



KOROK®

INTERTENANCY TERRACED HOUSING INSTALLATION GUIDE



JULY 2019

KOROK 
FIRE AND ACOUSTIC WALL SYSTEMS

KOROK® COMPONENTS SUMMARY

Product Image	Item Description
	KOROK® C-track 60 x 51 x 60mm 1.15B.M.T.
	KOROK® C-track 60 x 80 x 60mm 1.15B.M.T.
	KOROK® J-track 70 x 51 x 60mm 1.15B.M.T.
	KOROK® J-track 70 x 80 x 60mm 1.15B.M.T.
	KOROK® panel 51mm wide 250mm cover 600kg/m³ density
	KOROK® panel 78mm wide 250mm cover 400kg/m³ density
	Hilti DBZ 6/4.5 x 32mm
	6.5 x 32 Rawl Mushroom spikes
	Wafer Tek 10g - 16 x 16mm Class 3
	Wafer Tek 10g - 16 x 30mm Class 3
	Sikaflex-400 Fire Rated Sealant Hilti CP606 PROMASEAL®-A

Product Image	Item Description
	Hex Head Type 17 14g x 35mm
	Hex Head SDS 14g x 22mm
	Aluminium bracket 75 x 50 x 40 x 3mm
	KOROK® KIT flashing
	KOROK® fire flashing
	KOROK® Angle

This guide has been put together to assist you in the installation of KOROK fire and acoustic wall systems. If you have any questions at all, please contact our Installation Manager

Tony Sullivan
0274 983 899

He's waiting for your call.

TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

Installation of the KOROK® Intertency Systems requires the attachment of the KOROK® panels to framing members using KOROK® aluminium brackets. The framing is set out to allow for the required clearances on both sides of the KOROK® Intertency wall.

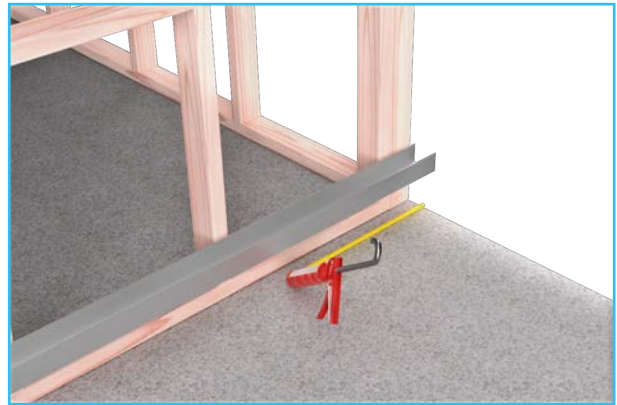
After the framing on one side of the KOROK® Intertency wall is completed, the KOROK® Intertency wall is installed and attached with KOROK® aluminium brackets.

When the framing on the other side is completed the KOROK® aluminium brackets are installed on that side. The sequence of construction should be planned to accommodate the progressive erection of the KOROK® panels.

The KOROK® panels can also be installed after both the wall frames have already been erected. However, this will not be as efficient.

1 Place a bead of fire rated sealant between the floor and C-track on the centre line of the KOROK® wall position. Refer the KOROK® Components Summary for approved sealants.

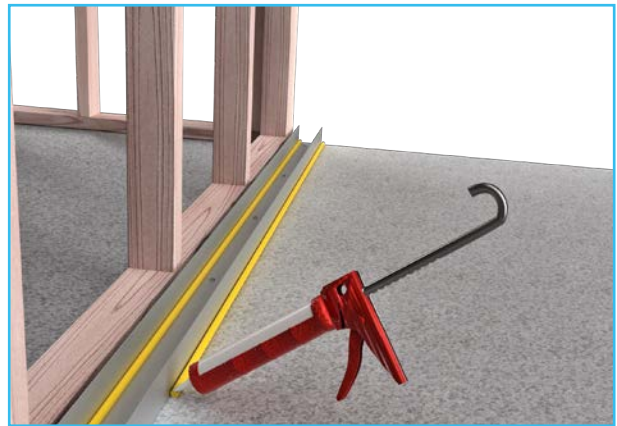
Where the timber framing sits on HIANDRI packers use KOROK® J-track, in place of C-track, with the 70mm leg to the wall framing side.



2 Fix the C-track at maximum centres of 400mm with 6.5mm x 32mm Hilti DBZ Fastenings. Place fire rated sealant in the internal corner of the C-track.

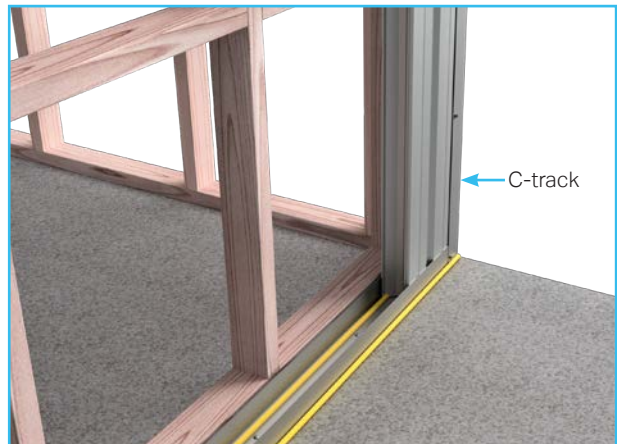
When setting out the C-track ensure there is enough clearance from the wall frame giving consideration to any KOROK® KIT flashings.

If the surrounding surface is uneven or if you are not sure you have a good seal, add another bead of fire rated sealant along the C-track floor junction.



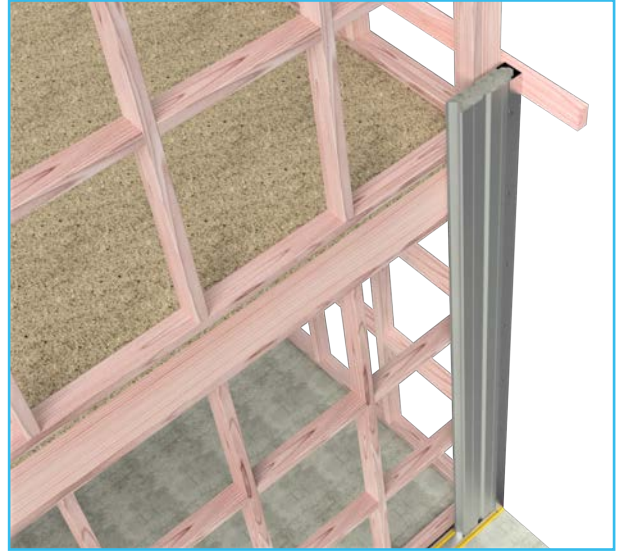
3 Fix the side C-track to the first panel using 10x16mm Wafer Tek screws at 400mm centres both sides, prior to installing.

Then place the first panel into the floor C-track.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

- 4** You may temporarily brace the C-track.



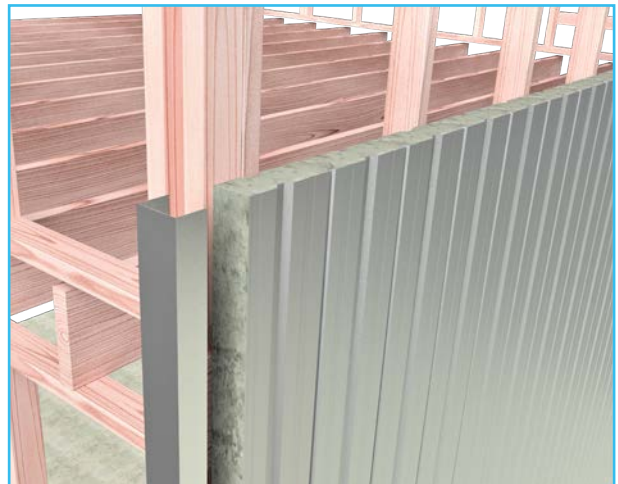
- 5** After every second panel is installed, fix the KOROK® aluminium brackets into the panel using 2 each Hex Head Type 17 14g x 35mm screws and 1 each Hex Head Type 17 14g x 35mm screws into framing at no more than 3.0 metres above floor level.



- 6** Continue placing panels into position, ensuring the tongue and groove are fully locked.

Cut the last panel to fit the wall length and place C-track on the cut panel and screw off with 10 x 16 Wafer Tek screws at 400mm centres both sides.

Screw off the bottom C-track with 10 x 16 Wafer Tek screws at 250mm centres both sides.

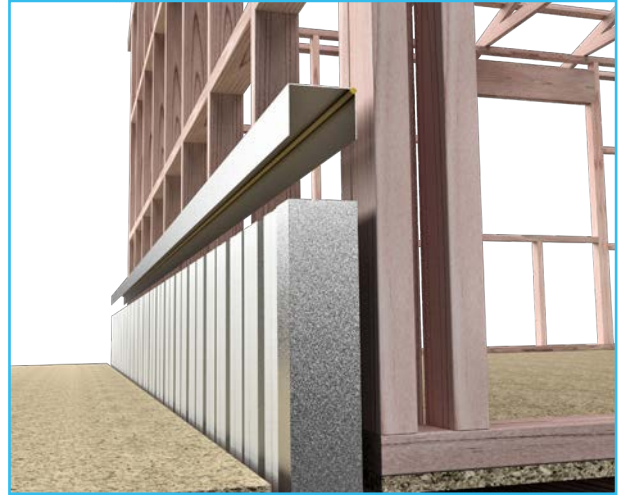


TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

7 Place a bead of fire rated sealant into the internal corner of the C-track. Fit the C-track to the top of the panels hard down and screw to panels with 10x16mm Wafer Tek screws at 250mm centres both sides.

Fix the remaining rows of KOROK® aluminium brackets to the timber frame and panels at a maximum 500mm horizontal centres and 3.0 metres vertically into the panel.

There must be a row of KOROK® aluminium brackets within 1500mm of any mid-wall horizontal joint.

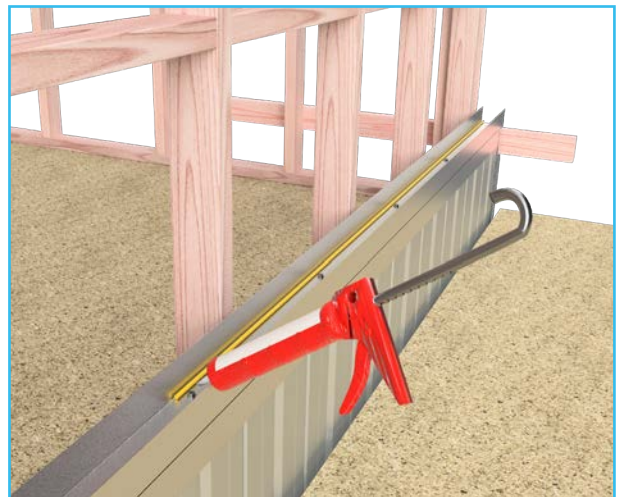


8 Place bead of fire rated sealant on top of C-track.

Place the second C-track directly on top and fix with Hex Head SDS 14g x 22mm screws at 400mm centres.



9 Place bead of fire sealant into the internal corner of the top C-track.

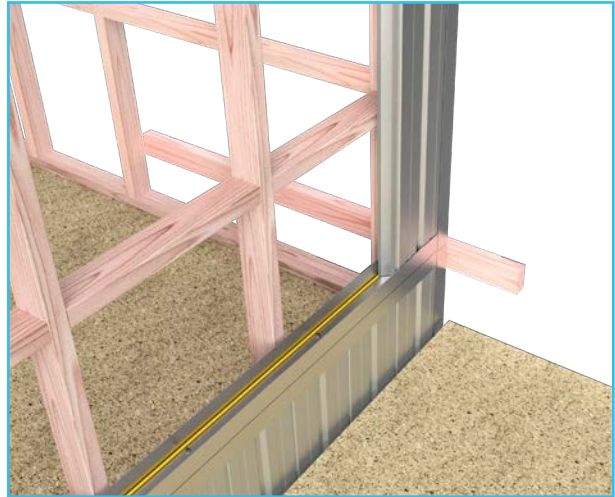


TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

10 Fix the vertical C-track to the first panel using 10x16mm Wafer Tek screws at 400mm centres both sides, prior to installing.

Place the first panel in position and fix with a KOROK® aluminium bracket no more than 3.0 metres vertically from the previous row of brackets.

You may use a temporary brace.



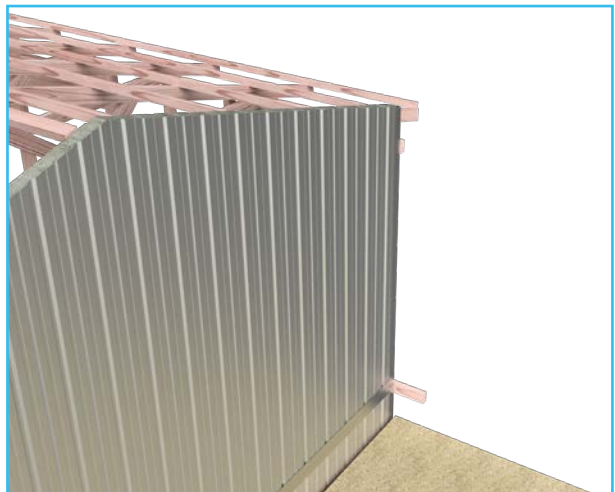
11 Continue placing the KOROK® panels.

Fix panels to timber framing with KOROK® aluminium brackets at 500mm horizontal centres into the panel and no more than 3.0 metres from the last row of KOROK® aluminium brackets.

Fix the vertical C-track to the last KOROK® panel using 10x16mm Wafer Tek screws at 400mm centres both sides.

Screw off the bottom C-track with 10 x 16 Wafer Tek screws at 250mm centres both sides.

Cutting of the KOROK® panels to the rake and height may be carried out when all the panels are erected.

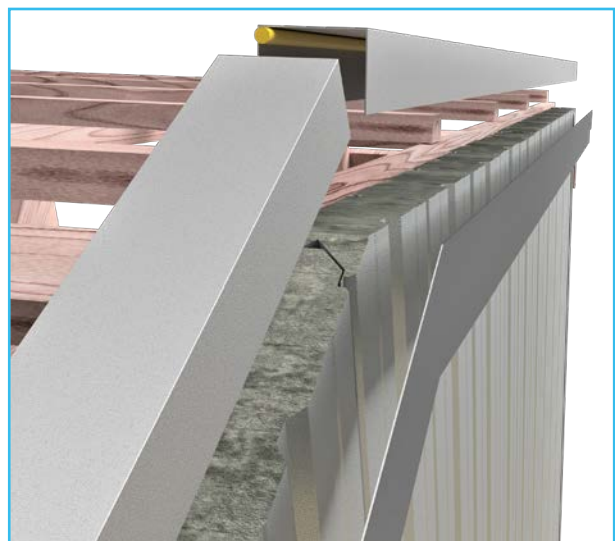


12 Place a bead of fire sealant into the internal corner of the top C-track.

Place the top C-track hard down on top of KOROK® panels and fix off with 10x16mm Wafer Tek screws at 250mm centres one side.

Fix the KOROK® aluminium brackets to timber framing and panels at 500mm horizontal centres with Hex Head Type 17 14g x 35mm screws. Ensure wall is straight and true.

Place a bead of fire sealant around the join edge between the C-track and the panel.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

13 HEAD TRACK PROTECTION

Check if the system you are installing requires head track protection. This applies to KIT 51mm 60/60/60 and KIT 78mm, 120/120/120 systems. There are three options:

13.1 Install a KOROK® Fire flashing at the top C-track. The KOROK® Fire flashing is fixed to the panels at 250mm centres using Wafer Tek 10g - 16 x 16mm screws.

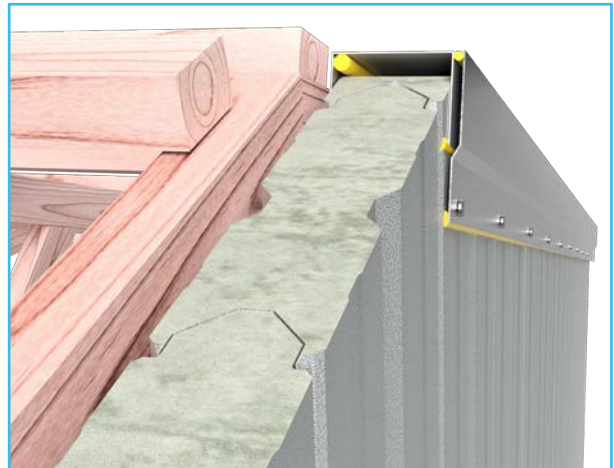
Place a bead of fire sealant around the perimeter of the KOROK® Fire flashing and over any joins.

OR

13.2 Install a 13mm GIB Fyreline® or equivalent x 120mm strip with sealant fixed at 250mm centres top and bottom, using 6 x 32mm drywall screws.

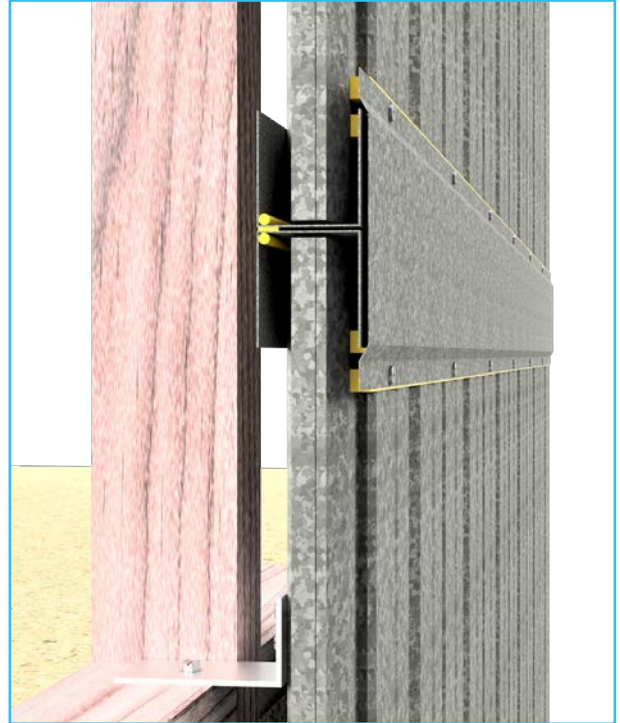
OR

13.3 Install adequate mineral or ceramic wool, friction-fitted to prevent insulation failure, with a nominal density of 60kg/m³.

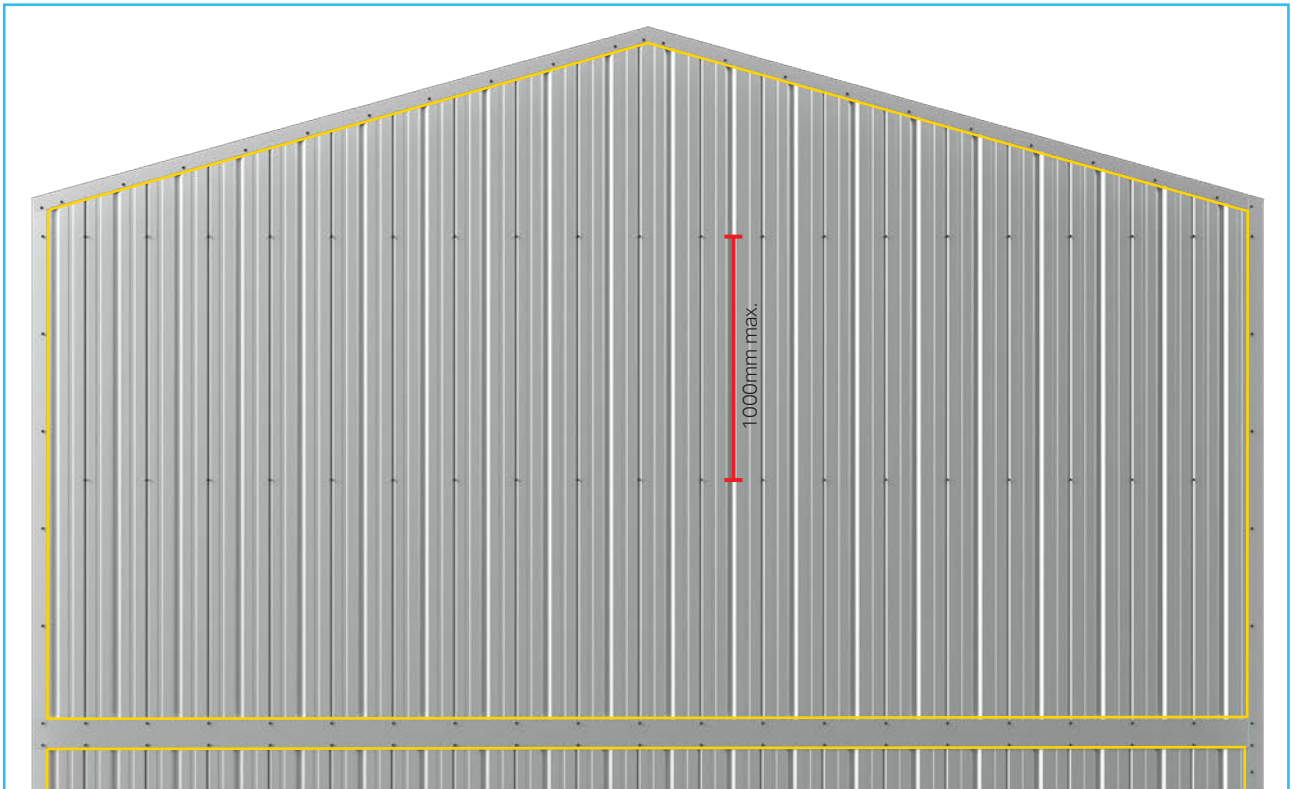


TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

- 14** Install a KOROK® KIT flashing over the mid-wall joint fixed at 250mm centres top and bottom using 10x16mm Wafer Tek screws. Apply a bead of fire sealant along both flashing edges. This applies to KIT 51mm 60/60/60 and KIT 78mm, 120/120/120 systems.



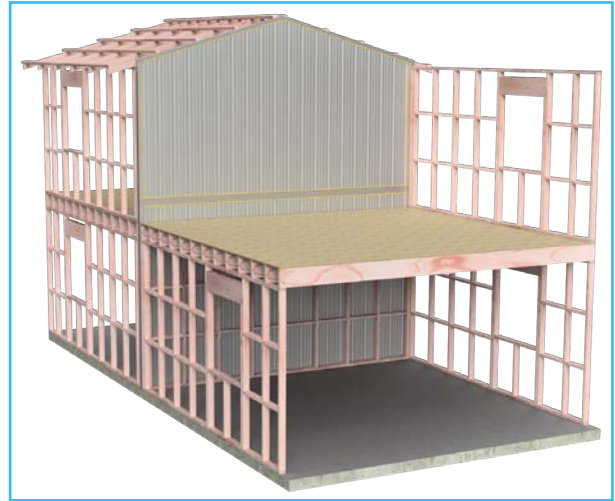
- 15** Ensure the wall is screwed off at each panel joint on one side at 1000mm centres vertically with 10x16 Wafer Tek screws. The horizontal bottom and mid-wall C-track is screwed off to the KOROK® panel with 10x16 Wafer Tek screws at 250mm centres both sides.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

16 Ensure all C-track / panel junctions have been sealed with fire rated sealant.

Ensure all KOROK® aluminium brackets are in place and fixed correctly.



17 Once the framing on the second side is completed, fix KOROK® aluminium brackets into the panels at 500mm horizontal centres and a maximum of 3.0 metres vertically.

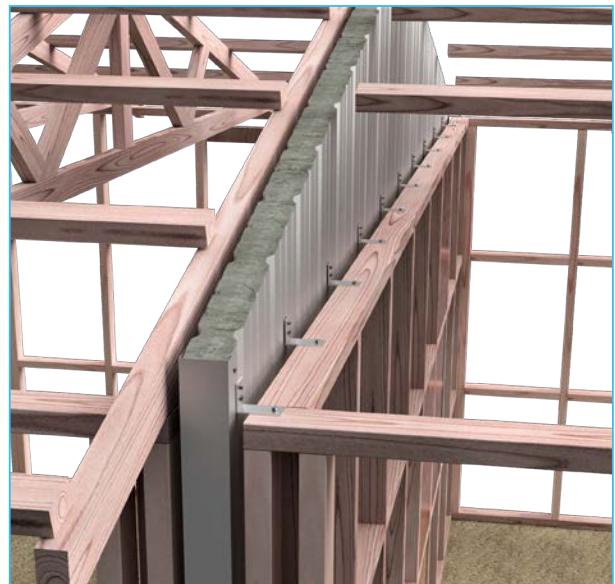


TABLE 2 - SCREW PLACEMENT WALL PANELS

Panels are fixed together at every panel joint at the vertical centres.

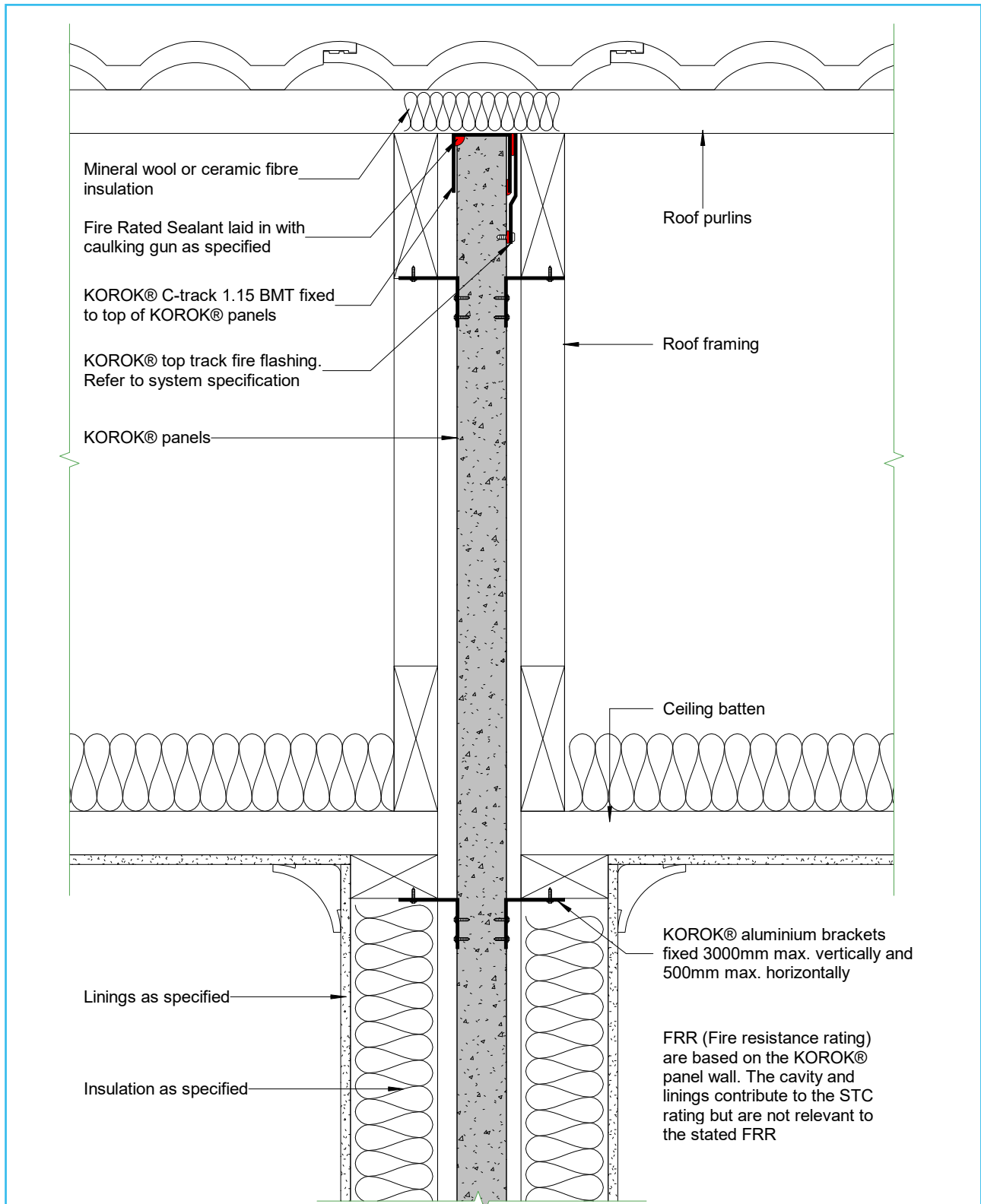
Panel Thickness (mm)	Panel Orientation	Max. Wall Height (m)	Panel to Panel Max. Centres (mm)	Sides	KOROK Wall System or similar	Notes:
51	Vertical	12	1000	One	KIT01 to KIT05	10g - 16 x 16mm Wafer Tek
78	Vertical	12	1000	One	KIT06 to KIT10	10g - 16 x 16mm Wafer Tek

FINAL CHECK

At the completion of the job and at the finish of each day's work, it is essential that the completed area be thoroughly cleaned of all swarf, rivet stems, nails, drillings and screws etc. normally associated with the installation of metal KOROK® panels. Remove any remaining strippable film, check all fixings are correctly installed, all fire and acoustic sealant is applied correctly.

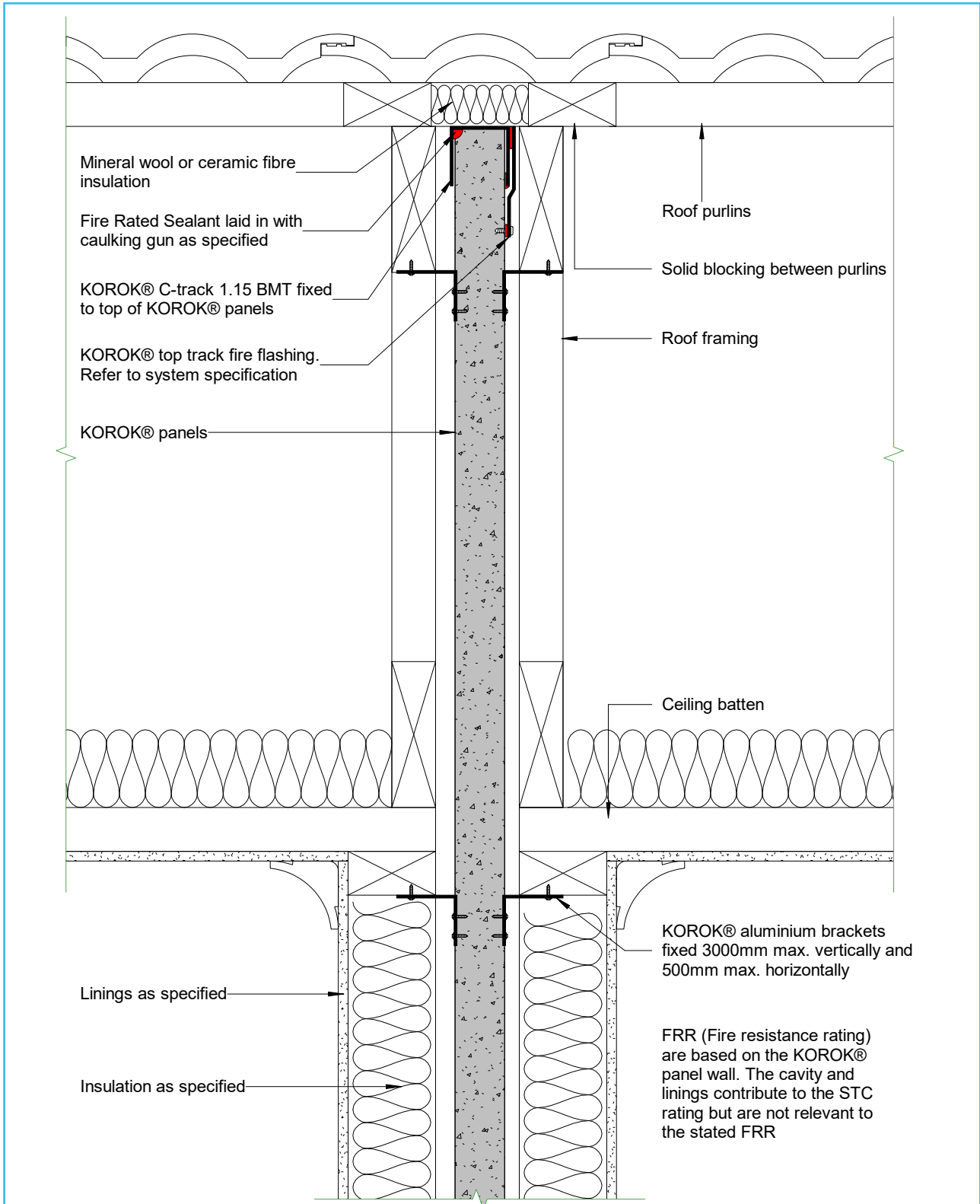
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

ROOF INTERSECTION



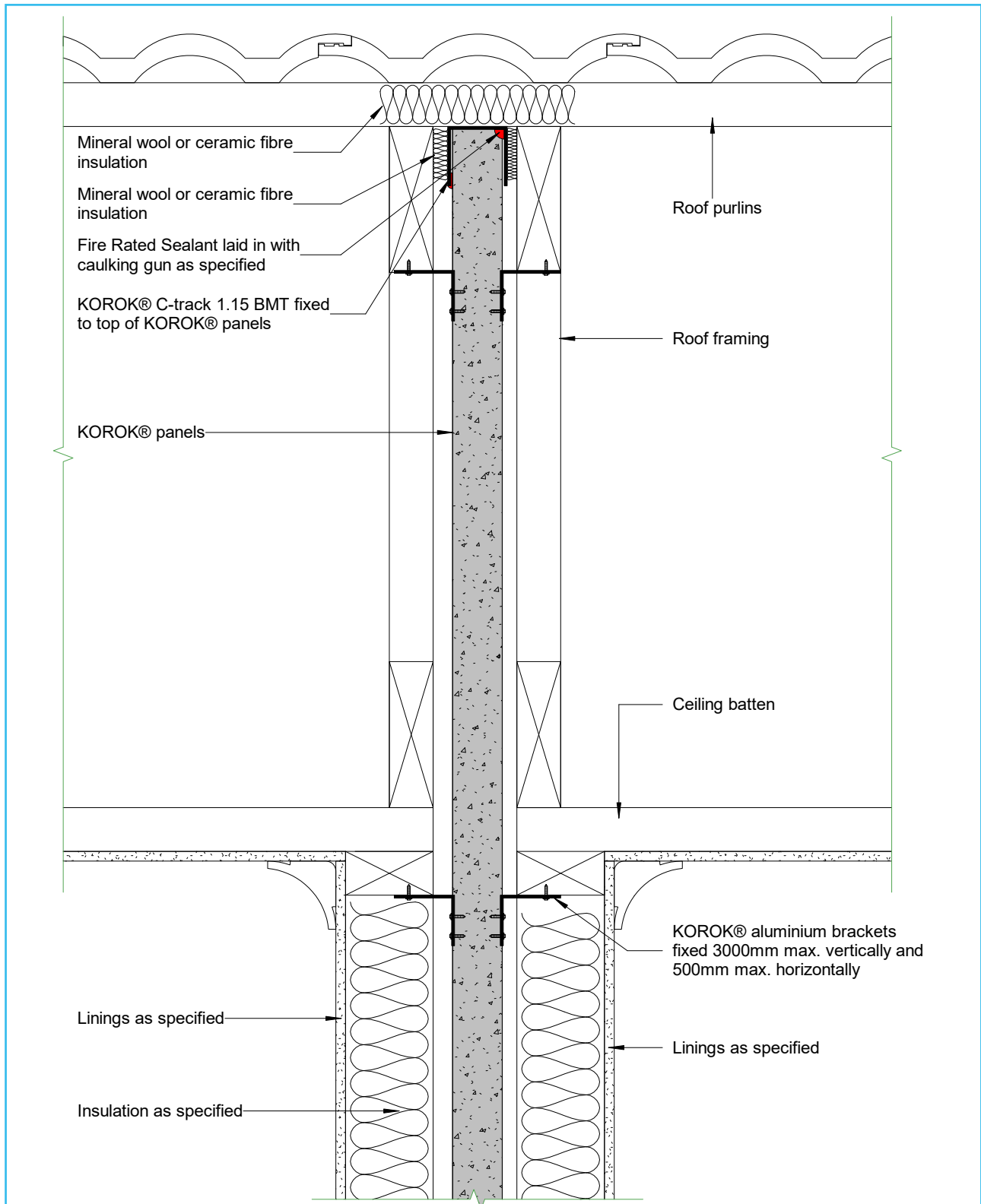
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

ROOF INTERSECTION



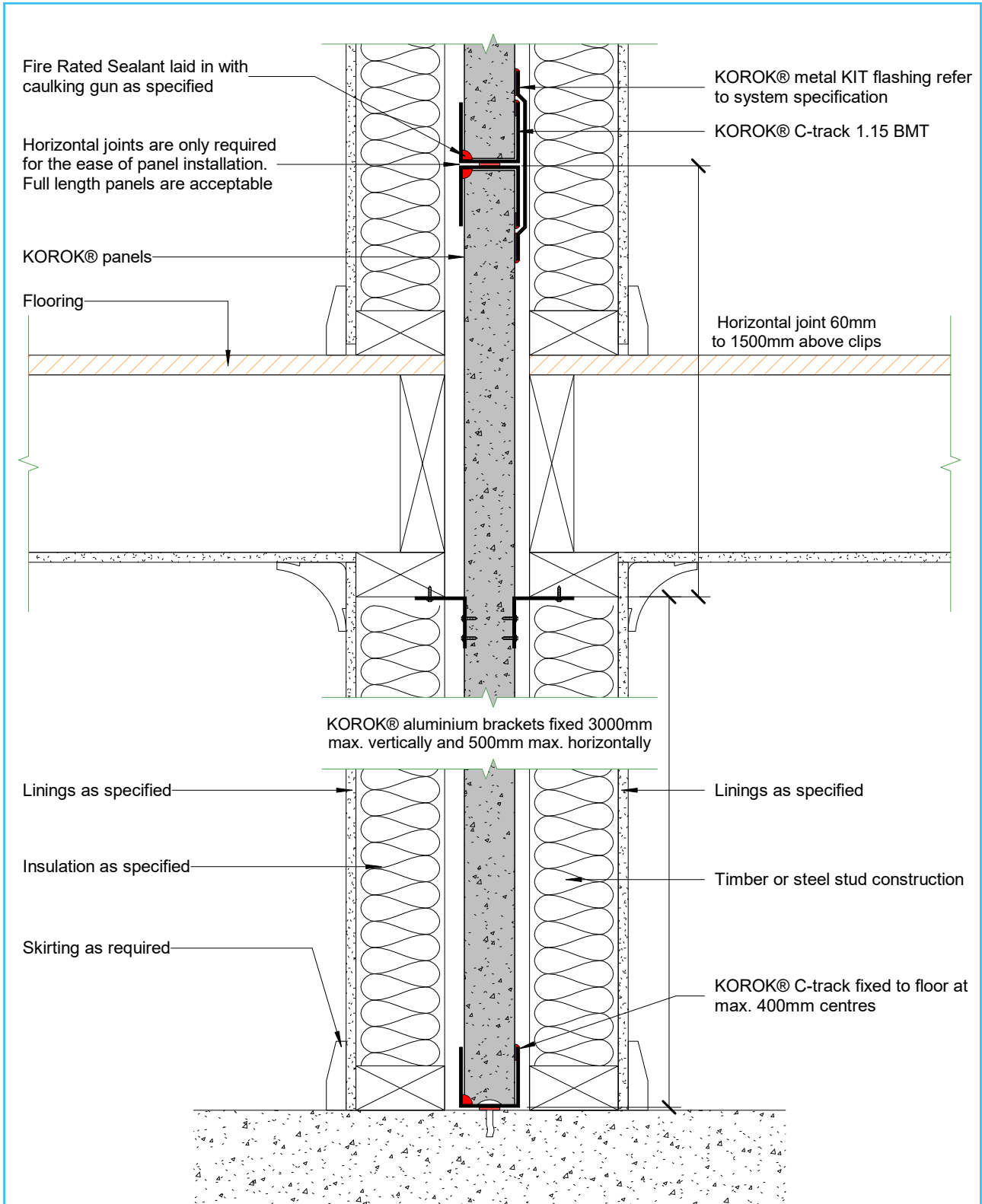
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

ROOF INTERSECTION MINERAL WOOL TOP TRACK



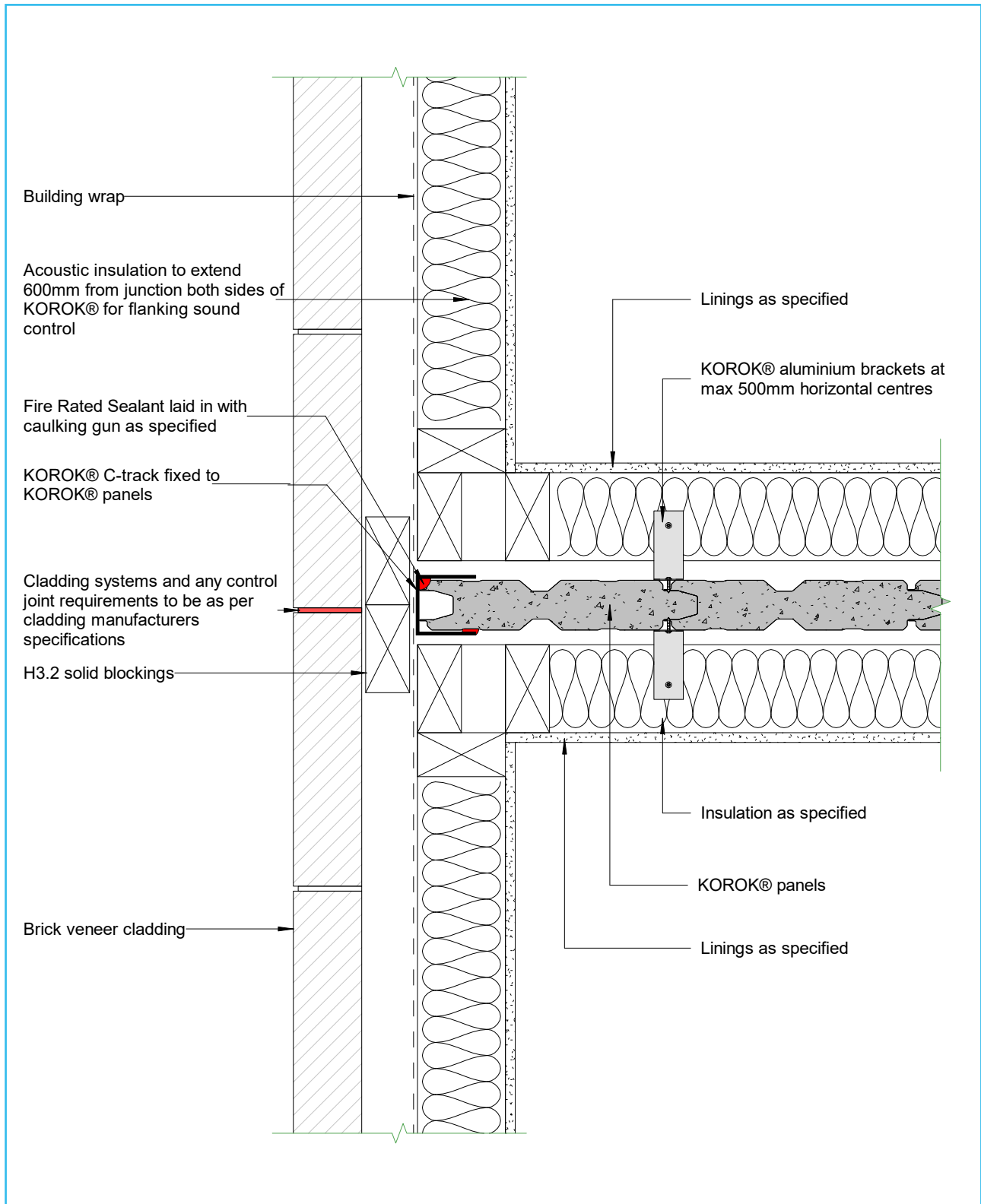
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

FLOOR INTERSECTION



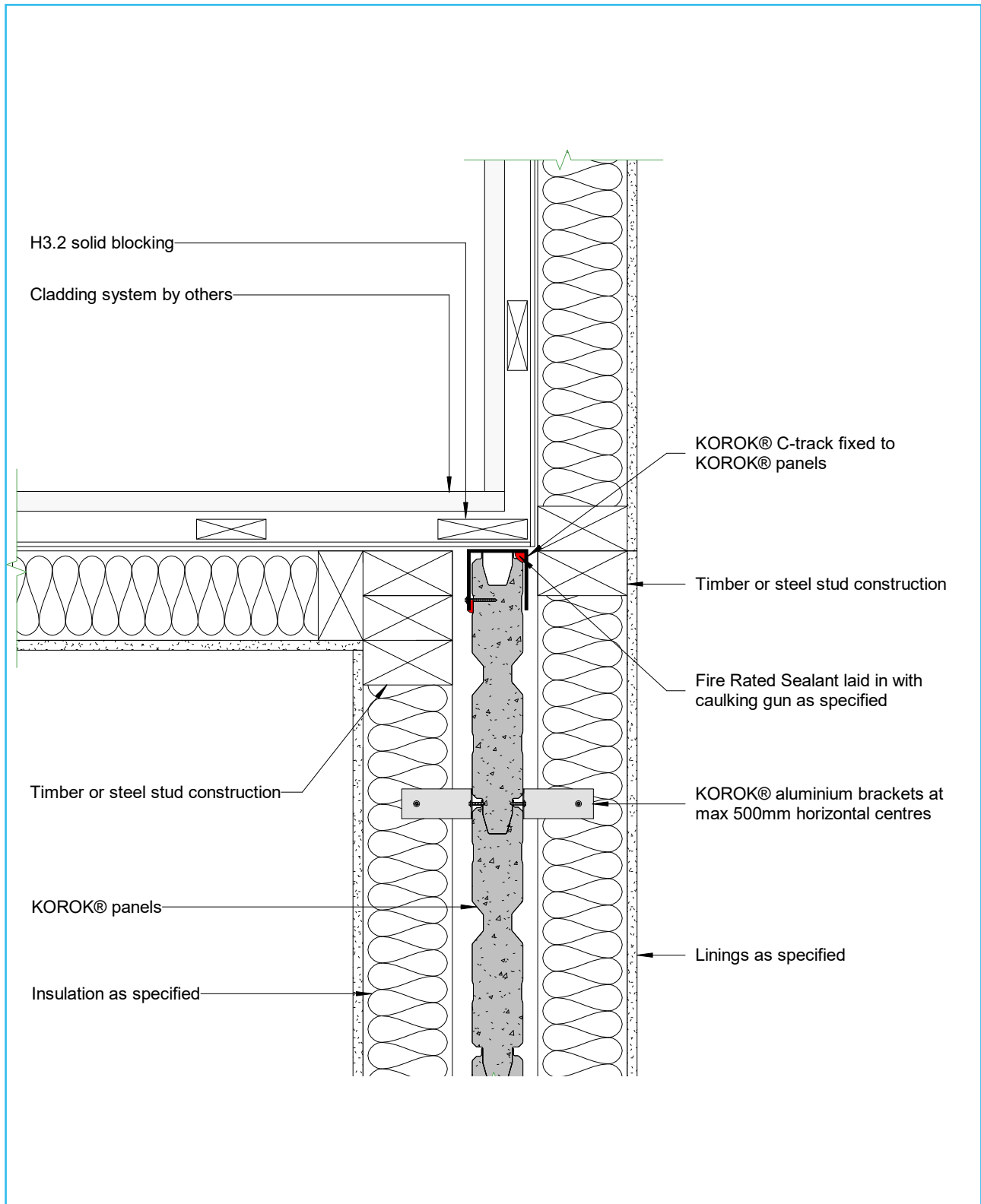
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

CLAD WALL INTERSECTION SOLID BLOCK



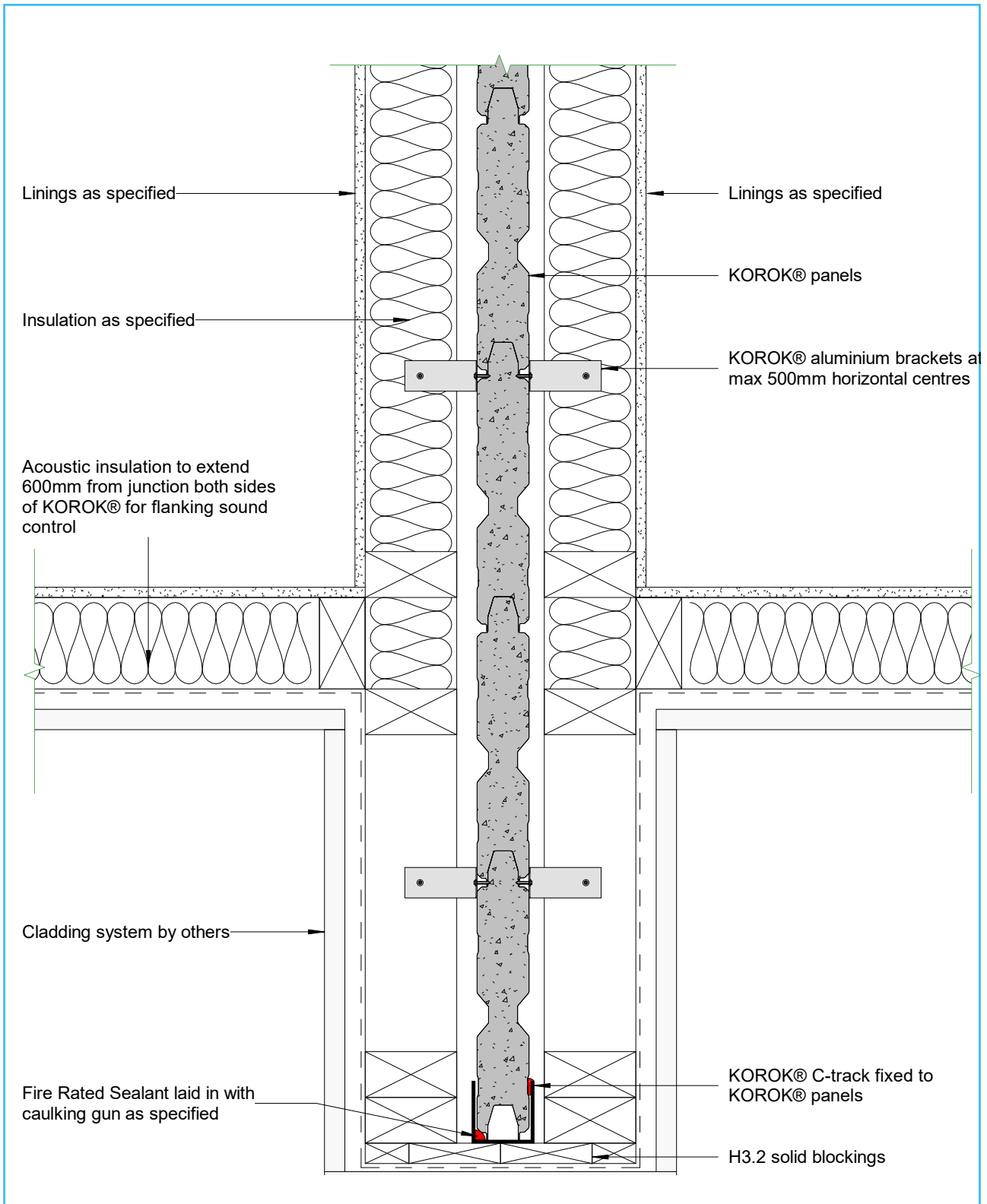
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

EXTERNAL CORNER SOLID BLOCKING



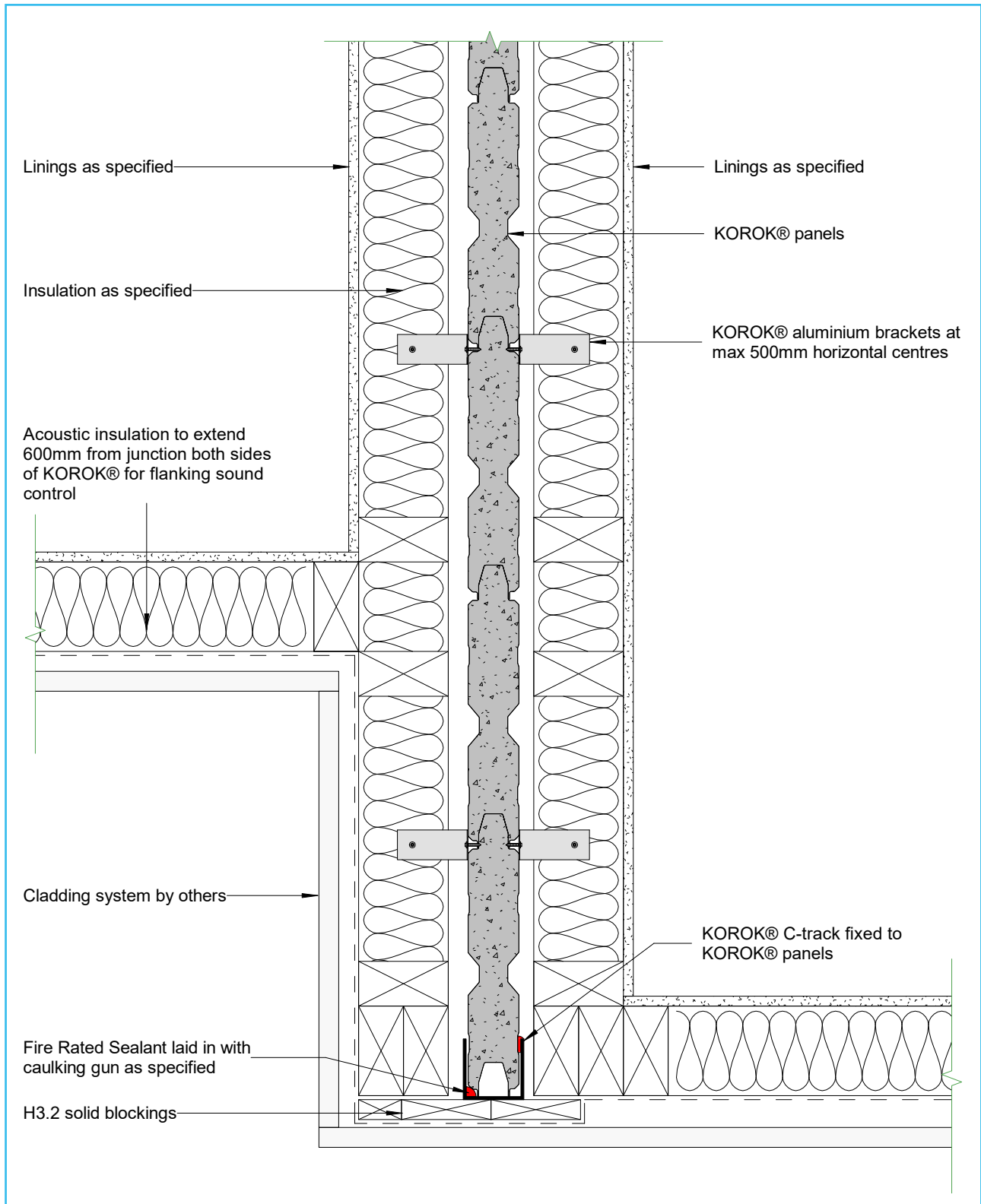
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

WALL PROJECTION AT EXTERNAL TIMBER FRAME WALL



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

CLAD WALL CORNER INTERSECTION



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

EXTERNAL SOLID BLOCKING

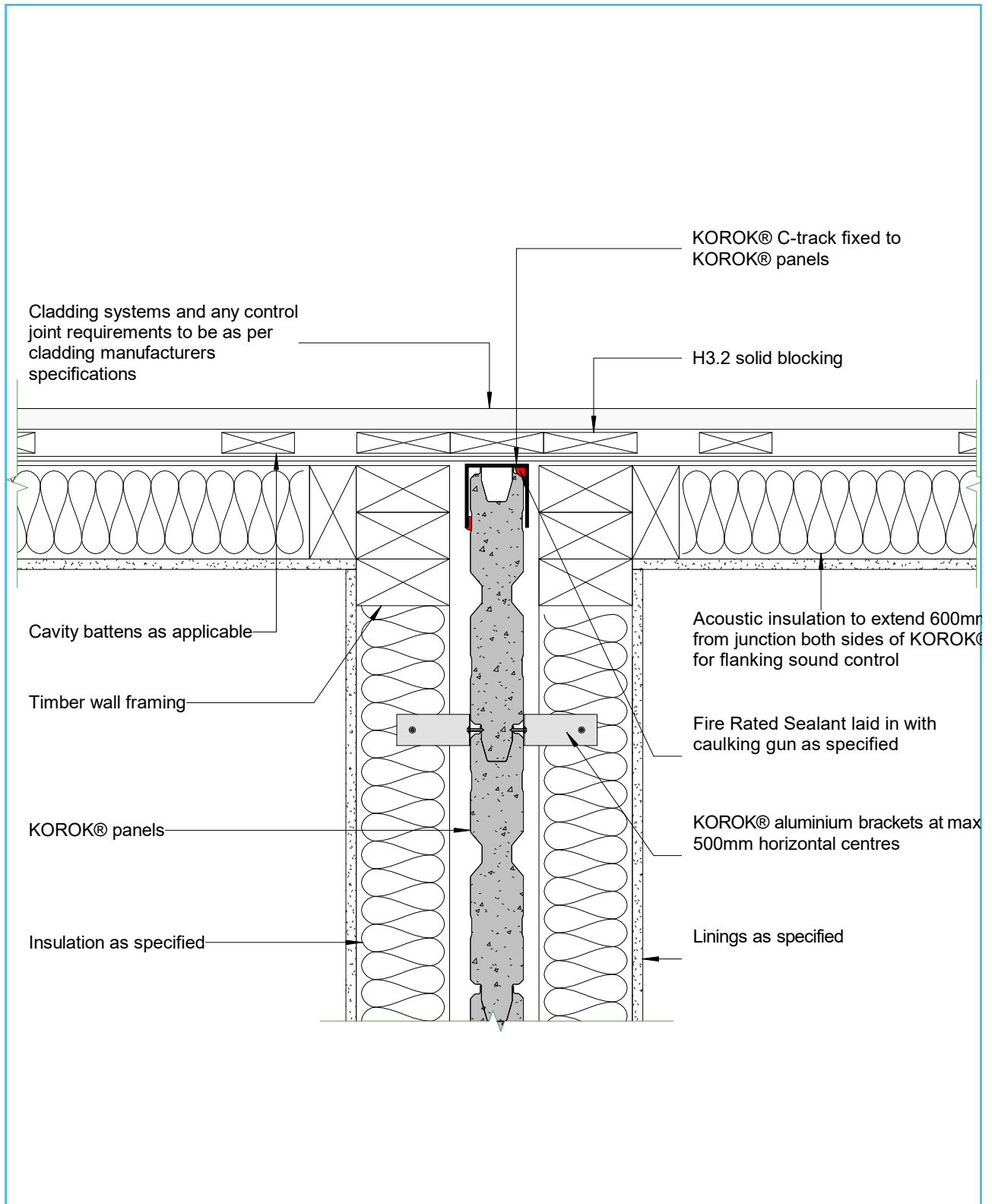


TABLE 3 - KOROK® FASTENERS SPACING

Use	KOROK® Wall System or similar	Panel Thickness (mm)	Panel Orientation	Maximum Wall Height (m)	Maximum Wall Span/ Width (m)	Panel to Panel Maximum centres (mm)	Sides	Tek Screw	Panel Perpendicular to C-track (mm)	Panel Face or Joint	Sides of C-track	Tek Screw	Notes:
Intertency - Terraced Housing	KIT01 to KIT5	51	Vertical	12m	3m between KOROK® aluminium brackets	1000	One	10-16	250	Face	Both	10-16	See flashing details for FRR
Intertency - Terraced Housing	KIT06 to KIT10	78	Vertical	12m	3m between KOROK® aluminium brackets	1000	One	10-16	250	Face	Both	10-16	See flashing details for FRR

NOTES

- For C-track running parallel to the panels, 10-16 Tek screw fixings at 400mm centres are used both sides.

INSTALLATION INFORMATION

DOORWAYS AND WINDOWS

C-track is cut to the trim size for doors, windows and large penetrations. As the wall is assembled the C-track is fitted and sealed and fixed as per the standard details.

PENETRATIONS

Where penetrations into KOROK® are required, the use of a grinder, Sabre saw or hole saw to remove the steel shell is ideal. The aerated concrete is easily removed.

Any gaps in, or services that penetrate through fire rated construction are to be fire rated using certified proprietary systems such as fire collars, fire wraps, intumescent systems etc. The systems are to be installed to the specification of the manufacturer of the product.

KOROK® should be earthed where electrical equipment or unsheathed cables may come into contact with the metal work.

PLUMBING AND ELECTRICAL SERVICES

Copper and brass piping should be isolated from direct contact with the steel shell. Similar care should be taken when contact with dissimilar metals is possible.

SHELF LOADS

KOROK® can be used to carry shelf loads. The capacity of KOROK® to carry shelf loading is dependant upon variables such as shelf design, shelf fastening methods, wall height and shelf location.

FIXING ACCESSORIES

Where practical, services and accessories should be fixed through the male/female shell connections, where the steel shell has greatest thickness (1.2mm B.M.T.).

Where loads are higher e.g. 50 x 50 timber framing for an internal gutter, fixings should extend through the panel.

EXTERNAL WALL INSTALLATION

For external walls, KOROK® can provide site specific details. See our External Wall Systems Manual.

NEW ZEALAND BUILDING CODE (NZBC) COMPLIANCE

New Zealand Building Code (NZBC) compliance

The NZBC sets out both the legal minimum sound transmission between tenancies (Clause G6) and minimum levels of fire resistance (Clauses C3 and C6). The KOROK® Intertenancy Systems Manual provides guidance on the specification and construction of systems that will both meet and exceed those minimum levels. However, designers should consider the comfort of occupants when selecting a system that will satisfy the occupants' expectations when using the space rather than the minimum required by law.

NZBC Clause B1 – Structure

The KOROK® Systems meet the requirements for loads arising from self-weight, earthquake, wind, impact and creep and shrinkage.

NZBC Clause B2 – Durability

Under normal conditions of dry internal use KOROK® Intertenancy Systems have a serviceable life in excess of 50 years and satisfy the requirements of NZBC Clause B2 – Durability.

NZBC Clauses C3 - Fire affecting areas beyond the source

KOROK® Intertenancy Systems can be used to provide passive fire protection in accordance with the requirements of NZBC Clause 3 – Spread of fire

NZBC Clause C6 - Structural Stability

Compliance with (NZBC) Clause C6 'Structural Stability'.

In order to satisfy the requirements of the New Zealand Building Code (clause 6) relating to "structural stability" designers must ensure that KOROK® elements are supported by primary elements that have at least the same fire rating as the KOROK® system that is used.

Where the primary elements supporting the KOROK® system are outside the fire cell, there is no requirement to apply the same FRR as the KOROK® system. Notwithstanding, post fire stability requirements of the NZBC must also be satisfied.

NZBC Clause G6 – Airborne and Impact Sound

KOROK® Intertenancy Systems, both meet and exceed the minimum requirements outlined in NZBC Clause G6. Consideration should be given to both the minimum requirements and the comfort of occupants.

INSTALLATION INFORMATION

QUALITY CONTROL

The performance ratings of the published systems have been obtained by independent testing and opinions sourced from organisations with accredited quality assurance. It is of prime importance to pay strict attention to the details of design, construction and workmanship, otherwise the performance could be significantly degraded.

DESIGN GUIDELINES

The recommended maximum unsupported span for KOROK® Fire Rated Systems is 4000mm. Greater spans are subject to specific engineering design.

LIMITATIONS

Adhesive fixing cannot replace mechanical fasteners in KOROK® Fire Rated Systems.

Do not install KOROK® above the span and height limits stated in this booklet without seeking advice from KOROK Building Systems NZ Ltd.

TRANSPORT

Generally the lengths of KOROK® are delivered to site by long trailers and articulated trucks. Therefore access to and on building sites must be adequate to accommodate these types of vehicles.

Off loading and site storage or craning onto site is the responsibility of the client and suitable arrangements should be made prior to delivery.

KOROK® products are packed and protected against damage during delivery but care must be exercised during unloading.

Lengths must be adequately supported during unloading and where packs are broken and panels lifted by hand, care must be taken not to slide or drag the panel and scrape the finished surfaces of the product.

HANDLING AND STORAGE

KOROK® panels must be stored under clean, dry and ventilated conditions.

Where it is necessary for KOROK® Panels to be stored onsite they should be placed away from the building operations, if possible, in the order in which they will be fixed.

Storage should provide a firm and dry base, protected from the weather, accidental damage and moisture.

The panels should be stored on bearers no more than 2000mm apart. Stack heights are limited to 8 pallets.

Adequate cover must be provided and water must not lie on or between the panel surfaces, which will cause staining and degradation of the surface coatings.

If pallets become wet the KOROK® panels should without delay be separated, wiped with a clean cloth and stacked so that the circulation of air will complete the drying process.

STRIPPABLE FILM

KOROK® panels may be coated with a plastic film to provide protection during handling and transportation. This film has a very short life when exposed to exterior conditions and must be removed immediately after installation.

It must not be left lying in the sun or at the site for more than a few hours. Failure to remove the film will lead to difficulties later with its removal.

CLEANING

At the completion of the job and at the finish of each days work, it is essential that the completed area be thoroughly cleaned of all swarf, rivet stems, nails, drillings and screws, etc., normally associated with the installation of metal panels.

Hot swarf should not be allowed to contact pre-painted sheet material. Any grinding, welding or drilling carried out above the wall level should be done with the panels appropriately covered to avoid swarf contact.

Failure to do so will result in unsightly staining of the surface as the metal particles rust or oxidise.

ON SITE HANDLING

Handle KOROK® panels carefully prior to installation. Avoid knocks, bumps and scratches, which may lead to maintenance issues later.

Store KOROK® panels on site flat or in their pallets and ensure that KOROK® panels are dry prior to installation.

INSTALLATION

Specific design advice should be sought where KOROK® is to be subject to point loads or other distributed loading other than wind.

Ensure connections between KOROK® panels are

INSTALLATION INFORMATION

properly made.

Ensure connections of KOROK® panels to the structure are adequate.

MAINTENANCE

All cladding products are subject to the cumulative effects of weather, dust and other deposits. Maintenance regimes are to be in accordance with maintenance recommendations for New Zealand Steel Products used for roofing and wall cladding.

MATERIAL SAFETY DATA SHEET

A Material Safety Data Sheet (MSDS) is available on request from KOROK® Building Systems NZ Ltd or from our website: www.korok.com

SPECIFICATION

KOROK® have prepared a technical specification suitable for inclusion in contract documents by Architects, Engineers or Builders. This may be freely copied (in full) or reproduced (in full) and is available by contacting us at KOROK® on 0800 773 777 or info@korok.com, or from www.korok.com.

WARRANTY

KOROK® Building Systems NZ Ltd supplies the KOROK® wall system and warrants it to be free from defects in material and workmanship. KOROK® Building Systems NZ Ltd will at its own option replace and/or repair any product found to be defective, provided it has been stored, installed and maintained strictly in accordance with the requirements and recommendations of KOROK® technical literature. This warranty is in addition to any statutory rights to the customer.

KOROK® Building Systems NZ Ltd cannot be held responsible for deterioration to galvanised products caused by poor handling or storage practices after the product has arrived at the customers site.

All KOROK® building products are designed to satisfy New Zealand conditions.

DISCLAIMER

KOROK® Building Systems NZ Ltd reserves the right, at any time, at its own discretion and without notice, to discontinue or change the features, designs, materials, colours and other specifications of its products and to either permanently or temporarily withdraw any such products from sale

without incurring any liability.

This booklet is published as a general guide only and must not be used in preference to detailed technical advice from an appropriately qualified person where application differs from those described herein.

To the best of KOROK Building Systems NZ Ltd knowledge, all information is correct at the time of printing.

Whilst every effort has been made to ensure the material contained within this document is accurate and correct, no responsibility or liability, in part or whole by the authors, editors or publishers of this manual will be accepted for misuse, misreading or deviation from the recommended installation details.

DO NOT SUBSTITUTE ANY COMPONENT

KOROK® fire and acoustic rated systems are not generic. Where specified in this manual, branded components must be used when specifying and installing KOROK® systems.

Substituting any component of any system shown in this manual may compromise the performance of the system.

LIABILITY

KOROK® New Zealand accepts no liability if any KOROK® Fire Rated System or Acoustic Rated System is not designed and installed in strict accordance with instructions contained in this publication.

IS THIS PUBLICATION CURRENT?

This publication may be superseded by a new publication. KOROK® Building Systems NZ Ltd accepts no liability for reliance upon publications that have been superseded.

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PANEL PROPERTIES

KOROK® PANELS

KOROK® panels are roll-formed from zinc-coated steel strips. The steel from which the shells are manufactured conforms to AS1397:2001.

Steel shells have a base metal thickness of 0.4mm B.M.T. with a Z275 zinc coating. These panels have an aerated concrete core and weigh nominally 10.2kg per lineal metre.

KOROK® panels have 250mm coverage when installed.

LOADING COMBINATIONS

All loading combinations are in accordance with NZ4203:1992 and AS/NZS 1170.0:2002.

GENERAL DESIGN NOTES

The designs specified in this manual have been carried out in accordance with NZS4203 and laboratory testing carried out by BRANZ Limited.

The tables and charts are prepared for the use of KOROK® in wall applications i.e. floor systems cannot be modelled from the safe load tables in this manual. Interpolation of the tables is acceptable.

REFERENCES

The following references including standards and codes of practice govern the manufacture of components, use and design and installation of KOROK® systems.

STANDARDS

NZS 2589.1:1997

Gypsum Linings in residential and light commercial construction.

AS 3566:1988

Screws – Self Drilling for the Building and Construction Industry

NZS 4203:1992

Code of practice for General Structural Design and Design Loadings for Buildings.

AS/NZS 1170.0:2002

Structural design actions. Part 0: General Principles

NZS 7202

Part 1 Specification for gap filling adhesives

AS 4072:Part 1 - 2005

Components for the protection of openings in fire-resistant separating elements

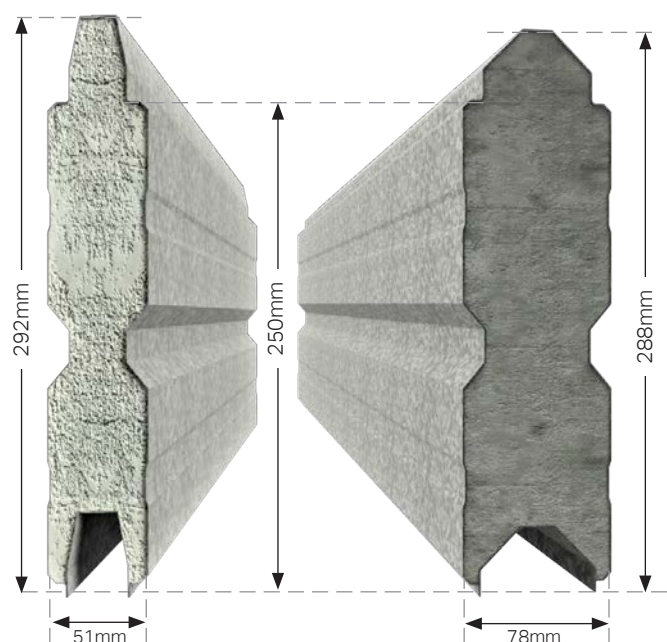
AS 1530:Part 4 - 2014

Methods for fire tests on building materials, components and structures

MANUFACTURERS DOCUMENTS

Manufacturers and Suppliers Documents, which refer to work in this section are:

- Autex® Insulation Data Sheets
- GIB® Site Guide
- GIB® Fire Rated Systems
- Penetrations and closures in GIB® Fire Rated Systems
- GIB® Noise Control Systems
- Hilti® New Zealand Technical Manual
- Pink® Batts® Data Sheets
- Powers Fasteners Specification & Design Manual
- Rondo® Steel Stud & Tracks Installation Manual
- USG® Drywall Steel Stud & Track System
- USG® Boral Plasterboard Installation Manual NZ





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