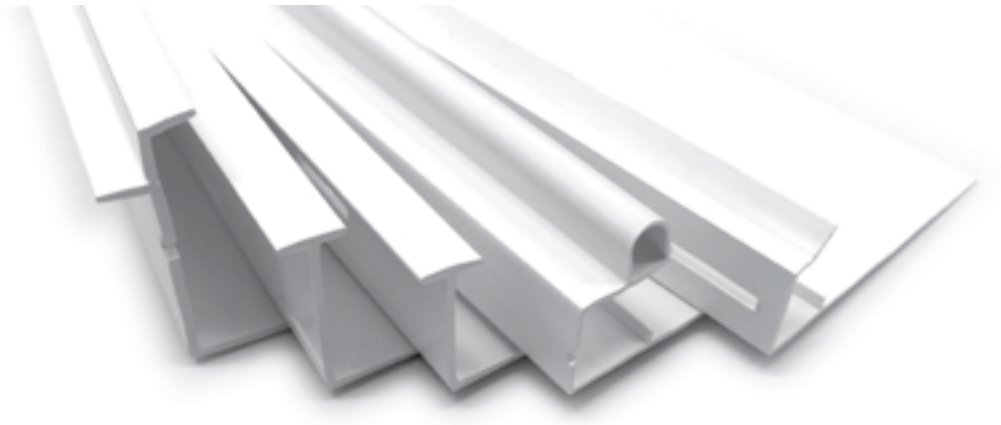
BRANZ Appraised
Appraisal No. 911 [2016]

DYNEX CAVITY CLOSERS



Appraisal No. 911 (2016)

Amended 7 January 2019.

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 Dynex Cavity Closers are a range of uPVC cavity closers for cavity-based wall cladding systems.

Scope

2.1 Dynex Cavity Closers have been appraised for use as cavity closers on timber and steel framed 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 cavity-based wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or with proprietary cavity-based wall cladding systems covered by a valid BRANZ Appraisal; and,
- situated in NZS 3604 Wind Zones up to, and including Extra High, and specific design wind pressures up to and including 2.5 kPa Ultimate Limit State (ULS).

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Dynex Cavity Closers 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 B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. Dynex Cavity Closers meet these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Dynex Cavity Closers when used to close the drained cavity behind a cladding system will contribute to meeting this requirement. See Paragraphs 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Dynex Cavity Closers meet this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance.

Technical Specification

4.1 Dynex Cavity Closers are white uPVC extrusions supplied in 3 m lengths. Dynex Extrusions Ltd supplies six different profiles:

- **20 mm Cavity Closer Trim** – suitable for use with 20 mm thick cavity battens and features a soft seal to the outer lip, which is designed to close gaps that result from batten thickness variation.
- **Raked Roof Cavity Closer Trim** – features a bulb seal and is designed for use up raked rooflines behind weatherboard claddings. When the cladding is installed, the seal fills gaps that occur behind the cladding up these rakes (such as at the lap).
- **30 mm Cavity Closer Trim** – designed for use behind weatherboard cladding with a 30 mm gap from the wall underlay to the back face of the weatherboard.
- **35 mm Cavity Closer Trim** – designed for use behind weatherboard claddings with a 35 mm gap from the wall underlay to the back face of the weatherboard.
- **45 mm Cavity Closer Trim** - suitable for use with 45 mm timber cavity battens and features a soft seal to the outer lip, which is designed to close gaps that result from batten thickness variations.
- **40/50 mm Cavity Closer Trim** – a cavity closer that can be modified easily to reduce from a 50 to 40 mm width by tearing off the front lip/angle. Designed for use behind wall claddings with a 40 or 50 mm gap from the wall underlay to the back face of the cladding.

4.2 Dynex Architectural Cavity Closers include a integrated coloured cap in ivory or graphite that hides the ventilation holes for aesthetics. The 20 mm and 45 mm Architectural Cavity Trim includes a soft seal to the outer lip designed to close gaps that result from batten thickness variation. They are supplied in 3 m lengths and are available in three different profiles:

- **20 mm Architectural Cavity Trim** - suitable for use with 20 mm thick cavity battens.
- **30 mm Architectural Cavity Trim** - suitable for use with 30 mm thick cavity battens.
- **45 mm Architectural Cavity Trim** - suitable for use with 45 mm thick cavity batten.

4.3 Accessories used with the Dynex Cavity Closers, which are supplied by the building contractor, are:

- **Fixings (timber frame)** – 40 x 2.5 mm hot-dip galvanised flat head nails.
- **Fixings (steel frame)** – self-drilling 6-gauge AS 3566 Corrosion Class 4 galvanised screws.

Handling and Storage

5.1 Handling and storage of all materials supplied by Dynex Extrusions Ltd, whether on site or off site, is under the control of the installer. Dynex Cavity Closers must be protected from physical damage and must be stored in clean, dry conditions.

5.2 Handling and storage of all materials supplied by the building contractor, whether on or off site, is under the control of the building contractor. Materials must be handled and stored in accordance with the relevant manufacturer's instructions.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Dynex Cavity Closers. 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 Dynex Cavity Closers can be used as an alternative to the cavity base closure specified within NZBC Acceptable Solution E2/AS1, Figure 66.

7.2 Punchings in the Dynex Cavity Closers provide a minimum ventilation opening area of 1000 mm^2 per lineal metre of wall in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3 (b).

7.3 Dynex Cavity Closers must be positioned to allow a minimum drip edge to the cladding of 10 mm at the base of walls, and 15 mm above window and door head flashings, meter box head flashings, apron flashings and inter-storey drained joint flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3 (c).

7.4 Dynex Cavity Closers must not be exposed to the weather or ultra violet light for a total of more than 90 days before being covered by the wall cladding.

7.5 Where a proprietary cladding manufacturer specifies a specific cavity closure as part of their system, permission must be obtained from the cladding manufacturer before the cavity closure is substituted with a Dynex Cavity Closer.

7.6 Where the Dynex Cavity Closers are used with other cladding systems not covered by this Appraisal (refer to Paragraph 2.1), designers must detail the junction between the Dynex Cavity Closers and the cladding to meet their own requirements and the performance requirements of the NZBC. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.

Durability

8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of Dynex Cavity Closers both during normal use and maintenance of the building.

Serviceable Life

8.2 Provided they are not exposed to the weather or ultra-violet light for a total of more than 90 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Dynex Cavity Closers are expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for Dynex Cavity Closers. 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

10.1 Separation or protection must be provided to the Dynex Cavity Closers from heat sources such as flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

11.1 In cavity construction, the Dynex Cavity Closers, when installed in accordance with this Appraisal and the Technical Literature, will allow the cavity to be drained and open to the exterior at the bottom of the cavity in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 (d). They also provide vermin proofing at the cavity base in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 (e).

Installation Information

Installation Skill Level Requirements

12.1 Installation of the Dynex Cavity Closers must be completed by, or under the supervision of Licensed Building Contractors with the relevant Licence Class, in accordance with instructions given within the Dynex Cavity Closers Technical Literature and this Appraisal.

System Installation

Wall Underlay Installation

13.1 The selected wall underlay must be installed by the building contractor in accordance with the underlay manufacturer's instructions prior to the installation of the Dynex Cavity Closers.

Dynex Cavity Closers Installation

13.2 The appropriate Dynex Cavity Closer section must be selected depending on the cladding system being installed. Dynex Cavity Closers may be cut to length with a hand saw or drop saw.

13.3 The Dynex Cavity Closers must be set to the correct height and line and must be positioned to achieve the minimum drip edge to the wall cladding (refer Paragraph 7.3). They are to be installed in continuous lengths and must be mitred at internal and external corners. They must be installed over the wall underlay to the wall framing and must be fixed in place with 40 x 2.5 mm hot-dip galvanised flat head nails (timber frame construction), or self-drilling 6-gauge AS 3566 Corrosion Class 4 galvanised screws (steel frame construction) at approximately 400 mm centres.

13.4 The selected wall cladding is installed over the cavity battens and Dynex Cavity Closers in accordance with NZBC Acceptable Solution E2/AS1 or the proprietary cladding manufacturer's instructions.

Finishing

13.5 Dynex Cavity Closers do not require painting at the completion of installation. If the closers are painted, the paint manufacturer's instructions for painting uPVC must be followed, and the ventilation openings must not be covered or compromised in size.

Basis of Appraisal

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

Investigations

14.1 BRANZ expert opinion on NZBC E2 code compliance for the Dynex Cavity Closers was based on evaluation of all details within the scope and as stated within this Appraisal. The details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of Acceptable Solution E2/AS1 for cavity closures.

14.2 A durability opinion has been provided by BRANZ technical experts.

14.3 The practicability of installation has been assessed by BRANZ.

14.4 The Technical Literature for the Dynex Cavity Closers has been examined by BRANZ and found to be satisfactory.

Quality

15.1 The manufacture of Dynex Cavity Closers has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

15.2 The quality of materials, components and accessories supplied by Dynex Extrusions Ltd is the responsibility of Dynex Extrusions Ltd. The quality control system of Dynex Extrusions Ltd has been assessed and registered as meeting the requirements of ISO 9001: 2008.

15.3 The environmental management system of Dynex Extrusions Ltd has been assessed and registered as meeting the requirements of ISO 14001: 2004.

15.4 Quality on site is the responsibility of the installer.

15.5 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems, wall underlays, cavity battens and cladding system in accordance with the instructions of the designer.

15.6 Building owners are responsible for the maintenance of the cladding system in accordance with the instructions of cladding manufacturer and designer.

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].
- Ministry of Business, Innovation and Employment Record of Amendments - Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 15 February 2018.

This Appraisal has been amended to include the 45 mm Cavity Closer Trim, and 20 mm and 45 mm Architectural Cavity Closer Trim.

Amendment No. 2, dated 7 January 2019

This Appraisal has been amended to include the 30 mm Architectural Cavity Trim.

In the opinion of BRANZ, Dynex Cavity Closers 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 Dynex Extrusions Limited, 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. Dynex Extrusions Limited:
   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 Dynex Extrusions Limited.
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 Dynex Extrusions Limited or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
29 April 2016