

# PROVISTA

BALUSTRADE SYSTEMS

## VISTA FRAMELESS CHANNEL



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# COMMERCIAL & RESIDENTIAL BALUSTRADE DESIGN

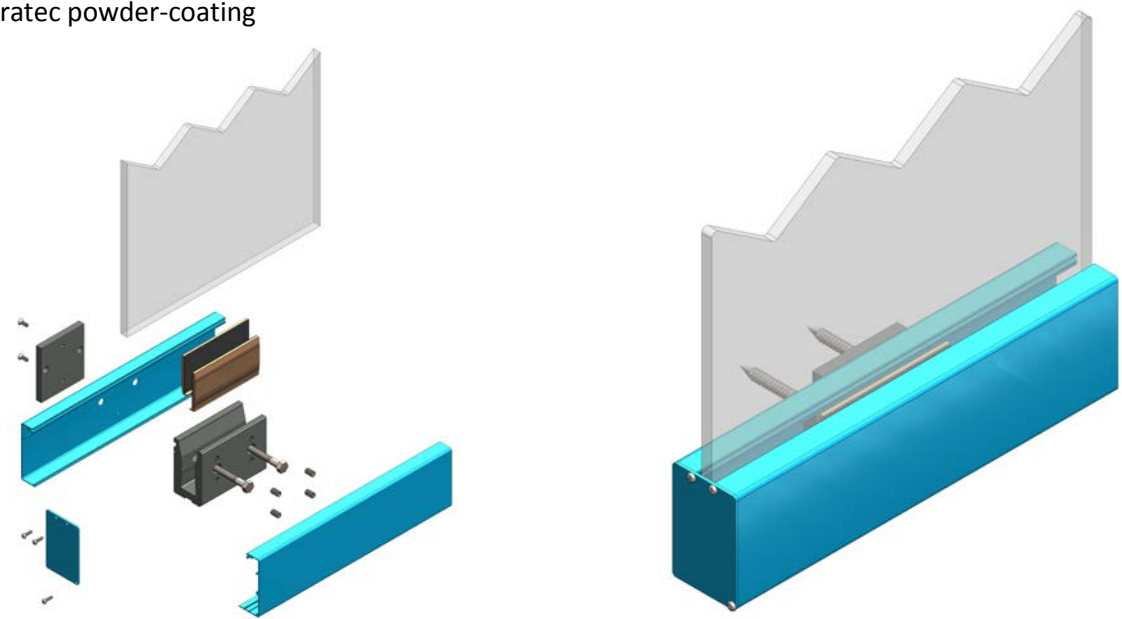
## Vista Frameless Glass Balustrade

### Description:

Provista Balustrade Systems Vista Frameless Glass balustrade system features a modern aluminum channel design suiting both classic and contemporary building design. The channel is a face-fixed design providing an ultra-clean look with completely hidden fixings. The channel can accept 12mm and 15mm toughened safety glass as well as 15.3mm laminated safety glass. An interlinking rail is available for balustrade applications using 12mm glass which is available in a stainless steel or powder-coated finish.

### Key Features:

- Designed for residential and commercial applications including apartment balconies and decks
- Suitable for both interior or exterior applications, including pool fencing and gates
- Hidden-fixings for an ultra-clean look
- Choice of 12mm or 15mm toughened or 15.3mm toughened laminated safety glass
- Designed for all building structures including timber, concrete and steel
- T6 Temper Grade alloy used for all profiles, providing approx. 20% increased strength over typical grades
- Multiple finish options – can be powder-coated or anodised in all available NZ colours, including Dulux Duratec powder coating for high-corrosion zones
- National design service to assist with project specific design and detailing
- National network of fabricators and installers
- Complies with AS/NZS 1170, NZS3603, AS/NZS 1664, AS/NZS 2208 and NZS 4223.3 2016
- 5 year warranty on balustrade, 10 year warranty on Dulux Duralloy powder-coating, 20 year warranty on Dulux Duratec powder-coating



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## Scope of Use:

The Vista Channel solution is designed to comply with A, B, E and C3 loadings for residential and commercial occupancy types and is suitable for decks, balconies, stairways, pool fences and gates.

Suitable building structures can be timber, concrete, steel and typical combinations of each. A stainless steel interlinking rail is available for 12mm glass applications, affixed directly to the top edge of the glass. The rail can also be supplied in a powder-coated finish which could be the same as that of the channel covers or in a contrast colour.

Address or Site-specific design and Producer Statements can be arranged as required.

## Limitations on Use:

- The Vista Channel solution should only be used in accordance with the Provista Technical Manual. The Manual confirms installation requirements and fixing methods available
- Not suitable for Commercial Occupancy Type C5
- 1<sup>st</sup> Grade Toughened Safety Glass must be minimum 100Mpa
- Specified for use in Very High Wind Zones but Site Specific PS1 and Calculations can be provided for Extreme Wind Zones
- For high corrosion zones use Dulux Duratec powder-coating

## NZS 3604 MAXIMUM SUITABILITY



Very High Wind Zone

## In-service History:

Provista has over 10 years of balustrade and pool fence design, development and installation experience across New Zealand. Provista products are designed and manufactured for NZ conditions. Many kilometres of Provista balustrade and pool fence solutions have been installed across the length and breadth of NZ

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## Statement of Building Code Compliance:

- Provista Balustrade Systems solutions have been designed and tested by independent engineers to comply with:
  - o AS/NZS 1170 Structural Design Actions
  - o NZS3603 Timber Structures Standard
  - o AS/NZS 1664 Aluminium Structures – allowable stress design
  - o AS/NZS 2208 Safety Glazing Materials in Buildings
  - o NZS 4223.3 2016 Glazing in Buildings – Human Impact Safety Requirements
- The Vista Frameless solution is designed for Occupancy A, B, E and C3
- Designs are engineered to comply with B1, B2, F2 and F4 of the NZ Building Code
- For applications outside the Provista Technical Manual specifications a Site Specific PS1 can be prepared upon request

## NZBC DESIGNED TO COMPLY

**B1**

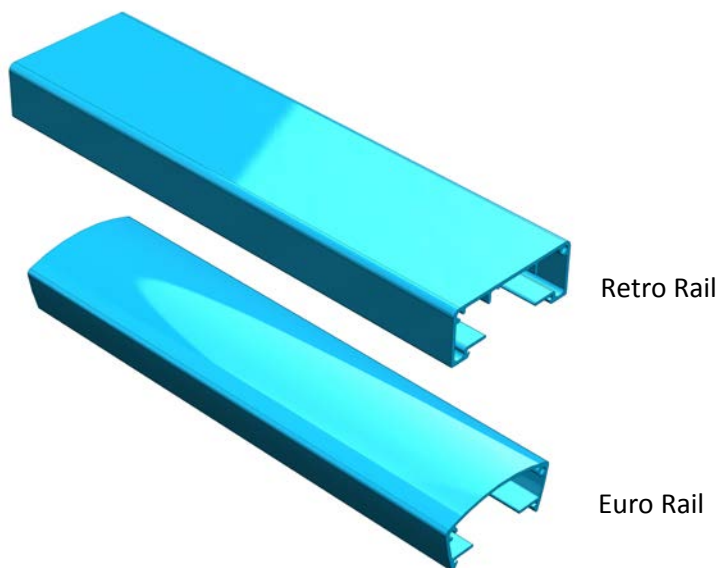
**B2**

**F2**

**F4**

Structure Durability Hazardous Materials Safety From Falling

Choice of Continuous Interlinking Stainless or Aluminum handrail profile options



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## General Notes

### GENERAL NOTE:

- (1) THE BALUSTRADE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTS AND ENGINEERS DRAWINGS.
- (2) ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE AGAINST THE ARCHITECTS AND ENGINEERS DRAWINGS PRIOR TO COMMENCING WORK - ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO THE CONSULTANT FOR RESOLUTION.
- (3) ALL WORK IS TO COMPLY WITH THE NZ BUILDING CODE.
- (4) REMOVE ALL EXCESS MATERIALS AND RUBBISH FROM SITE AND REINSTATE ANY DAMAGE ON COMPLETION OF WORK.
- (5) THE CONSULTANTS ARE TO BE GIVEN 24 HOURS NOTICE FOR ANY SITE INSPECTIONS AS REQUIRED - A PS4 CANNOT BE PROVIDED (PRODUCER STATEMENT FOR CONSTRUCTION REVIEW) IF THE CONSULTANT IS NOT INFORMED OF AND INSPECTS ANY WORK REQUIRING A SPECIFIC INSPECTION AS REQUIRED BY THE LOCAL TERRITORIAL AUTHORITY.
- (6) THE BALUSTRADE HAS BEEN DESIGNED BASED ON RESIDENTIAL OCCUPANCY A, A(OTHER), OR C3, AND COMMERCIAL OCCUPANCY B, E AND C3 OF TABLE 3.3 AS/NZS 1170.1 AND VERY HIGH WIND ZONE AS PER NZS3604:2011.
- (7) THE MAXIMUM BALUSTRADE HEIGHT 1300MM.
- (8) FOR BALUSTRADE HEIGHT ABOVE FINISHED FLOOR LEVEL UP TO 1200MM, THE CLAMPS ARE TO BE SPACED AT MAX. 500MM CRS. TOUGHENED GLASS TO BE DESIGNED BY OTHERS. THE MAXIMUM DISTANCE FROM SIDE EDGE OF GLASS TO FIXINGS IS 250MM.
- (9) FOR BALUSTRADE HEIGHT ABOVE FINISHED FLOOR LEVEL UP TO 1300MM, THE CLAMPS ARE TO BE SPACED AT MAX. 400MM CRS. TOUGHENED GLASS TO BE DESIGNED BY OTHERS. THE MAXIMUM DISTANCE FROM SIDE EDGE OF GLASS TO FIXINGS IS 200MM.
- (10) THE MAXIMUM DISTANCE FROM THE FINISHED FLOOR LEVEL TO THE DECK FASTENER IS 100MM.

### EXISTING SUPPORT STRUCTURE:

- (1) THE EXISTING DECK, BALCONY OR PAVING STRUCTURE MUST HAVE BEEN CONSTRUCTED TO COMPLY WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS AND REQUIREMENTS, THE NZ BUILDING CODE AND NZS 3604.
- (2) ALL STEELWORK IS TO BE PROTECTED AS REQUIRED BY THE NZ BUILDING CODE.
- (3) THE DESIGN OF CONCRETE, STEEL OR TIMBER SUPPORT FOR THE BALUSTRADE IS THE RESPONSIBILITY OF OTHERS.

### NEW CONSTRUCTION NOTES:

- (1) THE EXISTING SUPPORTING STRUCTURE DETAILS ARE NOT COVERED BY THESE DRAWINGS.
- (2) THESE DRAWINGS ONLY COVER INSTALLATION

- (3) DETAILS OF THE NEW STAINLESS STEEL BALUSTRADE AND GLASS FENCE/HANDRAIL.
- (3) ALL BOLTS AND COACH SCREWS CLASS 80 AND BRACKETS ARE TO BE 316 STAINLESS STEEL.
- (4) ALL CHEMSET CONCRETE ANCHORS TO BE CLASS 80 STAINLESS STEEL AND FIXED TO MANUFACTURER'S SPECIFICATION.
- (5) ALL COACH SCREWS ARE TO BE INSTALLED WITH HILTI HIT RE - 500 EPOXY AS PER MANUFACTURERS SPECIFICATION. THE DIAMETER OF DRILL BIT SHOULD BE BETWEEN 2 TO 6MM LARGER THAN THE FASTENER OUTSIDE DIAMETER. BLOW OUT THE DUST AND WOOD CHIPS FROM DRILLING USING OIL-FREE AIR. HOLES SHOULD BE CLEANED JUST BEFORE SETTING THE FASTENER. HOLES MUST BE FREE OF ICE, OIL/GREASE AND OTHER CONTAMINANTS.
- (6) THE MAXIMUM TIGHTENING TORQUE FOR COACH SCREWS SHOULD NOT EXCEED HALF THE TIGHTENING TORQUE PUBLISHED IN THE "INSTRUCTIONS FOR USE" OR IN THE "HILTI FASTENING TECHNOLOGY MANUAL (FTM)".
- (6) ALL DAMAGE TO EXISTING STRUCTURE CAUSED BY CONSTRUCTION TO BE REINSTATED.
- (7) PREVENT CONTACT BETWEEN ALL DISSIMILAR MATERIALS IE: GALVANISED STEEL AND ALUMINIUM BY SEPARATING WITH NEOPRENE WASHERS.
- (8) ALL GLASS PANELS ARE TO BE TOUGHENED GLASS TO COMPLY WITH THE NZ BUILDING CODE AND CLAUSE 22.4.3 OF NZS4223.3:2016.
- (9) TYPICAL GLASS SIZES ARE 12MM OR 15MM TOUGHENED GLASS OR 13.52MM OR 17.52MM SENTRYGLAS. REFER TO GLASS MANUFACTURERS SPECIFICATIONS FOR GLASS SIZING.
- (10) ALL STRUCTURAL GLASS BARRIERS SAFEGUARDING A FALL OF 1000MM OR MORE REQUIRE INTERLINKING HANDRAIL AS PER CLAUSE 22.4.3 OF NZS 4223.3:2016 UNLESS SPECIFICALLY DESIGNED TO COMPLY WITH 22.4.3(C).
- (11) ALL GLASS PANELS ARE TO BE SEATED ON NYLON WASHERS OR BUSHES AT ALL SUPPORT BRACKETS AND BOLTS.
- (12) ALL SEALANTS ARE TO COMPLY WITH THE REQUIREMENTS FOR THE SPECIFIC USE INTENDED DURING CONSTRUCTION.
- (13) A RUBBER, EPDM OR FOAM TAPE LAYER MUST BE INSTALLED BETWEEN THE CLAMP AND DECK.



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REVISION:

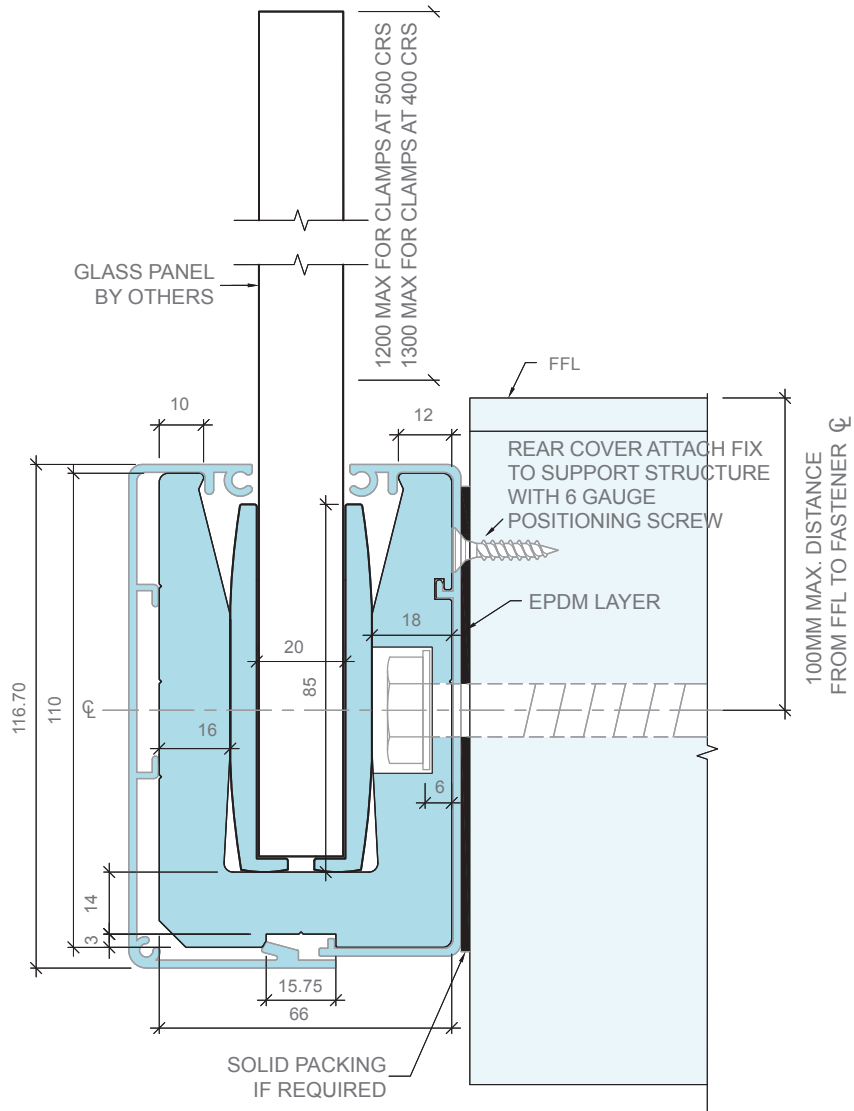
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Clamp Section



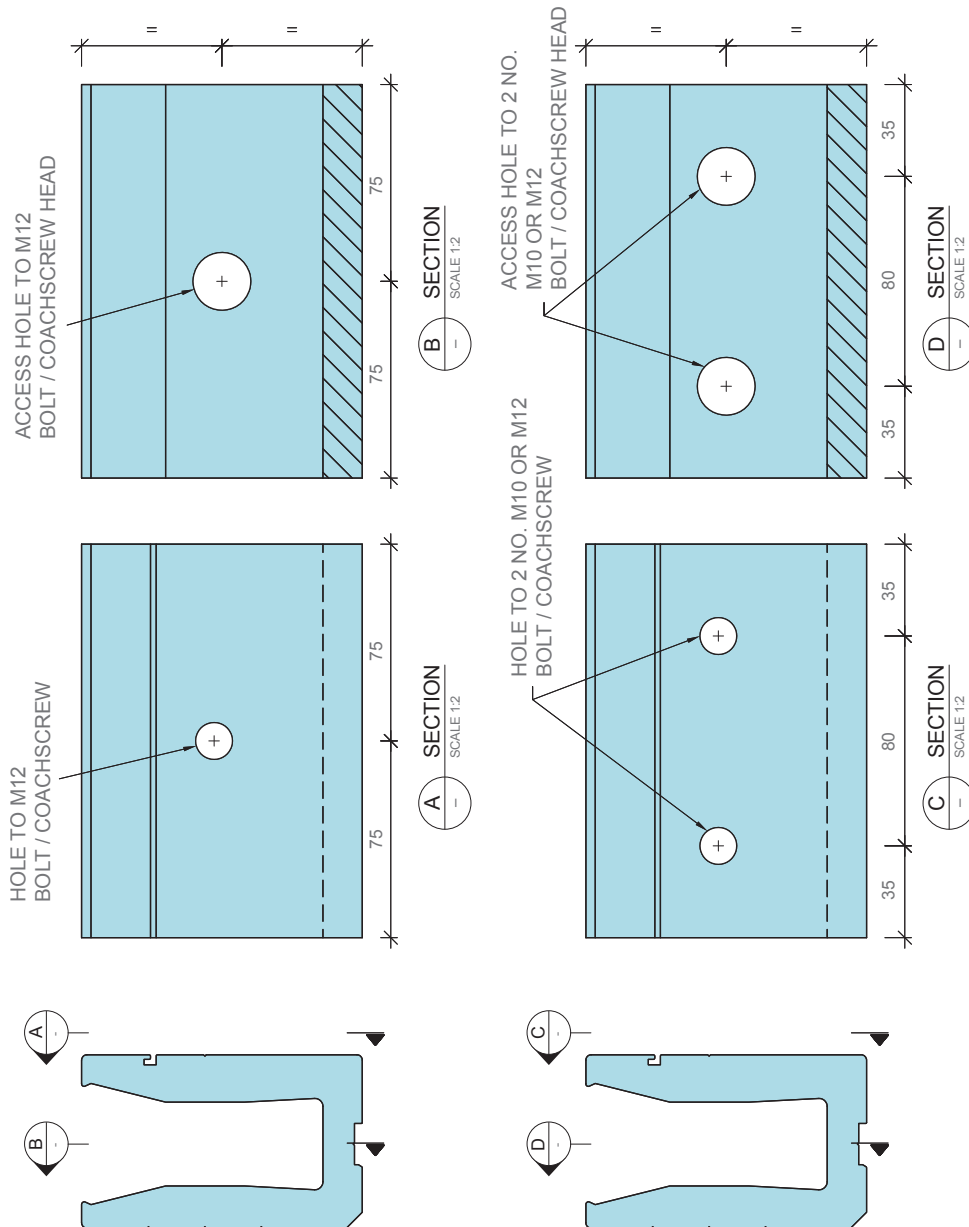
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## Clamp Elevation




  
**obdconsultants**
  
*Innovation in Engineering Design*

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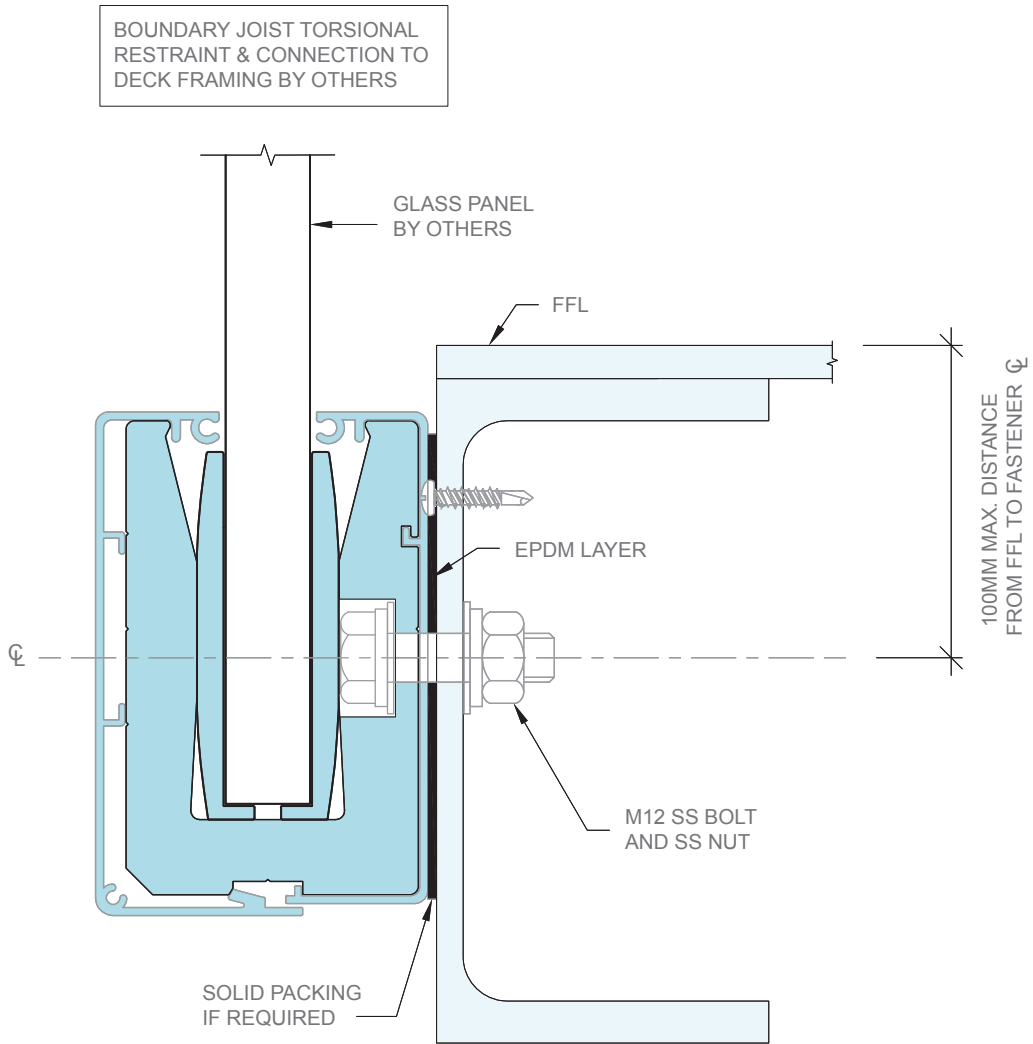
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# COMMERCIAL & RESIDENTIAL BALUSTRADE DESIGN



Connection Type 1 - Steel Deck



1 CONNECTION TYPE 1 - STEEL DECK  
SCALE 1:2



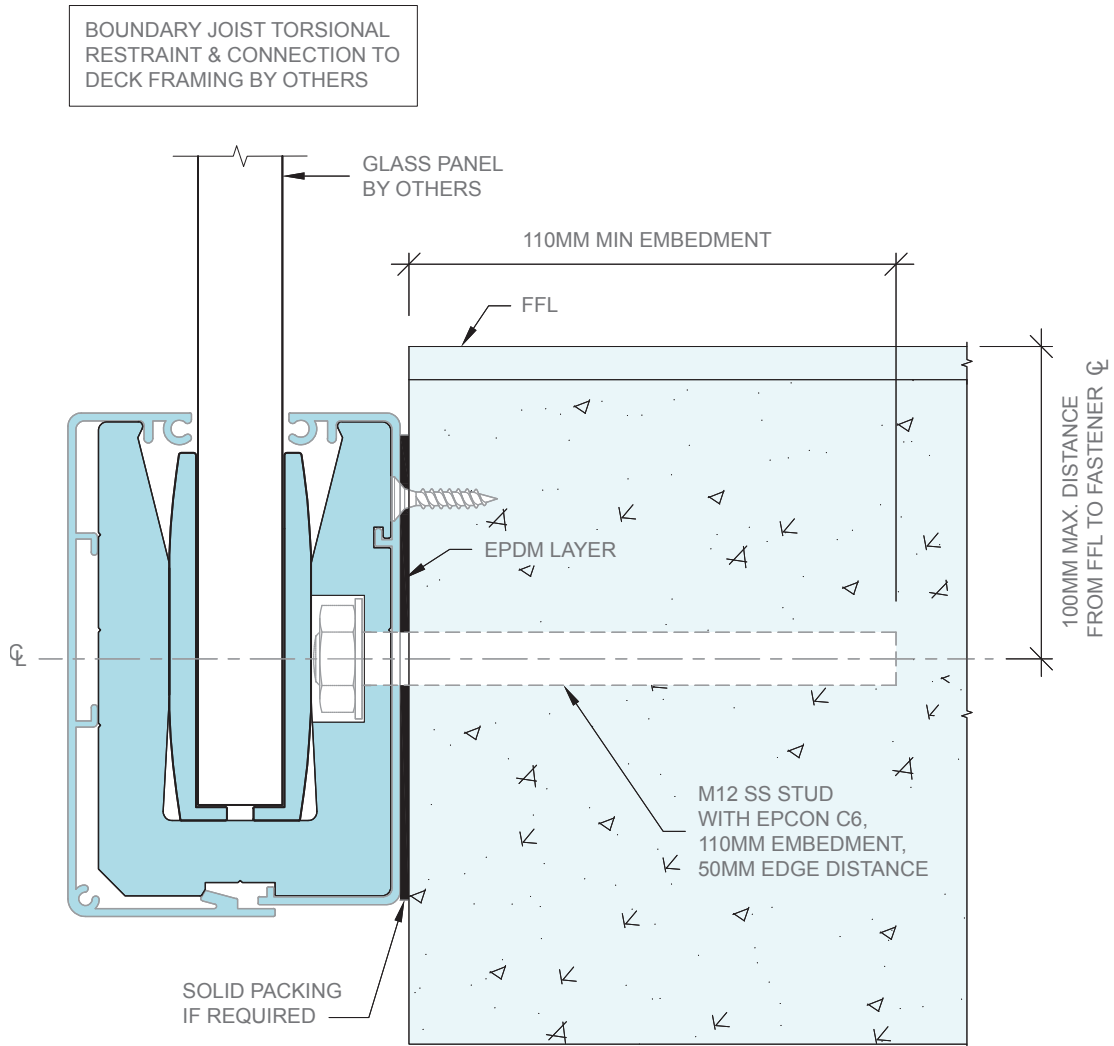
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Connection Type 2 - Concrete Deck



2 CONNECTION TYPE 2 - CONCRETE DECK  
SCALE 1:2



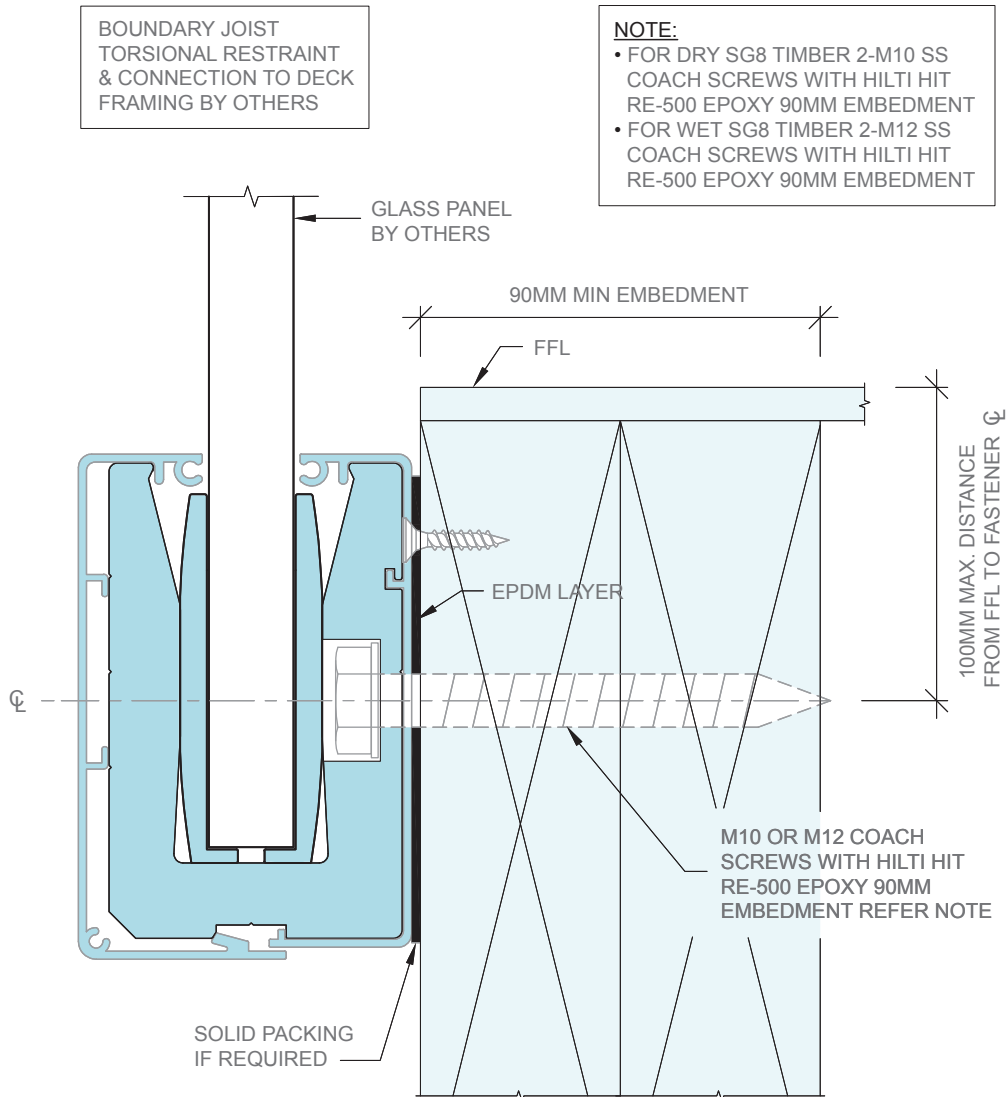
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Connection Type 3 - Timber Deck With Coach Screws



BOUNDARY JOIST  
TORSIONAL RESTRAINT  
& CONNECTION TO DECK  
FRAMING BY OTHERS

**NOTE:**  
 • FOR DRY SG8 TIMBER 2-M10 SS  
 COACH SCREWS WITH HILTI HIT  
 RE-500 EPOXY 90MM EMBEDMENT  
 • FOR WET SG8 TIMBER 2-M12 SS  
 COACH SCREWS WITH HILTI HIT  
 RE-500 EPOXY 90MM EMBEDMENT

3A CONNECTION TYPE 3A - TIMBER DECK WITH COACH SCREWS  
 SCALE 1:2

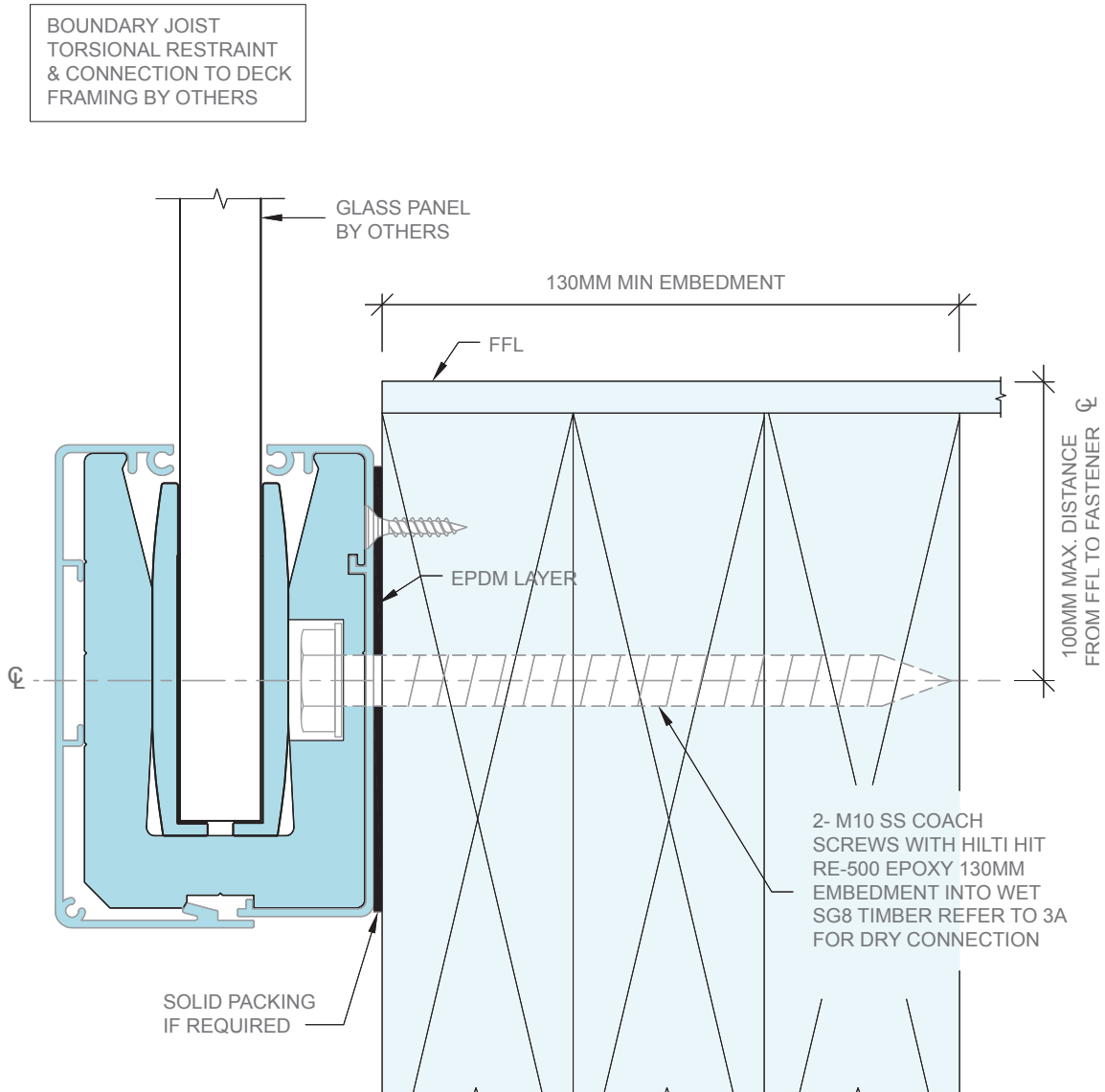


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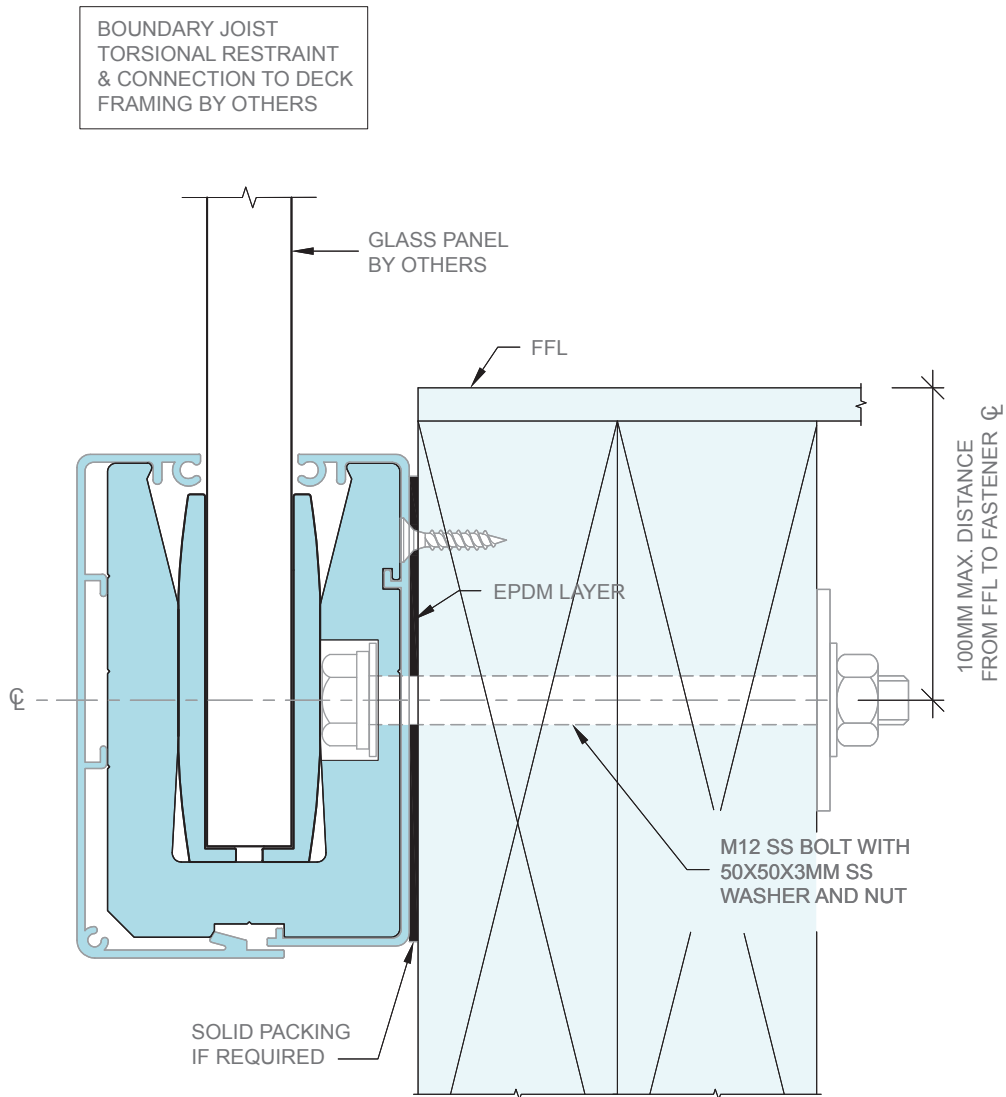
Connection Type 3 - Timber Deck With Coach Screws



**3B** CONNECTION TYPE 3B - TIMBER DECK WITH COACH SCREWS  
SCALE 1:2

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Connection Type 3 - Timber Deck With Bolt



3C CONNECTION TYPE 3C - TIMBER DECK WITH BOLT  
SCALE 1:2

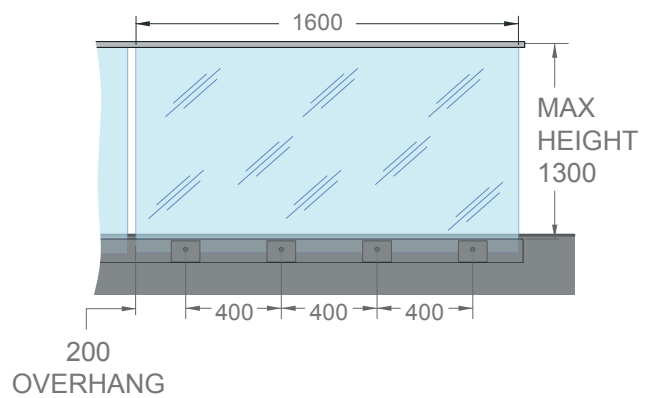
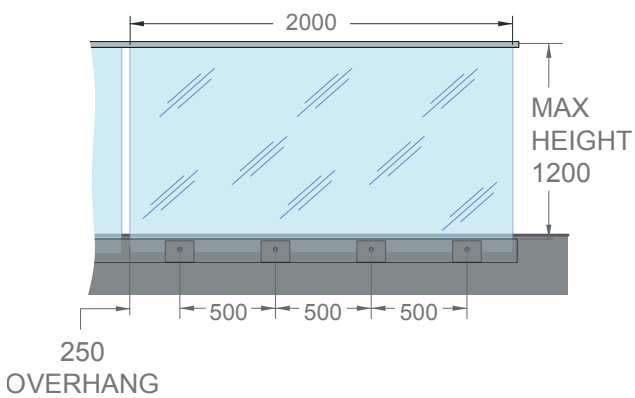
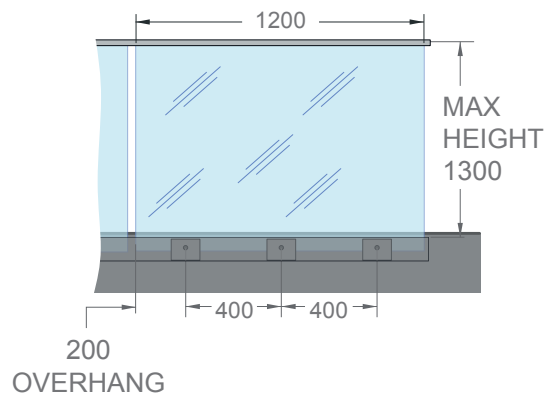
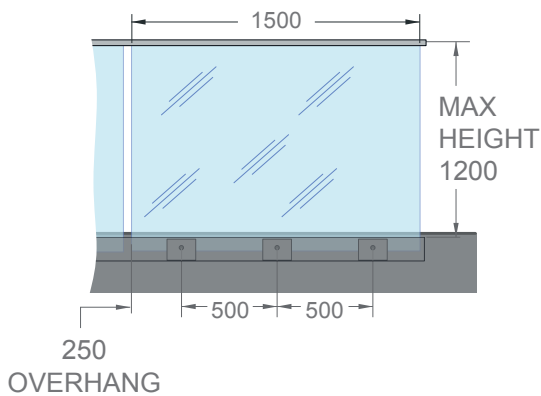
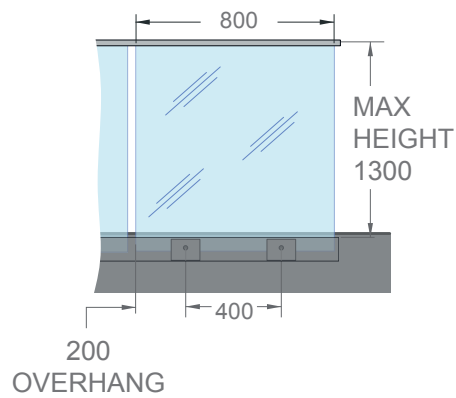
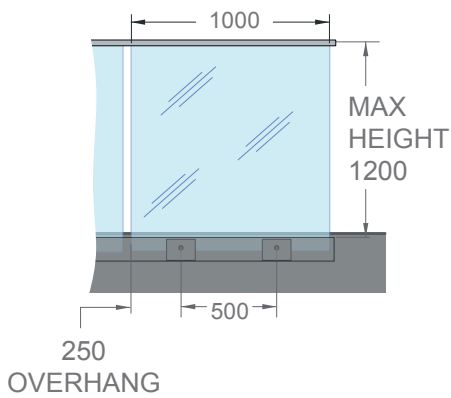
# COMMERCIAL & RESIDENTIAL BALUSTRADE DESIGN



Vista Frameless Channel  
Typical Glass Clamp Layouts

OCCUPANCY - RESIDENTIAL  
A, C3 & POOL FENCE

OCCUPANCY - COMMERCIAL  
B, E & C3



NOTE: ALL DIMENSIONS IN MILLIMETRES

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