Knauf AQUAPANEL®
Interior Ceiling System

For wet indoor areas

KNAUF

Key facts

Perfect protection against high humidity and chemicals

Simple installation

Complete Knauf engineered and specified system

AQUAPANEL®

Build for the world we live in

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 mildew.

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.

Contents

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

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 water-resistant and made of inorganic materials, which prevents mildew 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.
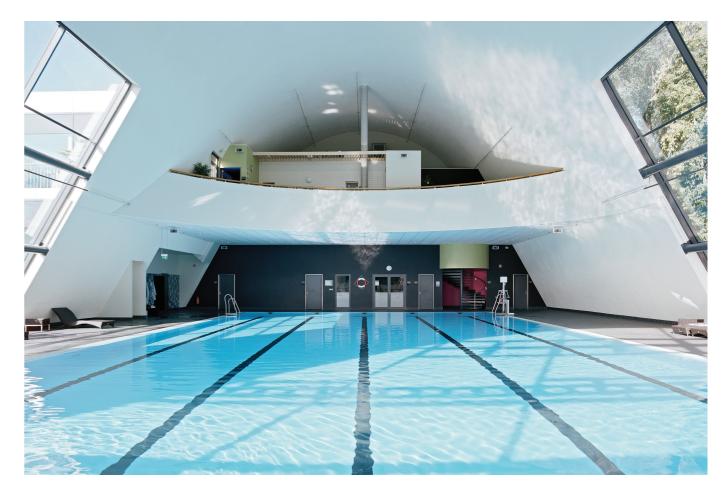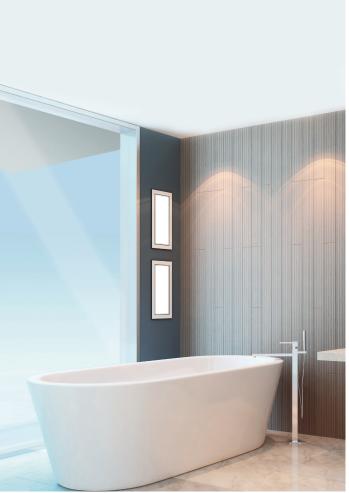
Internal ceilings and swimming pools

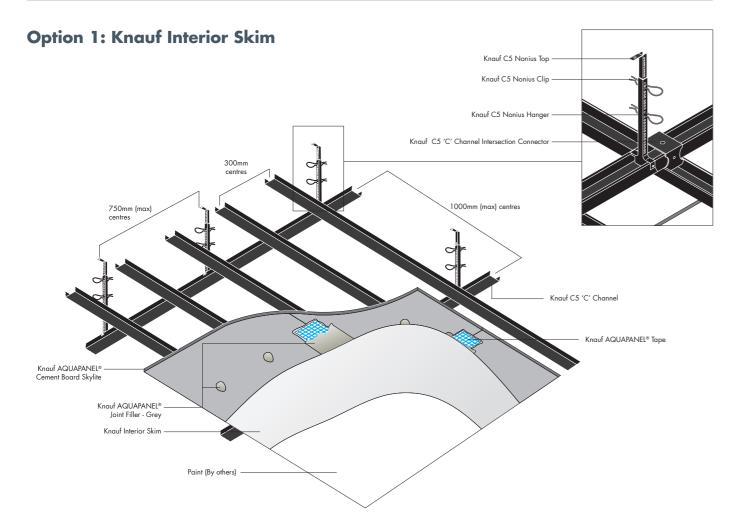### Benefits

- **Simple installation**
- **Moisture and chemical resistant**
- **Mildew-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^2 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.

The physical properties of the components in the systems ensure that water and chlorine have no effect on the construction; enabling the implementation of creative architectural solutions which cannot be accomplished with other products.

System overview

Option 1: Knauf Interior Skim

Knauf C5 Nonius Top
Knauf C5 Nonius Clip
Knauf C5 Nonius Hanger
Knauf C5 'C' Channel Intersection Connector
300mm centres
750mm (max) centres
1000mm (max) centres
Knauf C5 'C' Channel
Knauf AQUAPANEL® Tape
Knauf AQUAPANEL® Cement Board Skylite
Knauf AQUAPANEL® Joint Filler - Grey
Knauf Interior Skim
Paint (By others)

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

Knauf C5 Nonius Top
Knauf C5 Nonius Clip
Knauf C5 Nonius Hanger
Knauf C5 'C' Channel Intersection Connector
300mm centres
750mm (max) centres
1000mm (max) centres
Knauf C5 'C' Channel
Knauf AQUAPANEL® Tape
Knauf AQUAPANEL® Cement Board Skylite
Knauf AQUAPANEL® Joint Filler and Skim Coating - White or Knauf AQUAPANEL® Joint Filler - Grey
Knauf AQUAPANEL® Joint Filler and Skim Coating - White
Knauf AQUAPANEL® Reinforcing Mesh
Knauf AQUAPANEL® Joint Filler and Skim Coating - White
Paint (by others)

System component details

Knauf C5 'C' Channel

C5 coated steel section for use as support channel in Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.

	Dimensions (mm)			Material No.	Pack Details	
Gauge	Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
0.60	60	4000	27	322196	12	27
0.60	60	cut to order	27	322197[CF]	12	-

Compliance: EN 13964:2014

Knauf C5 'U' Channel

C5 coated steel section for use as perimeter channel in Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.

	Dimensions (mm)			Material No.	Pack Details	
Gauge	Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
0.60	28	3000	27	322228	16	18

Compliance: EN 13964:2014

Knauf C5 Nonius Hanger

C5 coated suspending brackets for use in Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.

Material No.	Size	Pack Details	
	mm	Items/Pack	Kg (Approx.)
322195	100	50	2

Compliance: EN 13964:2014

Knauf C5 Nonius Top

C5 coated suspending brackets for use in Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.

Dimensions (mm)	Material No.	Pack Details	
a		Items/Pack	Kg (Approx.)
147.5	322210	50	1.7
245.0	322211	50	2.5
342.5	322212	50	3.3
440.0	322213	50	4.2
537.5	322214	50	4.9
635.0	469042	50	5.8
732.5	469069	50	6.8
830.0	469070	50	7.8
927.5	322215	50	8.7
1122.5	322216	50	10.5
1415.0	322217	50	13.1
1707.5	322218	50	15.0

Compliance: EN 13964:2014

System component details

Knauf C5 'C' Channel Intersection Connector

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

Material No.	Pack Details	
	Items/Pack	Kg (Approx.)
322206	50	2

Compliance: EN 13964:2014

Knauf C5 'C' Channel Connector

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

Material No.	Pack Details	
	Items/Pack	Kg (Approx.)
324008	50	2.3

Compliance: EN 13964:2014

Knauf C5 'U' Mounting Bracket

Locates Knauf 'C' Channel to background support.

Dimensions (mm)			Material No.	Pack Details	
Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
60	120	27	322018	50	3
60	200	27	323996	50	4

Compliance: EN 13964:2014

Knauf C5 Nonius Clip

Coated clip for use in combination of the Knauf Nonius top for adjustment of ceiling heights. Any areas where the paint is scratched after installation must be coated with Corrosion Resistant Paint.

Material No.	Pack Details	
	Items/Pack	Kg (Approx.)
591249	100	0.7

Compliance: EN 13964:2014

Knauf Blackstar Screws TN 3.5 25

Secure Knauf Coated Nonius Hanger to Knauf Coated 'C' Channel. Must be painted with Corrosion Resistant Paint when installed.

Material No.	Pack Details	
	Items/Pack	Kg (Approx.)
322622	1000	1.37

Compliance: EN 13964:2014

Corrosion Resistant Paint

Corrosion resistant paint for use in the Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.

Tub Size	Material No.	Pack Details	
Litres		Items/Pack	Kg (Approx.)
0.75	64776	6	5

Knauf AQUAPANEL® Cement Board SkyLite

Knauf AQUAPANEL® Cement Board SkyLite is a lightweight 8mm cement board suitable for interior ceilings in wet and humid areas as well as some exterior soffits dependent on specification. Contact Knauf for exterior specification.

Dimensions (mm)			Material No.	Pallet Details		
Thickness	Width	Length		Boards	m²	Tonnes (Approx.)
8	900	1200	433850	80	86.4	0.9

Compliance: ETA-13/0608

System component details

Knauf AQUAPANEL® Maxi Screws (SN)

Corrosion-protected screws for fixing AQUAPANEL® to light gauge steel profiles (up to 0.7mm) as part of Knauf AQUAPANEL® Interior and Exterior systems. They have a needle point and countersunk heads.

Dimensions (mm)		Material No.	Pack Details	
Length	Diameter		Items per Carton	Kg (Approx.)
25	4.2	87319	1000	1.8
39	4.2	87283	100	0.39
39	4.2	53500	500	2.0
55	4.2	95644	250	2.0

Compliance: EN 14566

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, AQUAPANEL® Joint Filler and Skim Coat - White, or tile adhesive, to reinforce joints as part of a Knauf AQUAPANEL® Exterior or Interior system.

Roll Size		Material No.	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	100	429471	12	4
20	100	465546	18	5.3

Estimating Guide: 2.1m/m²

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 28m². Compliance: EN 998. Available in part pallet quantities.

Knauf Interior Skim

Ready-mixed water-resistant skim coat for use on Knauf AQUAPANEL® Interior systems and Knauf AQUAPANEL® Interior Ceiling systems to create a smooth and level finished surface, ready for painting.

Bag Size	Material No.	Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	258278	40	1.0

Shelf life: 9 months. Estimating Guide: Coverage 10m² per bag at 1.5mm thickness. Available in part pallet quantities.

Knauf AQUAPANEL® Joint Filler and Skim Coating – White

Cement-bound material for skim coating Knauf AQUAPANEL® Cement Board Indoor in non-tiled areas. Knauf AQUAPANEL® Reinforcing Mesh must be embedded.

Bag Size	Material No.	Pallet Details	
Kg		Bags	Tonnes (Approx.)
20	131095	48	0.96

Shelf life: 12 months. Estimating Guide: 4.2kg/m² for full surface skim. Compliance: EN 998. Available in part pallet quantities.

Knauf AQUAPANEL® Reinforcing Mesh

Knauf AQUAPANEL® Reinforcing Mesh is a 1m wide, alkaline-resistant glass fabric mesh designed for complete cover reinforcement of Knauf AQUAPANEL® Joint Filler and Skim Coat - White as part of the Knauf AQUAPANEL® Interior Ceiling System.

Roll Size		Material No.	Pallet Details	
Length (m)	Width (m)		Rolls per Pallet	Kg (Approx.)
50	1	102584	30	375

Estimating Guide: 1.1m²/m². Available in part pallet quantities.
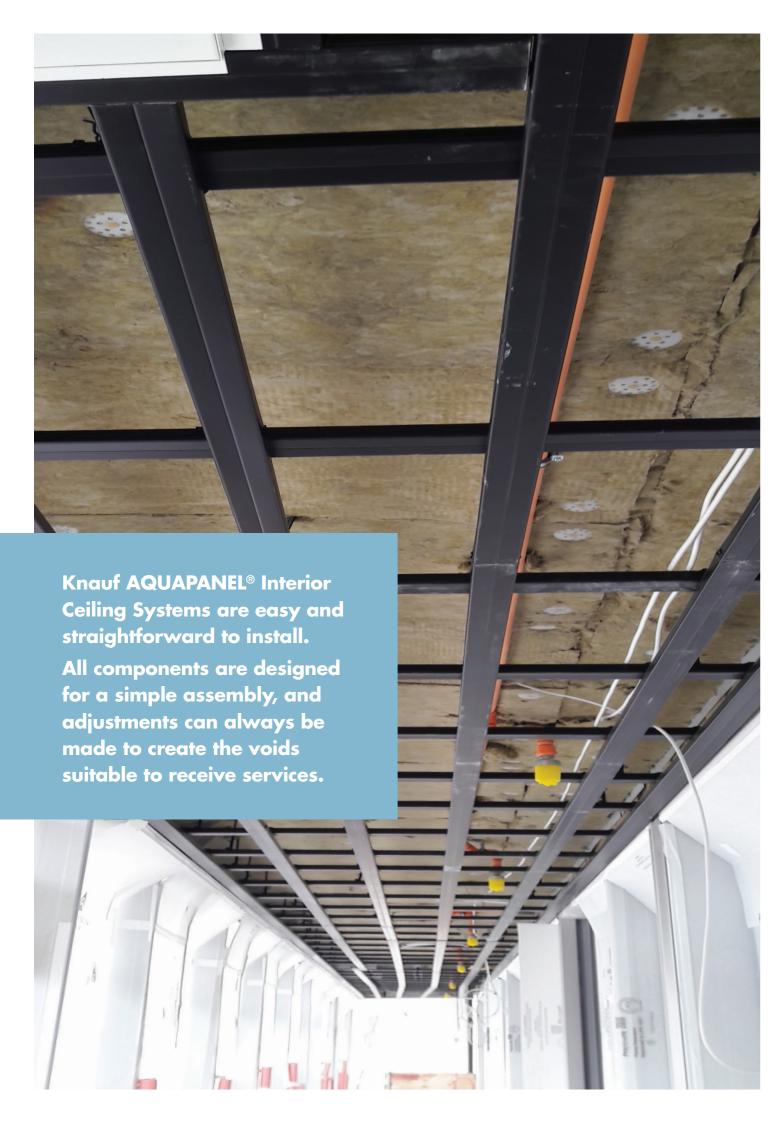
Installation

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 Blackstar Screws TN 3.5 25, 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.
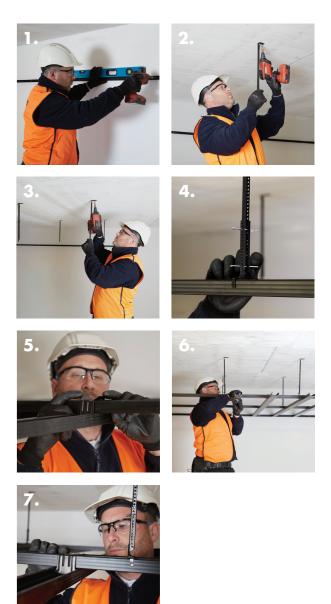
5, 6 & 7. Lower Channels

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.

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.

* fixings supplied by other manufacturers

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 (Image 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 m². 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.
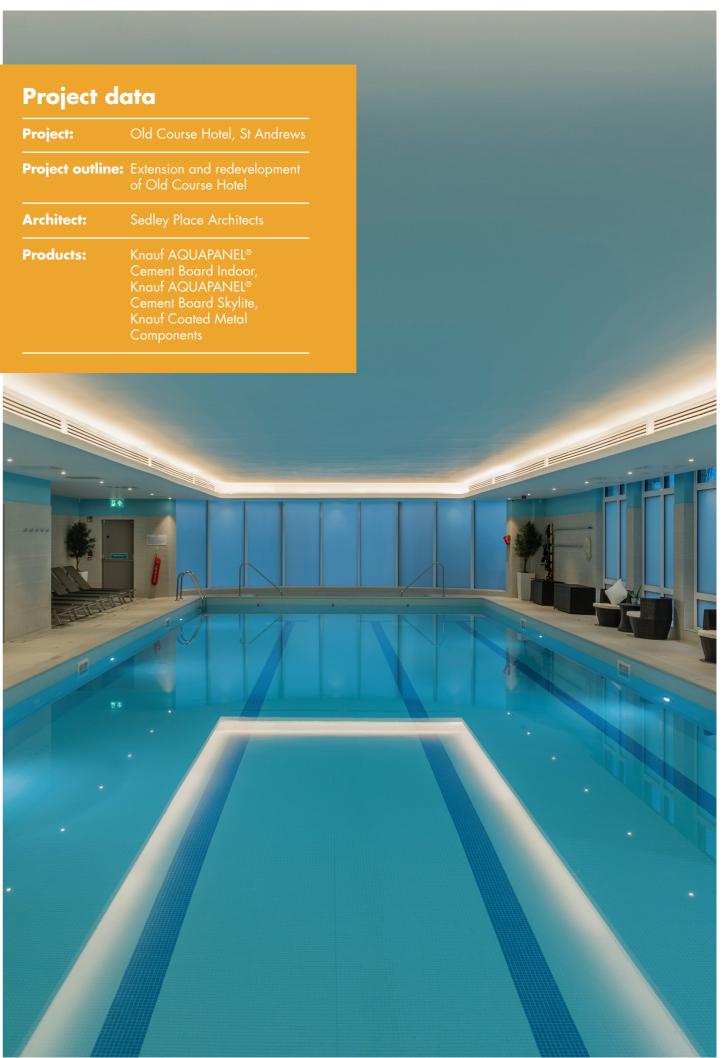
8.

9.

10.

11.

12.

13.

Old Course Hotel, St Andrews Golf Course

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 2,300m² 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.
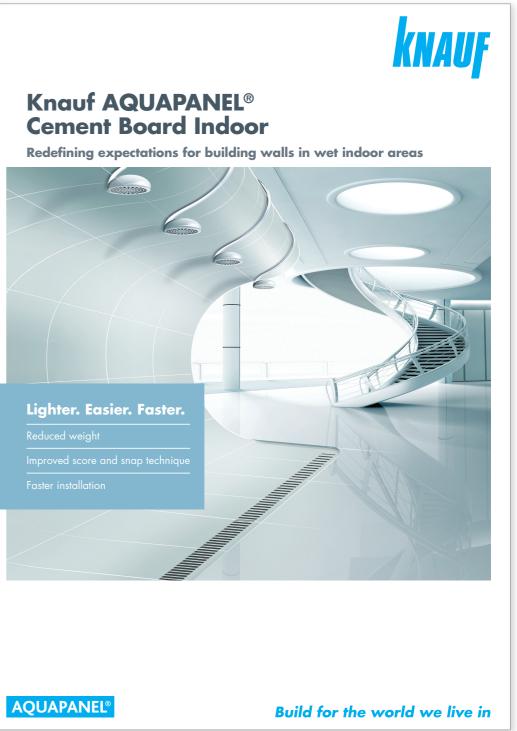
Knauf AQUAPANEL® Cement Board Indoor and Skylite are water resistant and dimensionally stable. The boards remain unaffected even when immersed in water. They are resistant to mould growth which makes them ideal for use in wet and humid areas such as bathrooms, swimming pools, communal showers, laboratories, 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.

Sedley Place Architects added: "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".

Did you know...

We also have a complete engineered wall solution for wet indoor areas.

Knauf AQUAPANEL®
Cement Board Indoor

Redefining expectations for building walls in wet indoor areas

Lighter. Easier. Faster.

Reduced weight

Improved score and snap technique

Faster installation

AQUAPANEL®

Build for the world we live in

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