IQCLAD Vertical Cladding System

DESIGN GUIDE

Version 1.0 March 2023

General and product information

PURPOSE

This guide is for the design of the IQCLAD Vertical Cladding System.

IMPORTANT DOCUMENTS

This guide must be read in conjunction with the following:

- IQCLAD Cladding System pass™
- IQCLAD Cladding System Specification guide
- IQCLAD Vertical Cladding System Installation guide
- IQCLAD Cladding System Care and Maintenance guide
- IQCLAD Cladding System warranty
- this document.

SKILLS REQUIRED

This guide is suitable for use by a competent designer. Where applicable, the person specifying the IQCLAD Vertical Cladding System must be able to meet all RBW provisions.

FOR MORE HELP

Technical assistance is available at www.iqclad.nz.

While all reasonable efforts have been made to ensure the accuracy of information provided, this guide is a guide only. It may be subject to change.

FOR OUR WARRANTY

Refer to www.iqclad.nz.

PRODUCT DESCRIPTION

IQCLAD Cladding System is an interlocking extruded aluminium weatherboard cladding system incorporating a drained and ventilated cavity.

The weatherboards are manufactured from 6063 or 6060 T5 aluminium and powder-coated in accordance with AAMA 2604 or 2605. The IQCLAD Vertical Cladding System has the weatherboard profiles installed with a vertical orientation.

Weatherboards are available in three profiles:

- Kaweka,
- Remutaka, and
- Hunua.

The boards are cut to job specific lengths of up to 6500 mm maximum length. The boards are 230 mm in width with an effective cover of 190 to 200 mm and are 13 mm thick.

Weatherboards are interlocking and installed using concealed fixing brackets, fixed to cavity battens. Ancillary components include flashings and trims.

SCOPE AND LIMITATIONS

For scope of use, limitations, conditions, and statement of building code compliance, refer to the IQCLAD Cladding System pass™.

MORE INFO

Design

STEP 1 CONFIRM SCOPE

The IQCLAD Vertical Cladding System is supplied for use as an external wall cladding with weatherboards installed with a vertical orientation.

Confirm the proposed use is within the scope and limitations of the pass™.

This document provides instruction for the design and specification of the IQCLAD Vertical Cladding System. The IQCLAD Cladding System can also be installed with weatherboards with a horizontal orientation. Refer to the IQCLAD Horizontal Cladding System Design guide.

STEP 2 CONFIRM RELATED BUILDING WORK

Framing

The IQCLAD Vertical Cladding System is suitable for use with a timber or lightweight steel structure.

For new and existing buildings, confirm that the design of the primary structure:

- complies with the NZ Building Code and is designed in accordance with NZS 3604:2011 or NASH Standard 2019 Parts 1 and 2; or
- is specifically designed to NZS 3603:1993 or AS/NZS 1170:2002; or
- where existing, is suitable for the intended building work.

Studs must be at maximum 600 mm centres and nogs and dwangs at maximum 800 mm centres.

Where the site wind pressure is greater than 2.5 kPa, specific engineering design is required.

Underlay

The IQCLAD Vertical Cladding System must be used with a building underlay (flexible or rigid) and fixings that are suitable for the site-specific conditions.

Confirm the underlay specified:

- Is a weathertight, flexible, or rigid underlay that meets the performance characteristics described in Table 23 of Acceptable Solution E2/AS11 at a minimum.
- Where a rigid underlay is installed, a flexible underlay must be installed over the rigid underlay in accordance with E2/AS1 or an alternative barrier that can be demonstrated to meet Building Code Clause E2.
- Flexible flashing tape must be compatible with the selected underlay; follow manufacturer's recommendations.

Thermal break

A thermal break is required for steel-framed walls.

- Confirm a thermal break is specified for lightweight steel framing. A thermal break with an R-value of not less than 0.25 is required. Acceptable thermal break materials given in E3/AS1 are 12 mm S grade expanded polystyrene or 12 mm wood fibre insulating board. Where an alternative product is used, the thermal performance requirement must be met.
- Refer to BRANZ Build 127 [Refer to link https://www.buildmagazine.org.nz/assets/PDF/Build127-19-DesignRight-ThermalBreaksAndSteelFraming.pdf].

1 Where E2/AS1 is referred to, it is to be read as E2/AS1 or E2/AS4.

STEP 3 **DETAIL THE CAVITY SYSTEM**

Specify cavity battens and batten fastenings.

Cavity battens must be IQ Bat installed at maximum 400 mm to 600 mm centres for vertical applications.

The IQ Bat is used as a support batten for internal and external corners for vertical board applications.

Fastenings must be:

- stainless steel 10 G x 60 countersunk screws for fixing to timber or lightweight steel framing; or
- stainless steel 10 G x 60 masonry countersunk screws for fixing to concrete footing and masonry
- 2.8 x 50 mm hot dip galvanised nails for fixing to timber floor structure.

STEP 4 **SPECIFY THE FIXINGS**

Specify the fixings.

Fixings must be stainless steel 10 G x 16 self-tapping metal screws for fixing the concealed fixing brackets to the cavity battens.

STEP 5 **SPECIFY TRIMS AND FLASHINGS**

IQCLAD supplies the following trims and flashings:

- IQW Standard fastening bracket
- IQW Horizontal Starter Support
- Vertical starter bracket
- IQW Dual-purpose female corner bracket
- IQW Dual-purpose male corner bracket
- IQW External joint bracket
- IQW Internal joint bracket
- IQW External window swing flashing
- IQW Internal window swing flashing
- IQW Perforated vertical channel
- IQW Vertical channel
- IQW External window flashing
- IQW Internal window flashing.

Specify the required trims and flashings for the system.

STEP 6 **DETAIL THE SYSTEM**

Access IQCLAD Vertical Cladding System details. See details.

It is intended that details be placed on the relevant plan sheet for easy reference on-site.

Detail the IQCLAD Vertical Cladding System. Detail the overall layout including joinery, flashings, trims, and accessory components.

This includes all details and instructions required to be referenced and followed for the on-site assembly.

STEP 7 QUALITY CHECK

Confirm all relevant design requirements are met.

Complete the IQCLAD Cladding System Specification guide. This forms part of the construction contract as well as the building consent documentation; therefore, accuracy and completeness are crucial.

Check that each plan sheet includes all relevant details.

Collate the following documents and include in the building consent application:

- IQCLAD Cladding System pass™
- IQCLAD Cladding System Specification guide
- IQCLAD Vertical Cladding System Installation guide
- IQCLAD Cladding System Care and Maintenance guide
- IQCLAD Cladding System warranty
- this document.

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