## Manthorpe

### Building Products **Guide**



# Discover more from our range of quality building products



All Product Guide

Roofing Products
Guide





Plumbing & Drainage Guide

From our first venture into the building industry in 1986, through to our latest product innovations, Manthorpe Building Products has grown year on year thanks to a philosophy of continuous investment and development. For over 30 years we have pushed the boundaries of design and pioneered the use of new technologies within the industry to provide our customers with the highest quality building, roofing and plumbing products available.

From our state-of-the-art facilities in the heart of Derbyshire we produce a range of market leading products for every aspect of building construction, from groundwork to the roofline, from newbuild to retrofit. We pride ourselves on offering high quality innovative products and on providing excellent customer service and technical support.

In 2018, after a successful 32-year history, we were acquired by the Polypipe Group.

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#### Loft access doors

### Roof space hatches for access to equipment and services

Whether for general access to loft storage or as a maintenance hatch for roof space services, the need for access through ceilings is a requirement for most buildings. However care must be taken that these apertures do not compromise the integrity of the building envelope.

#### Insulated loft spaces

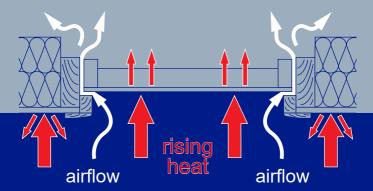
The increased level of thermal insulation found within the roof voids of a modern house is intended to reduce the amount of heat that is lost from the warm living spaces of the property over time. However breaks in this insulation layer, such as the loft access door, will severely compromise its effectiveness.

#### Losing heat, losing money ...

A poor quality draught seal around a loft hatch or the lack of one entirely will lead to there being open gaps between the living area and the cold loft space. It is through these gaps that air can escape, air which the homeowner has paid to heat up, leading to an increase in the cost of heating bills, especially during the winter.

Heat will also radiate out of a property, typically upwards as the heat rises, with loft insulation helping to reduce the amount of this heat which can escape. Areas with low levels of insulation, such as the back of loft hatches, will allow more heat to escape than the surrounding area. This problem can be avoided by insulating the back of the loft door to the required level.

All of Manthorpe's loft access doors are thermally insulated to reduce heat loss and are fully draught sealed from both the frame to the door and frame to ceiling. The draught seals will help to meet the air leakage requirements for new build homes when they come to be pressure tested.



Typical air leakage and heat loss issues through a poorly sealed and inadequately insulated loft hatch.

#### Air leakage

Manthorpe's GL250, GL280F and GL270F doors meet the requirements of both BS 9250:2007¹ and BS 5250:2011² for the air leakage rate through the loft hatch and frame. The requirement when tested to BS EN 13141-1:2004 is less than 1m³/h at a pressure difference of 2 Pa.

The doors also meet the Building Regulations 2010 Part L1A³ reasonable limit for the design air permeability of the building fabric, set at 10m³/(h.m²) at 50 Pa. Tested at the BRE, report numbers 283506 and 233677.

#### Insulation

All of Manthorpe's loft access doors offer a variety of insulation options to meet various thermal values through the door. Ranging from a basic level of insulation, doors are available with a U-Value of 0.35W/m²K to meet the requirements of the Robust Construction Details along with insulated options down to 0.15W/m²K for those considering the higher levels of the Code for Sustainable Homes.

#### **Environment**

The insulation materials used have an Ozone Depletion Potential (ODP) of 0 and a Global Warming Potential (GWP) of less than 5.

<sup>&</sup>lt;sup>1</sup> BS 9250:2007 Design of the air tightness of ceilings in pitched roofs

<sup>&</sup>lt;sup>2</sup> BS 5250:2011 Control of condensation in buildings - H.3.2

<sup>&</sup>lt;sup>3</sup> Building Regulations 2010 Part L: Conservation of fuel and power

#### **GL250**



## Drop down loft access door range



#### **Product Features**

- Fully draught sealed around both the door and frame
- The door seals are supported by 12 perimeter catches
- Insulated door panel, available in numerous U-Values
- Unique sliding catch mechanism hides the door hingeDoor removable in seconds with innovative hinge design

The patented GL250 drop down loft door is an innovative solution to the need for energy efficient loft access, offering a cost effective alternative to traditional means of access. The unobtrusive design coupled with sleek, contemporary styling makes the door an ideal match for modern décors.

The revolutionary design of the multi-point catch mechanism allows the GL250 door to maintain a more effective draught seal around the entire accessible opening, helping it to meet the air tightness requirements of the Building Regs Part L. This prevents heat loss and solves the problem of moist, warm air from entering the roof space causing condensation damage.

| Specification Guide |            |                         |                   |  |
|---------------------|------------|-------------------------|-------------------|--|
| Product Code        | Insulation | U-Value                 | Fitting Size (mm) |  |
| GL250               | 50mm EPS   | -                       | 562 x 726         |  |
| GL250-035-<br>EPS   | 110mm EPS  | 0.35 W/m²k              | 562 x 726         |  |
| GL250-035-PU        | 60mm PU    | 0.35 W/m²k              | 562 x 726         |  |
| GL250-015-PU        | 150mm PU   | 0.15 W/m <sup>2</sup> k | 562 x 726         |  |
|                     |            |                         |                   |  |

Key lockable versions of each door are available with the GL251 prefix.

#### GL250-03



## Drop down loft access door (2003 version)



#### **Product Features**

- · Foam compression seals for draught free installation
- Innovative twist action, three point closing mechanism
- Thermally insulated door panel to prevent heat loss
- Door panel is removable for easier roofspace access
- · The door and frame has an easy to clean textured finish

The GL250-03 drop down loft access door has a unique twist action catch which secures the frame in three places to provide a secure, draught-sealed fit. It can be easily installed into existing ceilings to provide a cost effective means of loft access.

The door and frame are unobtrusive with a lightly textured white finish. The door can be easily cleaned with a solvent free damp cloth, or alternatively the GL250-03 can be painted to match the décor.

Draught seals prevent the problem of moist warm air entering the roof space and help to meet the air leakage requirements of Part L of the Building Regulations. An insulated panel helps to reduce heat loss. An insulation variant offering a U-Value of 0.35 W/m²k is also available.

| Specification Guide |            |            |                   |  |  |
|---------------------|------------|------------|-------------------|--|--|
| Product Code        | Insulation | U-Value    | Fitting Size (mm) |  |  |
| GL250-03            | 50mm EPS   | -          | 562 x 726         |  |  |
| GL250-03L-EPS       | 110mm EPS  | 0.35 W/m²k | 562 x 726         |  |  |

The '03' suffix represents that the door was first manufactured in 2003.

#### **GL260**



### Push up loft access door



#### **Product Features**

- · Fully draught sealed around both the door and frame
- Insulated door panel, available in numerous U-Values
- Frame installs quickly with fixing screws provided
- Secure twin catches to ensure effective draught seal
- · Push up door can be easily removed for full access

The range of GL260 Push Up Loft Access Doors provides a modern alternative to the traditional timber frame 'push up' loft hatch. The historic wooden board and surround is replaced with an unobtrusive and cost effective plastic moulding with integral catches and draught seals.

The catches lock the door in position and help to pull the door down onto the draught seal to prevent air leakage. An additional seal also prevents leakage between the frame and ceiling. The back of each door is thermally insulated to prevent heat loss into the loft space.

The door is designed to blend into the look of the modern home thanks to its lightly textured surface. It can be easily cleaned and also be painted to match interior décor.

| Specification Guide |            |            |                   |  |  |
|---------------------|------------|------------|-------------------|--|--|
| Product Code        | Insulation | U-Value    | Fitting Size (mm) |  |  |
| GL260               | 50mm EPS   | -          | 562 x 562         |  |  |
| GL260L (EPS)        | 110mm EPS  | 0.35 W/m²k | 562 x 562         |  |  |
| GL260L (PU)         | 60mm PU    | 0.35 W/m²k | 562 x 562         |  |  |

Key lockable versions of each door are available with the GL261 prefix.

#### GLL256 / GLL257



#### Multi section loft ladders



#### **Product Features**

- Available in 2 and 3 section ladders for varying heights
- 3 section ladder comes with a mid section hand rail
- Safety catch prevents premature drop during operation
- Deep, non slip treads for more security while climbing
- Rubber feet offer extra stability on slippery floors

GLL256 and GLL257 multi section loft ladders are a cost effective simple solution to roof space access when combined with Manthorpe's drop-down loft doors.

The robust two and three section aluminium ladders are compact, lightweight and easy to install.

The ladders are designed with non-slip 'D' shaped rungs, for added comfort and security whilst climbing. The overlapping sections have a metal safety catch preventing premature drop during sliding ladder operation.

A complete fitting accessory pack and fitting instructions are supplied with each ladder including an operating pole.

| Specification Guide |          |                       |          |  |
|---------------------|----------|-----------------------|----------|--|
| Product Code        | Sections | Vertical<br>Coverage* | Handrail |  |
| GLL256              | 2        | Up to 2.6M            | No       |  |
| GLL257              | 3        | Up to 3.0M            | Yes      |  |

<sup>\*</sup>Vertical height is measured from floor to floor, not to the underside of the ceiling.

#### **GL270F**



### Square fire rated loft door



#### **Product Features**

- Provides a 1 hour fire rated square opening in the ceiling
- Built in draught seals limit air leakage through the door
- Made from powder-coated mild steel with a white finish
- Mineral wool insulation offers a 0.35 W/m²k U-Value
- Available with square "T-keys" or lockable Camlock keys

The square, drop down GL270F 1 hour fire rated loft door is a robust access solution for situations in which fire integrity is paramount.

The door is designed to be a flush fit to the ceiling and to fit between 600mm centre trusses, with the modern design blending in with modern house décors.

Manufactured from powder coated mild steel and insulated with a fire retardant mineral wool, the doors will provide one hour of fire protection, ideal for use in dwellings with a shared roof space.

The standard fire rated door (GL270F) comes with a budget lock and 'T' key. A lockable option can be supplied with a secure Camlock (GL271F).

| Specification Guide |                 |            |                   |  |  |
|---------------------|-----------------|------------|-------------------|--|--|
| Product Code        | Insulation      | U-Value    | Fitting Size (mm) |  |  |
| GL270F              | Mineral wool    | 0.35 W/m²k | 562 x 562         |  |  |
| GL271F              | Mineral<br>Wool | 0.35 W/m²k | 562 x 562         |  |  |

The GL270F has a square 'T' Key catch, the G271F offers a Camlock key lock.

#### **GL280F**



### Rectangular fire rated loft door



#### **Product Features**

- Makes a 1 hour fire rated rectangular opening in the ceiling
- Built in draught seals limit air leakage through the door
- · Made from powder-coated mild steel with a white finish
- Mineral wool insulation offers a 0.35 W/m²k U-Value
- Available with square "T-keys" or lockable Camlock keys

For details where the provision for larger access is required, the rectangular GL280F fire rated loft door offers a drop down access solution with an increased opening size. The door is designed to be flush fit to the ceiling and to fit between 600mm centre trusses.

In fire rated applications the timber structural opening will need to be lined with plasterboard before the door is installed to ensure that the whole detail, not just the door, is fire proofed.

The fire rated doors have been tested at Warrington Fire Research, test number 157180. Seals are located to all 4 sides of the door and seal to the frame, allowing the door to meet the BS 5250 and Building Regs Part L guidelines for air leakage, BRE test number 233677.

| Specification | n Guide         |            |                   |
|---------------|-----------------|------------|-------------------|
| Product Code  | Insulation      | U-Value    | Fitting Size (mm) |
| GL280F        | Mineral wool    | 0.35 W/m²k | 562 x 726         |
| GL281F        | Mineral<br>Wool | 0.35 W/m²k | 562 x 726         |

The GL280F has a square 'T' Key catch, the G281F offers a Camlock key lock.

#### **Access panels**

### Providing quick access to concealed utilities and services

The practice of dry lining allows the builder to hide utilities such as electrical wiring and plumbing pipe work, from view behind the plasterwork. However, the need for visual inspection and potential maintenance of these utilities will require points of access.

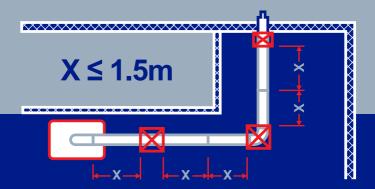
#### Gas flues in voids

The recent changes to Part J of the Building Regulations, relating to concealed gas flues within false ceilings and walls, has incorporated a Gas Safe guideline requiring sufficient access for inspection and maintenance.

Where boilers are located away from external walls, flues are more likely to run through ceiling or wall voids. In such cases when the gas appliance is serviced or maintained it can be difficult, or impossible, to determine whether the flue has been installed correctly or if it is still in good condition.



Gas engineers are legally required to check the flue after carrying out any work on the boiler. This will include a visual inspection. Similarly, when an engineer installs a boiler they need to ensure that it can be used without constituting a danger to anyone; this would include checking whether the flue is safe.



All flue joints and corner transitions should be viewable from an inspection point.

#### Areas to inspect

The original installer of the system along with every subsequent servicing or maintenance engineer need to be able to check that:

- The flue is continuous throughout its length
- All joints are correctly assembled and are well sealed
- The flue is adequately supported throughout its length

Unless the gas engineer can make these checks they cannot ensure that the flue from the boiler is safe in order to comply with their legal duties. This necessitates the provision of appropriate inspection hatches in the ceiling or stud wall.

Manthorpe's range of standard and fire rated access panels is ideally suited to providing access to concealed gas flues. The panels can also be used to access utilities and services such as:

- Soil stacks and waste pipes
- Concealed gas flues and outlets
- Valves, stopcocks and plumbing fittings
- Fuse boxes, wiring systems and switches
- System controls and connection link units

In addition Manthorpe offers a unique tile access panel for use in bathrooms and kitchens to provide discreet access behind ceramic tiles.



## 150 x 200 access panel



#### **Product Features**

- · Allows quick access to concealed services and utilities
- Lightweight, quick and easy to install with no fixings
- The hinged door panel is fully removable for better access
- Fits into a 150 x 200mm hole within the dry lining
- · Lightly textured finish, can be painted over if required

The GL100 access panel provides a cost effective solution for easy access to hidden building services behind a dry lined ceiling or wall. It is also ideally suited for providing a means of access for inspection and maintenance to concealed gas flues within wall or ceiling voids.

The flush fit panel is lightweight, quick and easy to fit, removing the need for traditional site made hatches. Manufactured from white High-Impact Polystyrene (HIPS), the panel has a light textured finish which can be painted over if required. It also has a hinged door which can be fully removed from the frame with ease to allow for simpler installation and more open access to concealed services.

The GL100 panel is rectangular in shape and is designed to suit openings of 150mm x 200mm in size. Once a hole is made, the panel is secured using a suitable adhesive.

| Specification | Guide      |        |          |                   |
|---------------|------------|--------|----------|-------------------|
| Product Code  | Insulation | Colour | Material | Fitting Size (mm) |
| GL100         | N/A        | White  | HIPS     | 150 x 200         |

The flush fit door panel can be quickly opened with a screwdriver or coin.

#### **GL300**



## 300 x 300 access panel



#### **Product Features**

- · Allows quick access to concealed services and utilities
- Lightweight, quick and easy to install with no fixings
- The hinged door panel is fully removable for better access
- Fits into a 300 x 300mm hole within the dry lining
- · Lightly textured finish, can be painted over if required

The larger GL300 access panel provides a more practical means of access to hidden building services to better aid maintenance requirements.

In accordance with Part J guidelines, all voids containing concealed flues should have at least one inspection hatch measuring at least 300mm square. The GL300 is an ideal solution to help installers meet this requirement.

The flush fit panel is lightweight, quick and easy to fit, removing the need for traditional site made hatches. Manufactured from white High-Impact Polystyrene (HIPS), the panel has a light textured finish which can be painted over if required. The hinged door panel can be fully removed from the frame to allow for simpler installation and more open access. Once a hole is made, the panel is secured in place using a suitable building adhesive.

| Specification | Guide      |        |          |                   |
|---------------|------------|--------|----------|-------------------|
| Product Code  | Insulation | Colour | Material | Fitting Size (mm) |
| GL300         | N/A        | White  | HIPS     | 300 x 300         |

The flush fit door panel can be quickly opened with a screwdriver or coin.

#### GL150F / 130F / 450F



## Fire rated access panels



#### **Product Features**

- Provides a 1 hour fire rated opening in the ceiling or wall
- Built in draught seals limit air leakage through the door
- Made from powder-coated mild steel with a white finish
- Various opening sizes available, including bespoke sizes
- Available with square "T-keys" or lockable Camlock keys

The range of fire rated access panels, GL150F, GL130F and GL450F, provides various sizes of protected openings, in both ceilings and walls, giving access to building engineering services and utility controls. The door is finished in powder-coated white steel and can be over painted to blend with the surrounding surface.

Each one hour fire rated access panel is fitted with a catch lock and a simple 'T' key is supplied. The GL151F, GL131F and GL451F fire rated doors come complete with a more substantial key lock for additional security. All panels are fire rated to one hour as defined in British Standard BS476-22:1987, and were tested at Warrington Fire Research Centre, report number 162703.

| Specification Guide |              |            |                    |  |  |
|---------------------|--------------|------------|--------------------|--|--|
| Product Code        | Insulation   | Material   | Fitting Size* (mm) |  |  |
| GL150F              | Mineral Wool | Mild Steel | 174 x 224          |  |  |
| GL130F              | Mineral Wool | Mild Steel | 324 x 324          |  |  |
| GL450F              | Mineral Wool | Mild Steel | 474 x 474          |  |  |

<sup>\*</sup> The structural opening shown will accommodate a 10mm plasterboard lining.

#### GLTAP-500



## Tile access panel system



#### Product Kit Includes:

- 4 lengths of uPVC frame extrusion
- 8 high-impact polystyrene corner support clips
- 1 fibre cement composite back board (not in GLTAP-5CP)
- 2 magnetic soft touch, 'push to open' latches
- The ceramic tiles are not included in the kit

The GLTAP-500 tile access panel is a versatile kit of parts that can be quickly assembled to form a concealed access panel within a tiled wall. The panel is completely flexible and can be used with most sizes and thickness of tiles to form an access panel of any varying dimensions from 150mm to 465mm square, up to a maximum panel weight of 5kg.

The kit is quick and easy to fit and ensures a seamless blend with the rest of the tiling within a bathroom or kitchen. When access to services is required, a light touch releases the magnetic catches and the panel opens smoothly.

A contractor pack with enough components to make up to 5 access panels (GLTAP-5CP) is available, providing a cost effective solution aimed at the professional builders and tilers.

| Specification Guide |                |                   |                |  |  |
|---------------------|----------------|-------------------|----------------|--|--|
| Product Code        | Min Panel Size | Max Panel<br>Size | Max Panel Load |  |  |
| GLTAP-500           | 150mm²         | 465mm²            | 5 kg           |  |  |
| GLTAP-5CP           | 150mm²         | 500mm² †          | 5 kg           |  |  |

 $<sup>^{\</sup>dagger}$  Or equivalent area, e.g. 150 x 825mm (this will reduce the total panels available).

### Through wall & underfloor ventilation

#### Venting sub floors & cavity walls

Underfloor voids should be ventilated to remove the build up of condensation and harmful gases, which if uncontrolled can damage the property and the health of the occupants. The added use of insulations, air tightness requirements and building on brown field sites can increase the potential problems.

#### Ventilating suspended floors

Concrete suspended floors have now replaced the traditional methods of using concrete raft foundations in buildings. As a result, the requirements to provide sufficient ventilation to the voids below floor level have increased.

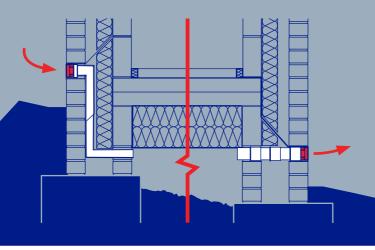
Building Regulations and NHBC guidelines state that a well-ventilated gap between the ground and the underside of the floor should be provided to prevent the build up of condensation and contaminated air.

#### Ventilation requirements

The Building Regulations Part C¹ along with the NHBC Standards² outline the requirements for the type of vents and provide calculations to work out the frequency of ventilation openings to an underfloor void.

Ventilators should incorporate grilles which prevent the entry of vermin to the sub-floor but do not resist the air flow. If internal floor levels need to be nearer to the ground to provide level access, then sub-floor ventilation can be provided through offset ventilators. There should be at least 75mm between the base of the vent and the external ground level.

Two opposing external walls should have ventilation openings placed so that the ventilating air will have a free path between opposite sides. Where this is not possible, airflow can be ducted to these areas to create a cross flow.



Manthorpe recommends following the NHBC guide that ventilators should be spaced at not more than 2m centres and within 450mm of each end of the opposing walls. The range of through wall and underfloor ventilators diffuse potentially dangerous gases, such as methane, which can seep from the ground in the space beneath timber and concrete suspended floors.

#### Deeper floors, wider cavities ...

The current and future requirements of Part L of the Building Regulations along with other standards such as the Code for Sustainable Homes have focused on the need for well insulated homes. This has led to an increase in the depth of thermal insulation used in suspended floors along with the ever growing width of wall cavities to accommodate the greater amounts of insulation placed within them. This means that clear access to an underfloor void may be as far as 6 or 7 brick courses (525mm) below the level of an airbrick and potentially as much as 350mm from the outer face of the external leaf. Traditional telescopic underfloor ventilators would not be able to achieve this without the use of additional vertical and horizontal extension sleeves.

Manthorpe's unique G965 dual extended underfloor ventilator is specifically designed to provide a clear airflow passage to a void beneath the insulated suspended floor construction of a modern property.

<sup>&</sup>lt;sup>1</sup> Building Regulations Part C 4.19 - 'Site preparation and resistance to contaminants and moisture'

<sup>&</sup>lt;sup>2</sup> NHBC Standards 5.2

<sup>&#</sup>x27;Suspended ground floors'

#### G930



### 9" x 3" combination airbrick



#### **Product Features**

- Stacks together to create 9"x6" and 9"x9" combinations
- Provides 6,450mm² of free airflow per 9"x3" airbrick
- Integral mortar key ensures secure bond to the brickwork
- Louvred grille prevents the entry of large insects
- · Available in various colours to suit different substrates

The G930 combination airbrick is designed to provide high levels of ventilation through walls and into underfloor voids.

Replacing a single house brick within the outer leaf wall construction the airbrick incorporates a front mounted louvred grill to permit airflow while blocking out wind driven rain and prohibiting large insects from gaining access.

A single 9" x 3" Airbrick provides  $6,450 \text{mm}^2$  of airflow; this can be increased by stacking more than one unit together. Multiple airbricks can be clipped together and stacked vertically to make 9" x 6" and 9" x 9" combinations which provide  $12,900 \text{mm}^2$  and  $19,350 \text{mm}^2$  respectively.

The airbrick is available in a wide range of colours to suit many different masonry finishes and render types.

| Specification Guide |                |           |         |  |
|---------------------|----------------|-----------|---------|--|
| Product Code        | Free Vent Area | Size (mm) | Box Qty |  |
| G930                | 6,450mm²       | 220 x 72  | 20      |  |

The G930 is available in terracotta, buff, white, grey, blue/black and brown.

#### G965



## Dual underfloor vent



#### **Product Features**

- Provides ventilation to an insulated underfloor void
- Removes the need for additional extension sleeves
- Offers 8,000mm² of free ventilation area per unit
- Allows for a vertical extension of 5-8 brick courses
- Can bridge across a 150mm wide insulated cavity

The G965 ventilator offers a vertical telescopic adjustment of between 5 and 8 brick courses without the need for an extension sleeve. The horizontal outlet is also long enough to bridge through an overall wall thickness of 350mm without additional extensions. The product is ideally suited for ventilating through a well insulated cavity wall and below an insulated suspended floor.

The front aperture will accommodate a G930 airbrick but it can also be used in conjunction with a traditional clay airbrick. N.B. components may reduce the overall airflow through the system (e.g. airbricks/extensions/adaptors).

Larger through wall and sub floor spans can still be achieved by using the G961 extension sleeve. Similarly, details that require less than a 5 course vertical drop in the brickwork can be achieved by trimming down the vent.

| Specification Guide |                |                    |         |  |
|---------------------|----------------|--------------------|---------|--|
| Product Code        | Free Vent Area | Vertical Extension | Box Qty |  |
| G965                | 8,000mm²       | 5-8 courses        | 16      |  |

Max vertical coverage: 600mm. Max horizontal coverage 360mm (inc. airbrick).



## Telescopic underfloor vent



#### **Product Features**

- · Provides ventilation to an insulated underfloor void
- Allows for a vertical extension of 3-5 brick courses
- Offers 6,600mm<sup>2</sup> of free ventilation area per unit
- Deeper vertical drops can be achieved with a G961
- Will drop down within a 50mm clear cavity space

The G960 telescopic underfloor ventilator provides a clear airflow passage for underfloor ventilation to suspended concrete and timber floors. The telescopic feature enables the product to adjust the ventilation channel vertically within the cavity between three and five brick courses. An extension sleeve is also available for further multiples of two course adjustments as required.

The ventilator is designed to be used in conjunction with a G930 airbrick. It can also be used with a standard 9" x 3" clay airbrick, albeit with a reduced airflow.

The vent fits within a 50mm wide cavity, but also suits wider cavities that are filled with insulation leaving only 50mm gap.

| Specification Guide |                |                    |         |  |
|---------------------|----------------|--------------------|---------|--|
| Product Code        | Free Vent Area | Vertical Extension | Box Qty |  |
| G960                | 6,600mm²       | 3-5 courses        | 20      |  |

Max vertical coverage: 365mm. Max horizontal coverage 250mm (inc. airbrick).



## Underfloor extension sleeve



#### **Product Features**

- Adds an extra 2 course extension to the telescopic vents
- Can be used to navigate deeper, well insulated floors
- · Provides a horizontal extension through wider cavities
- · Quick & easy push fit assembly with the underfloor vents
- Maintains an unobstructed airflow path through the wall

The G961 extension sleeve increases the adjustment of the underfloor ventilators by two brick courses vertically. The sleeve can also be fitted to the base outlets of the vents to add an extra horizontal extension through larger cavities.

Placing the sleeve between the two halves of the underfloor vents adds 150mm of vertical coverage. This enables the products to navigate suspended floors with high levels of insulation built in. By adding additional sleeves, you can extend the coursing drop indefinitely providing that they are adequately supported in the cavity.

As cavity walls are becoming wider with the increasing amounts of insulation being used, the telescopic vents may no longer fully penetrate through into the underfloor void on their own. The G961 can be fitted horizontally to extend the outlet through wider cavity wall details as required.

| Specification Guide |                |                    |         |  |  |
|---------------------|----------------|--------------------|---------|--|--|
| Product Code        | Free Vent Area | Vertical Extension | Box Qty |  |  |
| G961                | 7,000mm²       | 2 courses          | 20      |  |  |

Additional vertical coverage: 150mm. Additional horizontal coverage 160mm.

#### G935



### Combination cavity sleeve



#### **Product Features**

- Telescopically expands to suit various cavity widths
- Stacks with the airbrick in 9"x6" and 9"x9" combinations
- The integral wind baffle helps to reduce draughts
- Extends the underfloor vent through thicker external walls
- Can use multiple units to extend the span indefinitely

The G935 combination cavity sleeve is designed to fit into the back of the G930 airbrick to ventilate through a standard cavity or solid brick wall.

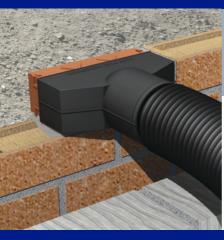
Like the airbrick itself, the unit can be stacked to create both a 9"x6" and 9"x9" through wall duct. It also telescopically extends horizontally to fit cavity widths of 50mm to 100mm, with further extension possible through the addition of extra product units.

The G935 also includes an integral wind baffle to help reduce draughts through the product whilst maintaining an effective airflow. It can be used in any combination required and built into the brick course as normal.

This product should be used in conjunction with other products from the through wall & under floor range to provide a complete ventilation system for your detail.

| Specification Guide |                |                      |         |  |
|---------------------|----------------|----------------------|---------|--|
| Product Code        | Free Vent Area | Horizontal Extension | Box Qty |  |
| G935                | 6,600mm²       | 270 - 320mm*         | 10      |  |

<sup>\*</sup> Horizontal extension range indicated is inclusive of the G930 airbrick.



### Remote void ventilator



#### **Product Features**

- Converts a single airbrick opening onto a 4" dia. pipe
- Can also be used with a telescopic underfloor vent outlet
- Ideal for ducting airflow under a cast concrete floor
- Easily trimmed to suit an airbrick or underfloor vent
- Works with the Manthorpe GRPA range of flexible pipes

The G962 remote void ventilator is specifically designed to connect an airbrick or underfloor vent to a 4" round pipe. This is required for ducting airflow from airbricks and underfloor vents over long distances such as when an extension with a cast concrete floor blocks the airbricks to the existing suspended floor.

By converting the rectangular openings into a round pipe means that it can be much more easily cast into a foundation or ducted over long distances using standard drainage pipe lengths and connectors. For details where you are unable to fit the vents in two opposing walls, ducting pipework can enable you to maintain a cross flow of air.

The adapter fits directly onto the bottom of the underfloor vent and can be easily cut down to fit the G930 airbrick.

| Specification Guide |                |           |         |  |
|---------------------|----------------|-----------|---------|--|
| Product Code        | Free Vent Area | Pipe Size | Box Qty |  |
| G962                | 8,800mm²       | Ø 4"      | 10      |  |

Underfloor vent opening size: 232 x 50mm. Airbrick opening size: 215 x 70mm.



### Perp end weep vent



#### **Product Features**

- Drains water from dpc, lintels and abutment cavity trays
- Can be used to ventilate timber frame cavity wall details
- Sits discreetly within the perp joint between two bricks
- Available in multiple colours to suit various substrates
- Built in drip lip sheds moisture away from the brick face

The G950 perp end weep ventilator is used to drain lintels, DPC, abutment cavity trays and to provide ventilation into cavity walls.

The product can be slotted between two bricks and mortared into position. It provides an unobtrusive drainage or ventilation point for the cavity behind. The vent has a baffled grille to prevent the ingress of driving rain and wind whilst incorporating an insect grille and drip lip. This grille is sized to keep out large insects but is wide enough that it will not be blocked by debris, paint or water droplets.

The weep vent should be spaced at no greater than 900mm centres to meet NHBC guidelines for draining a perimeter DPC, along with a recommended lintel spacing of every 450mm maximum with at least two per opening above all windows and doors.

| Specification Guide |                |              |         |  |
|---------------------|----------------|--------------|---------|--|
| Product Code        | Free Vent Area | Size (mm)    | Box Qty |  |
| G950                | 220mm²         | 9 x 65 x 100 | 50      |  |

Available in buff, terracotta, brown, white, black, grey, clear and blue/black.



#### Refurb weep vent



#### **Product Features**

- · Quick installation into a 25mm diameter drilled hole
- Can be used to ventilate timber frame cavity wall details
- Louvred chevron grille protects against wind driven rain
- External flange covers any damage to the substrate
- Drip rib ensures clean moisture run off, avoiding staining

The G952 refurbishment weep ventilator has been designed to provide retrospective ventilation to cavity wall details where no or an insufficient amount of weep vents have been used. The G952 can be used to ventilate rendered walls where standard weep vents are difficult to detail in.

Further benefits of the product are that each unit is produced with a louvred chevron grille which prevents the ingress of large insects and helps to protect against wind driven rain. The protruding drip feature on the front face of the vent directs moisture away from the wall rather than onto the product which could lead to unsightly stains and damp patches.

The product is quick to install, easily pushing into a 25mm hole drilled through the external wall and comes in a range of colours to suit all common brick and render finishes.

| Specification Guide |                |           |         |  |
|---------------------|----------------|-----------|---------|--|
| Product Code        | Free Vent Area | Size (mm) | Box Qty |  |
| G952                | 260mm²         | Ø 25 x 80 | 50      |  |

Available in buff, terracotta, brown, white, black, grey, clear and blue/black.

#### G900



## 5 inch core drill ventilator



#### **Product Features**

- Ideally suited to ventilating rooms with gas appliances
- Designed to install through a 5" diameter core drill hole
- Kit includes a hooded, weather proof external cowl cover
- Discreet internal louvred grille with hidden fixing holes
   Anti draught baffle included to reduce airflow if required

The G900 core drill vent is designed for ventilating a gas appliance or supplying general through wall ventilation. Using a standard 5" core drill, the system can be fitted quickly and easily in both new build and refurb situations.

The cowl and louvre significantly reduce any visible light and gusty winds. They also block wind driven rain and large insects. The duct creates an uninterrupted path through an exterior wall up to a maximum thickness of 350mm. An anti-draught baffle can be used to reduce the airflow through the vent.

As standard, the vent area is 100 cm² which is enough to provide ventilation to a 27kW or 92,000 Btu/h rated appliance. The anti-draught baffle reduces the effective ventilation area to 70 cm², enough to provide ventilation to a 21kW or 71,500 Btu/h rated appliance.

| Specification Guide |                 |             |         |  |  |
|---------------------|-----------------|-------------|---------|--|--|
| Product Code        | Free Vent Area* | Pipe Length | Box Qty |  |  |
| G900                | 100 cm²         | 350mm       | 1       |  |  |

Product available in brown, terracotta and white (Internal louvre grill always white).

#### G901



### Large backplate core vent



#### **Product Features**

- The large backplate covers over any masonry damage
- Easier to fit around masonry that has been chiselled out
- Suited to refurbishment jobs with weak plaster work
- Offers 100 cm² of airflow without draught baffle installed
- Anti draught baffle reduces the effective airflow to 70 cm²

The G901 large backplate 5" core drill vent is similar to the G900 with the addition of a larger perimeter backplate. The backplate gives the installer greater flexibility, allowing them to simply cut masonry away with a hammer, chisel to fit the product and cover over any inaccuracies or uneven edges afterwards.

The cover plate will also hide any damage that may have occurred as a result of using a core drill. This is especially useful in a refurbishment situation when the decorating inside the property has been completed as old plaster work can sometimes break or become loose during the use of the core drill.

The core drill vents have been independently tested by the BRE to the requirements of BS 5440-2:2009, BRE test report number 240795.

| Specification Guide |                     |                     |         |  |  |
|---------------------|---------------------|---------------------|---------|--|--|
| Product Code        | Free Vent Area*     | Backplate Size (mm) | Box Qty |  |  |
| G901                | 100 cm <sup>2</sup> | 275 x 207           | 1       |  |  |

 $<sup>^{\</sup>star}$  With baffle installed effective free area is 70 cm  $^{2}$  (BRE test report no. 240795).

#### **Cavity trays**

### Providing protection from water ingress below roof abutments

Wind driven rain can penetrate through the porous outer leaf of a structure and run down the inside of the cavity. This is not a problem unless a roof abuts this wall. When this occurs the outside wall becomes an inside wall where rain soaked bricks can cause damp problems in internal rooms.

#### A change in requirements ...

The recent changes to the NHBC Technical Standards (specifically section 6.1.17) have provided more detailed guidance to the use of cavity and lintel trays at roof abutments and cavity interruptions, one of the most important changes being the requirement for preformed trays to be used at stepped roof abutments details.

By installing Manthorpe's cavity tray systems, penetrating rainwater is collected above the abutment and diverted back out through a weep hole above the roof line, thus preventing costly damage to internal walls.

#### A tray for every occasion

The cavity and lintel tray ranges have been developed to incorporate several innovative design features to aid in the installation and performance for a variety of different abutment applications:

- Stepped systems for pitched roofs
- A horizontal system for straight runs
- A refurbishment system for remedial work
- Brickwork/Stonework/Blockwork ranges
- Lintel tray range for above doorways and windows

All Manthorpe's trays can be ordered either with or without lead attached. Short, standard, or long lead is available (see page 46 for further details).



#### Water ingress behind an unprotected abutment

#### Free take-off service

For larger projects we offer builders, architects and developers a free of charge, project specific take off service for abutment cavity trays. Simply send us the elevation drawings and we can calculate the type and quantity of trays you require for your project.



Whether it is a simple straight run, or a complex stepped abutment that wraps around 2 corners, Manthorpe inhouse specialists can review project drawings and advise the builder of the right type and quantity of cavity trays they require for their project.

Send your enquiries to mbp.takeoffs@manthorpebp. co.uk along with the details of the wall construction and the elevation drawings of the job, quotes can be easily produced on a specific detail, a whole plot or an entire site.

#### **GW295**



Horizontal system

### Horizontal tray



#### **Product Features**

- Preformed tray holds itself rigid within the wall cavity
- Covered interlock allows for multiple trays to be linked
- Integral stop ends ensure water is collected in the tray
- Use with a peep weep to drain moisture onto the roof
- Removable mortar clip for quick & simple lead installation

The GW295 horizontal tray is designed to provide driving rain protection for external walls above straight horizontal roof abutments.

The preformed tray holds itself upright within the cavity and has integral stop ends to catch and contain any moisture that penetrates the wall. A covered hook joint feature allows adjacent trays to be linked together within the perp joint and removes the need for overlap of trays, giving a total tray effective length of 900mm. Two peep weeps must be used in conjunction with this tray, spaced in the perp joints at 450mm centres to meet NHBC standards and drain away the collected water.

The tray has a unique front mortar clip that can be easily removed once the mortar has set leaving a slot into which the lead is inserted.

| Specification Guide |                 |          |          |         |  |
|---------------------|-----------------|----------|----------|---------|--|
| Product Code        | Coursing Height | Bed Size | Coverage | Box Qty |  |
| GW295               | 75 - 225mm      | 102.5mm  | 900mm    | 25      |  |

Available with short (75mm), standard (150mm) and long (300mm) drop lead.

#### **GW294**



Horizontal system

### Refurb tray



#### **Product Features**

- · Ideal for remedial work, can be installed into existing walls
- Removable mortar clip for quick & simple lead installation
- Integral stop ends ensure water is collected in the tray
- Use with a peep weep to drain moisture onto the roof
- Covered interlock allows for multiple trays to be linked

The GW294 refurbishment horizontal tray is designed to provide protection where a new horizontal roof abutment (such as single storey extension) meets an existing external wall. It can also be used where an existing cavity tray system has been found to have degraded or even left out of the wall construction altogether.

Like the longer GW295, the preformed tray holds itself upright in the cavity with stop ends to contain any moisture. A covered interlock joins adjacent trays together to create continuous runs, with each tray having an effective length of 450mm. A single peep weep should be used in each tray to any moisture that accumulates to drain away onto the roof line.

The trays can be used in conjunction with the GW295 trays when a shorter tray is required during the run.

| Specification Guide |                 |          |          |         |  |  |
|---------------------|-----------------|----------|----------|---------|--|--|
| Product Code        | Coursing Height | Bed Size | Coverage | Box Qty |  |  |
| GW294               | 75 - 225mm      | 102.5mm  | 450mm    | 25      |  |  |

Available with short (75mm), standard (150mm) and long (300mm) drop lead.

#### GW296 / GW297



Horizontal system

### Corner trays



#### **Product Features**

- Preformed tray holds itself rigid within the wall cavity
- Location ribs ensure correct overlap with adjacent trays
- Mastic tape creates a watertight joint between trays
- Removable foam strip leaves slot for lead installation
- Code 4 and 5 pre-leaded trays are available to order

The GW296 and GW297 internal and external corner transitions are used where a straight run of the horizontal cavity tray system is required to change direction around an inside or outside corner of a wall.

The corner units are easily joined to the rest of the horizontal system. Locating ribs ensure a positive overlap with the adjacent tray while the attached mastic tape creates a watertight bonded seal.

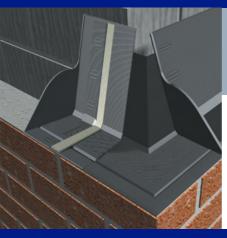
The trays include a foam strip positioned below the front lip of the units that is easily raked out exposing a 25mm deep aperture into which a lead blank can be inserted and secured with lead wedges.

The trays can be supplied with short, standard or long lead.

| Specification Guide |                 |          |          |            |  |  |
|---------------------|-----------------|----------|----------|------------|--|--|
| Product Code        | Coursing Height | Bed Size | Corner   | Box<br>Qty |  |  |
| GW296               | 75 - 225mm      | 102.5mm  | Internal | 25         |  |  |
| GW297               | 75 - 225mm      | 102.5mm  | External | 25         |  |  |

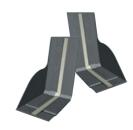
Available with short (75mm), standard (150mm) and long (300mm) drop lead.

## GW298 / GW299



Horizontal system

## Stop ends



#### **Product Features**

- · Preformed stop end holds itself rigid within the cavity
- Mastic tape creates a watertight joint between trays
- Finishes off corner trays and cut down horizontal runs
- Handed stop ends for left and right tray terminations
- Pre cut width ensures suffcient overlap with adjacent tray

The GW298 and GW299 left and right hand stop ends are designed for use with the horizontal cavity tray system to finish the end of a run. The stop ends prevent water from discharging off the sides of a corner unit or cut down horizontal tray and into the cavity.

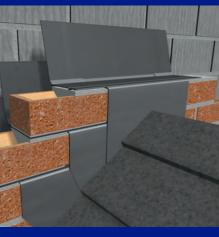
Each stop end is supplied with mastic tape strip, which bonds to the adjacent tray ensuring a watertight joint is achieved between the stop end and tray.

Depending on the detail it may be necessary to cut down one of the horizontal trays, in these instances a stop end should be used to terminate a cut down end of the tray. Alternatively, the stop ends can be positioned on one side of an external/internal corner to provide a moisture stop for the tray as it protects around the corner of the wall.

| Specification Guide |                 |          |       |            |  |
|---------------------|-----------------|----------|-------|------------|--|
| Product Code        | Coursing Height | Bed Size | Hand  | Box<br>Qty |  |
| GW298               | 75 - 225mm      | 102.5mm  | Right | 25         |  |
| GW299               | 75 - 225mm      | 102.5mm  | Left  | 25         |  |

Stop ends are supplied with a mastic tape strip attached.

## **GW290**



Stepped system

Apex tray



#### **Product Features**

- Preformed tray holds itself rigid within the wall cavity
- Sits at the ridge allowing moisture to drain off either side
- 731mm long for effective coverage over a range of pitches
- Removable mortar clip for quick & simple lead installation
- Manufactured from durable black polypropylene

Installed at the very top of a stepped abutment system, the GW290 apex tray is the last tray to be fitted and covers the point at which the intermediate runs meet at the ridge line.

The tray has no stop ends on either side which allows any moisture that collects on the tray to be evenly dispersed down either side of the abutment.

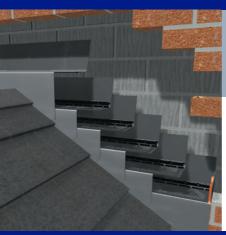
When planning to fit the lead after the system is installed, the tray comes fitted with Manthorpe's unique front mortar clip, which can be removed at any time once the mortar has set leaving a 25mm deep aperture into which the lead can be inserted and secured with lead wedges.

Alternatively, a made to measure GW290 can be supplied with lead stapled and sealed to the tray in either code 4 or code 5.

| Specification Guide |                    |          |             |         |  |
|---------------------|--------------------|----------|-------------|---------|--|
| Product Code        | Coursing<br>Height | Bed Size | Pitch Range | Box Qty |  |
| GW290               | 75mm               | 102.5mm  | 17.5° - 50° | 25      |  |

Lead drop of 300mm (standard) available to dress down over the apex.

## GW291 / GW292



Stepped system

# Intermediate trays



#### **Product Features**

- · Left and right hand stepped trays for pitched abutments
- Preformed tray holds itself rigid within the wall cavity
- Built in stop end ensures correct water run off direction
- · Angled ribs trap falling mortar ensuring clean drainage
- Removable mortar clip for quick & simple lead installation

Spaced in every course of brickwork from the top of the abutment to the bottom, the GW291 and GW292 handed intermediate trays have an integral stop end on one side. This ensures that water runs out of the tray in the correct direction, onto the tray below.

Intermediate trays should be positioned in every course down the abutment, with the corner positioned 75mm off the finished roof line. The trays will overlap by at least 80mm to help prevent driving rain penetrating the outer wall and tracking across the masonry.

Along with the removable lead clip, the tray also features a unique mortar trap which ensures a clear water path by reducing the risk of mortar droppings and other debris completely blocking the tray.

| Specification | Guide              |       |             |         |
|---------------|--------------------|-------|-------------|---------|
| Product Code  | Coursing<br>Height | Hand  | Pitch Range | Box Qty |
| GW291         | 75mm               | Right | 17.5° - 50° | 25      |
| GW292         | 75mm               | Left  | 17.5° - 50° | 25      |

### **GW293**



#### Stepped system

## Catchment tray



#### **Product Features**

- Collection tray for the lower end of stepped tray runs
- Preformed tray holds itself rigid within the wall cavity
- Integral stop ends ensure water is collected in the tray
- Angled ribs trap falling mortar ensuring clean drainage
- Use with a weep vent to drain moisture onto the roof

The GW293 catchment tray is located at the lowest point of the abutment. Up stands at both ends of the tray ensure that the water which runs down from the trays above is collected and safely diverted out of the wall. A G950 weep vent must be used in conjunction with this tray to drain the collected water away.

The GW293 includes a removable clip allowing lead to be installed once the tray has been fitted. It also features a unique mortar trap which ensures a clear drainage path for moisture by reducing the risk of mortar droppings and other debris completely blocking the back of the tray.

The catchment tray is the first tray in the stepped system to be fitted as you build your way up the wall. Once installed, ensure there is an overlap from the trays above to allow the cascade of moisture to find its way into the catchment tray.

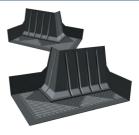
| Specification Guide |                    |          |             |         |  |
|---------------------|--------------------|----------|-------------|---------|--|
| Product Code        | Coursing<br>Height | Bed Size | Pitch Range | Box Qty |  |
| GW293               | 75mm               | 102.5mm  | 17.5° - 50° | 25      |  |

## **GW293CC**



#### Stepped system

# Catchment corner tray



#### **Product Features**

- Collection tray for the lower end of stepped tray runs
- Used at gable edges to shield the corner from water entry
- Integral stop ends ensure water is collected in the tray
- Use with a weep vent to drain moisture onto the roof
- · Preformed tray holds itself rigid within the wall cavity

The GW293CC handed corner catchment trays are designed for situations where a stepped roof abutment ends at the edge of an external wall to shield the corner from water entry, also where restricted space prohibits the fitting of a standard catchment tray.

The tray has up stands at both ends ensuring the water running down from the trays above is collected and safely diverted out of the wall. A G950 weep vent must be used in conjunction with this tray to drain the collected water away, diverting it out of the wall and back onto the roof line where it can safely drain away.

The trays include a foam strip positioned below the front lip of the tray that is easily raked out exposing an aperture into which a lead blank can be inserted and secured.

| Specification Guid | le                 |       |             |         |
|--------------------|--------------------|-------|-------------|---------|
| Product Code       | Coursing<br>Height | Hand  | Pitch Range | Box Qty |
| GW293CC-RH         | 75mm               | Right | 17.5° - 50° | 25      |
| GW293CC-LH         | 75mm               | Left  | 17.5° - 50° | 25      |
|                    |                    |       |             |         |

## GW291 / GW292-SBS



Stepped system

## Short block stone trays



#### **Product Features**

- Left and right hand stepped trays for pitched abutments
- Preformed tray holds itself rigid within the wall cavity
- Adjustable stop end suits 150mm and 225mm coursing
- 448mm long tray suitable for details with a steeper pitch
- Removable mortar clip for quick & simple lead installation

Spaced in each course of block or stonework between the apex and the catchment, the short block stone handed intermediate trays have a built in adjustable stop end on one side. This ensures that water runs out of the tray in the correct direction and onto the tray below.

Taller coursing heights of block / stonework means that the trays have to travel further horizontally along a course before dropping down onto the one below. As the pitch decreases, the length of the tray required increases; the short block stone intermediate trays service a pitch range from 25°-50° (for stone) and 35°-50° (for blockwork).

The adjustable stop end allows the trays to be used with varying coursing heights, the flexible end tab is run up the perp joint with any excess folded over the adjacent block.

| Specification Guide |                          |   |  |  |  |  |
|---------------------|--------------------------|---|--|--|--|--|
| 150mm Range         | 225mm Range              | Hand  | Box Qty  |  |  |  |
| 25° - 50°           | 35° - 50°                | Right                                       | 25   |  |  |  |
| 25° - 50°           | 35° - 50°                | Left  | 25   |  |  |  |
|                     | 150mm Range<br>25° - 50° | 150mm Range 225mm Range 25° - 50° 35° - 50° | 150mm Range         225mm Range         Hand           25° - 50°         35° - 50°         Right |  |  |  |

## GW291 / GW292-LBS



Stepped system

## Long block stone trays



#### **Product Features**

- Left and right hand stepped trays for pitched abutments
- Preformed tray holds itself rigid within the wall cavity
- Adjustable stop end suits 150mm and 225mm coursing
- 814mm long tray suitable for details with a shallower pitch
- Removable mortar clip for quick & simple lead installation

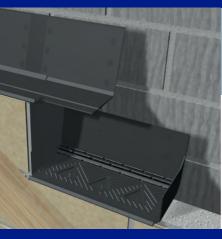
The taller coursing heights of block and stonework means that the trays have to travel further horizontally along a course than brickwork trays before dropping down onto the one below. As the pitch decreases, the length of the tray required increases; the long block stone intermediate trays service a pitch range from 12°-24° (for stonework) and 17.5°-34° (for blockwork).

Spaced in each course between the apex and the catchment, the long block stone intermediate trays have a built in adjustable stop end on one side, allowing water to drain in the correct direction and onto the tray below.

The adjustable stop end allows the trays to be used with varying coursing heights, the flexible end tab is run up the perp joint with any excess folded over the adjacent block.

| Specification Guide |                          |  |  |  |  |  |
|---------------------|--------------------------|--|--|--|--|--|
| 150mm Range         | 225mm Range              | Hand   | Box Qty  |  |  |  |
| 12° - 24°           | 17.5° - 34°              | Right  | 25   |  |  |  |
| 12° - 24°           | 17.5° - 34°              | Left   | 25   |  |  |  |
|                     | 150mm Range<br>12° - 24° | 150mm Range 225mm Range<br>12° - 24° 17.5° - 34° | 150mm Range         225mm Range         Hand           12° - 24°         17.5° - 34°         Right |  |  |  |

## **GW293-BS**



Stepped system

## Catchment block trays



#### **Product Features**

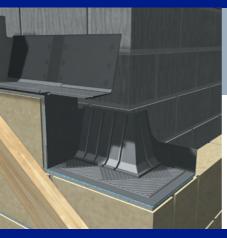
- Collection tray for the lower end of stepped tray runs
- Preformed tray holds itself rigid within the wall cavity
- Integral stop ends ensure water is collected in the tray
- Angled ribs trap falling mortar ensuring clean drainage
- Use with a weep vent to drain moisture onto the roof

The GW293-BS handed block stone catchment trays are suitable for larger coursing heights typically 150mm stonework or 225mm blockwork. The catchment tray is the first tray in the stepped system to be fitted as you build your way up the wall and is located at the lowest point of the abutment.

Upstands at both ends of the tray ensure that the water, which runs down from the trays above, is collected and safely diverted out of the wall, a weep vent must be used in conjunction with this tray to drain the water away. The flexible perpend protector attached to one end of the tray prevents driving rain from penetrating the outer wall and tracking across the taller coursing of block and stonework, easily folding down to suit various heights.

| Specification Guide |                 |       |          |         |  |
|---------------------|-----------------|-------|----------|---------|--|
| Product Code        | Coursing Height | Hand  | Bed Size | Box Qty |  |
| GW293-BSRH          | 150 - 225mm     | Right | 100mm    | 25      |  |
| GW293-BSLH          | 150 - 225mm     | Left  | 100mm    | 25      |  |

## GW293CC-BS



Stepped system

## Corner block trays



#### **Product Features**

- Collection tray for the lower end of stepped tray runs
- Used at gable edges to shield the corner from water entry
- Integral stop ends ensure water is collected in the tray
- Use with a weep vent to drain moisture onto the roof
- · Preformed tray holds itself rigid within the wall cavity

The GW293CC-BS handed block stone corner catchment trays are designed for situations where an abutment ends at an edge of a wall to shield the corner from water entry, and where restricted space prohibits the fitting of a standard catchment tray. The trays are suitable for larger coursing heights typically 150mm stonework or 225mm blockwork.

The tray has upstands at both ends of the tray to ensure that the water which runs down from the trays above is collected and safely diverted out of the wall. The flexible perpend protector prevents driving rain from penetrating the outer wall and tracking across the masonry.

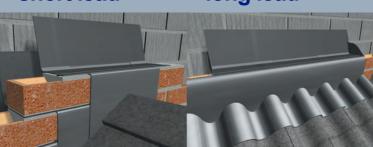
The corner trays include a foam strip positioned below the front lip of the tray that is easily raked out exposing an aperture into which lead can be inserted and secured.

| Specification Guide |                 |       |          |         |
|---------------------|-----------------|-------|----------|---------|
| Product Code        | Coursing Height | Hand  | Bed Size | Box Qty |
| GW293CC-BSRH        | 150 - 225mm     | Right | 100mm    | 25      |
| GW292CC-BSLH        | 150 - 225mm     | Left  | 100mm    | 25      |

## Leaded trays

# Stepped system with short lead

# Horizontal system with long lead



#### **Product Features**

- Trays are unleaded as standard with removable mortar clip
- Leaded trays available with a pre cut blank of lead attached
- Long and short lead options available for different details
- Code 4 fitted, stapled and sealed to the tray as standard
   Code 5 lead supplied to suit areas with higher exposure

The Manthorpe range of abutment cavity trays can be supplied unleaded or with factory fitted lead stapled and

sealed securely to the front edge of the tray if requested.

Different lengths and either code 4 or 5 lead are available depending on the application and severity of the prevailing weather conditions

The stepped range can be supplied with short lead (75mm) or long lead (150mm) attached to dress over tiles. Short lead is typically used in conjunction with an abutment soaker, with the lead overlapping down over the upstand. Long lead is recommended where profiled tiles are used, the lead is then dressed over to mould into the contours of the tiles.

The horizontal system is available in a choice of two different lengths of lead: 150mm or 300mm drop.

When ordering Leaded Trays please remember to state length of lead and pitch required. Code 4 lead will be supplied unless another code is specified.

Detailed lead installation sheets are available from Manthorpe on request.

## G951



## Perp end Peep Weep



#### **Product Features**

- Drains water from dpc, lintels and abutment cavity trays
- Sits discreetly within the perp joint between two bricks
- Available in multiple colours to suit various substrates
- Built in drip lip sheds moisture away from the brick face
- Prevents the ingress of insects into the cavity wall void

The G951 peep weep provides an unobtrusive solution to cavity wall drainage requirements. The protective hood which when fitted "peeps" out from the brick is designed to guard against blockage during installation and stops penetration of wind driven rain. The exit hole allows for drainage but is small enough to keep out large insects.

They should be spaced at no greater than 900mm centres when fitted over a DPC but to meet NHBC guidelines for lintels "weep holes are recommended to be sited at every 450mm maximum with at least two per opening above all windows and doors".

The peep weep should be simply fitted in open perp joints and mortared in position leaving approximately 10mm protruding from the brick face. The mortar key ties into the building fabric and an external rib aids in positioning.

| Specification Guide |                |              |         |  |
|---------------------|----------------|--------------|---------|--|
| Product Code        | Free Vent Area | Size (mm)    | Box Qty |  |
| G951                | N/A            | 9 x 65 x 100 | 100     |  |

Available in buff, terracotta, brown, black, clear and blue/black.

## GW281 / 282 / 283



## Lintel system

## Lintel trays



#### **Product Features**

- Pre-creased rolled up tray for faster installation on site
- Trays available to suit different heights of insulated lintel
- Rolls come in versatile lengths of 5 and 25 metres
- Both fixed and adjustable stop-end units are available
- · Can be easily cut to the required length on site

The range of lintel trays come in three sizes to suit cavity widths up to 150mm and lintel heights of 230mm, they are available in rolled lengths of 5 & 25 metres. Its precreased design enables the tray to be folded to suit a variety of lintels profiles and its rigidity allows it to be self supporting. This eliminates the need to build into the inner leaf wall.

The lintel trays are designed in response to NHBC and BS requirements. These state that cavity tray or damp proof protection should be installed over all openings.

The rolls are tough and durable to help protect lintels against corrosion from moisture. Any water collects on the tray and is contained by the stop ends and directed out through peep or weep vents.

| Specification | n Guide       |            |          |              |
|---------------|---------------|------------|----------|--------------|
| Product Code  | Lintel Height | Roll Width | Bed Size | Roll Lengths |
| GW281         | 100mm         | 400mm      | 100mm    | 5M & 25M     |
| GW282         | 163mm         | 463mm      | 100mm    | 5M & 25M     |
| GW283         | 230mm         | 530mm      | 100mm    | 5M & 25M     |

Both 5 and 25 metre lengths come rolled, taped and sealed in a polythene bag.

## G955 / G956



#### **Product Features**

- Stop end units to prevent water spilling over edge of tray
- Mastic tape strip allows for quick and easy installation
- Stop ends available to suit lintels with a 90° upstand
- · Adjustable stop end units for sloping lintels also available
- Should be used in conjunction with weep & peep vents

The G955 and G956 lintel stop ends are designed to prevent water spilling off the ends of lintels into the cavity below causing damage and expensive repairs. In line with NHBC guidelines, water landing on the lintel tray is contained by the stop ends and drains away through weep holes.

The G955 stop ends are supplied in pairs for convenience on site and the attached adhesive tape also ensures that a tightly bonded joint is achieved between the stop end and lintel tray. For lintels with a 90° rear up stand we recommend the use of our G955.

The G956 adjustable lintel stop end can be used with all types of lintels having a sloped rear up stand. The back of the stop end is designed to fold back and forth to fit the angle of various sloped lintel types.

| Specification Guide |            |              |        |         |  |
|---------------------|------------|--------------|--------|---------|--|
| Product Code        | Adjustable | Mastic Joint | Colour | Box Qty |  |
| G955                | No         | Yes          | Black  | 50*     |  |
| G956                | Yes        | Yes          | Black  | 50      |  |

 $<sup>^{\</sup>star}$  The G955 stop ends are handed and sold as a pair, each box contains 25 pairs.

## **Cavity closers**

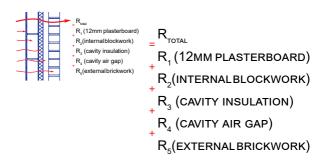
## Thermal bridging solutions for window and door reveals

Poorly insulated door and window reveals can lead to significant heat loss and damp issues. Manthorpe's Thermal Cavity Closers provide a versatile solution to cold bridging problems. They also act as a vertical dpc by closing off the cavity without the need to return the blockwork.

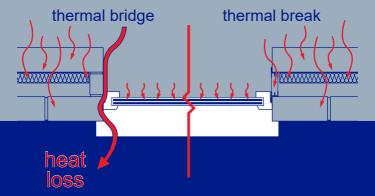
#### Thermal values

In an effort to improve energy efficiency, modern building practices measure the thermal performance of every aspect of a building's construction.

The thermal resistance of a building material such as a brickwork wall or concrete floor is referred to as its 'R-Value'. As buildings are seldom built from a single material, the total R-Value of an assembly is the sum of the resistance of the individual construction elements added together.



In most aspects of cavity wall construction, the building elements are sandwiched together to provide multiple barriers to prevent the heat escaping from the property, as shown above. Heat must pass all the way through one material before it gets to the next, so any heat that is blocked by one material is blocked the rest of the way.



Typical example of a cold bridging issue which results in heat loss through a poorly insulated window reveal.

### Thermal bridging

In certain details however, such as around window and door reveals, a single element supporting a window frame can span the distance from inside to outside. These details can create what is known as a thermal bridge, where heat bypasses the layers of the insulated cavity wall and takes the path of least resistance across the single material, creating a cold bridge. Common issues that occur when there is a cold bridge are damp patches and mould growth within the inside face of the window or door reveal.

Thermal bridging can be avoided by placing insulation between the elements of the component that is creating the cold bridge, providing a thermal break. The Manthorpe range of cavity closers offers an economical solution to closing the cavity at window and door reveals while also solving cold bridging problems. The cavity closers also act as an effective vertical damp proof course (DPC), ensuring compliance with Building Regulations.

The lightweight closers are available in a wide range of sizes to suit many cavity widths and are quick and simple to install, requiring no special tools. Lengths can be simply cut with a saw, the PVC flanges and fixing clips provide a secure method of fixing. The closer can be used in individual lengths, or some may be preformed into frames or fixed directly onto window and door frames prior to installation.

Fire rated cavity closers and made to measure rigid frame formers are also available to provide a cavity closing solution for any eventuality.



#### **Product Features**

- Double flange feature supports the closer in the reveal
- Closer sizes available to suit a variety of cavity wall widths
- Lengths easily joined without loss of thermal efficiency
- Fixing clips allow the closer to be tied into the masonry
- Corner clips can be used to make window frame formers

The G240 cavity closer has a double flange feature for use in standard window reveal details, providing an economical solution to cold bridging problems and is available in a range of sizes to suit varying cavity widths. The closer also acts as a vertical DPC barrier, however a DPC is still recommended in horizontal applications.

The closers can also be used around reveals to satisfy the requirements of Part B of the Building Regulations when the window/door frames are fixed in a standard dry lined detail. See Warrington Fire test report 166563 for further details.

The closer is easily installed and can be used in individual lengths, or preformed into formers and fixed directly on to window and door frames. Lengths are easily cut with a saw and joined together, with no loss of thermal efficiency, allowing smaller offcut lengths to be reused.

| Specification Guide |        |                         |           |
|---------------------|--------|-------------------------|-----------|
| Product Code        | Length | Cavity Widths Available | Box Qty   |
| G240                | 2.5m   | 50mm up to 150mm*       | 6 lengths |

<sup>\*</sup> Additional closer widths are also available to order to suit cavities up to 350mm.



#### **Product Features**

- Single flange designed for rebated or 'check' reveals
- Closer sizes available to suit a variety of cavity wall widths
- Lengths easily joined without loss of thermal efficiency
- Fixing clips allow the closer to be tied into the masonry
- Corner clips can be used to make window frame formers

In areas of high exposure that are subject to severe weather conditions, it is common practice to position the window frame behind a rebate in the outer leaf at the jamb, this is sometimes referred to as a check reveal.

The G242 cavity closer is designed to work in a check reveal detail, making it suitable for use in exposure zones up to and including zone 4 (very severe).

In a rebated opening, the two cavity leaves are not in line, so a conventional double flanged cavity closer would not sit level across them. The G242 is a single flange cavity closer, which is suited to rebated openings, with the flanged edge resting on the internal leaf and the other butting up to the rebated outer leaf. The G245 fixing clips can still be used to tie the flangeless edge of the closer into the outer leaf, securing it in position.

| Specification Guide |        |                         |           |
|---------------------|--------|-------------------------|-----------|
| Product Code        | Length | Cavity Widths Available | Box Qty   |
| G242                | 2.5m   | 50mm up to 150mm*       | 6 lengths |

<sup>\*</sup> Additional closer widths are also available to order to suit cavities up to 350mm.

## G245 / G246



# Cavity closer fixing clips



#### **Product Features**

- Ties allow the closer to be built into the masonry coursing
- Mountable in different orientations to suit many details
- Vertically adjustable to slot into various coursing heights
- Can be used to join multiple lengths of closer together
- Right angled clips allow the creation of window formers

G245 fixing clips enable the closer to be fixed securely to the brickwork, the clips slide into the fixing channel in the supporting flanges allowing variable height adjustment to match brick courses. The clip has alternative fixing legs at each end to enable the tie to be used at either 30 degrees or 60 degrees.

Lengths of the cavity closer can be joined together using the clips ensuring that the butt joints slope down at 45 degrees to the outer leaf. A minimum of four ties should be used per window jamb, two near the top (one in each leaf) and two near the bottom.

The G246 right angle clip allows for the formation of 90° joints between lengths of closer when constructing cavity window formers.

| Specification Guide |                   |                        |         |
|---------------------|-------------------|------------------------|---------|
| Product Code        | Closer Joint Type | Fixing Tie for Masonry | Box Qty |
| G245                | Straight          | Yes                    | 100     |
| G246                | Right angle       | No                     | 50      |
|                     |                   |                        |         |

A recommended eight clips should be ordered per 2.44m length of cavity closer.

## G243 / G244



## Flexible thermal cavity closer



#### **Product Features**

- Can be used to close arched and round window reveals
- Single and double flange profile versions are available
- The flexible closers have a minimum diameter of 500mm
- Available in a range of sizes to suit various cavity widths
- Straight and flexible lengths can easily be joined together

The G243 and G244 flexible cavity closers allow for arched and round window and door openings to be easily incorporated into building designs without compromising insulation requirements.

The flexible cavity closers are available in two alternative profiles; the G243 cavity closer has a double flange to suit standard cavities while the G244 is suitable for rebated details with its single flange design. Both are suitable for closing the cavity at circular or arched openings with a minimum diameter of 500mm. Straight closer runs can be easily joined to curved runs to make arched tops.

Any larger openings can be easily produced, from domestic 'bull's eye' windows to large commercial applications, through a unique joining clip system and flexible capability.

| Specification Guide |                         |   |  |  |
|---------------------|-------------------------|---|--|--|
| Length              | Cavity Widths Available | Box Qty   |  |  |
| 2.5m                | 50mm up to 150mm*       | To order  |  |  |
| 2.5m                | 50mm up to 150mm*       | To order  |  |  |
|                     | Length 2.5m             | Length Cavity Widths Available 2.5m 50mm up to 150mm* |  |  |

<sup>\*</sup> Additional closer widths are also available to order to suit cavities up to 350mm.

## WCMULTICOR



# Single extrusion cavity closer



#### **Product Features**

- Double flanged profile made from a single extrusion piece
- Available in a range of sizes to suit various cavity widths
- Multi width profiles can be trimmed to suit various sizes
- Multi width version from 50-100mm
- The insulation block provides a GWP rating of less than 5

The G247M range is a single extrusion profile closer which is available to suit a range of cavity widths, the multi width profiles are designed to enable the stockist to hold one size which can be easily trimmed to suit a variety of cavity width requirements.

The closers provide an economical solution to cold bridging problems, acting not only as a thermal break to the cavity but also as an effective vertical DPC barrier. The lightweight closers are available in sizes to suit most common cavity widths and are simple to install.

The multi width closer suits cavity widths between 50-100mm in a single product. The grooved back profile of the insulation can be cut to the desired width.

| Specification Guide |        |                         |           |
|---------------------|--------|-------------------------|-----------|
| Product Code        | Length | Cavity Widths Available | Box Qty   |
| G247M               | 2.44m  | 100mm*                  | 6 lengths |

<sup>\*</sup> Initial width 100mm, cut to suit smaller widths using the grooved guides.

## WCMULTICOR150



# Single extrusion cavity closer



#### **Product Features**

- Double flanged profile made from a single extrusion piece
- Available in a range of sizes to suit various cavity widths
- Multi width profiles can be trimmed to suit various sizes
- Multi width version from 100-150mm
- The insulation block provides a GWP rating of less than 5

The G247M range is a single extrusion profile closer which is available to suit a range of cavity widths, the multi width profiles are designed to enable the stockist to hold one size which can be easily trimmed to suit a variety of cavity width requirements.

The closers provide an economical solution to cold bridging problems, acting not only as a thermal break to the cavity but also as an effective vertical DPC barrier. The lightweight closers are available in sizes to suit most common cavity widths and are simple to install.

The multi width closers suits cavity widths between 100-150mm in a single product. The grooved back profile of the insulation can be cut to the desired width.

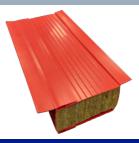
| Specification Guide |        |                         |           |
|---------------------|--------|-------------------------|-----------|
| Product Code        | Length | Cavity Widths Available | Box Qty   |
| G247-150            | 2.44m  | 150mm*                  | 6 lengths |

<sup>\*</sup> Initial width 150mm, cut to suit smaller widths using the grooved guides.

## REDSHIELD®



## REDSHIELD Cavity Barrier



#### **Product Features**

- Cavity barrier with a half hour fire integrity rating
- Closer sizes available to suit a variety of cavity wall widths
- Rigid box section design contains a mineral fibre insulation
   Unique compression clip expands into the cavity space
- Double flange design is suitable for standard reveals

The Manthorpe Redshield, cavity barrier has been designed for use where a fire barrier / fire stop is required to seal cavities around window and door reveals of a building. The unique compressible clip feature allows the product to expand within the cavity creating a fire seal.

The construction incorporates a compressed mineral wool insulating core which provides the 30 minutes integrity and 15 minutes insulation of a cavity barrier as well as providing a solution to cold bridging problems acting as a thermal cavity closer and DPC.

Available in four sizes that suit cavity widths varying from 50mm to 160mm in size.

| Specification Guide |        |               |           |  |
|---------------------|--------|---------------|-----------|--|
| Product Code        | Length | Cavity Widths | Box Qty   |  |
| RED/50/70           | 2.4m   | 50-70mm*      | 3 lengths |  |
| RED/70/90           | 2.4m   | 70-90mm*      | 3 lengths |  |
| RED/90/110          | 2.4m   | 90-110mm*     | 3 lengths |  |
| RED/110/130         | 2.4m   | 110-130mm*    | 3 lengths |  |
| RED/130/160         | 2.4m   | 130-160mm*    | 3 lengths |  |

<sup>\*</sup> The closer profiles can be compressed to reduce the cavity widths

## REDSHIELD® - REBATED DETAIL





## REDSHIELD® - Rebated Cavity Barrier

#### **Product Features**

- Single flange design is suitable for rebated/check reveals
- · Thermal cavity closer with a half hour fire integrity rating
- Closer sizes available to suit a variety of cavity wall widths
- Unique compression clip expands into the cavity space
- Rigid box section design contains a mineral fibre insulation

The Redshield rebated cavity barrier is suitable for use in rebated cavity openings where a fire barrier is required. In this construction the frame is positioned behind the outer leaf and is suitable for use in exposed categories up to and including very severe as defined in table 10 of BS5628 Part 3 which covers all exposure zones in the United Kingdom.

The cavity barrier has been designed to comply with Building Regulations Part L and Scottish Technical Standards Part D requirements for fire breaks. The required 30 minutes integrity and 15 minutes insulation of a cavity barrier was tested by Warrington Fire Research, test report No.428941.

| Specification Guide | <b>;</b> |               |           |
|---------------------|----------|---------------|-----------|
| Product Code        | Length   | Cavity Widths | Box Qty   |
| RED/50/70-R         | 2.4m     | 50-70mm*      | 3 lengths |
| RED/70/90-R         | 2.4m     | 70-90mm*      | 3 lengths |
| RED/90/110-R        | 2.4m     | 90-110mm*     | 3 lengths |
| RED/110/130-R       | 2.4m     | 110-130mm*    | 3 lengths |
| RED/130/160-R       | 2.4m     | 130-160mm*    | 3 lengths |

<sup>\*</sup> The closer profiles can be compressed to reduce the cavity widths

## **Rigid frame formers**

## Say goodbye to timber dummy window formers

Structural window openings need to be created to suit the exact specifications of the glazed unit that will fit into it. A dummy former the size of the window is installed at sill level to build the rest of the opening around, providing a perfectly proportioned square opening.

#### Out with the old ...

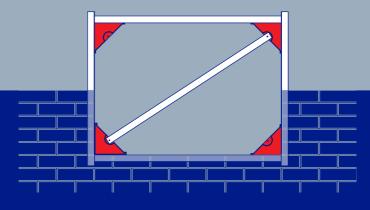
Dummy formers were traditionally made of timber, which then needed to be removed once the opening was finished to fit the cavity closer and eventually the window unit. These wooden units needed to be painstakingly fabricated on site to the correct size for each opening, and were prone to damage while awaiting installation. Once no longer required and swapped out for the cavity closer, the removed timber frames were yet another thing to dispose of for the builder.



#### In with the new ...

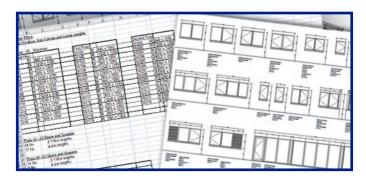
The Manthorpe rigid frame former is a faster, more efficient, more cost effective alternative to made-on-site timber equivalents. The units are a dummy former and cavity closer rolled into one; they are strong, quick to install and are designed to improve efficiency and save man hours.

#### Frame formers come fitted with corner blocks and braces



### Project specific take off service

For larger projects we offer builders, architects and developers a project specific take off service. Send your enquiries to mbp.takeoffs@manthorpebp.co.uk along with the details of the structural opening information or window schedule and we will calculate the size of the openings and supply Manthorpe rigid frame formers specific to that particular development, streamlining operations, saving more time and increasing efficiency even further.



### Ready assembled or flat packed

Choose the option that suits you best — either ready assembled or cut-to-length, palletised flat packs. Easy to transport and easy to store on-site, the flat pack version has proven to be extremely popular in tests, reducing clutter (no more piles of frames) and leading to quicker, better organised ways of working. Assembly is easy and fast — just click to fit.

## G280 / G282



# Rigid frame former square



#### **Product Features**

- Double flange feature supports the closer in the reveal
- Closer sizes available to suit a variety of cavity wall widths
- Lengths easily joined without loss of thermal efficiency
- Fixing clips allow the closer to be tied into the masonry
- Corner clips can be used to make window frame formers

The G280 and G282 rigid frame former provides a time saving solution to cold bridging problems around window and door reveals. The rigid design allows the cavity walling to be built up to the frame without the need of manufacturing dummy window formers, beating more traditional methods of window construction on all counts. Strong, extremely simple to install and available in a multitude of widths, the product has been designed to improve efficiency, speed up installation and cut down on the need for on site fabrications.

| Specification Guide |                |              |                  |  |
|---------------------|----------------|--------------|------------------|--|
| Product Code        | Flange<br>Type | Cavity Width | Delivery<br>Type |  |
| G280-75FF           | Double         | 75mm         | Made up          |  |
| G280-85FF           | Double         | 85mm         | Made up          |  |
| G280-90FF           | Double         | 90mm         | Made up          |  |
| G280-100FF          | Double         | 100mm        | Made up          |  |
| G280-110FF          | Double         | 110mm        | Made up          |  |
| G280-120FF          | Double         | 120mm        | Made up          |  |
| G280-130FF          | Double         | 130mm        | Made up          |  |

FF refers to a made up frame, to order a flat pack version replace FF with FP.

# Rigid frame former p & q - shaped

# Rigid frame former t-shaped





The rigid frame former eliminates site clutter that arises from dummy timber frames, which are prone to damage when left lying around. The product provides a framework for the masonry construction around the window aperture and remains in place as a base for the window frame.

The frame formers achieve the required thermal break and vertical DPC at the reveal of the window and door openings when fixed to allow a 30mm overlap into the cavity. This applies to sills, doors and rebated reveals (G282 profile).

Secured with self-tapping screws, quick-fit corner braces and horizontal battens ensure that rigidity is maintained. For larger doors and windows, where rigidity is required, a reusable diagonal brace is also provided.

| Specification Guide |                |              |                  |
|---------------------|----------------|--------------|------------------|
| Product Code        | Flange<br>Type | Cavity Width | Delivery<br>Type |
| G282-75FF           | Single         | 75mm         | Made up          |
| G282-85FF           | Single         | 85mm         | Made up          |
| G282-90FF           | Single         | 90mm         | Made up          |
| G282-100FF          | Single         | 100mm        | Made up          |
| G282-110FF          | Single         | 110mm        | Made up          |
| G282-120FF          | Single         | 120mm        | Made up          |
| G282-130FF          | Single         | 130mm        | Made up          |

FF refers to a made up frame, to order a flat pack version replace FF with FP.

## Joist seals

# Air leakage solutions for penetrations in the building fabric

The joist seal range solves the problem of air leakage around timber joists and 'I' beams at the point where they penetrate through the internal skin of masonry, helping to meet Part L and E requirements of the Building Regulations without resorting to joist hangers.

### The problem

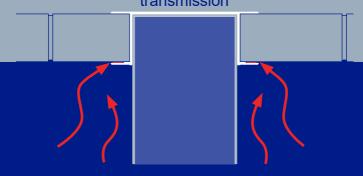
The Robust Construction Details suggest that timber joists should no longer be built into the internal blockwork skin of an external wall as the shrinkage of joists and mortar allows air leakage into the cavity.

To meet Part L and Part E of the Building Regulations, an alternative to the traditional construction method is to use joist hangers to suspend joists. However, this slows down the building process and they are more difficult to fit correctly leading to reported structural problems such as springy floors and, in some cases, total collapse.



A joist hanger which has been poorly fitted to a wall can often be the reason why some modern timber floors are found to be springy.

# Air path through the blockwork penetration is sealed to prevent heat loss & sound transmission



#### The solution

Designed to meet the requirements of Part L Building Regulations regarding increased insulation and air leakage, Manthorpe's joist seal provides an effective alternative to the Robust Construction Details suggestion.

The seals fit over the joist end before being built into the blockwork in the traditional manner. Effectively, the joist seal is a box built into the inner wall which is sealed to the masonry to form an air-tight joint. The floor joist then simply fits into this box.

During the drying out period, the timber floor joist can shrink within the product without the seal between the box and the masonry being affected, thus complying to Part L.

### Why Use Manthorpe Joist Seals?

All sectors of the construction industry agree that joist seals are of great benefit to the builder.

Throughout the development of this product range, Manthorpe has sought information and recommendations from industry experts to assist in the design of the ultimate product to combat air leakage around timber joists and comply with regulations regarding acoustics.

As a result of this, Manthorpe has designed a comprehensive range of seals to fit a wide variety of situations; such as different joist heights and widths as well as for varying widths of blockwork.

### G912



## 225mm joist seal



#### **Product Features**

- Perimeter sealing flange with an air tight foam gasket
- Rear location tabs provide a positive pressure on seal
- Cut out slots to fit restraining straps as required
- Compliant to Building Regulations Part L for air leakage

The G912 range of joist seals is designed to accommodate solid timber joists and engineered "I-beam" joists with a maximum height of 225mm. For joists that exceed this height the taller G913 joist seal can be used up to a maximum height of 302mm.

Restraining straps can be used in conjunction with the seals to comply with Building Regulations by trimming out slots in the product at designated points. These are inboard of the black compression seal which provides an air tight seal to the internal blockwork.

|                 |       | Blockwork Depth (C) |              |  |
|-----------------|-------|---------------------|--------------|--|
|                 |       | 100mm               | 115mm        |  |
|                 | 40mm  | G912-40-100         | G912-40-115  |  |
| B               | 48mm  | G912-48-100         | G912-48-115  |  |
| Joist Width (B) | 65mm  | G912-65-100         | G912-65-115  |  |
| Wid             | 75mm  | G912-75-100         | G912-75-115  |  |
| ist             | 90mm  | G912-90-100         | G912-90-115  |  |
| S,              | 100mm | G912-100-100        | G912-100-115 |  |
|                 | 150mm | G912-150-100        | G912-150-115 |  |

In order to match the correct joist seal to your specific requirements the code system below is used:

#### G91A-BB-CCC

A = Joist Height (225mm for G912)

B = Joist Width (mm)

C = Depth of Blockwork (mm)

#### Example:

You are using a joist with a height of 225mm and a width of 48mm in a 115mm deep block wall.

You will need the following seal: G912-48-115

When using joists smaller than the seal or engineered joists with gaps at the sides, the joist should be packed using a suitable dry timber material or mineral fibre to prevent movement and preserve the structural, thermal and fire integrity of the structure.

As an additional inspection feature, the range of joist seals is manufactured from translucent polypropylene to allow a clear view of the joist resting on the blockwork inside the product when viewed down the cavity wall, this makes it easier for site checks.

|              | Blockwork Depth (C) |              |
|--------------|---------------------|--------------|
| 125mm        | 130mm               | 140mm        |
| G912-40-125  | G912-40-130         | G912-40-140  |
| G912-48-125  | G912-48-130         | G912-48-140  |
| G912-65-125  | G912-65-130         | G912-65-140  |
| G912-75-125  | G912-75-130         | G912-75-140  |
| G912-90-125  | G912-90-130         | G912-90-140  |
| G912-100-125 | G912-100-130        | G912-100-140 |
| G912-150-125 | G912-150-130        | G912-150-140 |
|              |                     |              |



## 302mm joist seal



#### **Product Features**

- Perimeter sealing flange with an air tight foam gasket
- Rear location tabs provide a positive pressure on seal
- Cut out slots to fit restraining straps as required
- Compliant to Building Regulations Part L for air leakage

The G913 range of joist seals is designed to accommodate solid timber joists and engineered "I-beam" joists with a maximum height of 302mm. For joists of 225mm height and under, the shorter G912 joist seal can be used.

The standard depth of the seals is 100mm. Variants are available for larger block depths, these are achieved by affixing flange extensions to the standard box depth. This means that regardless of the bed depth of the block used, the seal will only permit the joist a bearing of 100mm.

|                 |       | Blockwork Depth (C) |              |  |
|-----------------|-------|---------------------|--------------|--|
|                 |       | 100mm               | 115mm        |  |
|                 | 38mm  | G913-38-100         | G913-38-115  |  |
|                 | 45mm  | G913-45-100         | G913-45-115  |  |
| (B)             | 60mm  | G913-60-100         | G913-60-115  |  |
| Joist Width (B) | 76mm  | G913-76-100         | G913-76-115  |  |
|                 | 90mm  | G913-90-100         | G913-90-115  |  |
|                 | 120mm | G913-120-100        | G913-120-115 |  |
|                 | 150mm | G913-150-100        | G913-150-115 |  |
|                 | 180mm | G913-180-100        | G913-180-115 |  |
|                 |       |                     |              |  |

In order to match the correct joist seal to your specific requirements the code system below is used:

#### G91A-BB-CCC

A = Joist Height (302mm for G913)

B = Joist Width (mm)

C = Depth of Blockwork (mm)

#### Example:

You are using a joist with a height of 302mm and a width of 90mm in a 100mm deep block wall.



Tests carried out at CERAM Building Technology proved that Manthorpe's joist seals were more effective at preventing air leakage than pointing in the joint with a sealant, and even out performed joist hangers.

| Blockwork Depth (C) |              |              |  |
|---------------------|--------------|--------------|--|
| 125mm               | 130mm        | 140mm        |  |
| G913-38-125         | G913-38-130  | G913-38-140  |  |
| G913-45-125         | G913-45-130  | G913-45-140  |  |
| G913-60-125         | G913-60-130  | G913-60-140  |  |
| G913-76-125         | G913-76-130  | G913-76-140  |  |
| G913-90-125         | G913-90-130  | G913-90-140  |  |
| G913-120-125        | G913-120-130 | G913-120-140 |  |
| G913-150-125        | G913-150-130 | G913-150-140 |  |
| G913-180-125        | G913-180-130 | G913-180-140 |  |

### Flood defence



Airbricks are one of the first entry points for flood water according to the Environment Agency 1.

The airbrick flood defence is a discreet solution to the problems of flood damage caused by unprotected airbricks. In the event of a flood the easy to fit cover prevents water entering the vent, saving sandbags for use in other areas around the property.

The Manthorpe Airbrick Flood Defence is designed to cover the opening of a 9"x3" airbrick, stopping the ingress of water into the property in the event of a flood. The product can be used with any plastic, clay or concrete airbrick.

Airbricks are one of the first entry points of flood water into a property, and can require several sandbags to effectively block each one, this can waste valuable time and use up sandbags which could be better used elsewhere.

The easy to install frame of the airbrick flood defence forms a permanent mount for the removable cover, requiring only simple tools to fit and discreetly sits flush to the wall when not in use.

In the event of a flood, the easy to store cover simply clicks onto the frame to protect the property and can continue to be used as and when required.

The high visibility colour reminds the homeowner to remove the cover once the flood water has receded.

<sup>&</sup>lt;sup>1</sup> Taken from the Environment Agency advice on preparing for a flood http://www.environment-agency.gov.uk/homeandleisure/floods

## G980



# Airbrick flood defence



#### **Product Features**

- · Simple push fit cover clips, with finger release catches
- O-Ring seal between cover & frame prevents water entry
- A mastic sealant is used between the frame and the wall
- Press fit caps are supplied to cover over the fixing screws
- Exterior mastic sealant and fixing screws not provided

The frame of the airbrick flood defence is available in a range of colours designed to suit all common brick and render colours. The cover itself is only available in yellow, this high visibility colour reminds the homeowner to remove the cover once the flood waters subside, to restore airflow to the underfloor void and help in the drying out process. The frame, cover and caps are manufactured from UV stable polypropylene with a Neoprene O-Ring seal inserted into the back of the cover.

NB. The manufacturer does not guarantee that the product alone will prevent floodwater damage, as water can penetrate numerous openings around a property. This product however can significantly delay the ingress of water through an airbrick, allowing much needed time to safeguard valuables.

| Specification Guide |                        |               |         |
|---------------------|------------------------|---------------|---------|
| Product Code        | Description            | Airbrick size | Box Qty |
| G980                | Airbrick frame & cover | 9" x 3"       | 10      |

The frame is available in terracotta, buff, white, grey, blue/black and brown.

## **Conservation**



Swifts are with us for just 3 months each summer, but they bring spectacular action, drama & excitement to our skies.

Owing to the dwindling number of habitable spaces for them to breed, the population of swifts in the UK has almost halved in the last twenty years. New nesting boxes are needed to help their numbers recover as they return to our shores to breed every summer.

Every year the swifts announce the arrival of the British summer as they complete a 6,000 mile migration to nest in the UK. However with falling population numbers there are now less than 90,000 breeding pairs arriving in the UK, down from almost 150,000 pairs just two decades ago. Part of this decline is being linked to a reduction in potential nesting sites.

Modern building practices have greatly improved the quality of new homes in the UK, however not to the benefit of everyone. Many bird species, such as swifts, have occupied the cracks and crevices in our buildings for thousands of years, but the improved standard and style of modern construction has limited these nesting spaces and put their survival in our towns and cities at risk.

These popular birds come to the UK for just three months during the summer to raise their young and can be seen on warm evenings giving spectacular aerial displays and also eat large quantities of insect pests and spiders. They prefer nesting in small groups but the population has been dwindling for many years as suitable nest sites have become scarcer.

## **GSWB**



## Swift nesting brick



#### **Product Features**

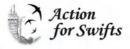
- The coloured face blends into the surrounding brickwork
- 29 x 65 mm opening leading into a recessed entry tunnel
- Integral concave provides ideal start point for nest building
- 413cm² floor area gives a maximum habitable living space
- The built in cavity tray detail protects against water ingress

The swift brick has been developed in conjunction with major house builders and conservation experts to provide a safe, spacious and habitable area to allow swifts to nest within the well built construction of modern houses.

The brick should be located high within the gable wall of the property, ideally at 5 metres high and above and over the level of the insulation zone. Where possible, install in locations that are unlikely to receive large amounts of direct sunlight during the hottest times of the day. Ideal places include below the overhang of the verge and barge board.

### Developed in partnership with





| Specification Guide |                     |                   |         |
|---------------------|---------------------|-------------------|---------|
| Product Code        | Description         | Facing brick size | Box Qty |
| GSWB                | Swift nesting brick | 9" x 3"           | 2       |
|                     |                     |                   |         |

The brick is available in terracotta, buff, white, slate grey, black and antique red.

| Notes |
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