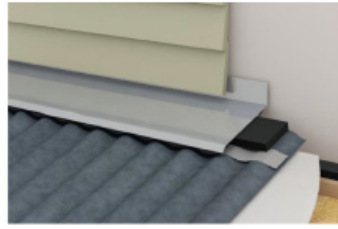




BRANZ Appraised

Appraisal No. 979 [2017]

ROOF VENTILATION PRODUCTS



Appraisal No. 979 [2017]

Amended 06 December 2018

BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 Roof Ventilation Products consist of a range of extruded battens and vents for use in pitched and skillion roof construction. The Roof Ventilation Products, when used together, will form a system to assist with the ventilation of the roof space.
- 1.2 The following Roof Ventilation Products are covered by this Appraisal:
 - VENT Ventilated Roof Batten [VB20] - polypropylene ventilated batten used to create airflow.
 - VENT Ridge Vent [RV10P and RV10DT] - used at ridge to release air from the roof void.
 - VENT Ventilated Apron Batten [AB20 and AB20DT] - polypropylene ventilated batten used at barge/abutment to allow air to escape from the lower roof void.

Scope

- 2.1 Roof Ventilation Products have been appraised for use as non-structural roof battens and vents for use with pitched and skillion roof construction on buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with profiled metal roof cladding; and,
 - situated in NZS 3604 Wind Zones up to, and including Extra High.
- 2.2 Building designers are responsible for incorporation of Roof Ventilation Products into their design for weathertightness and detailing of junctions.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Roof Ventilation Products if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. Roof Ventilation Products meet the requirements for loads arising from gravity loads, wind and impact [i.e. B1.3.3 (b), (h) and (j)]. See Paragraphs 8.1 to 8.3

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. Roof Ventilation Products meet these requirements. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Roof Ventilation Products will contribute to meeting this requirement. See Paragraphs 12.1 - 12.3.

Clause E3 INTERNAL MOISTURE: Functional Requirement E3.2 (c). Roof Ventilation Products will contribute to meeting this requirement.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Roof Ventilation Products meets this requirement and will not present a health hazard to people.

Technical Specification

4.1 System components and accessories supplied by VENT are:

- **VENT Ventilated Roof Batten (VB20)** - manufactured from extruded polypropylene. The battens are cut after extruding to a finished size of approximately 40 mm wide by 20 mm thick and provide a ventilation opening area of approximately 18,000 mm² per lineal metre. The VENT Ventilated Roof Battens are coloured black and are supplied in 1,800 mm long lengths.
- **VENT Ridge Vent** - manufactured from extruded polypropylene with an aluminium based conformable, soft edge flashing along the bottom edges. The VENT Ridge Vents are coloured black with a grey flashing and are supplied in 1,200 mm long lengths and provide a ventilation opening area of approximately 8,000 mm² per lineal metre.
 - **RV10P** - the vents are cut after extruding to a finished size of approximately 520 mm wide [including the flashing] by 20 mm thick. RV10P are suitable for trough depths that are less than 38 mm.
 - **RV10DT** - the vents are cut after extruding to a finished size of approximately 560 mm wide [including the flashing] by 20 mm thick. RV10DT are suitable for trough depths that are between 38 mm and 60 mm.
- **VENT Ventilated Apron Batten** - manufactured from extruded polypropylene with an aluminium based conformable, soft edge flashing on the bottom edge. The VENT Ventilated Apron Battens are coloured black with a grey flashing and are supplied in 1,200 mm long lengths and provide a ventilation opening area of approximately 8,000 mm² per lineal metre.
 - **AB20** - the battens are cut after extruding to a finished size of approximately 180 mm wide [including the flashing] by 20 mm thick. AB20 are suitable for trough depths that are less than 38 mm.
 - **AB20DT** - the battens are cut after extruding to a finished size of approximately 230 mm wide [including the flashing] by 20 mm thick. AB20 are suitable for trough depths that are between 38 mm and 60 mm.

4.2 System components and accessories supplied by the building contractor are:

- VENT Ventilated Roof Batten fixings - 40 x 2.5 mm hot-dip galvanised flat head nails, or hot-dip galvanised or stainless steel finishing brads at approximately 400 mm centres.

Handling and Storage

- 5.1 Handling and storage of the Roof Ventilation Products, whether on or off site, is under the control of the building contractor. The Roof Ventilation Products must be protected from direct sunlight and physical damage, and should be stored flat and under cover.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Roof Ventilation Products. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 Roof Ventilation Products can be used to provide passive ventilation of the roof space. The design of the roof ventilation system is subject to specific design and is the responsibility of the designer.
- 7.2 Roof Ventilation Products are for use with profile metal roof claddings in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 8.4 or to a specific design. Roof fixings must take into account the thickness of the products for roof fixing penetration into the supporting structure.
- 7.3 The VENT Ventilated Roof Batten provides a path for passive air flow over the top of structural battens and purlins. It is most suited for skillion roofs and commercial buildings.
- 7.4 The VENT Ridge Vent provides ventilation at roof ridges.
- 7.5 The VENT Ventilated Apron Batten provides ventilation at roof barge and abutments.
- 7.6 For further design guidance, refer to roof ventilation articles in BRANZ Publications: BUILD 148, BUILD 151, BUILD 152, BUILD 155, and BUILD 158.

Structure

- 8.1 The VENT Ventilated Roof Batten must be considered as non-structural roof battens only.

Impact Resistance

- 8.2 The VENT Ventilated Roof Battens have adequate resistance to impact loads likely to be encountered in normal residential and commercial use. The battens also have adequate resistance to compressive loads likely to be encountered during fixing of the claddings. They will withstand normal foot traffic and the function of the product will not be impaired by such traffic.

Wind Zone

- 8.3 The Roof Ventilation Products are suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High.

Durability

- 9.1 The Roof Ventilation Products are required to meet the performance requirements of NZBC Clause B2.3.1 (b) 15 years.

Serviceable Life

- 9.2 The Roof Ventilation Products will have a durability equivalent to that of the roof cladding to meet code compliance with NZBC Clause B2.3.2 provided the cladding system is maintained in accordance with this Appraisal and the Roof Ventilation Products are continually protected from UV light.

Maintenance

- 10.1 No maintenance is required for Roof Ventilation Products. Regular checks, at least annually, must be made of the roof cladding, flashings and penetrations to ensure they are maintained weathertight and continue to perform their function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to the Roof Ventilation Products from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 to C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 The Roof Ventilation Products must only be used under long run metal roof claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1.
- 12.2 The Roof Ventilation Products, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Acceptable Solution E2/AS1.
- 12.3 The detailing of the roof cladding system including junctions is the responsibility of the building designer. These details have not been assessed as part of this Appraisal.

Internal Moisture

- 13.1 The Roof Ventilation Products will contribute to the control of internal moisture by providing passive air flow. The building designer is responsible for the design of roof space ventilation.

Installation Information

Installation Skill Level Requirements

- 14.1 Installation must always be carried out in accordance with the Roof Ventilation Products Technical Literature and this Appraisal by, or under the supervision of, a License Building Practitioner (LBP) with the relevant Licence Class.

System Installation

Roof Underlay Installation

- 15.1 The selected building underlay must be installed in accordance with the underlay manufacturer's instruction prior to the installation of the VENT Ventilated Apron Batten, VENT Ridge Vent, and over the VENT Ventilated Roof Battens.

Roof Cladding

- 15.2 Profile metal roof cladding, including flashings and stop ends are in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 8.4 or to a specific design. Roof cladding fixing penetrations into supporting timber must be in accordance with NZBC Acceptable Solution E2/AS1 or specific design.

VENT Ventilation Roof Batten

- 15.3 The battens may be cut on site with a knife, hand saw or drop saw.
- 15.4 The battens must be installed under the building underlay to the purlins. The battens can be temporary fixed with the adhesive backing. The battens must be fixed in place with 40 x 2.5 mm galvanised flat head nails or galvanised stainless steel finishing brads at approximately 400 mm centres.

VENT Ridge Vent

- 15.5 The vent may be cut on site with a knife, hand saw or drop saw.
- 15.6 Lay vent on roof centrally over the roof apex with the flashing tape to either side.
- 15.7 Temporary fix the vent in place with tape or screws at each corner ensuring the underside of the vent is flat against the roof.

VENT Ventilated Apron Batten

- 15.8 The VENT Ventilated Apron Batten is placed over the top of the roof cladding. The protective paper is removed from the underside of the flashing tape and the vent will adhere to the cladding surface. The apron/barge flashing sits over the top of the VENT Ventilated Apron Batten.

Inspections

- 15.9 The Technical Literature must be referred to during the inspection of Roof Ventilation Products installations.

Health and Safety

- 16.1 There are no specific health and safety requirements for Roof Ventilation Products, however safe use and handling procedures for the components that make up the cladding system must be followed in accordance with the requirements of the relevant manufacturer's Technical Literature.

Basis of Appraisal

The follow is a summary of the technical investigations carried out:

Tests

- 17.1 The following testing has been completed by BRANZ:
- The Roof Ventilation Products were heat aged and compressed to assess the durability performance of the products.

Other Investigations

- 18.1 A durability opinion has been given by BRANZ technical experts.
- 18.2 The practicability of installation of the Roof Ventilation Products has been assessed by BRANZ and found to be satisfactory.
- 18.3 The Technical Literature, including installation instructions for the Roof Ventilation Products have been examined by BRANZ and found to be satisfactory.

Quality

- 19.1 The manufacture of the Roof Ventilation Products have been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 19.2 The quality of supply to the market is the responsibility of Blue Building Solutions T/A VENT.
- 19.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems, building underlays, flashing tapes, airseals and cladding system in accordance with the instructions of the designer.
- 19.4 The quality of the installation, handling and storage on site of the Roof Ventilation Products is the responsibility of the installer.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 (Amendment 7, 01 January 2017).
- BUILD 148 June/July 2015 Ventilation dries attic space.
- BUILD 151 December 2015/January 2016 Roof space moisture.
- BUILD 152 February/March 2016 Passive roof ventilation.
- BUILD 155 August/September 2016 Vents in skillion roofs.
- BUILD 158 February/March 2017 Airflow through ceilings.
- Ministry of Business, Innovation and Employment Record of Amendments – Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 06 December 2018.

This Appraisal has been amended to update the width of the VENT Ventilated Roof Batten and to include VENT Ridge Vent RV10DT and VENT Ventilated Apron Batten AB20DT.



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02 November 2017

ROOF VENTILATION PRODUCTS



In the opinion of BRANZ, **Roof Ventilation Products** are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Blue Building Solutions Limited T/A VENT**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Blue Building Solutions Limited T/A VENT**:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Blue Building Solutions Limited T/A VENT**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Blue Building Solutions T/A VENT** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

02 November 2017