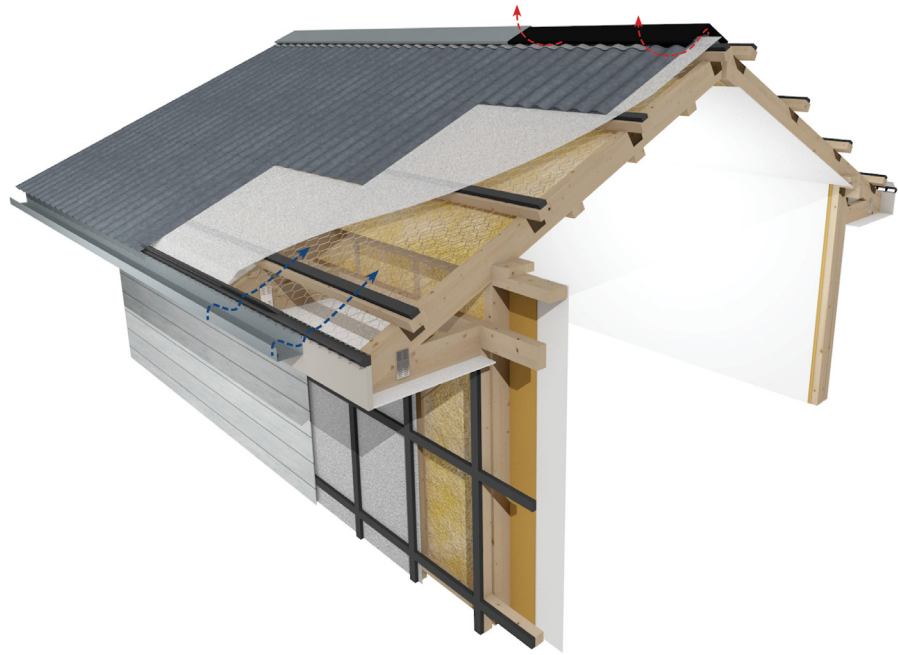




BRANZ Appraised
Appraisal No. 1099 [2019]

VENT WALL CAVITY BATTEN



Appraisal No. 1099 [2019]

BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 VENT Wall Cavity Batten consists of extruded fluted battens designed for use as non-structural cavity battens in cavity-based wall cladding systems. The VENT Wall Cavity Batten is designed for use with timber framed buildings.
- 1.2 VENT Wall Cavity Battens create a minimum 18 mm cavity, providing a secondary means of weather resistance by separating the cladding from the external wall framing, as well as providing an unobstructed path for any occasional ingress of water that may get past the external skin to drain to the exterior of the building.

Scope

- 2.1 VENT Wall Cavity Batten have been appraised for use as non-structural cavity battens for use with non-structural wall cladding systems on timber framed buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
 - with cavity-based wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or a valid BRANZ Appraisal that specifies a nominal 20 mm [minimum 18 mm] drained and vented cavity; and,
 - situated in NZS 3604 Wind Zones up to, and including Extra High.

[Note: The VENT Wall Cavity Batten can also be used on buildings subject to specific weathertightness design. Weathertightness design and detailing of these installations is the responsibility of the designer and is outside the scope of this Appraisal. The VENT Wall Cavity Batten is not suitable for use where pressure equalized cavities are required.]

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 **In the opinion of BRANZ, VENT Wall Cavity Batten 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. VENT Wall Cavity Batten meet the requirements for loads arising from wind and impact [i.e. B1.3.3 (h) and (j)]. See Paragraphs 8.1 - 8.3.

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. VENT Wall Cavity Batten meet these requirements. See Paragraphs 9.1 to 9.3.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. VENT Wall Cavity Batten when used to form a drainage cavity behind a cladding system will contribute to meeting this requirement. See Paragraphs 12.1 - 12.5.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. VENT Wall Cavity Batten meets this requirement and will not present a health hazard to people.

Technical Specification

- 4.1 VENT Wall Cavity Batten is manufactured from extruded polypropylene. The battens are cut after extruding to a finished size of approximately 40 mm wide by 20mm thick. The battens are coloured black and are supplied in 1,800 mm long lengths.

Handling and Storage

- 5.1 Handling and storage of the VENT Wall Cavity Batten, whether on or off site, is under the control of the building contractor. The battens 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 VENT Wall Cavity Batten. 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 VENT Wall Cavity Batten can be used to form drained cavities as specified by NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2, except that VENT Wall Cavity Batten can also be installed continuously in a horizontal orientation as ventilation and drainage is permitted through the batten flutes.
- 7.2 VENT Wall Cavity Batten can be used as an alternative to the timber and polystyrene cavity battens specified within NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.4.
- 7.3 When installed horizontally and continuously, VENT Wall Cavity Batten provide vermin proofing to the bottom of the drained cavity. If a durable life of more than 15 years is required, vermin proofing must be installed at the base of the cavity.
- 7.4 When installed vertically or for non-continuous horizontal installations, VENT Wall Cavity Batten do not provide vermin proofing to the bottom of the drained cavity. A cavity vent strip complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3 must be installed as part of the selected cladding system.
- 7.5 Where the VENT Wall Cavity Batten are installed vertically or horizontally at greater than 450 mm centres and a flexible building underlay is used, a building underlay support in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.8.5 must be installed over the building underlay behind the cavity battens at 300 mm centres horizontally to prevent bulging of the building underlay into the drainage cavity.
- 7.6 VENT Wall Cavity Batten is compatible with wood based, cement based, fibre cement, polystyrene, metal and uPVC cladding products and kraft paper based and synthetic building underlays.

Structure

- 8.1 The VENT Wall Cavity Batten must be treated as non-structural packers only. Fixing lengths for the cladding material must be as required for non-structural timber cavity battens. If the VENT Wall Cavity Batten are to be used with a cladding system that was originally direct fixed, the fixing length must be increased by a minimum of 20 mm to ensure frame penetration depths are maintained.

Impact Resistance

- 8.2 VENT Wall Cavity Batten 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 cladding.

Wind Zone

- 8.3 VENT Wall Cavity Batten are able to transfer the positive wind loads on the wall cladding to the structural wall frame. VENT Wall Cavity Batten are suitable for use on buildings situated in all Wind Zones of NZS 3604, up to, and including Extra High.

Durability

Serviceable Life

- 9.1 Provided the VENT Wall Cavity Batten is not exposed to weather or ultra-violet [UV] light for a total of more than 60 days, it is expected to have a serviceable life of at least 15 years.
- 9.2 VENT Wall Cavity Batten will have a durability equivalent to that of the cladding to meet code compliance with NZBC Clause B2.3.2 provided the cladding system is maintained in accordance with this Appraisal, the battens are continually protected from UV light, and durable vermin proofing is used at the base of the cavity regardless of installation specifics.

Maintenance

- 10.1 No maintenance is required for VENT Wall Cavity Batten. Regular checks, at least annually, must be made of the wall 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 VENT Wall Cavity Batten from heat sources such as fire places, heating appliances and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 and C/AS2 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 VENT Wall Cavity Batten alone will not prevent airflow from the cladding cavity into the roof space. The cavity must be sealed off from the roof space to meet code compliance with NZBC Clause E2.3.5.
- 12.2 Drained cavities constructed using VENT Wall Cavity Batten allow excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet code compliance with NZBC Clause E2.3.6.
- 12.3 Where a cladding manufacturer specifies a drained cavity that complies with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 as part of their system, VENT Wall Cavity Batten may be used. Where a proprietary cladding system manufacturer specifies timber or polystyrene cavity battens as part of their system, permission must be obtained from the cladding manufacturer before the timber or polystyrene cavity battens are substituted with the VENT Wall Cavity Batten.
- 12.4 The detailing of the cladding system including junctions between the cladding system and external joinery, other wall penetrations, e.g. meter boxes, and other cladding and roofing junctions is the responsibility of the building designer for compliance with the NZBC. These details have not been assessed as part of this Appraisal.
- 12.5 The use of the VENT Wall Cavity Batten to form a drained cavity where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirements for junctions, penetrations etc of the cladding system to remain weather resistant.

Installation Information

Installation Skill Level Requirements

- 13.1 Installation of VENT Wall Cavity Batten must be completed by competent tradespersons with an understanding of cavity construction.

System Installation

Building Underlay and Flexible Sill and Jamb Tape Installation

- 14.1 The selected building underlay and flexible sill and jamb flashing tape must be installed in accordance with the underlay and flashing tape manufacturer's instructions prior to the installation of the VENT Wall Cavity Batten.

VENT Wall Cavity Batten

- 14.2 The battens may be cut on site with a knife, hand saw or drop saw.
- 14.3 The battens must be installed over the building underlay to the wall framing. The cavity battens have a self adhesive on the reverse to temporarily keep them in place. Permanent fixing is made when the cladding is fixed through the batten to the timber structure.
- 14.4 Where the studs are at greater than 450 mm centres and a flexible building underlay is used, a building underlay support in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5 must be installed horizontally over the building underlay at 300 mm centres.
- 14.5 The battens must be installed in continuous lengths and may be installed vertically and/or horizontally to suit the requirements of the selected cladding.

Inspections

- 14.6 The Technical Literature must be referred to during the inspection of VENT Wall Cavity Batten System installations.

Health and Safety

- 15.1 There are no specific health and safety requirements for VENT Wall Cavity Batten, 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 following is a summary of the technical investigations carried out:

Tests

16.1 The following testing has been completed by BRANZ:

- Testing and assessment of the VENT Wall Cavity Batten for compression resistance when cladding fixings are applied through the batten by gun driven and Tex type screw fixing have been completed. The test results were used to assess the impact on the reduction in batten thickness when claddings are fixed using typical cladding fixing methods. .
- BRANZ expert opinion on NZBC E2 code compliance for VENT Wall Cavity Batten was based on testing to the relevant components of E2/VM1 [as contained within NZBC Clause E2, Amendment 4]. The testing assessed the performance of the VENT Wall Cavity Batten in a continuous vertical and horizontal orientation. In addition to the weathertightness test, the Technical Literature has been reviewed, and an opinion has been given by BRANZ technical experts that VENT Wall Cavity Batten will meet the performance levels of Acceptable Solution E2/AS1 for drained cavity claddings.

Other Investigations

- 17.1 A durability opinion has been given by BRANZ technical experts.
- 17.2 Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 17.3 The Technical Literature for VENT Wall Cavity Batten has been examined by BRANZ and found to be satisfactory.

Quality

- 18.1 The manufacture of the VENT Wall Cavity Batten has 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.
- 18.2 The quality of supply to the market is the responsibility of Blue Building Systems Ltd (T/A VENT).
- 18.3 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.
- 18.4 The quality of installation, handling and storage on site of the VENT Wall Cavity Batten is the responsibility of the installer.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of Amendments - Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.



In the opinion of BRANZ, the **VENT Wall Cavity Batten** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Blue Building Solutions 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 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 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:

13 December 2019