

# ***KNAUF***

**AQUAPANEL®**

## ***AQUAPANEL® INTERIOR CEILING SYSTEM***

For wet indoor areas



***Build on us.***

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**A world leader in building materials, Knauf's commitment to innovation, quality and service provides effective solutions for the construction industry.**

The Knauf AQUAPANEL® Interior Ceiling System provides a cost-effective complete system with the highest standards in design, installation and sustainability.

Ideal for use in wet areas, from swimming pools and spas through to bathrooms, wet rooms and communal showers, Knauf AQUAPANEL® Interior Ceiling System prevents damage from water, chlorine and salt, and provides perfect protection from moisture and mould.

From spectacularly large and impressive ceiling surfaces to round, organic shapes, these lightweight, resilient and easy to install materials ensure quality and durability.

Meaning you can specify Knauf AQUAPANEL® Interior Ceiling System with confidence.

***Build on us.***

## System introduction

Knauf AQUAPANEL® Ceiling System provides high-performance, economical and sustainable solutions for dry lining style construction of any wet indoor environment.

**From ceilings for swimming pools and spa rooms to bathroom and shower rooms, Knauf solutions are engineered to withstand the most challenging wet conditions.**

### Perfect protection against high humidity and chemicals

Knauf AQUAPANEL® Interior Ceiling System is the perfect solution for ceilings exposed to moisture, chlorine and salt. All components are designed and tested to achieve the highest performance of construction.

Knauf AQUAPANEL® cement boards are unaffected by exposure to moisture and made of inorganic materials, which prevents mould from forming and spreading. Our suspended ceiling structure features metal components coated to achieve a C5 class for corrosion resistance, making it suitable for indoor areas with high humidity and chemicals.

### Simple installation

Our ceiling components are easy to construct, install and apply.

### Complete Knauf engineered and specified system with one single point of contact

Our team of Project Specification Managers and Area Sales Managers will provide you with support throughout the project. From the architect's drawings at the very early stage so that the initial specification can be created, to regular visits on site to ensure optimum system performance.

Working with our team of specialists will guarantee you highest standards in design, construction, cost-effectiveness and durability.

## Internal ceilings and swimming pools

### Benefits

- Simple installation
- Moisture and chemical resistant
- Mould-resistant
- Highly stable and durable
- Creative design opportunities
  - Options for the creation of curved ceilings
  - Spectacular ceilings thanks to expansion joints that are only needed every 15m and enable a 225m<sup>2</sup> closed area without a visible joint

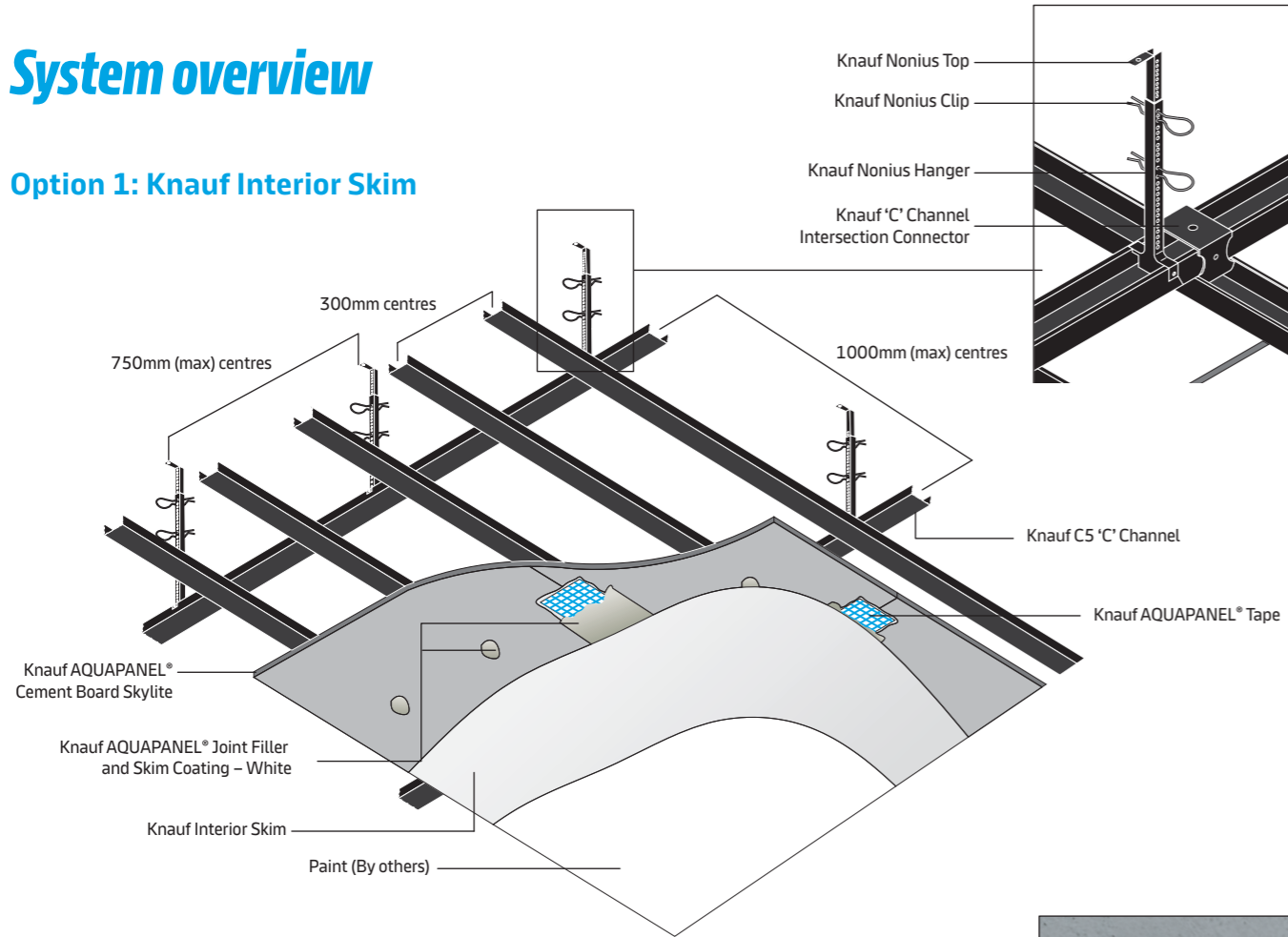
Be it shower rooms, bathrooms, swimming pools and spa rooms, in any interior area where moisture and humidity are prone to spread extensively, a Knauf AQUAPANEL® Interior Ceiling System is the ideal solution.



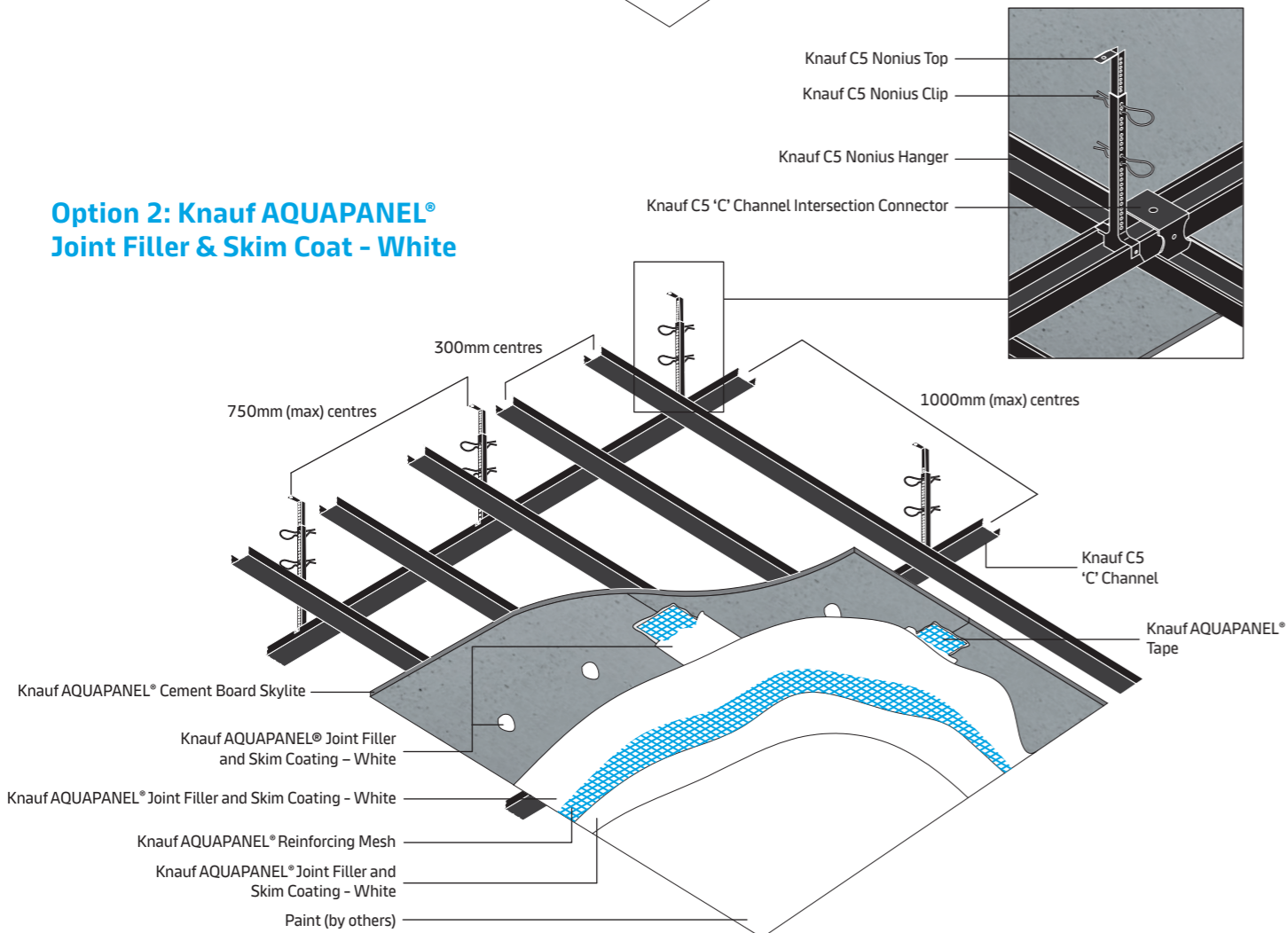
**Knauf AQUAPANEL® Ceiling system is water-resistant, offering the perfect solution for ceilings that are exposed to moisture, chlorine and salt.**

# System overview

## Option 1: Knauf Interior Skim



## Option 2: Knauf AQUAPANEL® Joint Filler & Skim Coat - White



# System component details

A range of Knauf metal components coated to achieve a C3 or C5 corrosion resistance and suitable for exterior ceilings. Used as part of a complete AQUAPANEL® Interior Ceiling System that provides protection against moisture and mold for projects exposed to humidity and chemicals, such as chlorine.

## Knauf Coated 'C' Channel

Coated steel section for use as support channel for Knauf AQUAPANEL® Ceiling system.

Coating	Dimensions (mm)				Material No.	Ex Stock	Pack Details	
	Gauge	Size/webb	Length	Flange			Items/Pack	kg (Approx.)
C3	0.60	60	4000	27	57983	✗	12	27
C3	0.60	60	cut to order	27	322198 <sup>CF</sup>	✗	12	-
C5	0.60	60	4000	27	322196	✗	12	27
C5	0.60	60	cut to order	27	322197 <sup>CF</sup>	✗	12	-

Compliance: EN 13964. Material Pricing Group: PG

## Knauf Coated 'U' Channel

Coated steel section for use as perimeter channel in Knauf AQUAPANEL® Ceiling system.

Coating	Dimensions (mm)				Material No.	Ex Stock	Pack Details	
	Gauge	Size/webb	Length	Flange			Items/Pack	kg (Approx.)
C3	0.60	28	3000	27	59877	✗	16	18
C5	0.60	28	3000	27	322228	✗	16	18

Compliance: EN 13964. Material Pricing Group: PG

## Knauf Coated Nonius Hanger

Coated suspending brackets for use in Knauf AQUAPANEL® Ceiling system.

Coating	Dimensions (mm)		Material No.	Ex Stock	Pack Details	
	Length				Items/Pack	kg (Approx.)
C3	100		824263	✗	50	2
C5	100		322195	✗	50	2

Compliance: EN 13964 Material Pricing Group: PO

## Knauf Coated 'C' Channel Intersection Connector

Connects primary and secondary channels in the Knauf AQUAPANEL® Ceiling system.

Coating	Material No.	Ex Stock	Pack Details	
			Items/Pack	kg (Approx.)
C3	824269	✗	50	2
C5	322206	✗	50	2

Compliance: EN 13964. Material Pricing Group: PO

## System component details

### Knauf Coated Nonius Top

Coated suspending brackets for use in Knauf AQUAPANEL® Ceiling system.



Coating	Max. Void Depth*	Material No.	Ex Stock	Pack Details	
				Items/Pack	kg (Approx.)
	a				
C3	200	785365	✘	50	1.7
C3	300	785369	✘	50	2.5
C3	200	785368	✘	50	3.3
C3	500	787799	✘	50	4.2
C3	600	785367	✘	50	4.9
C3	700	785370	✘	50	5.8
C3	800	785408	✘	50	6.8
C3	900	785410	✘	50	7.8
C3	1000	785412	✘	50	8.7
C3	1200	785413	✘	50	10.5
C3	1500	785414	✘	50	13.1
C3	1800	785415	✘	50	15.0
C5	200	785711	✘	50	1.7
C5	300	785886	✘	50	2.5
C5	400	785885	✘	50	3.3
C5	500	785343	✘	50	4.2
C5	600	785887	✘	50	4.9
C5	700	785888	✘	50	5.8
C5	800	785889	✘	50	6.8
C5	900	785890	✘	50	7.8
C5	1000	785695	✘	50	8.7
C5	1200	785696	✘	50	10.5
C5	1500	785891	✘	50	13.1
C5	1800	785892	✘	50	15.0

Compliance: EN 13964. Material Pricing Group: PO

### Knauf Coated 'C' Channel Connector

Connects base and support profiles in the Knauf AQUAPANEL® Ceiling system.



Coating	Material No.	Ex Stock	Pack Details	
			Items/Pack	kg (Approx.)
C3	824270	✘	50	2.3
C5	324008	✘	50	2.3

Compliance: EN 13964. Material Pricing Group: PO

## System component details

### Knauf Coated 'U' Mounting Bracket

Locates Knauf 'C' Channel to background support.



Coating	Dimensions (mm)			Material No.	Ex Stock	Pack Details	
	Size/webb	Length	Flange			Items/Pack	kg (Approx.)
C3	60	120	27	824268	✘	50	3
C3	60	200	27	323977	✘	50	4
C5	60	120	27	322018	✘	50	3
C5	60	200	27	323996	✘	50	4

Compliance: EN 13964. Material Pricing Group: PO

### Knauf Nonius Clip

Clip for use in combination with the Knauf Coated Nonius Top for adjustment of ceiling heights. Any scratches on the coated clips must be coated with Corrosion Resistant Paint when installed. The non-coated clips must be fully coated with Corrosion Resistant Paint when installed.



Coating	Material No.	Ex Stock	Pack Details	
			Items/Pack	kg (Approx.)
C3	591247	✘	100	0.7
C5	591249	✘	100	0.7

\*MUST be painted with Knauf Corrosion Resistant Paint. Compliance: EN 13964. Material Pricing Group: PO

### Knauf Coated Metal Hanger To Profile Screw LN 3.9 11

Secure Knauf Coated Nonius Hanger to Knauf Coated 'C' Channel. Screws must be fully coated with Corrosion Resistant Paint when installed.



Material No.	Ex Stock	Pack Details		
		Items/Pack	kg (Approx.)	Tub Size (L)
46175	✘	1000	1.37	-

Compliance: EN 13964. Material Pricing Group: PO

### Corrosion Resistant Paint

Corrosion resistant paint for use in the Knauf AQUAPANEL® Interior and Exterior Ceiling Systems. scratched or uncoated metal and all Knauf Coated Metal Hanger to Profile Screw LN 3.9 11 must be coated with Corrosion Resistant Paint when installed.



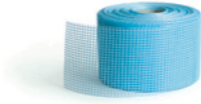
Material No.	Ex Stock	Pack Details		
		Items/Pack	kg (Approx.)	Can Size (L)
64776	✘	6	5	0.75

Material Pricing Group: PO

## System component details

### Knauf AQUAPANEL® Tape

Knauf AQUAPANEL® Tape is a 100mm wide, glass fibre tape with an alkaline-resistant coating. It is embedded into Knauf AQUAPANEL® Joint Filler - Grey to reinforce joints as part of a Knauf AQUAPANEL® Exterior system.



Roll Size		Material No.	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	100	429471	12	4

Estimating Guide: 2.1m/m<sup>2</sup>.

### Knauf AQUAPANEL® Joint Filler - Grey

Knauf AQUAPANEL® Joint Filler - Grey is a cement-based material for filling joints and embedding Knauf AQUAPANEL® Tape and Knauf AQUAPANEL® Reinforcing Mesh as part of the Knauf AQUAPANEL® Exterior and Interior Ceiling systems.

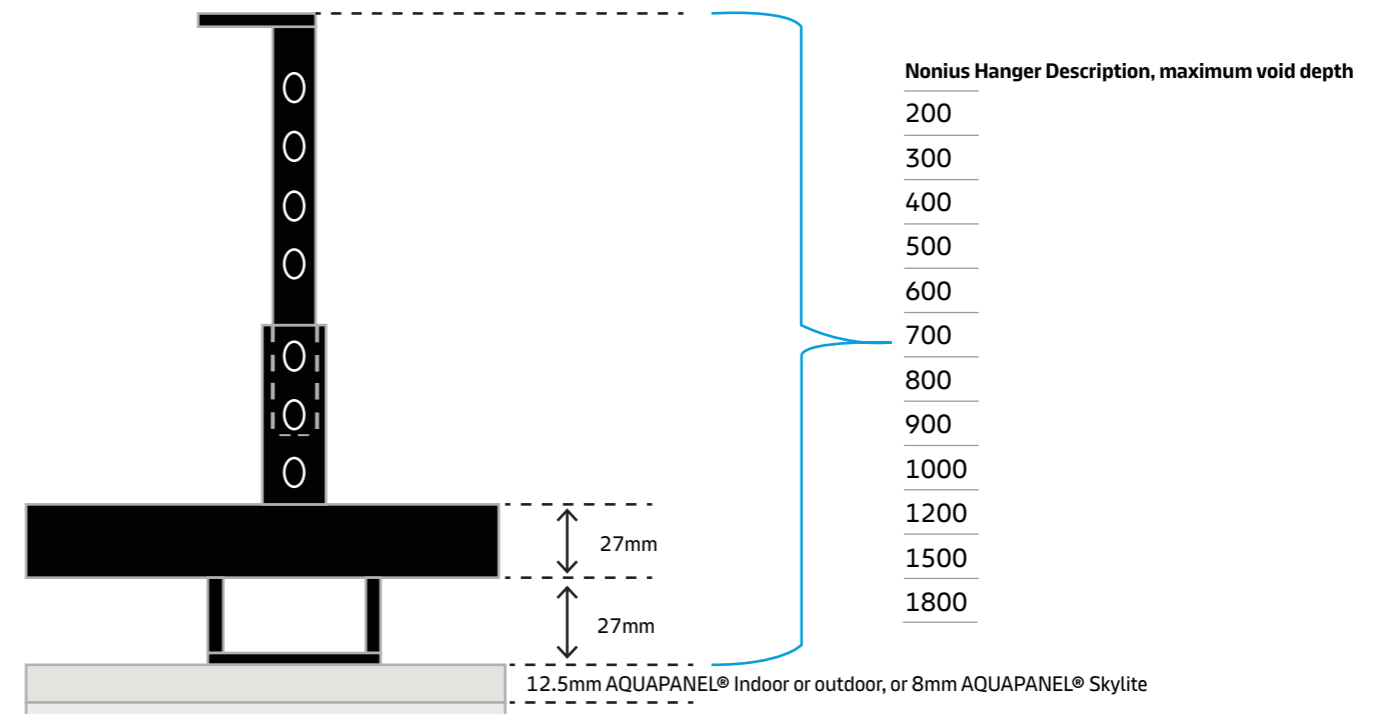
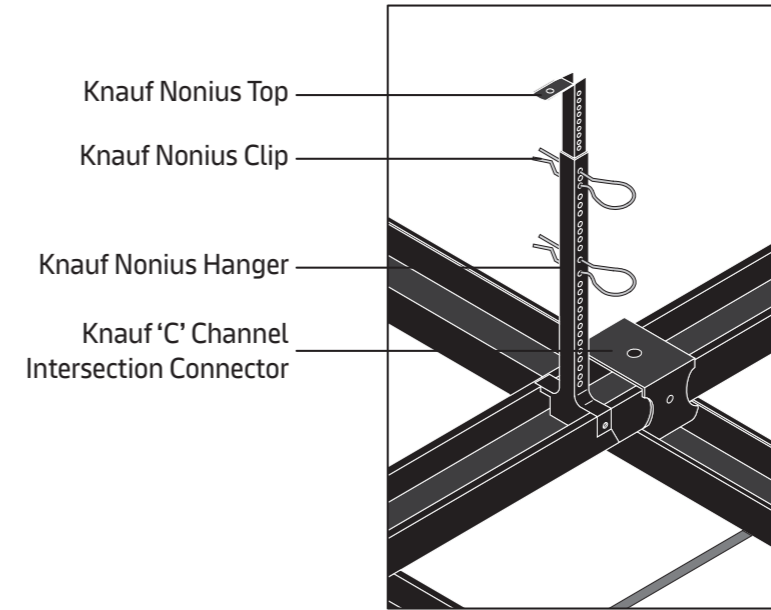


Bag Size		Material No.	Pallet Details	
Kg			Bags	Tonnes (Approx.)
20		131094	48	0.96

Estimating Guide: One bag will cover approximately 28m<sup>2</sup>. Compliance: EN 998-1:2016.

## Selecting the correct components for your coated metal ceiling

We've recently changed how we measure the Knauf Coated Nonius Top to make it easier to understand which product you need to order. The column labelled maximum void depth is the new measurement used to calculate the components needs. This reflects the maximum void depth as shown in the image below of the metal frame assembly, considering all products used. Simply use this measurement to select the appropriate Knauf Nonius Top.



# Installation procedure

The Knauf AQUAPANEL® Interior Ceiling System must be installed in accordance with Knauf recommendations and in accordance with BS: 8000-0:2014. Any cut, chipped or exposed edged metalwork should be painted with our Corrosion Resistant Paint. All installed Blackstar screws should also be fully coated with our Corrosion Resistant Paint.

## 1. Perimeter

Knauf C5 'U' Channel – Perimeter Support forms the perimeter of the ceiling. Channels should be installed at required heights, fixings\* should be installed at maximum 600mm centres and 50mm centres from ends of channels. Where ceiling runs exceed the Perimeter Support Channels length, additional channels should be installed and butted together to continue the run.

## 2 & 3. Suspension

When creating a shallow void, Knauf C5 'U' Mounting Bracket can be used. For drops less than 150mm, use the 'U' Mounting Bracket to secure the upper channel. Screw and securely fix the 'U' Mounting Bracket into the superstructure using appropriate fixings\* which are designed to take the required loadings. These are to be fixed at maximum 750mm centres and allow for measurement of the channel to the required depth on the bracket. Once the required measurement is located, screw the channel into the bracket using 2 Knauf Knauf Coated Metal Hanger To Profile Screw LN 3.9 11, which should subsequently be coated with corrosion resistant paint.

For greater void depths Knauf C5 Nonius Hangers in combination with Knauf C5 Nonius Tops should be used. The connection of Knauf C5 Nonius Hangers with Knauf C5 Nonius Tops is fixed using two Knauf Nonius Clips and should be fully engaged. Knauf C5 Nonius Clips, once installed, should be touched up with Corrosion Resistant Paint where the coating is removed. If using uncoated Nonius Clips, the entire clip must be coated with Corrosion Resistant Paint after installation.

The suspension hangers should be installed at maximum 750mm centres to the superstructure using appropriate fixings\* which are designed to take the required loadings.

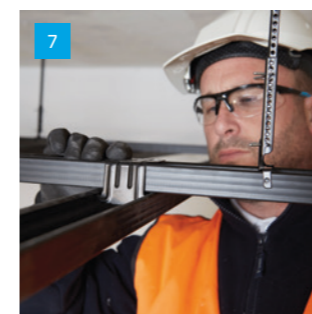
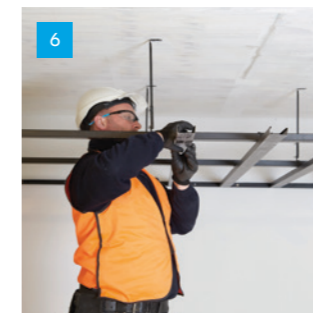
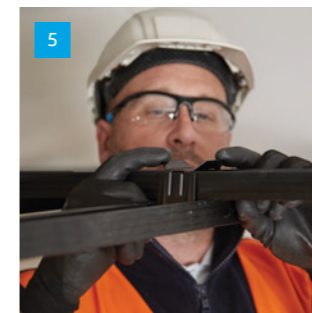
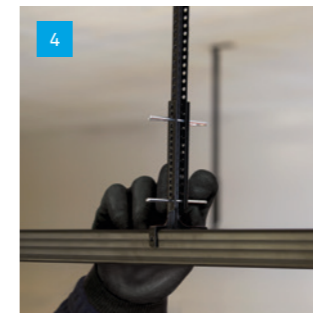
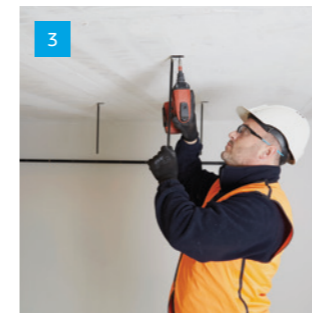
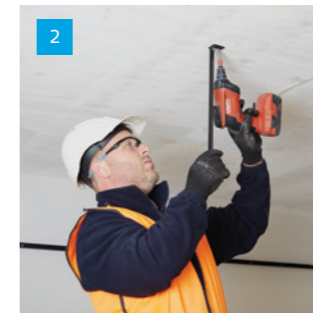
## 4. Upper Channels

The Knauf C5 'C' channels are located at maximum 1000mm centres. Hangers should be mechanically clipped and screwed to Knauf C5 'C' Channel using Knauf Blackstar Screws TN 3.5 25, which should subsequently be coated with corrosion resistant paint. The C5 'C' channels should lay on top of the upper flange of the Knauf C5 'U' Channel – Perimeter Support.

## 5, 6 & 7. Lower Channels

The Knauf C5 'C' channels are located at maximum 300mm centres within the perimeter channel, to coincide with the abutments of the Knauf AQUAPANEL® Cement Board SkyLite, which will be fixed later. The upper and lower Knauf C5 'C' channels are connected using a Knauf C5 Channel Intersection Connector. The connectors ensure positioning is maintained throughout the ceiling.

Connectors fit over the upper channels and snap fix into the lower channels. When ceilings exceed more than 4m, a Knauf C5 Channel Connector is required between 'C' channels. The Coated Channel Connector is friction fit between the two channels. For cut C5 metal section, paint the ends with the corrosion resistant paint. Although these figures are included as guidance, all framework and hangers should be engineered to suit the project. Contact Knauf to confirm frame.



\* fixings supplied by other manufacturers

**Knauf AQUAPANEL® Interior Ceiling Systems are easy and straightforward to install.**

**All components are designed for a simple assembly, and adjustments can always be made to create the voids suitable to receive services.**

## Installation

### Movement Control Joints

Movement control joints should be created within the system when runs of ceiling exceed 15m, as well as coinciding with existing movement joints in the surrounding structure.

### 8. Board Preparation

Knauf AQUAPANEL® Cement Board SkyLite can be easily and accurately cut using a coarse bladed saw, or by simply scoring and snapping. Score one side with a sharp knife, cutting through the mesh. Snap the board along the score, and then cut through the mesh on the other side. Smooth any rough areas caused by scoring with a rasp.

### 9. Fixing Board

Apply Knauf AQUAPANEL® Cement Board SkyLite to lower 'C' channels which are at maximum 300mm centres. Ensure there is a gap of 3-5mm between the boards and that the members are central behind both boards.

Use Knauf AQUAPANEL® Maxi Screws SN25 to fix the Knauf AQUAPANEL® Cement Board SkyLite to the metal 'C' channels. Screws should be at least 15mm in from the edge from AQUAPANEL® Cement Board SkyLite and spaced at maximum 200mm centres. Screws should not be over tightened.

### 10 & 11. Reinforcing Joints

All cement board joints should be filled with either Knauf AQUAPANEL® Joint Filler – Grey or Knauf AQUAPANEL® Joint Filler and Skim Coating – White, and Knauf AQUAPANEL® Tape.

All screw heads should be covered with Knauf AQUAPANEL® Joint Filler – Grey or Knauf AQUAPANEL® Joint Filler and Skim Coating – White.

### Finish

#### Option 1: Knauf Interior Skim (Images 12 and 13)

Empty the Knauf Interior Skim into the spray hopper of the machine, or bucket if hand applying. Apply the first coat of Knauf Interior Skim to ceilings, to a depth of 1 - 1.5mm.

Level out with a spatula. Use a corner trowel on internal angles. Allow drying, this typically takes 12 - 24 hours. Any material removed in the levelling can be placed back in the hopper or bucket and reused, providing no contamination has taken place.

Apply the second coat of Knauf Interior Skim and repeat the process of the first coat, applying more pressure to flatten the surface. Plaster depth will be 1.5 - 2mm total. Allow drying, this typically takes 12 - 24 hours.

Check the surface of the walls and ceilings and sand away any high spots etc. with 120 grit sand paper. A drywall sander, with vacuum attached, is ideal for reducing dust. Allow 12 - 24 hours before commencing decoration.

#### Option 2: Knauf AQUAPANEL® Joint Filler & Skim Coat - White

Apply AQUAPANEL® Joint Filler & Skim Coating - White with a stainless steel notched trowel to a thickness of 4mm. Embed AQUAPANEL® Reinforcing Mesh over the whole area (leaving an overlap of approximately 10cm at joints in the mesh) and level out. At openings, additional mesh is required.

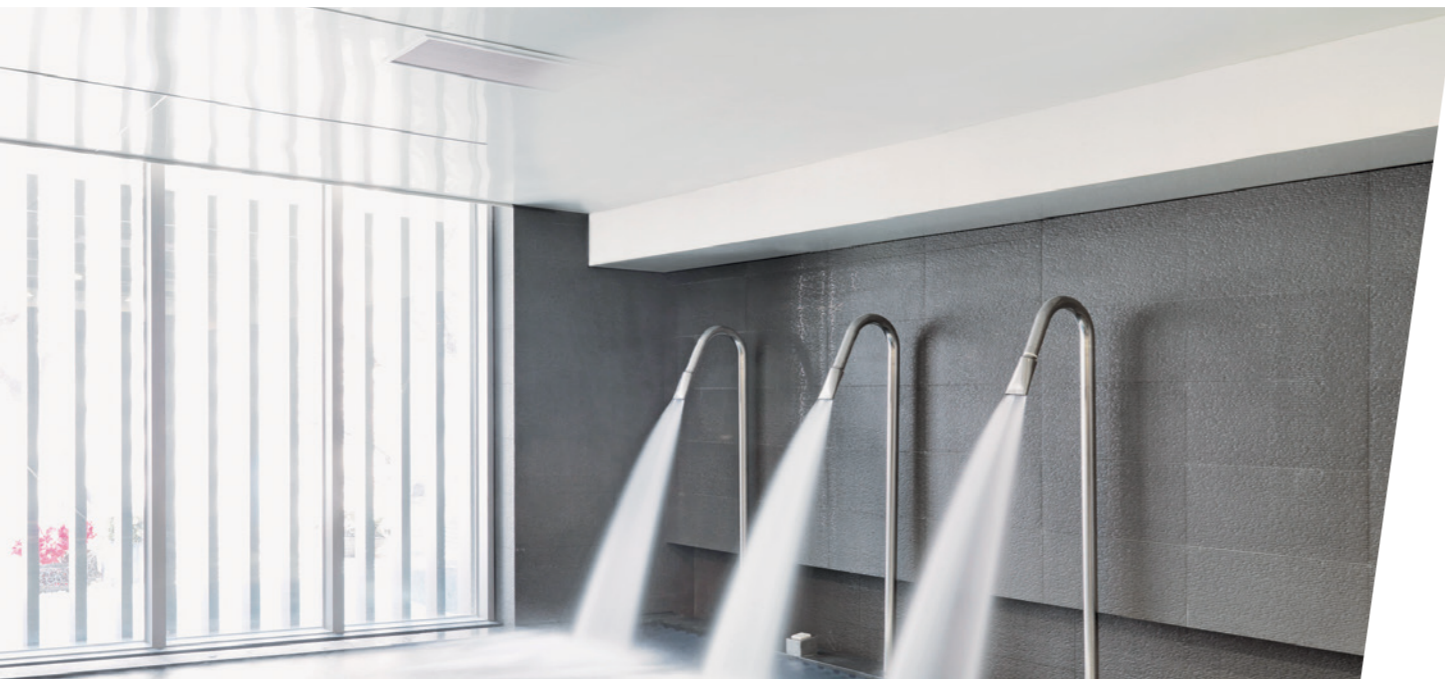
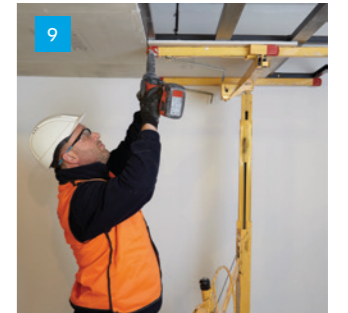
This will consist of an extra layer of reinforcement mesh, creating stress patches. Mesh sections measuring 250mm x 250mm are positioned at 45° to the corners of the openings. Leave to dry for 24 hours.

Working time for hand application is approximately 16-20 minutes per m<sup>2</sup>. The material begins to harden approximately 45 minutes after mixing.

To achieve a surface suitable for painting, skim over the first coat after hardening with a further 2-3mm of AQUAPANEL® Joint Filler & Skim Coating - White. As the product begins to harden, work the surface with a smoothing float spatula or trowel, if necessary use a sponge float. Leave to dry for 24 hours. If sanding is required use 180 grit sand paper taking care not to scratch the surface.

#### Paint Finish

Suitable paint finish as specified by paint manufacturer and in accordance with BS EN 11998 or any approved paint manufacturers recommendation.





## AQUAPANEL® Indoor range specified on iconic hotel redevelopment

When it was decided the world-famous Old Course Hotel in St. Andrews would have a multi-million pound facelift, only an exceptional product would be up to the job. Designed by Edinburgh based architects Sedley Place, the £8million 2,300m<sup>2</sup> extension was completed in January 2018. For a hotel recently voted Scotland's best wedding venue, this project demanded the highest standards.

The new Kohler Waters Spa is the first of its kind outside the USA and features 13 treatment rooms, a 20m indoor swimming spa pool, hydrotherapy pool, cold plunge pool, steam room and rooftop garden with hot tub.

The Knauf AQUAPANEL® Indoor range of products was the perfect solution for the leisure centre extension, an environment in which ceilings are exposed to large amounts of moisture, chlorine and salt.

Knauf AQUAPANEL® Cement Board Indoor was used for the walls and the complete Knauf AQUAPANEL® Indoor Ceiling, which included the suspended Knauf coated ceiling metal components and Knauf AQUAPANEL® SkyLite, for the ceiling areas.

Another product was initially specified at the outset, however the main contractor, who was experienced in using Knauf products had recommended the use of Knauf AQUAPANEL®.

John Cameron, the architect behind the project, said "We did not have an issue with the change in specification providing that the products had equivalent performance and this could be demonstrated. The local Knauf representative provided the necessary information to show equivalence."

Both Knauf AQUAPANEL® Cement Board Indoor and Knauf AQUAPANEL® SkyLite can be easily and accurately cut on site using a coarse bladed saw, or simply by scoring and snapping which allows simple and efficient installation.

Knauf AQUAPANEL® Cement Board Indoor and SkyLite are water resistant and dimensionally stable. The boards remain unaffected even when immersed in water. They are resistant to mould growth which makes them ideal for use in wet and humid areas such as bathrooms, swimming pools, communal showers, laboratories, etc.

As easy to use as gypsum boards, the light cement boards provide faster installation, higher productivity and increased profitability, even in the most challenging wet areas.

***"We were happy with the performance of the Knauf products on the project and the level of service provided in response to any queries we had as the project progressed".***

*Sedley Place Architects*

### Case Study

## Old course hotel St Andrews golf course

**Project outline:** Extension and redevelopment of Old Course Hotel

**Architect:** Sedley Place Architects

**Product:** Knauf AQUAPANEL® Cement Board Indoor, Knauf AQUAPANEL® Cement Board SkyLite, Knauf Coated Metal Components

# Look to the future – Build on us

We recognise the importance of the buildings in which we all live, work and relax.

We spend 90% of our lives inside buildings, so it is of the utmost importance that the homes we live in, the hospitals where we care for our sick, the schools in which we educate our children and the offices in which business operates are world class, safe, comfortable, sustainable and enjoyable.

The extensive portfolio of products and systems from Knauf UK & Ireland is developed to support that vision.

As a business, we look to the future; building on the knowledge we have acquired with a planned programme of research and development to make sure we continue to keep ahead of current thinking.

In terms of our operation we work hard to minimise our impact on the environment and are proud of our recycling, waste reduction and energy efficiency initiatives.



Healthcare



Education



Residential



Commercial

## AQUAPANEL® complete system solutions



Knauf AQUAPANEL®  
Cement Board Outdoor  
Brochure



Knauf AQUAPANEL®  
Cement Board Indoor  
Brochure



Knauf AQUAPANEL®  
Exterior Ceiling System  
Brochure



### Customer Service

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### Technical Service

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(excluding Public Holidays)

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