjustable Bend

0° to 90°



## RF70 300mm length Adjustable Pipe

Also available in 450mm length



## RF44 Adjustable Wallband

Also available with 50mm extension



## RF36 900mm length Twin Wall Flue Pipe

Also available in 1500mm, 450mm, 300mm and 150mm lengths



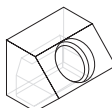
## RF 40 450mm length adjustable pipe



## RF34 Flue Block Connector



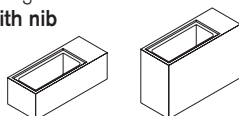
## RF8 Angled Exit Block



## RF3 147mm high Bonded Coursing Block with nib

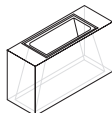
Also available in 112 and 72mm high

## RF3 222mm high Bonded Block with nib

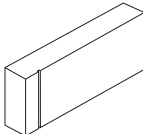


## RF2 Cover Block

Also available Deep Recess and Extra Wide cover blocks

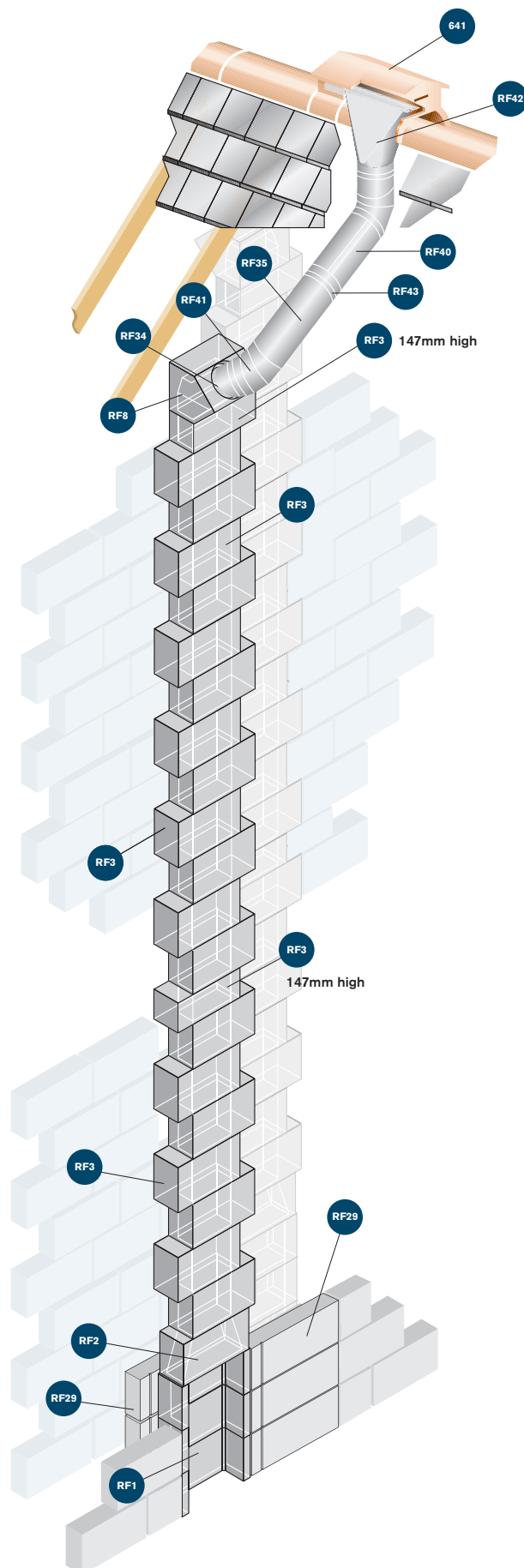
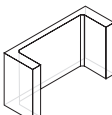


## RF29 High Density Block



## RF1 Starter Block

It is recommended that 3 starter blocks are used to form recess with a minimum 610mm high opening



# Timber framed property - typical flue system

**RF41 Adjustable Bend**  
0° to 90°



**RF40 450mm length Adjustable Pipe**  
Also available in 300mm length



**RF43 Wallband**  
Also available with 275mm extension



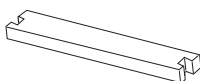
**RF35 1500mm length Twin Wall Flue Pipe**  
Also available in 900mm, 450mm, 300mm and 150mm lengths



**RF34 Flue Block Connector**



**FBL Top Lintel Block**

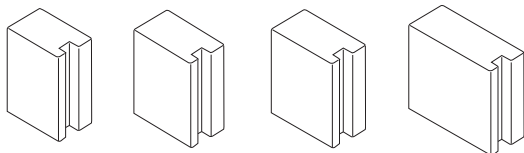


**FB3 136mm wide Flanking Block**

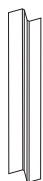
**FB1 150mm wide Flanking Block**

**FB2 163mm wide Flanking Block**

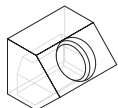
**FB4 215mm wide Flanking Block**



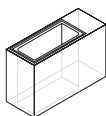
**FBZ Galvanised Steel 'Z' Section**



**RF8 Angled Exit Block**

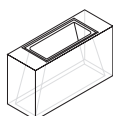


**RF3 222mm high Bonded Block with nib**



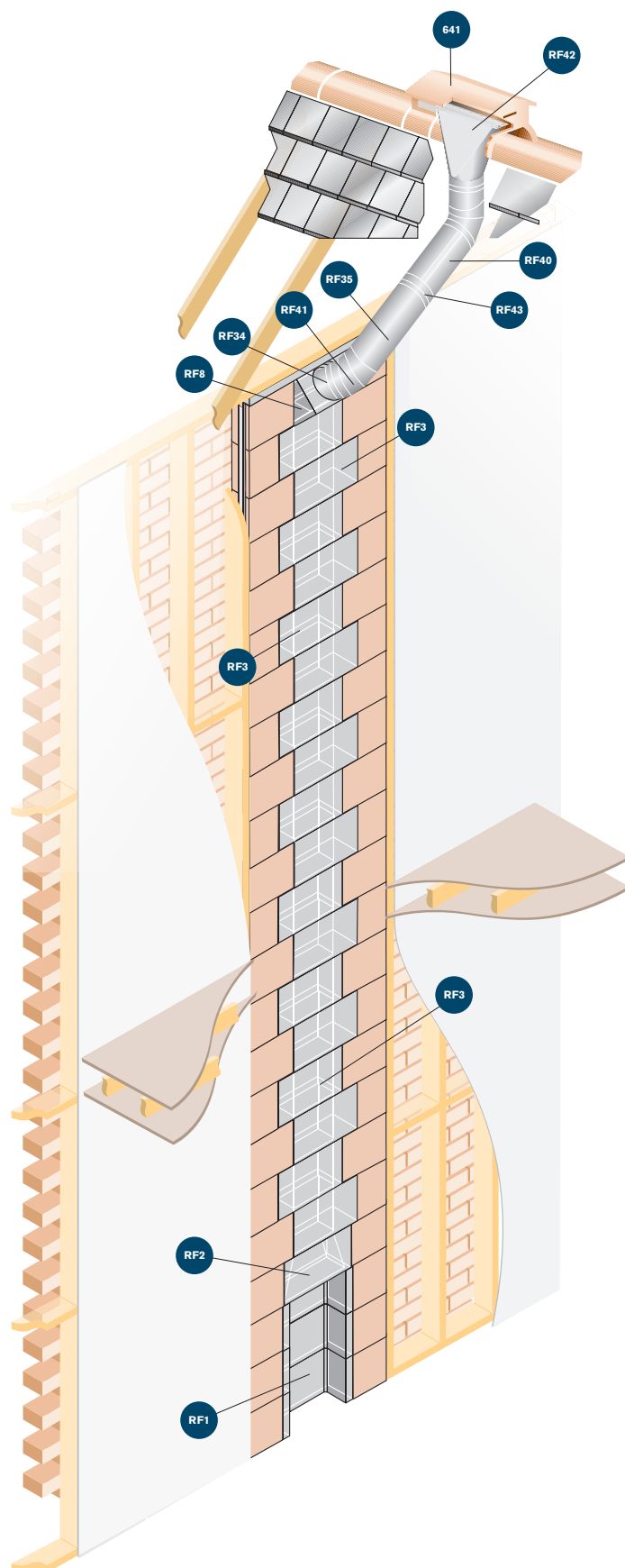
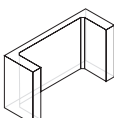
**RF2 Cover Block**

Also available Deep Recess and Extra Wide cover blocks used in conjunction with FB6 131mm wide flanking blocks



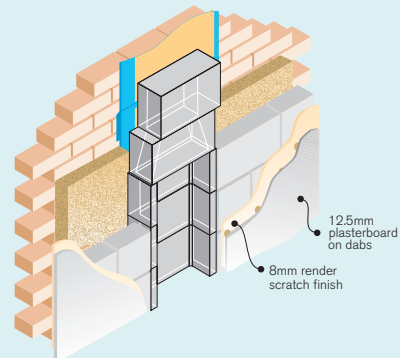
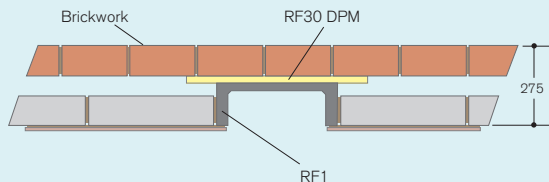
**RF1 Starter Block**

Also available Deep Recess and Extra Wide starter blocks used in conjunction with FB6 131mm wide flanking blocks

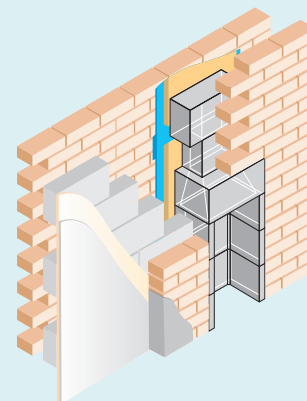
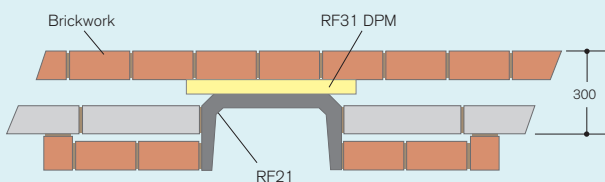


# Typical recess installations

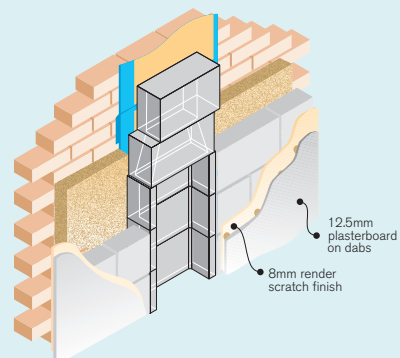
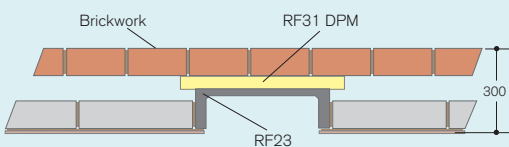
**RF1** Starter Blocks in external wall with 65mm cavity and 25mm thick damp proof insulation mat



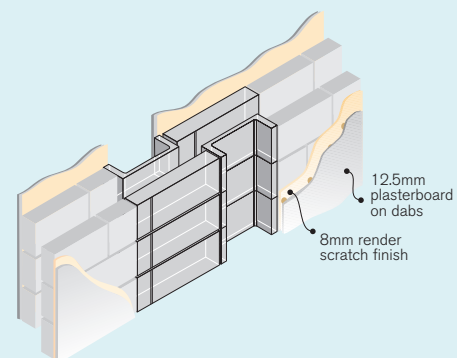
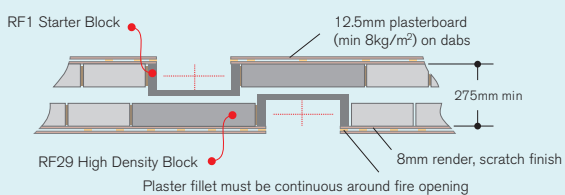
**RF21** Deep Recess Starter Blocks in external wall with 100mm cavity and 50mm thick damp proof insulation mat



**RF23** Extra Wide Starter Blocks on first floor of external wall.



**RF1** Starter Blocks in party wall situation with high density blocks, flues offset at 550mm centres

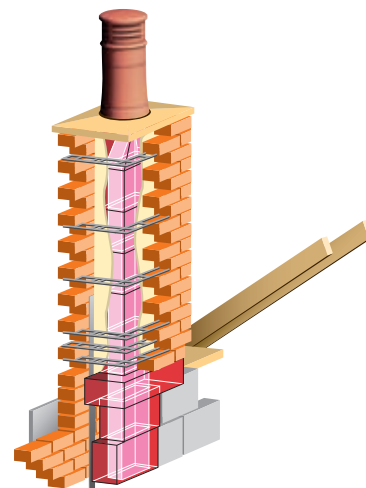




# Termination of flue systems

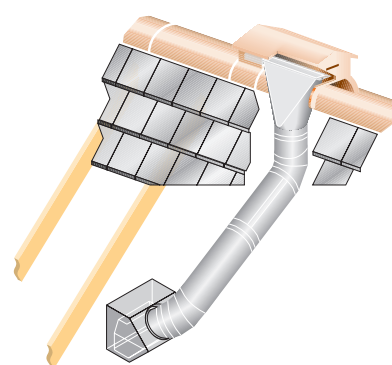
## Masonry Chimney

A traditional masonry chimney stack can be constructed on top of a cavity wall using Hanson Red Bank's structural reinforcing kit. The Bed reinforcement and stainless steel straps securely anchor the stack into the masonry below.



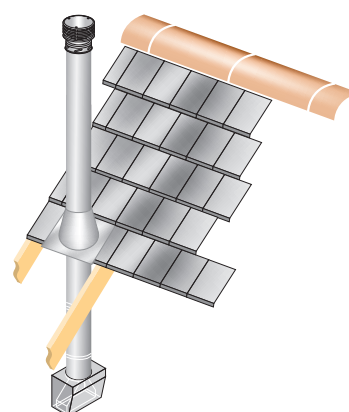
## Metal Twin Wall Flue Pipe for Angled Exit Block

Low resistance ridge terminals offer a discrete exit point for the flue. Eliminating the need for a chimney stack or external metal flue pipe.



## Metal Twin Wall Flue Pipe for Vertical Exit Block

If desired or where it is not possible for the flue to reach the ridge line, the twin wall metal flue pipe can penetrate through the roof slope using an angled flashing kit and terminating at a GC1 terminal.



## Prefabricated Chimney on ridge

A range of prefabricated chimney stacks with or without flue terminations are available. The stacks are available, finished with brick slips, prepared block slips or prepared for render.



# Installation, inspection and testing

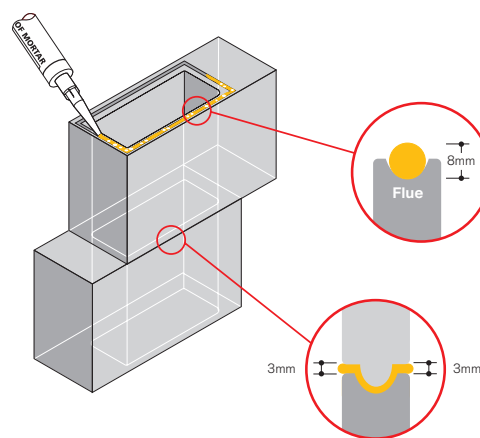
It is essential that the building of a flue block system is carried out correctly.

- to provide a flueway that is structurally sound
- to ensure the safe operation of the gas appliance installed
- the maximum overall height of the flue must not exceed 12 metres
- flue blocks can be terminated in the roof space and ducted to a low resistance terminal at the ridge, or to a chimney stack.



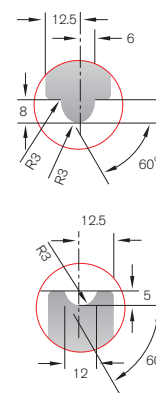
## Construction Guidelines (not appliance installation):

- blocks to be laid rebate up with an 8mm fireproof mortar bead to be applied into the rebate (as shown).
- joints should be pointed and any surplus mortar removed from the flueway during construction leaving a smooth uniform surface.
- ensure joints are completely sealed with jointing compound.
- if the blocks and surrounding courses of masonry fail to meet exactly on no account attempt to cut the blocks but trim the surrounding masonry to suit.
- a minimum air gap of 50mm must exist between the outside of the flue and any combustible material.
- **it is essential that during construction and appliance installation the commissioning requirements laid down in BS 5440 : Part 1 are strictly followed. This should include visual checks, smoke and spillage checks.**
- *for further details refer to the "Installation, Inspection and Smoke Testing Procedures" included in the Checklist and Notice Plate Pack.*

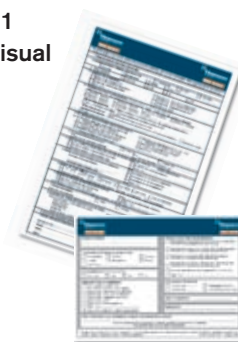


### Note:

An 8mm bead of fireproof mortar should be laid into the rebate (see opposite).



measurements for Tongue and Groove are in mm unless stated otherwise



## Approved Document 'J' (ADJ)

### 2002 Edition of the Building Regulations 2000

A flue system correctly constructed and installed in accordance with Building Regulations and our recommendations, using these components will meet all current statutory requirements.

For each flue system it is a requirement that the installer completes a 'Checklist' and Notice Plate'

The Checklist should ensure that the construction of the flue has been completed in accordance with regulatory requirements and copies should be offered to the Client, Building Control Body and/or Main Contractor.

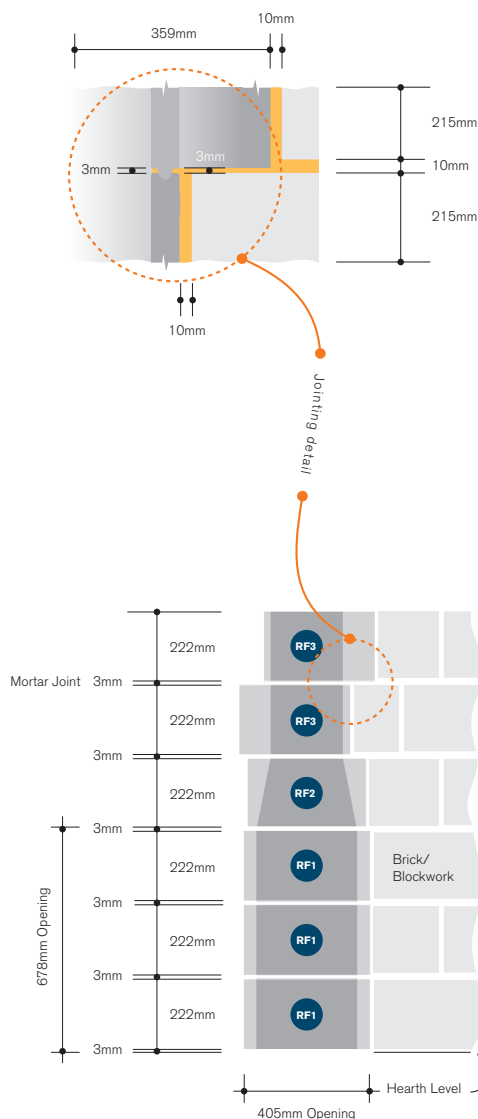
The Notice Plate contains information essential to the correct application and use of the flue and should be robust, indelibly marked and securely fixed in a permanent position within the building.

A 'Checklist and Notice Plate Pack' List No. NP1 is available. This contains a checklist, notice plate and self-sealing laminate cover together with guidance notes on completion. It also includes detailed recommendations on the installation of flue products, inspection and smoke testing procedures.

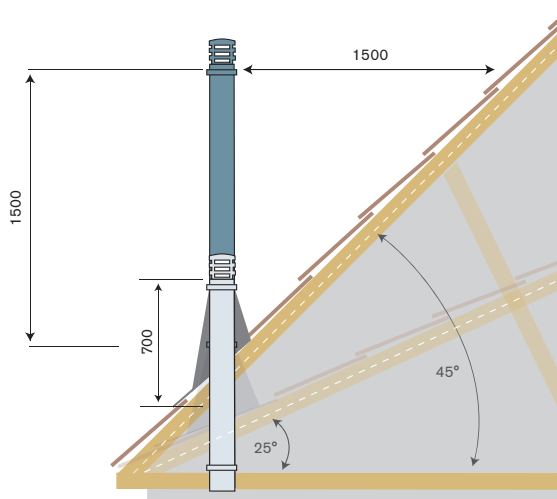
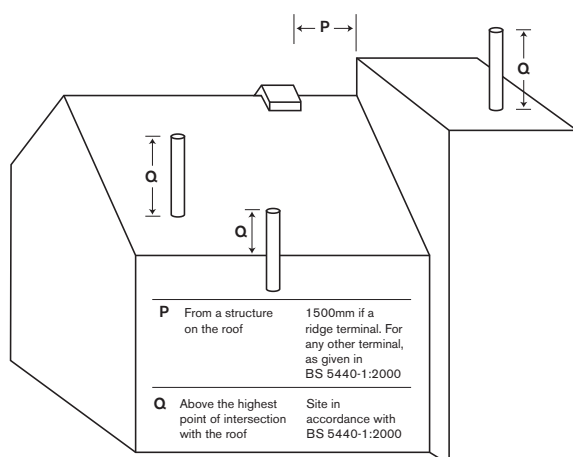
- check for damage to products
  - follow installation instructions of system and appliance
  - comply with health and safety - British Standards

- check for damage to products
  - follow installation instructions of system and appliance
  - comply with health and safety - British Standards
- decide on termination site and consider options available.

It is recommended that the flue is installed internally with a minimum length exposed externally. All external runs should not exceed 3 metres in length.
- recess size to be considered dependent on appliance to be installed.
- height of flue should be assessed using Annex B of BS 5440-1: 2008, to a maximum height of 12 metres.
- whenever possible avoid offsets; a vertical flue is the preferred choice.
- flues should be smoke tested during construction, at each floor level and following installation of outlet block. The smoke test procedure is detailed in the notice plate pack.
- a gas installer registered with the Gas Safe Register must be used to connect the appliance.
- if a hearth is required its height must be taken into consideration when calculating the finished height of the recess opening.



### ADJ terminal location



### **Hanson UK**

Hanson is one of the UK's largest suppliers of construction materials. Our products include aggregates, asphalt, ready-mixed concrete, bricks, blocks and cement. We are part of the HeidelbergCement Group, which employs 63,000 people across five continents and is the global leader in aggregates and has leading positions in cement, concrete and heavy building products.



### **Hanson Red Bank**

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