

GENERAL AND PRODUCT INFORMATION

PURPOSE

This guide relates to the design of the Jacobsen® NBK Terracotta TERRART® Cladding System.

IMPORTANT DOCUMENTS

This guide must be read in conjunction with:

- › Jacobsen® NBK Terracotta TERRART® Cladding System pass™
- › Jacobsen® NBK Terracotta TERRART® Cladding System Specification guide
- › the relevant Jacobsen® NBK Terracotta TERRART® details
- › Jacobsen® NBK Terracotta TERRART® Cladding System Installation guide
- › Jacobsen® NBK Terracotta TERRART® Cladding System Care and Maintenance guide
- › Jacobsen® NBK Terracotta TERRART® Cladding System warranty.

SKILLS REQUIRED

This guide is suitable for use by a designer who is a licensed building practitioner licensed to the relevant class or deemed LBP.

FOR MORE HELP

Technical assistance is available at www.jacobsen.co.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.jacobsen.co.nz.

PRODUCT DESCRIPTION

The Jacobsen® NBK Terracotta TERRART® Cladding System is a ventilated curtain wall/rainscreen system supplied for use as an external wall façade and as an internal lining or feature wall.

The system comprises natural terracotta clay tiles or baguettes and a proprietary aluminium fixing system.

The TERRART® tiles

TERRART® tiles weigh between 32 – 65 kg/m² and are classified as a medium weight cladding (refer to NZS 3604:2011, section 1.3).

TERRART® tiles are available as follows:

	Large	Mid	Shingle	Solid	Lite
Length (max) (mm)	3000	1800	1800	1200	1360
Height (mm)	800	500	300	600	300
Thickness (mm)	40	28	25 and 40	20 and 30	22
Surface finishes	Natural, honed, textured, peeled, profiled, glazed				
Mass (kg/m ²)	65	45	65	35	36

The TERRART® baguettes

TERRART® baguettes are ceramic pipes with square, rectangular or oblong cross-sections or custom-made as curved or coffer elements. They are intended to be used as an open façade such as a privacy screen to window areas.

The fixing system

The specifically designed 6063-T5 aluminium bracket support system is supplied in horizontal and vertical channel configurations. The panels are located into position using a proprietary hidden clip or a continuous back carrier with varying cavity depth.

SCOPE AND LIMITATIONS

For scope of use, limitations, conditions and statement of building code compliance refer to the Jacobsen® NBK Terracotta TERRART® Cladding System pass™.

DESIGN

The steps required to design and specify the systems are described in this section.

STEP 1: CONFIRM SCOPE

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

STEP 2: CONFIRM RELATED BUILDING WORK

Structure

The NBK Terracotta TERRART® Cladding System is suitable for use with a primary structure that is able to support a medium weight cladding system as defined in section 1 of NZS 3604:2011 and that:

- complies with the NZ Building Code and is designed in accordance with NZS 3604:2011, or NASH Standard Parts 1 and 2: 2019, or NZS 3101.1 and 2, or NZS 4229:2013; or
- is specifically designed in accordance with AS/NZS 1170.0; or
- is suitable for the intended building work if the building is an existing building.

Substrate

The substrate must be within maximum horizontal or vertical deviation (surface plane in any 2.0 m length) of 5 mm for structural tolerance and 3 mm for non-structural framework tolerance.

For a timber or steel structure, the Jacobsen® NBK Terracotta TERRART® Cladding System must be used with an underlay or rigid air barrier that complies with the NZ Building Code.

Jacobsen® recommends a fibre cement substate; however, an underlay or rigid air barrier that meets the performance requirements of Table 23 of Acceptable Solution E2/AS1, has a BRANZ appraisal or a CodeMark can be used. Where the wind zone is extra high, a rigid air barrier that meets, as a minimum, the performance requirements of Table 23 of Acceptable Solution E2/AS1 must be used.

A thermal break may be required for steel-framed walls. A thermal break in accordance with NASH Standard Parts 1 and 2: 2019 must be specified.

For a concrete structure, the surface finish must be specified at CSP 4 or better and must be straight and true. A substrate in the form of a rigid air barrier may be required where this finish cannot be achieved.

STEP 3: SELECT THE JACOBSEN® NBK TERRACOTTA TERRART® SYSTEM

The selection of the tile size and the preferred visual jointing method for the NBK Terracotta TERRART® System will determine the required suspension rails.

Specify:

- tile size
- tile finish
- vertical jointing method
- type, finish and location of the trims for:
 - internal and external corners
 - surrounds that accommodate windows, doors, base and parapets.

STEP 4: SELECT THE SUSPENSION RAIL SUPPORT SYSTEM

The suspension rail support system design takes into consideration wind and earthquake loads.

The building importance level, height and exposure will determine the specified support system.

The appropriate suspension rail system for the Jacobsen® NBK Terracotta TERRART® System can be designed using the NBK structural performance selection tables based on the following criteria:

- establish the earthquake zone
- establish the wind zone based on region, terrain and building height
- establish the calculated ultimate wind pressure (kPa) based on the building roof height
- establish the corrosion zone in accordance with NZS 2312, C3 – C5.
- specify the 6063-T5 aluminium suspension rail and clips.

Design and detail the suspension rail system in accordance with Jacobsen® NBK Terracotta TERRART® structural performance selection tables.

Detail the suspension rail system span configuration based on ultimate wind pressure tables.

STEP 5: SELECT THE FASTENINGS

Specify the fastener in accordance with the allowable pressure of the system and the substrate that the suspension rail is attached to. Refer to Jacobsen® NBK Terracotta TERRART® Technical specification, Fasteners table:

- select the substrate
- specify the fastener type
- specify the fastener size
- specify the minimum embedment
- specify the grade based on the corrosion zone.

STEP 6: DETAIL THE SYSTEM

Detail the Jacobsen® NBK Terracotta TERRART® System.

Provide building consent details and instructions to be referenced and followed for the on-site assembly. Detail the overall layout including joinery, flashings, trims and accessory components.

Use the Jacobsen® NBK Terracotta TERRART® system:

- common details SD 01 - 13
- typical details for common structural wall D-01 – 09.

Specify the tools required for accuracy:

- level or laser

Critical vertical alignment between adjacent rails must not exceed 1 mm. Specify that all suspension rails must be positioned correctly and vertically plumb before tightening the suspension rail fastenings.

STEP 7: QUALITY CHECK

Confirm all relevant design requirements are met.

Complete the Jacobsen® NBK Terracotta TERRART® Cladding System Specification guide. This forms part of the construction contract as well as the building consent documentation and so accuracy and completeness are crucial.

Check that each plan sheet includes all relevant details.

Confirm the building consent plans and specifications clearly define and include:

- NBK Terracotta tile type and configuration
- NBK Terracotta overall layout
- suspension rail material type and set-out
- fastening type and fixing points
- joinery installation

- flashing locations and fixing method
- type and location of trims
- system accessory components: fitment sponge, aluminium jointing strips.

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

- Jacobsen® NBK Terracotta TERRART® Cladding System pass™
 - Jacobsen® NBK Terracotta TERRART® Cladding System Specification guide
 - Jacobsen® NBK Terracotta TERRART® Cladding System Installation guide
 - Jacobsen® NBK Terracotta TERRART® Cladding System Care and Maintenance guide
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