

RendeX[®]

EXTERNAL CLADDING SYSTEM

PWS
Prestige Wall Systems

TECHNICAL OVERVIEW

CODEMARK CERTIFIED AND BCA COMPLIANT



BRAC ACCREDITED
BUILDING PRODUCT

VERSION 1.2018



Prestige Wall Systems Pty Ltd manufactures the **RendeX®** panel, being the key component of the **RendeX®** External Cladding System. The **RendeX®** External Cladding System provides the Owner, Designer or Builder an insulating, decorative and protective finish that is cost effective, energy efficient, weather resistant, easy to install, lightweight, strong and durable.

The **RendeX®** External Cladding System is a multi-layered exterior wall cladding solution that can be used in Domestic, Commercial and Industrial projects. The cladding system has been tested for Building Code of Australia (BCA) compliance and certified accordingly:

✓ **CodeMark™ Certificate of Conformity (CMA-CM40090)**

BCA requirements for structural stability, damp and weatherproofing plus thermal construction

✓ **BRAC Certificate of Accreditation (V13/01)**

BCA Class 1 and Class 10 buildings

✓ **BAL-29 Certified (SFC 27983000.1)**

BCA requirements for use in bushfire prone areas

The **RendeX®** External Cladding System can also be used in applications outside of the certified constraints provided they are engineered appropriately.

THE ELEMENTS

The key component of the **RendeX®** External Cladding System is the **RendeX®** panel. **RendeX®** panels are made from an expanded polystyrene (EPS), medium (M) grade board and factory coated on one or two sides with a polymer-modified, cementitious base coat, reinforced with embedded alkaline resistant fibreglass mesh. Other elements of the cladding system are as follows:

1 DAMP-PROOF COURSE (DPC)

Provides an impermeable barrier to the passage of moisture located at the bottom of the wall.

2 SARKING

A breathable moisture barrier between the wall cavity and internal linings.

3 BATTENS (when required)

Creates a wall cavity when fixing the **RendeX®** panels to an existing superstructure.

4 STARTER PANELS OR TRIMS

Ensures proper alignment and drainage at the base of each wall.

5 SCREW FASTENERS AND WASHERS

Mechanically fixes the **RendeX®** panels to an existing superstructure, such as a stud wall frame (with or without battens).

6 EXPANDING URETHANE FOAM

Fills and seals all **RendeX®** panel joins, except Control Joints (CJs).

7 MESHED EXTERNAL BEADING

Reinforces and finishes all 'external' corners and reveals.

8 FIBRE-GLASS MESH STRIP

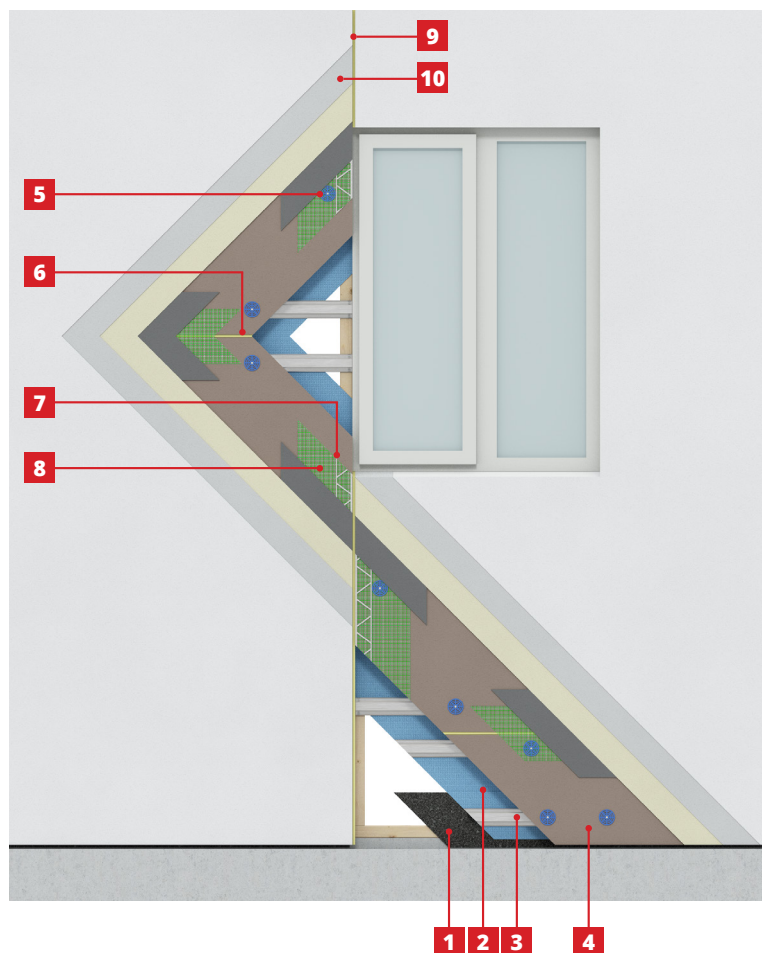
To provide structural continuity at all **RendeX®** panel joins (except CJs) and 'internal' corners.

9 FOAM AND SEALANT FOR CONTROL JOINTS

To weather-proof the CJ, but permit movement.

10 RENDER AND WALL-COATING SYSTEM

To weather-proof and texture finish the wall.



BENEFITS



ENERGY EFFICIENCY

The **RendeX®** External Cladding System literally wraps the exterior of the building in an energy-efficient thermal blanket. By insulating the outside of the structure, one can achieve reduced air infiltration, stabilisation of the interior environment and reduced energy consumption.

By using the **RendeX®** External Cladding System air infiltration can be reduced by as much as 55%, compared to standard brick construction. Since walls are one of the greatest areas of heat and air conditioning loss, improvements in wall permeability can be very meaningful in terms of energy conservation [Source: www.eima.com]. Due to the energy efficiency of the **RendeX®** External Cladding System, it is possible to specify lower-capacity heating and cooling equipment, without sacrificing interior comfort.



DESIGN FLEXIBILITY

The rich appearance of a **RendeX®** External Cladding System finished wall bears a resemblance to rendered brick. The cladding system is however far more versatile in design than brick and other wall materials. Not only can the **RendeX®** External Cladding System be finished in virtually limitless colours and a wide variety of textures, but it also can be fashioned into virtually any shape or detail, including curved walls.

By combining the **RendeX®** External Cladding System with **Mouldex®** architectural mouldings and **Keystone Industries™** decorative products, Owners, Designers and Builders can create a wide variety of exterior architectural details that would often be cost-prohibitive using conventional construction.



EFFICIENT AND COST EFFECTIVE

The **RendeX®** External Cladding System is built using lightweight components, making it easier and more time efficient to install and finish to a high quality. These benefits are most evident in multi-storey projects or where access is limited. This typically results in earlier project completion and effectively reduces the overall cost of construction.

RendeX® Starter Panels are now available in all thicknesses, enabling the Owner to ensure the best possible finish to the bottom edges of all walls.

NOTE: A number of alternative methods can be used to attach the **RendeX®** External Cladding System to an existing wall structure, each resulting in a weather-tight building enclosure. These methods are detailed in the **RendeX®** External Cladding System Technical Manual.

PROPERTIES



THERMAL

A thermal resistance of R2.4 is achieved using a 75mm thick **RendeX®** panel fixed to steel battens, installed on a standard stud-wall frame (without any additional insulating material) and lined internally with 10mm plasterboard.

To maximise the energy efficiency of the external walls, a thermal resistance of R4.5 can be achieved by using 100mm **RendeX®** panels and an additional 75mm of bulk insulation in the stud wall.



FIRE

The **RendeX®** External Cladding System can be used in bushfire prone areas and has been certified to meet BAL-29 rating. The addition of a flame-retardant during manufacture of the EPS inhibits accidental ignition from small fire sources and causes small fires to self-extinguish when the heat-source is removed.

However, the cladding system is NOT fire rated therefore the product cannot be used where a Fire Resistance Level (FRL) rating is required.



STRUCTURAL

The **RendeX®** External Cladding System has been tested for structural adequacy and found to be compliant with the requirements of the BCA.

What differentiates the **RendeX®** External Cladding System from raw polystyrene systems is that a more secure and durable installation is assured by mechanically fixing through the factory applied base coat and embedded fibreglass mesh reinforcement. There is evidence that this detail performs better during installation and under extreme weather conditions.



WEATHERPROOFING

The **RendeX®** External Cladding System can be considered to be water-tight and weatherproof, provided it is installed by qualified, experienced and competent tradespersons who are conversant with the specified method of installation.

Testing, according to Australian Standard requirements confirms that the **RendeX®** External Cladding System meets and exceeds the BCA requirements for air infiltration and water penetration.



ACOUSTIC

The **RendeX®** External Cladding System significantly outperforms brick, fibreboard and plastered walls in respect of sound absorption.

[Source: www.EngineeringToolBox.com]

TECHNICAL MANUAL

The **RendeX®** External Cladding System Technical Manual is available for use by Designers, Architects, Engineers and Builders. The manual includes design recommendations, sample specification, associated drawings and certification of alternative solution requirements. It is available in electronic format, with the express intention that they will be edited to suit the particular requirements of specific projects.

ONLINE



Refer to Prestige Wall Systems' website **www.rendex.com.au** for further details, including the Technical Manual, Test Reports and Certificates.

DISTRIBUTED BY



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PWS
Prestige Wall Systems

RendeX®

Mouldex®

KEYSTONE INDUSTRIES™



AUSTRALIAN OWNED AND MADE
Australia Wide Delivery

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AVAILABILITY

RendeX® panels are 1200mm wide, manufactured in the following standard lengths and finishes:

RendeX® PANELS		
THICKNESS	STANDARD LENGTHS	FINISH
40mm (<i>SA only</i>)	2400mm	Double-sided
50mm	2400mm	Single-sided
75mm	2400 & 3000mm	Single-sided
100mm	2400 & 3000mm	Single-sided
150mm	2400mm	Double-sided

NATIONAL DISTRIBUTION

RendeX® panels are available Australia wide, through authorised distributors or from our warehouses and trade stores. Further details are available on Prestige Wall Systems' website **www.rendex.com.au**.