

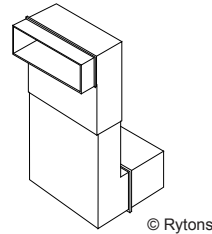
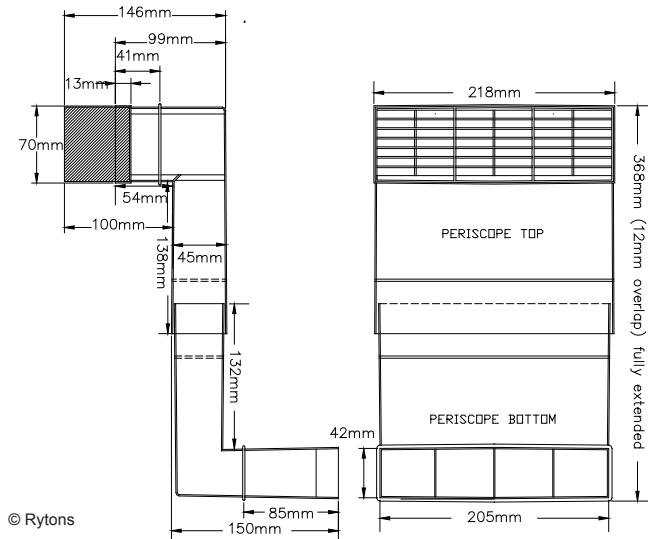
## Technical Data Sheet

### Rytons Periscope® Underfloor Ventilator

[www.vents.co.uk](http://www.vents.co.uk) (search code: PUFV)

April 2010

#### Dimensional Drawing



#### Approvals and Testing



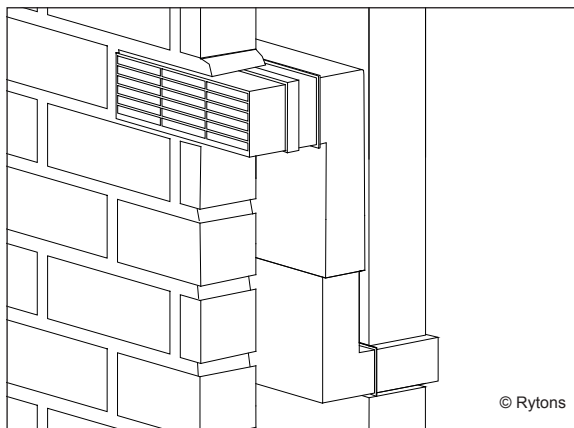
#### Main Uses, Features and Benefits

- For block and beam and timber floors.
- Alleviates build-up of dangerous gases.
- Expands up to 5 brick courses.
- Prevents damage by condensation.
- Use with Rytons Multifix® Air Brick (MFAB).

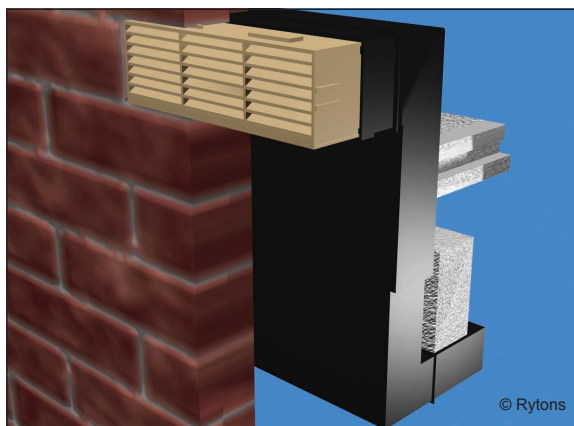
055Plus

F30 Accessories/Sundry Items for Brick/Block/Stone Walling  
Specification Clauses 17, 171

#### In-Situ Line Drawing



#### In-Situ Drawing



Product Specification Code	Free Area
Rytons PUFV	7750mm <sup>2</sup> per unit with Rytons Multifix® Air Brick fitted

#### Size

218mm (W) x 250mm (D) x 368mm (H).  
(Fully extended and with Rytons Multifix® Air Brick fitted).  
AutoCAD drawing available by email.

#### Composition

Polypropylene.

#### Colours

Black.

#### Specification Paragraph

Manufacturer: Rytons Building Products Ltd  
T: 01536 511874, F: 01536 310455, E: admin@rytons.com  
Visit our website at [www.vents.co.uk](http://www.vents.co.uk)

#### Product ref:

Rytons Periscope® Underfloor Ventilator (ref PUFV to BBA 89/2321)

#### Accessories:

- Rytons Multifix® Air Brick Buff/Sand (ref MFABBS to BBA 89/2321)
- Rytons Multifix® Air Brick Terracotta (ref MFABTC to BBA 89/2321)
- Rytons Multifix® Air Brick Grey (ref MFABGR to BBA 89/2321)
- Rytons Multifix® Air Brick Black (ref MFABBL to BBA 89/2321)
- Rytons Multifix® Air Brick White (ref MFABWH to BBA 89/2321)
- Rytons Multifix® Air Brick Brown (ref MFABDB to BBA 89/2321)
- Rytons Multifix® Air Brick Blue/Black (ref MFABBB to BBA 89/2321)
- Rytons Periscope® Vertical Extension (ref PUFVEXT)
- Rytons Horizontal Adaptor (ref HADAP100)

#### Installation

No special fixing required. Installation is easily carried out as work proceeds.  
Adjust the height of the Periscope® to suit courses and height of floor (cutting if necessary).

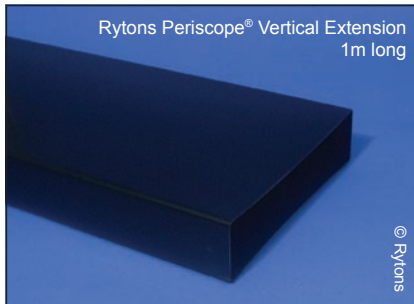
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### Photo Library



### UK Regulations, Standards and Guidelines

#### SUSPENDED TIMBER FLOORS

##### The Building Regulations 2000, Approved Document C 2004 edition

**4.14 b)** Ventilated air space measuring at least 75mm from the ground covering to the underside of any wall plates and at least 150mm to the underside of the suspended timber floor (or insulation if provided). Two opposing external walls should have ventilation openings placed so that the ventilating air will have a free path between opposite sides and to all parts. The openings should be not less than either 1500mm<sup>2</sup>/m run of external wall or 500mm<sup>2</sup>/m<sup>2</sup> of floor area, whichever gives the greater opening area. Any pipes needed to carry ventilating air should have a diameter of at least 100mm. Ventilation openings should incorporate suitable grilles which prevent the entry of vermin to the subfloor but do not resist the air flow unduly. If floor levels need to be nearer to the ground to provide level access sub-floor ventilation can be provided through offset (periscope) ventilators.

##### The Building (Scotland) Regulations - Domestic 2005

**Suspended timber floors 3.4.4** Permanent ventilation of the under floor space direct to the outside air by ventilators in 2 external walls on opposite sides of the building to provide an open area in each wall of either 1500 mm<sup>2</sup> for at least every metre run of the wall, or 500 mm<sup>2</sup> for at least every square metre of floor area, this open area also being provided in internal sleeper walls or similar obstructions to maintain the under floor ventilation; the ventilated space to be 75 mm in height from the site covering to the underside of any wall-plates and 150 mm to the underside of the floor joists.

##### NHBC Standards 2010

**Timber suspended ground floors 5.2 - D22 (c)** A minimum ventilation void of 150mm should be provided below floor joists or 75mm below any wall plate. On shrinkable soil where heave could take place, an allowance for movement should be added to the underfloor ventilation requirement to determine the minimum dimension of the underfloor void. The allowance for movement relates to the shrinkage potential of the soil as follows: • high potential - 150mm • medium potential - 100mm • low potential - 50mm. Voids should be ventilated by openings providing not less than 1500mm<sup>2</sup> per metre run of external wall or 500mm<sup>2</sup> per m<sup>2</sup> of floor area, whichever gives the greater opening area. Ventilators should be spaced at not more than 2m centres and within 450mm of each end of any wall. Air bricks should be ducted through cavities and be unobstructed. Every part of the void under a timber suspended ground floor should be thoroughly ventilated through openings on at least two opposite sides. Where this is not possible, effective cross ventilation from opposite sides should be provided by a combination of openings and air ducts. Provision should be made for ventilation through partitions and sleeper walls. If necessary, pipe ducts should be incorporated in adjoining solid floors, separating walls or other obstructions. Ventilation should not be obtained through a garage.

##### British Standard BS 5250:2002

**Timber 8.5.3.1** Subfloor cross ventilation should be provided by openings not less than either 1500mm<sup>2</sup>/m run of external wall or 500mm<sup>2</sup>/m<sup>2</sup> of floor area whichever gives the greater opening area.

##### Other Reference Material

Zurich Building Guarantee Solid Foundation Technical Manual 2007

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### BBA Approval

Rytons has 73 British Board of Agrément approved products, the largest range on the market. BBA certification is third party evaluation and accreditation, and approved products are accepted by building control officers, architects, engineers and surveyors nationwide. The NHBC also accept products approved by the BBA when used as stated in the relevant BBA certificate. Rytons also has an Irish Building Regulation Statement for each of their three BBA certificates.

### Handling Information

Box quantity: 20 number.  
Box size: 81cm (W) x 45cm (H) x 31cm (D).  
Box weight: 8.4kg.

## Questions

### Should the Periscope® be fitted above or below the DPC?

Generally air bricks and underfloor ventilators are installed directly above the DPC. Refer to paragraph 4.14, diagram 5, of The Building Regulations Approved Document C.

### How many sections is it possible to cut from a Rytons Periscope® Vertical Extension?

Based on standard brick and mortar sizes:

- 1 extra brick course - 5 sections from a 1m length max.
  - 2 extra brick courses - 3 sections from a 1m length max.
  - 3 extra brick courses - 2 sections from a 1m length max.
  - 4 extra brick courses - 2 sections from a 1m length max.
  - 5 extra brick courses - 2 sections from a 1m length max.
- Please double check all calculations to your particular specification using the dimensional drawing on page one to help.

### UK Regulations, Standards and Guidelines

#### SUSPENDED CONCRETE FLOORS

##### The Building Regulations 2000, Approved Document C 2004 edition

**4.19 b)** A ventilated air space should measure at least 150mm clear from the ground to the underside of the floor (or insulation if provided). "Two opposing external walls should have ventilation openings placed so that the ventilating air will have a free path between opposite sides and to all parts of the floor void. The openings should be not less than either 1500mm<sup>2</sup>/m run of external wall or 500mm<sup>2</sup>/m<sup>2</sup> of floor area, whichever gives the greater opening area. Any pipes needed to carry ventilating air should have a diameter of at least 100mm. Ventilation openings should incorporate suitable grilles which prevent the entry of vermin to the subfloor but do not resist the air flow unduly.

##### The Building (Scotland) Regulations - Domestic 2005

**Suspended concrete floors 3.4.3** Permanent ventilation of the under floor space direct to the outside air by ventilators in 2 external walls on opposite sides of the building to provide an open area in each wall of 1500 mm<sup>2</sup> for at least every metre run of the wall, or 500 mm<sup>2</sup> for at least every square metre of floor area, this open area also being provided in internal sleeper walls or similar obstructions to maintain the under floor ventilation; the ventilated space to be 150 mm to the underside of the floor slab or beams.

##### NHBC Standards 2010

**Precast concrete suspended ground floors 5.2 - D10 (b)** A minimum void of not less than 150mm should be provided below the underside of floor slabs and beams. On shrinkable soil where heave could take place, allowance should be made for the void to accommodate the following movements according to the shrinkage potential of the soil: • high potential - 150mm • medium potential - 100mm • low potential - 50mm. Voids should be ventilated by openings providing not less than 1500mm<sup>2</sup> per metre run of external wall or 500mm<sup>2</sup> per m<sup>2</sup> of floor area, whichever gives the greater opening area. Ventilation openings should be provided on at least two opposite sides. Where this is not possible, effective cross ventilation from opposite sides should be provided by a combination of openings and air ducts.

##### British Standard BS 5250:2002

**Precast concrete (beam and block) 8.5.3.2** Subfloor cross ventilation should be provided by openings not less than either 1500mm<sup>2</sup>/m run of external wall or 500mm<sup>2</sup>/m<sup>2</sup> of floor area whichever gives the greater opening area.

##### Other Reference Material

Zurich Building Guarantee Solid Foundation Technical Manual 2007  
Code of Best Practice for the Use of Aircrete Products - November 2002 A void of at least 75mm should be provided between the underside of the floor and the ground surface. Where the soil is heavy clay, the depth should be increased to at least 150mm to accommodate possible heave. The void should be ventilated by perimeter ventilators providing 600mm<sup>2</sup> of open area per metre run of external wall.



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