

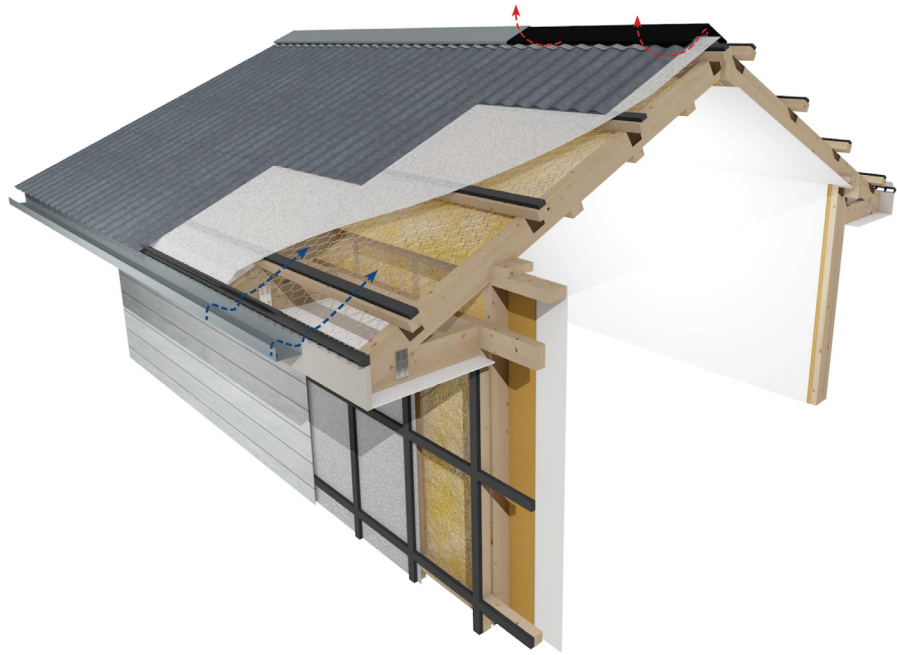


BRANZ Appraised
Appraisal No. 1099 [2024]

VENT VENTILATED WALL AND DRAINAGE CAVITY BATTEN

Appraisal No. 1099 [2024]

This Appraisal replaces BRANZ
Appraisal No. 1099 [2019]



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 The VENT Ventilated Wall and Drainage Cavity Batten is an extruded fluted batten, designed for use as a non-structural cavity batten in cavity-based wall cladding systems. The VENT Ventilated Wall and Drainage Cavity Batten is designed for use with timber-framed buildings.
- 1.2 VENT Ventilated Wall and Drainage 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 The VENT Ventilated Wall and Drainage Cavity Batten has been appraised for use as a non-structural cavity batten 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 Ventilated Wall and Drainage 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 Ventilated Wall and Drainage Cavity Batten is not suitable for use where pressure equalised cavities are required.]

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, the VENT Ventilated Wall and Drainage 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. The VENT Ventilated Wall and Drainage Cavity Batten meets 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. The VENT Ventilated Wall and Drainage Cavity Batten meets these requirements. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The VENT Ventilated Wall and Drainage Cavity Batten when used to form a drainage cavity behind a wall cladding system contributes to meeting this requirement. See Paragraphs 12.1-12.5.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The VENT Ventilated Wall and Drainage Cavity Batten meets this requirement.

Technical Specification

- 4.1 The VENT Ventilated Wall and Drainage Cavity Batten is manufactured from extruded polypropylene. The battens are cut after extruding to a finished size of approximately 45 mm wide by 20 mm 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 Ventilated Wall and Drainage Cavity Batten, whether on-site 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 This Appraisal must be read in conjunction with:
- VENT Ventilated Cavity Batten, VB20 Wall, dated October 2024.
- 6.2 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 Ventilated Wall and Drainage Cavity Battens can be used to form drained cavities as specified by NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2, except that VENT Ventilated Wall and Drainage Cavity Battens can also be installed continuously in a horizontal orientation as ventilation and drainage is permitted through the batten flutes.
- 7.2 VENT Ventilated Wall and Drainage Cavity Battens can be used as an alternative to timber or polystyrene cavity battens specified within NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.4.
- 7.3 When installed horizontally and continuously, the VENT Ventilated Wall and Drainage Cavity Batten provides 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, the VENT Ventilated Wall and Drainage Cavity Batten does 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 Ventilated Wall and Drainage Cavity Batten is 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 The VENT Ventilated Wall and Drainage 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 VENT Ventilated Wall and Drainage Cavity Battens 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 VENT Ventilated Wall and Drainage Cavity Battens 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 Ventilated Wall and Drainage Cavity 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 cladding.

Wind Zone

- 8.3 VENT Ventilated Wall and Drainage Cavity Battens are able to transfer the positive wind loads on the wall cladding to the structural wall frame. VENT Ventilated Wall and Drainage Cavity Battens 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 Ventilated Wall and Drainage Cavity Batten is not exposed to weather or ultraviolet (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 The VENT Ventilated Wall and Drainage 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 Ventilated Wall and Drainage Cavity Battens. 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 Ventilated Wall and Drainage Cavity Batten from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 The VENT Ventilated Wall and Drainage 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 the VENT Ventilated Wall and Drainage 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, the VENT Ventilated Wall and Drainage 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 Ventilated Wall and Drainage 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 and are outside the scope of this Appraisal.
- 12.5 The use of the VENT Ventilated Wall and Drainage 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 All design and building work must be carried out in accordance with the VENT Ventilated Wall and Drainage Cavity Batten Technical Literature and this Appraisal by competent and experienced tradespeople conversant with the VENT Ventilated Wall and Drainage Cavity Batten. Where the work involves Restricted Building Work [RBW] this must be completed by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.

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 Ventilated Wall and Drainage Cavity Batten.

VENT Ventilated Wall and Drainage Cavity Battens

- 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 wall 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 inspection of the VENT Ventilated Wall and Drainage Cavity Batten installations.

Health and Safety

- 15.1 There are no specific health and safety requirements for the VENT Ventilated Wall and Drainage 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 Ventilated Wall and Drainage 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 Clause E2 code compliance for the VENT Ventilated Wall and Drainage Cavity Batten was based on testing to the relevant components of NZBC Verification Method E2/VM1 [as contained within NZBC Clause E2, Amendment 4]. The testing assessed the performance of the VENT Ventilated Wall and Drainage 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 the VENT Ventilated Wall and Drainage Cavity Batten will meet the performance levels of NZBC 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 inspections have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 17.3 The Technical Literature for the VENT Ventilated Wall and Drainage Cavity Batten has been examined by BRANZ and found to be satisfactory.

Quality

- 18.1 The manufacture of the VENT Ventilated Wall and Drainage 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 Solutions Limited 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, air seals 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 Ventilated Wall and Drainage 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.



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11 December 2024

VENT VENTILATED WALL AND
DRAINAGE CAVITY BATTEN



In the opinion of BRANZ, the **VENT Ventilated Wall and Drainage 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 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 Limited T/A VENT** or any third party.

For BRANZ

Claire Falck

Chief Executive

Date of Issue:

11 December 2024