

Installation



CARE AND USE

SAFETY

Cleaneo is not classified as hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC). It is non-toxic and non-flammable.

Material Safety Data Sheets (MSDS) for the Cleaneo system are available at knaufplasterboard.com.au or by calling **1300 724 505**.

HANDLING, DELIVERY AND STORAGE

To ensure Cleaneo remains in the best condition prior to installation it is important to follow these key recommendations. Generally the board should be protected from any damage or conditions which could affect the final appearance or performance.

- Cleaneo must be kept dry and should be stacked clear of the floor, fully protected from the weather and delivered to sites when lock up stage is complete.
- To reduce the possibility of damage, delivery to site should occur immediately before installation.

- Care should be taken not to damage edges or the surface of the board.
- Exposure to excessive humidity during storage can result in plasterboard becoming damp and soft, and may appear defective. In this case the plasterboard should be allowed to dry out and handled with care during installation.
- Cleaneo is UV resistant and will not become discoloured if exposed to direct sunlight or fixed and left standing unpainted for long periods.

To help protect plasterboard from absorbing humidity:

- Avoid open sources of water such as wet floors
- Wrap the plasterboard with plastic
- Provide ventilation
- Install soon after delivery
- Install during dry weather for best results.

GENERAL REQUIREMENTS

Install control joints in plasterboard ceilings at:

- 12m maximum intervals
- All control joints in the structure
- Any change in the substrate material
- At the junction of a large room and passageway

Separate plasterboard from building elements made with other materials, such as columns by creating control joints that allow for movement, e.g. utilising a shadow line profile or incorporating Trenn-Fix Adhesive Strip.

All ceilings in this section are non-trafficable. Do not walk on plasterboard ceilings!

Attach ceiling fixtures to framing members only. Ensure the framing is designed to carry any additional load.

FRAMING

- Cut Top Cross Rail (TCR) and furring channel to leave 20mm expansion gaps at each wall
- Stagger joints in TCR and furring channel by 1200mm
- Install additional framing members around openings
- Fix short edges of Cleaneo boards to wide Furring Channel (Rondo No.155).

- Steel framed ceiling systems must be designed by an engineer according to the relevant Australian Standard.
- Framing members in this section are designed using either steel or timber joists, Lipped C type steel studs or a furring channel system.

The framing tables in this section apply to Rondo steel components. Alternative components may only be used:

- In accordance with the manufacturer's literature, or
- If their performance is equivalent or better and they comply with the relevant standard.

More ceiling framing combinations are available than those described in this section.

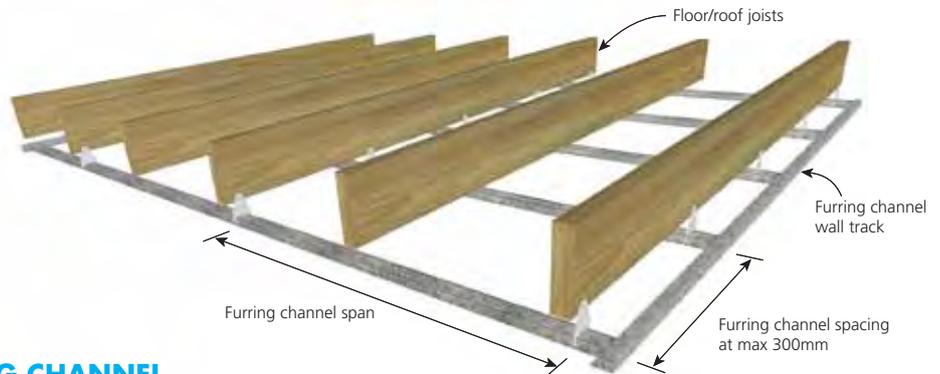
[Refer to Rondo building services literature or equivalent]

FURRING CHANNEL SPACING FOR CLEANEO

Perforation	Furring Channel Spacing
Random Plus 8/15/20 R	312.5mm
Standard Square 8/18 Q	333mm
Standard Circular 8/18 R	333mm
Alternating Circular 12/20/66 R	330mm

For Furring Channel spacing for other perforation patterns, refer to Acoustic Performance section.

FIGURE 1 Furring Channel Span and Spacing



MAXIMUM SPAN OF FURRING CHANNEL

Plasterboard	28mm Furring Channel Rondo No.129 at 300mm spacing		28mm Furring Channel Rondo No.155* at 300mm spacing	
	Single Span (mm)	Continuous Span (mm)	Single Span (mm)	Continuous Span (mm)
1 layer of 13mm Cleaneo	1300	1540	1300	1540

* Fix short edges of Cleaneo to wide furring channel (Rondo No. 155).

¹ If furring channel track is not used, the furring channel must be supported 200mm from ends.

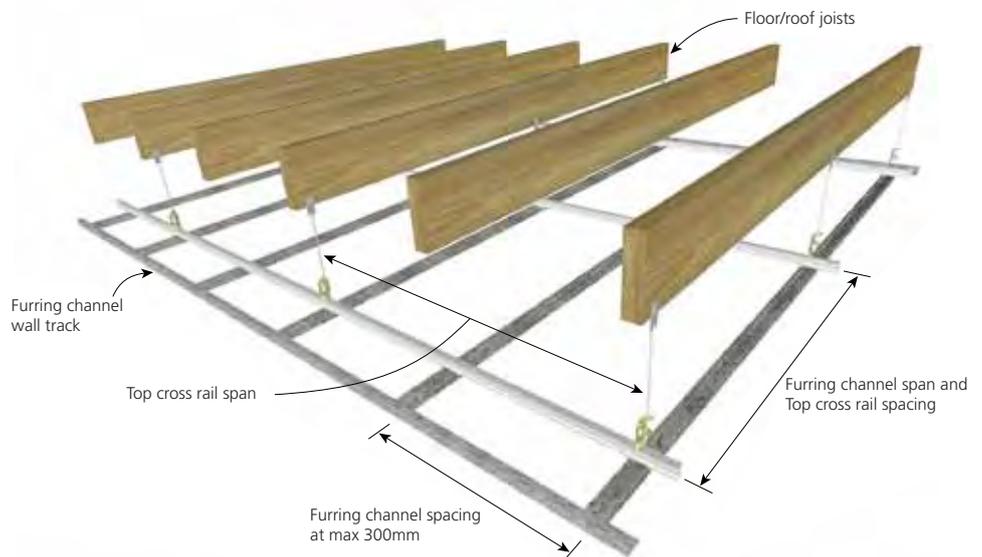
² $W_{ultimate} = 0.5 \text{ kPa}$, Strength Load Case: $1.2G + W_u$

³ $W_{serviceability} = 0.325 \text{ kPa}$, Serviceability Load Case 1: G [Limit is $L/600$], Serviceability Load Case 2: $G + W_s$ [Limit is $L/200$].

⁴ Strength check of unrestrained flange in compression.

⁵ Connections to be independently checked.

FIGURE 2 Top Cross Rail and Furring Channel Span and Spacing



SELECTED TOP CROSS RAIL (TCR) AND FURRING CHANNEL FRAMING OPTIONS

System	TCR Rondo No.	TCR span	TCR spacing	Furring Channel Rondo No. at 300mm spacing
1 Layer of 13mm Cleaneo	127	1200	1200	155*/129

* Fix short edges of Cleaneo to wide furring channel (Rondo No. 155).

¹ If furring channel track is not used, the furring channel must be supported 200mm from ends.

² $W_{ultimate} = 0.5 \text{ kPa}$, Strength Load Case: $1.2G + W_u$

³ $W_{serviceability} = 0.325 \text{ kPa}$, Serviceability Load Case 1: G [Limit is $L/600$], Serviceability Load Case 2: $G + W_s$ [Limit is $L/200$].

⁴ Strength check of unrestrained flange in compression.

⁵ Connections to be independently checked.

LAYOUT

- Start sheeting from the centre of the room. [Figure 3]
- Sheet ceilings perpendicular to framing members.
- All short edges must be over a wide furring channel. (Rondo No.155)

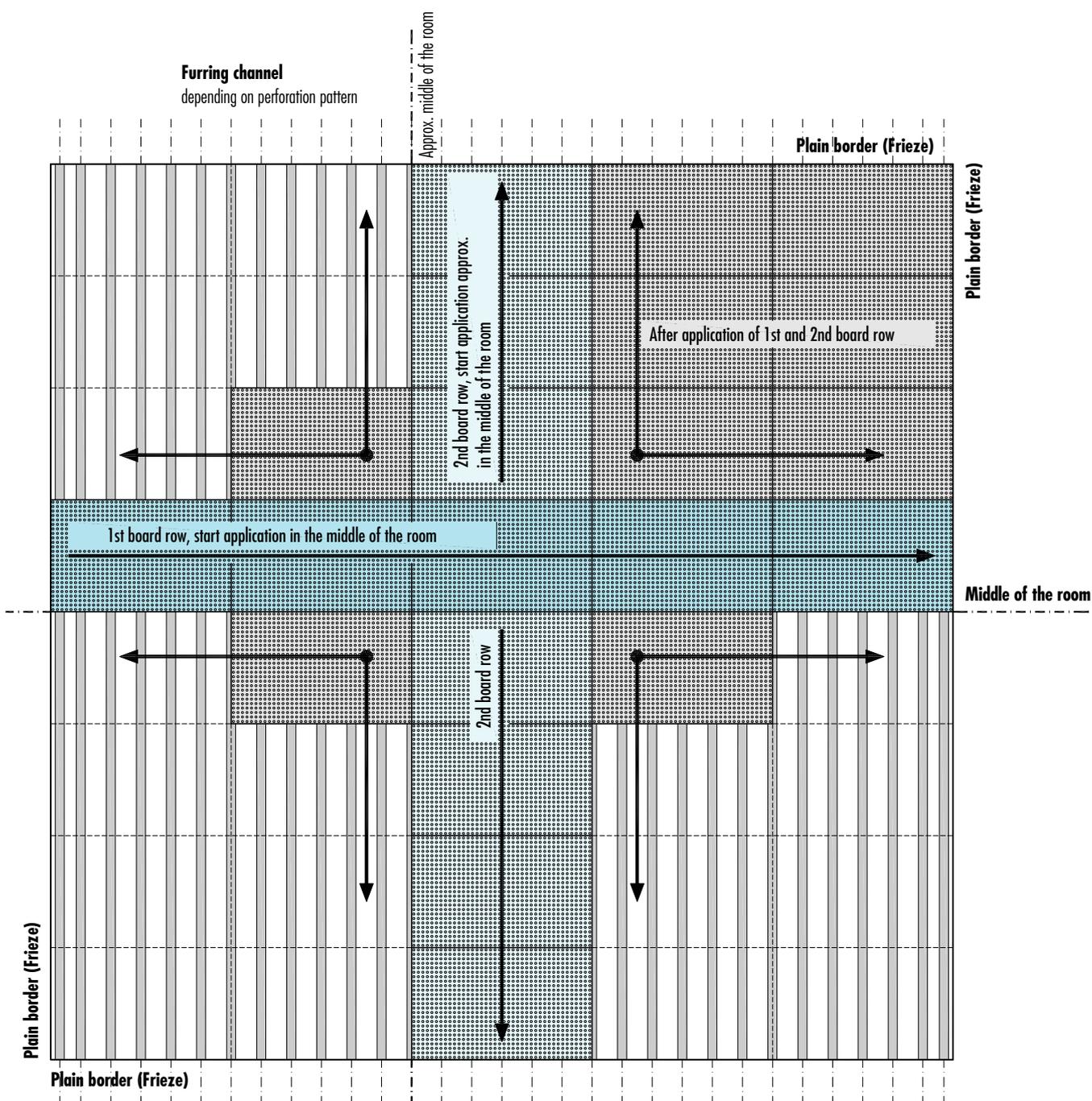


FIGURE 3 Installation Scheme

CLEANEO ALIGNMENT

- > Place FF edge adjacent to SK edge along short and long edges. [Figure 4]
- > Place linear notch edge adjacent to linear lap edge along short and long edges. [Figure 5]

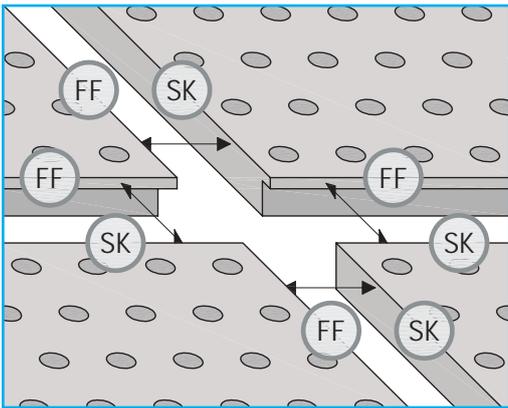


FIGURE 4 FF Edges Alignment

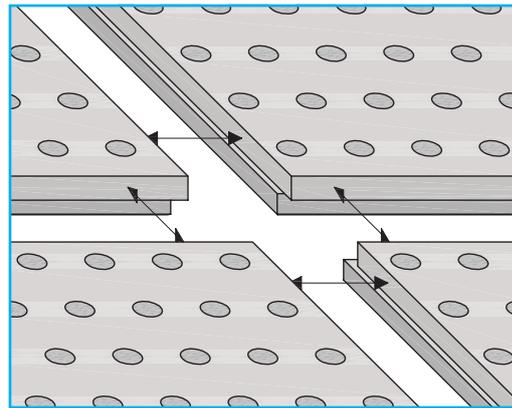


FIGURE 5 Linear Edges Alignment

Constantly check overall appearance of the ceiling via the straights and diagonals of the perforation rows during installation. [Figure 6]

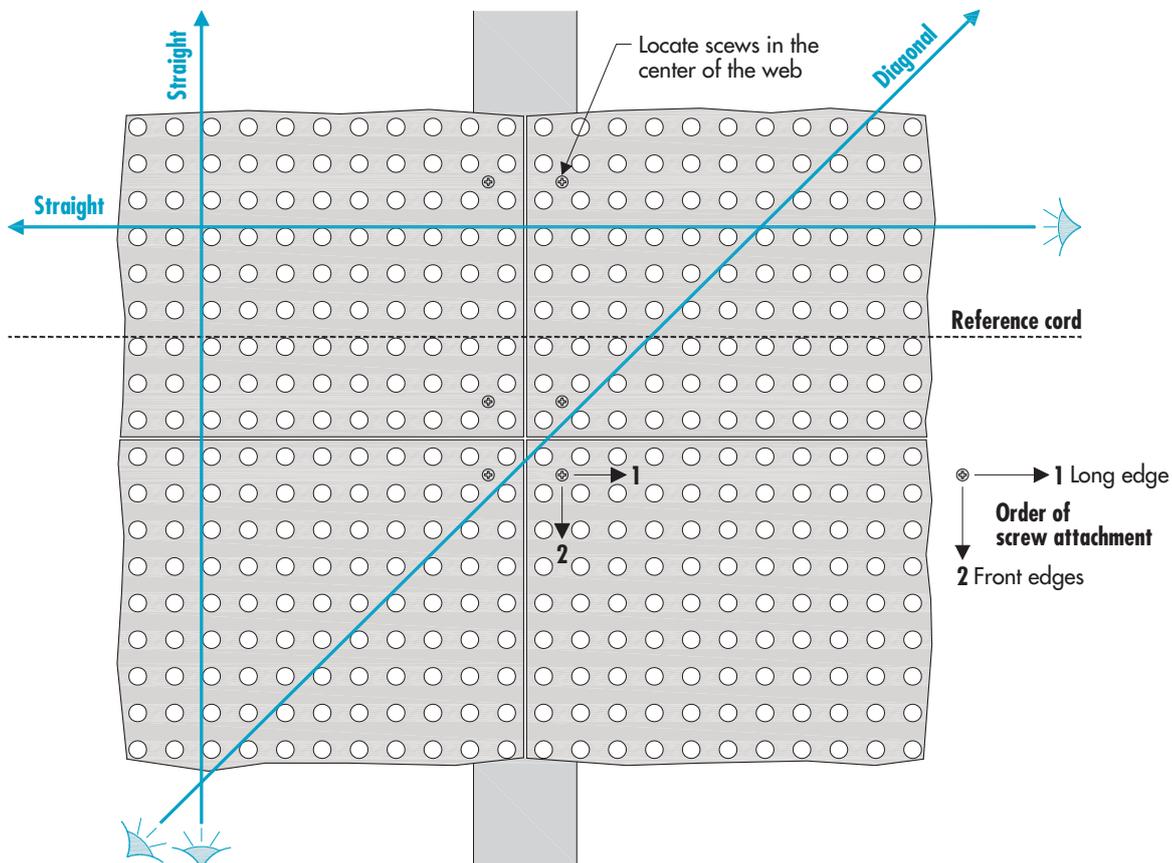


FIGURE 6 Board Application

FIXING

- Use fasteners only. Adhesive is not permitted.
- Use 25mm 6g plasterboard screws into metal furring channels.
- Drive fasteners to just below the sheet surface, taking care not to break the paper linerboard.
- Maximum screw spacing is 200mm along short edges and 300mm in the field of the boards.
- Press Cleaneo firmly on to the grid when screwing.
- Start fastening from the corner, where the board meets previously attached boards.
- Fasten long edge first and then short edge.
- Use Caps for easy installation. Caps remove the need for finishing screw heads. *[Figure 7]*

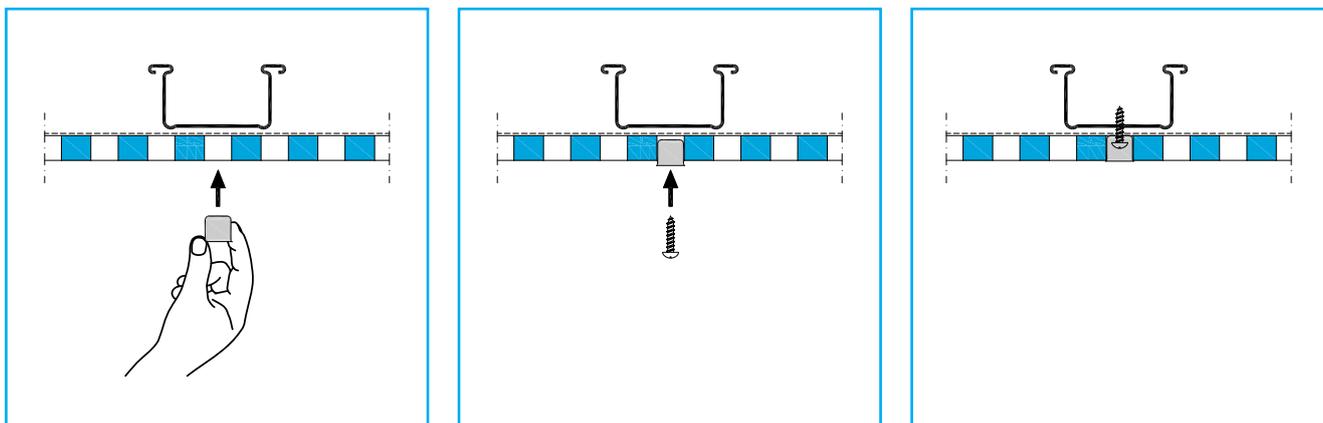


FIGURE 7 Cap Installation

JOINTING AND FINISHING

FF EDGE

- Only use Uniflott for jointing.
- Clean dust from joints after fixing the boards. Use a wet brush. *[Figure 8]*
- Prime site cut edges before jointing with Tiefengrund Primer.
- The edges of Cleaneo FF and Linear boards are already bevelled and primed off-the-shelf.
- Fill joints fully with Uniflott using the Uniflott Caulking Gun, Jet Gun or Cartridge. *[Figure 9]*
- Scrape off excess Uniflott after hardening. *[Figure 10]*
- Use MastaLite for finishing joints and screw heads. *[Figure 11 and 13]*

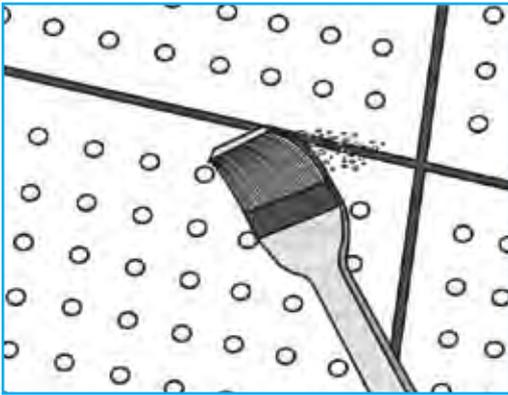


FIGURE 8 Cleaning of Joints

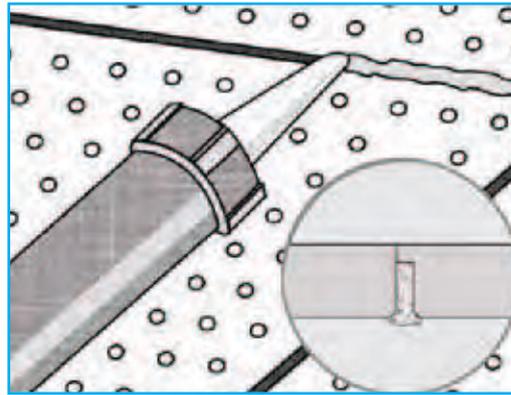


FIGURE 9 Joint Filling (with Uniflott)

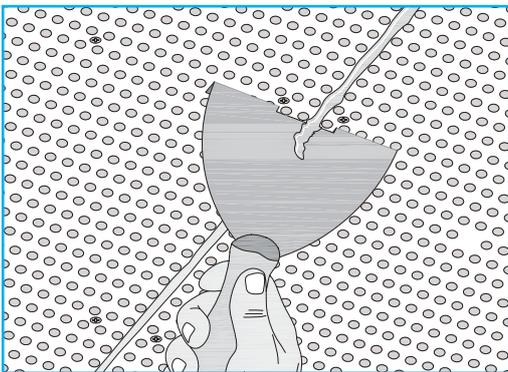


FIGURE 10 'Chipping' Off Excess Filler

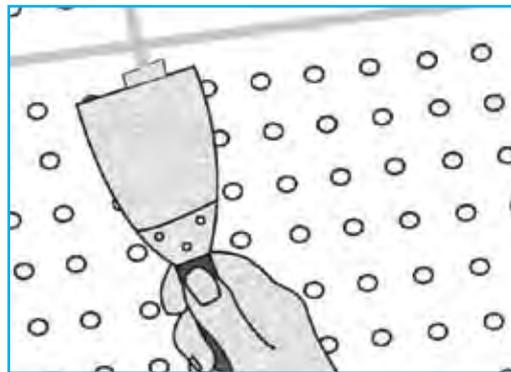


FIGURE 11 Finishing

LINEAR EDGE

- Adjust notch and lap edges (no compounds required). [Figure 12]
- Fill screw heads with MastaLite. [Figure 13]

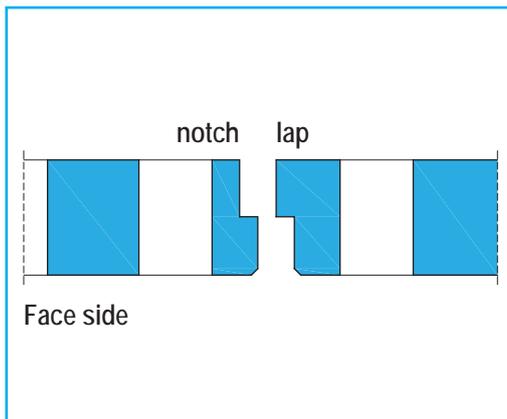


FIGURE 12 Linear Edge

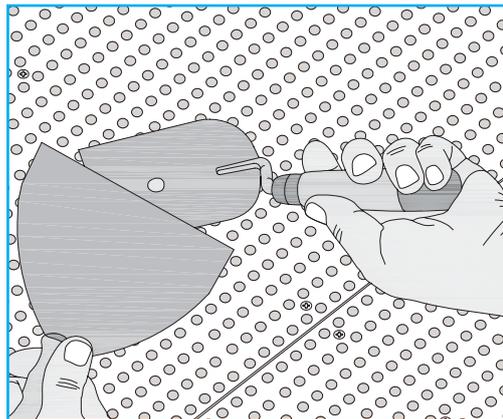


FIGURE 13 Filling of Screw Heads (if no Caps used)

PAINTING

A three coat paint system must be applied in accordance with Australian Standard AS/NZS 2311, *Guide to the painting of buildings*. Both the quality of the paint and how it is applied have a large effect on the finished appearance of the plasterboard.

The paint manufacturer's instructions for application must be followed. Only use roller application for painting Cleaneo. Roller application applies a uniform texture over the entire surface and ensures the paint does not contact the protective mat fixed to the back of the plasterboard. Spray application of paint is not permitted.

For more information, contact Technical Services on **1300 724 505** or visit **knaufplasterboard.com.au**

Construction Details

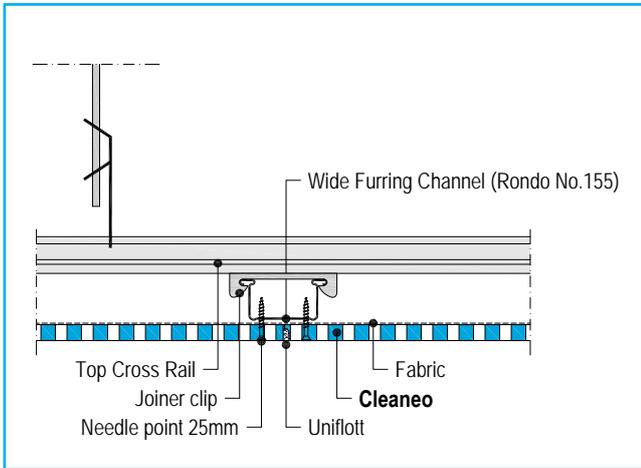


FIGURE 14 Short Edge Joint FF

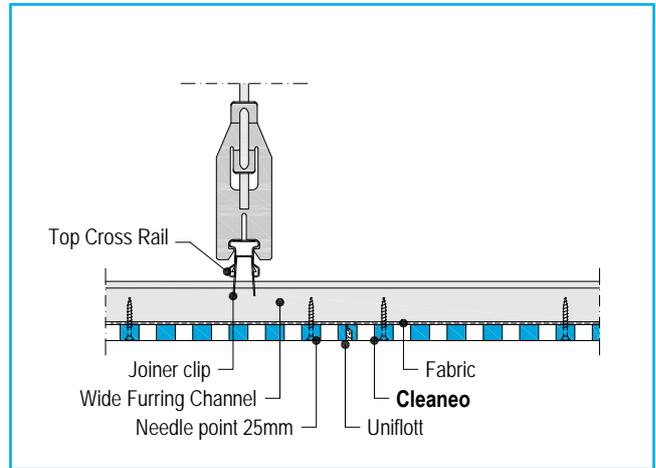


FIGURE 15 Long Edge Joint FF

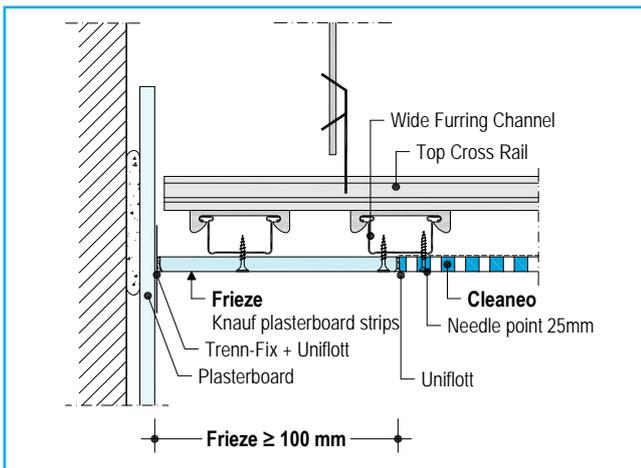


FIGURE 16 Connection to Wall

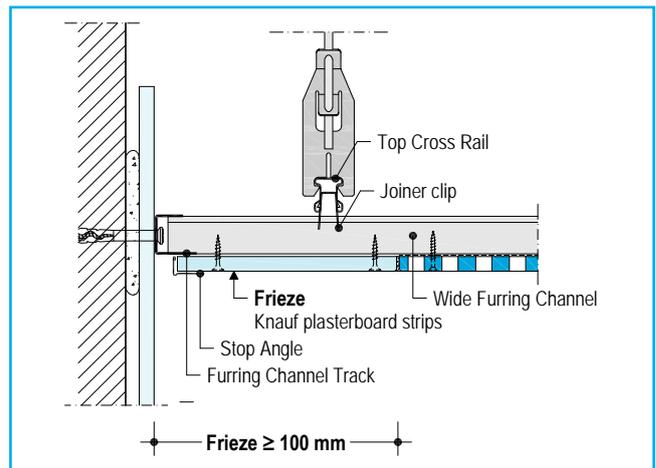


FIGURE 17 Connection to Wall with Exposed Joint

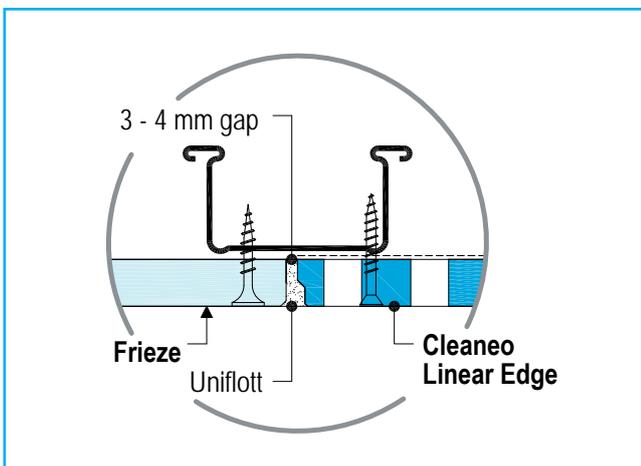


FIGURE 18 Connection to Frieze with Cleaneo Linear Edge

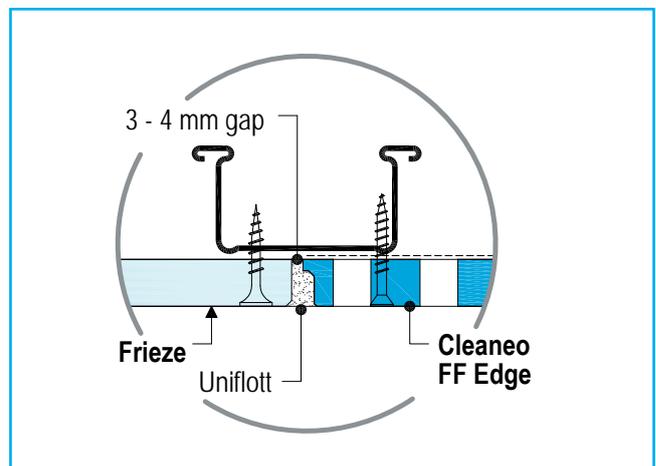


FIGURE 19 Connection to Frieze with Cleaneo FF Edge

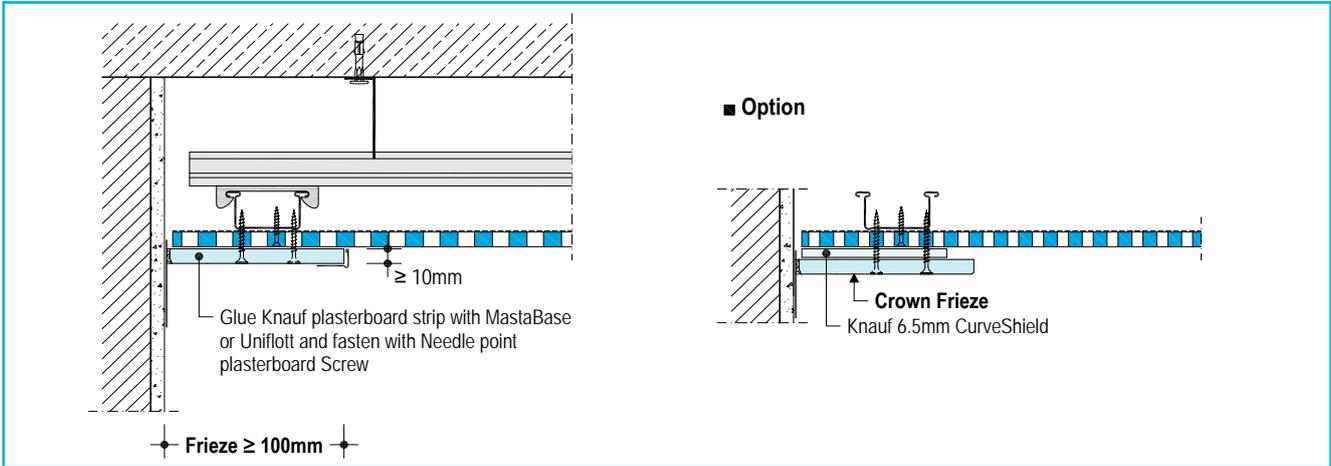


FIGURE 20 Crown Frieze

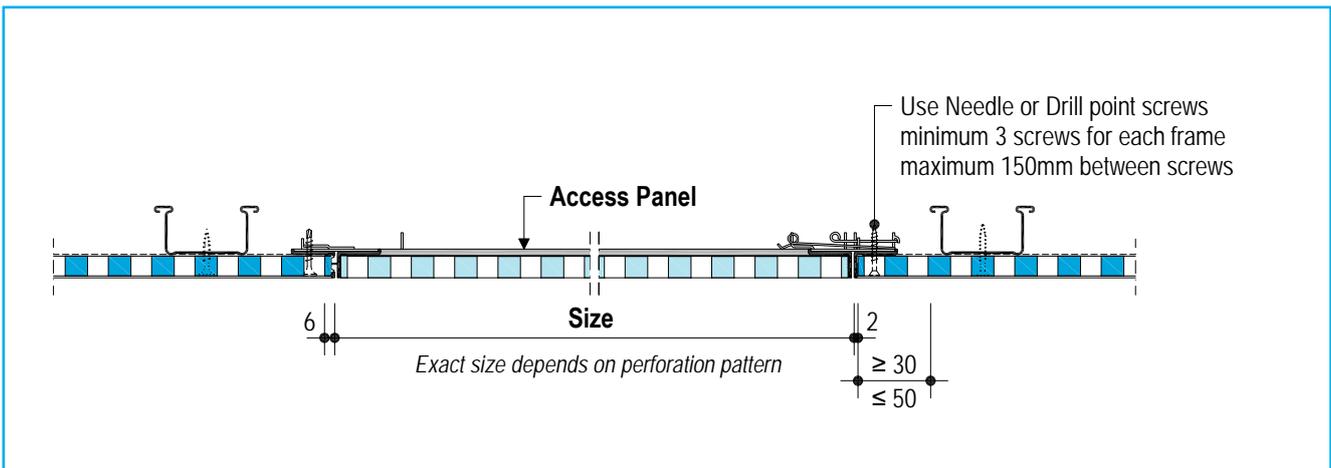


FIGURE 21 Access Panel (with Seal)

Design	Curving Radius -r- Dry Curving - Concave or Convex
Standard Circular R	≥ 3000 mm
Alternating Circular R	
Standard Square Q	
Random Plus R	≥ 3500 mm

It is recommended to pre-curve the boards on a curving device before application (preferably with a slightly smaller radius) in order to reduce tensions in the structure.

FIGURE 22 Curving Cleaneo