

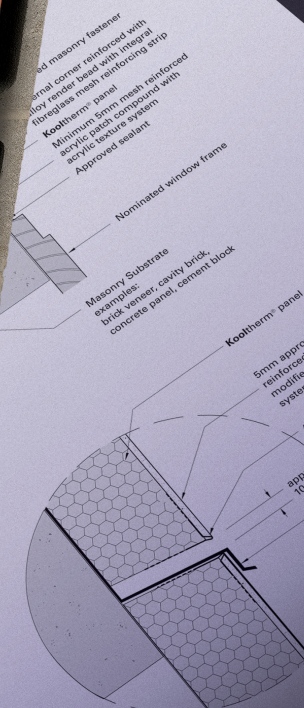
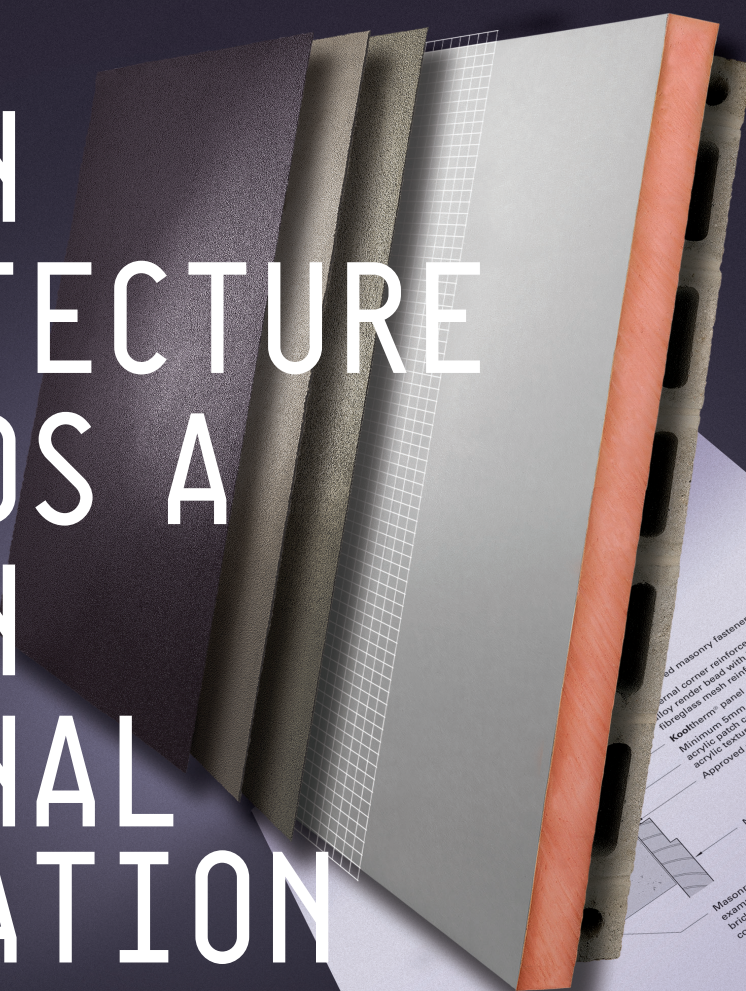


MASTERWALL

K-SERIES

BAL 40, super high performance external insulating wall system incorporating Kingspan Kooltherm® panel.

MODERN
ARCHITECTURE
DEMANDS A
MODERN
EXTERNAL
INSULATION
SYSTEM_



K-SERIES: UNBEATABLE THERMAL PERFORMANCE

ABOUT

K-Series has been specifically formulated for the Australian market to create a complete external insulation cladding system for projects requiring a super-high performance architectural finish. As a modern solution, K-Series addresses complex design issues with environmental responsibility.

Powered by Kooltherm® panels from Kingspan Insulation and Masterwall Australia's innovation and technology, K-Series is designed as a complete system with a 'whole-of-envelope' approach that delivers superior insulative performance over other traditional materials. No other system can achieve better thermal and fire performance with equivalent thicknesses of cladding.

K-Series is suitable for both residential and commercial buildings, offering architects and designers the opportunity to achieve great performance with total design freedom.

K-Series addresses the increasing concerns about poor weather tight building techniques incorporating design details to ensure long term durability.

Application of K-Series can be designed as either a Direct-To-Frame or to a masonry or concrete substrate, where a render system finish is required.

K-SERIES ADVANTAGES

1. CodeMark accredited building system

The K-Series System meets the Performance Requirements of the BCA (NCC) for Alternative Solutions.

2. Unbeatable thermal performance

External Insulation Systems are second to none for thermal performance in the building industry. Having an insulated external building envelope means that the substrate is protected from thermal exchange from outside extremes whilst eliminating hot/cold spots in

the wall system, enabling lower energy use from lower carbon footprint buildings with reduced operating costs.

3. Lower energy costs relating to heating and cooling by retrofitting K-Series to existing, inefficient structures

Increasing the insulation value of external walls is the single most efficient way to reduce energy costs and now with the K-Series, existing, inefficient, non-NABERS residential and commercial buildings can be completely transformed. For example, installing just 50mm of the K-Series System by retrofitting over an existing uninsulated brick/concrete wall will increase the thermal rating over 5 times from R0.6 to an impressive R3.1.

(For owners and managers of commercial buildings, retrofitting can assist with acquiring a Building Efficiency Certificate as part of NABERS).

4. Modernise existing architecture

Visually transform dated brick/concrete structures into modern insulated buildings with increased value by retrofitting K-Series.

5. Withstands all Australian conditions

K-Series has been engineered to meet every Wind Load and Climate Zone requirement in Australia.

6. Bushfire suitability

Unlike other insulative panels, the phenolic core merely chars, rather than melts, in fire conditions making the K-Series System the only lightweight insulative cladding system to achieve BAL 40.

7. Weather-tight building envelope

K-Series addresses the increasing costs associated with building rectifications caused by poor weather-tight building techniques within light-weight cladding systems by incorporating procedures to deal with the critical details, such as joints and penetrations.

8. MasterWall Australia support at every step

The K-Series System has been developed, tested and is solely distributed by Masterwall Australia, an experienced company leading the way in External Insulation Systems. Full technical support is offered to all areas of the building industry, including design consultation, special detailing and installation training. From online communication to onsite inspections and advice, Masterwall Australia is the specialist in providing comprehensive support.

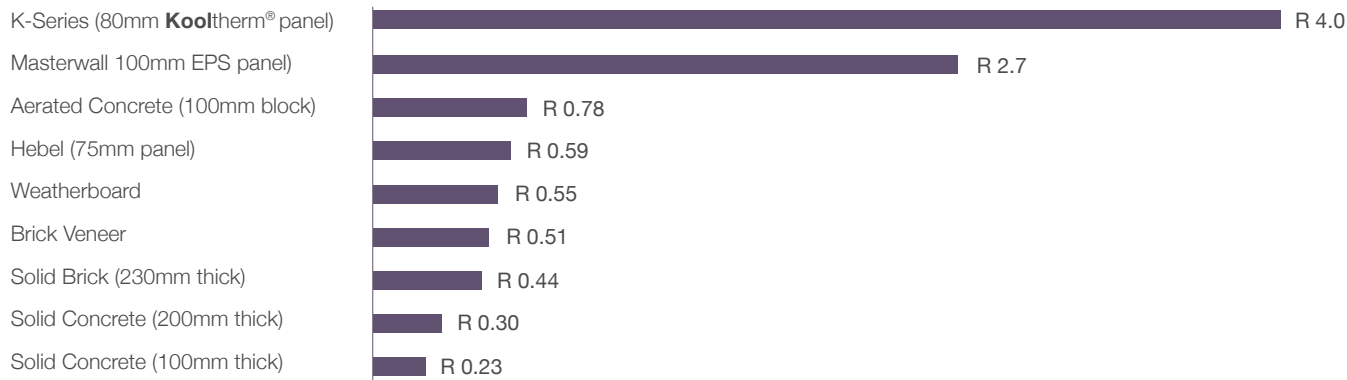
INSTALLING
JUST 50MM OF
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K-SERIES KOOLTHERM® PANEL VERSUS OTHER MATERIALS

Thermal ratings of common wall construction materials



WHOLE-OF-BUILDING ENVELOPE APPROACH

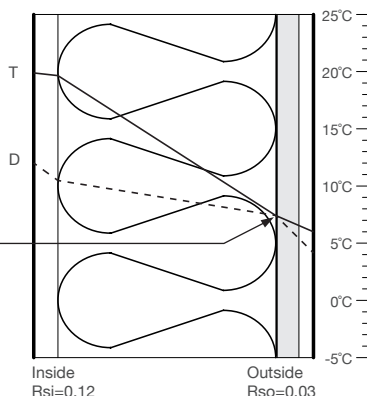
K-Series manages the dew points of the wall system by ensuring they occur on the outside of the wall system - not within that wall system. Where Dew Points occur within wall systems there is a dramatic decrease in the R value of the total wall system. This means that a building is in fact not performing as the original designers envisaged and the occupants are forced to pay higher energy consumption costs.

Dew Point reduces thermal performance in poorly designed wall systems

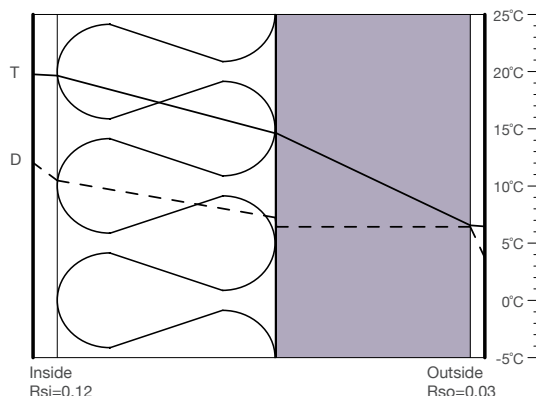
Only a 4% build up of moisture within fibre insulation will reduce its efficiency by 70%

Dew Point inside the fibre insulation zone

Standard Wall with Fibre Cement Sheet



The K-Series System with 80mm **Kooltherm**® Panel



Note: Example of a Direct - To - Frame application with fibre insulation installed.

Source: Kingspan Insulation

Condensation Risk and R_T Thermal Analysis

The Masterwall Australia Technical Services Department can provide a Condensation Risk Analysis and Total Wall System (R_T) Thermal Analysis of your proposed design. To obtain a free wall analysis, contact Masterwall Australia Technical Services.

WITH THE POWER OF KOOLTHERM® AND THE FLEXIBILITY TO ADAPT TO YOUR DESIGN, K-SERIES SETS A NEW BENCHMARK FOR EXTERNAL INSULATION

The Core

At the core of each the K-Series System is a super-high performance CFC/HCFC-free, rigid thermoset Kooltherm® phenolic panel.

Zero Ozone Depletion Potential (ODP)

Kooltherm® panels are manufactured without the use of CFCs/HCFCs and have zero Ozone Depletion Potential.

Standard Dimensions

Kooltherm® panel sizes:

Nominal Dimensions	Availability
Panel Sizes	1.2m x 2.27m
Panel Thickness	50mm (R 2.5) 80mm (R 4.0)

The Facing

For render finishes, the K-Series Kooltherm® panel features an autohesively bonded fiberglass tissue facing on both sides.

Compressive Strength

The compressive strength of the K-Series Kooltherm® panel typically exceeds 150 kPa at 10% compression when tested to BS EN 826:1996 (Thermal insulating products for building applications, determination of compression behavior).

BCA Classes

The K-Series System complies to BCA Classes 1 to 10 and Part J.

Bush Fire Attack Level (BAL)

The K-Series System has achieved a BAL 40 rating under the AS 1530.8.1-2007. This rating has been achieved using a specific group of materials and approved render system. This rating is related to a **BAL 40 wall system** not a wall panel only - please consult Masterwall Australia for further details.

Wind Loading

K-Series fixed at 300mm centres on a 450mm centres timber stud frame achieves a static ultimate wind load of -2.7 kPa for all building classifications under AS4040.2

Cyclonic Rating

K-Series provides an alternative light-weight cladding option that can be used in cyclonic areas. The system has achieved a C4 rating. K-Series is rated to C4 under both AS4040.3 and BCA 2010. The C4 rated panel features a fiberglass reinforced, machine applied cementitious coating for added flexibility and strength. This coating is applied by Masterwall Australia at our Melbourne manufacturing plant.

Thermal Conductivity

The boards achieve a thermal conductivity of 0.024 W/m.K (insulant thickness 15–24 mm), 0.023 W/m.K (insulant thickness 25–44 mm), and 0.021 W/m.K (insulant thickness ≥ 45 mm).

Thermal Resistance

K-Series has two panel thickness options, 50mm @ R2.5mm, 80mm @ R4.0 (Thermal resistance or R-value varies with the thickness and is calculated by dividing the thickness of the board (expressed in metres) by the thermal conductivity (K) value for a given annual mean temperature).

APPLICATIONS

For guidance on installing K-Series Direct-To-Frame or to Exterior Masonry wall lining solution utilising Masterwall Australia's technology and innovation, refer to the K-Series System Installation & Construction Details manual.

TECHNICAL ADVICE / DESIGN_

Masterwall Australia supports all of its products with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a software-powered service designed to give fast, accurate technical advice. Simply phone the Masterwall Australia Technical Service Department with your project specifications. Calculations can be carried out to provide a Condensation (Dew Point) Risk Analysis, and/or a Total Wall (R_T) System Thermal Value so that the correct insulation thicknesses can be determined for any given project.

CONTACT MASTERWALL AUSTRALIA_

For national Technical and Sales contact Masterwall Australia:

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Email: sales@masterwall.com.au

Web: masterwall.com.au

POWERED BY KINGSPAN_

K-Series is powered by Kingspan Kooltherm® panels to deliver exterior insulation systems with superior high performance.



YOUR LOCAL ACCREDITED INSTALLER / DISTRIBUTOR:

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EMAIL: sales@masterwall.com.au **FAX:** 03 8740 2180