

KNAUF DRYWALL

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KNAUF DRYWALL

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The Complete Drywall Manual A guide to all our products and services

Build for the world we live in

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2 Introduction

We believe dry lining is about space creation, not space division.

Our systems combine innovative products to realise speed of installation and warranted high performance. Our service and experience ensure your design freedom remains uncompromised from concept to site.

Knauf Drywall – space creation to meet the demands of designers, contractor and client.



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4 Introduction

The fastest route to the best solution for your application

1 Consult our 'Integrated, innovative systems' section to find the relevant solutions for the sector you are designing for

- Many of our systems are available in sector-optimised configurations



2 Review our 'Optimum solutions' tables. For 99% of applications, you'll find the perfect solution already designed for you

- Helps you find your ideal solution rapidly
- Easy-to-read performance information for each construction
- Organised by sector to save you time

The sector icons quickly identify the relevant sector application for each product range:



Residential

Solutions for housing, hotels plus residential elements of other buildings.

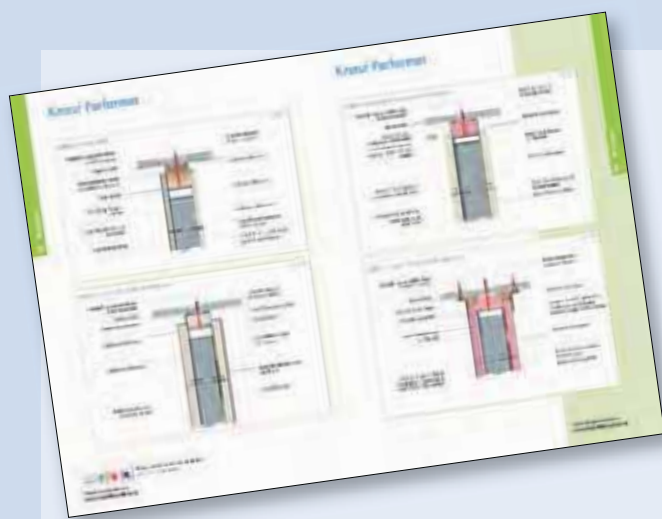


Commercial

Solutions for offices, administrative areas within buildings, commercial and retail environments.



3 If you want to tailor make your solution, or wish to upgrade to a higher or unique specification, you will find our complete performance tables on pages 332-338.



4 Review the system make-up, design detailing and installation procedures in our detailed 'systems' pages

- Clear, easy-to-understand details
- Full installation instructions
- System overview with related components

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Healthcare
Specialist solutions for hospitals, clinics and surgeries which meet HTM requirements.



Education
Solutions for schools, universities and training colleges which meet BB93 requirements.

Integrated, innovative systems

These pages highlight which Knauf Drywall systems are most suited to meet performance criteria and bring a variety of construction and end user benefits to the sector you are designing for.



Housing, hotels, residential elements of other buildings

- Solutions designed to satisfy The Code for Sustainable Homes* and the Building Regulations
- Efficient dry lining solutions for residential partitioning and linings

* Used in conjunction with other systems



Partitions

- Performer page 14
- Easybuild page 48
- Isolator page 66

Wall Linings

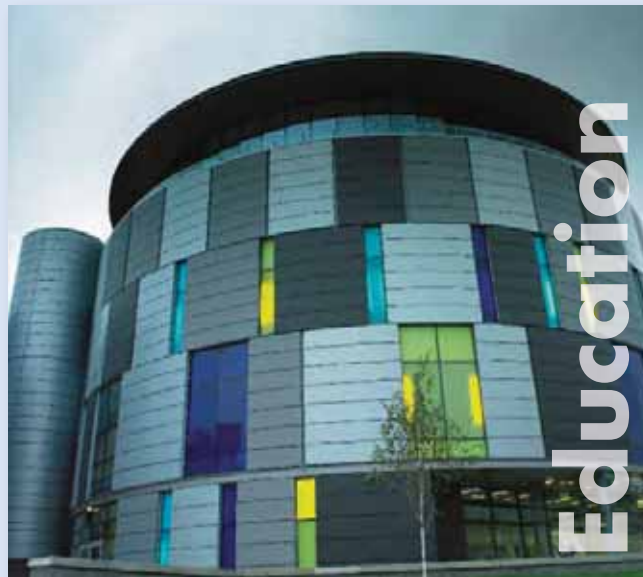
- Thermal Linings page 122

Soffit Linings

- Ceiling Linings page 150
- Warm Roof Linings page 152

Floor Linings

- Brio page 154



Schools, universities, training colleges

- Systems to meet BB93
- Solutions capable of meeting high impact criteria
- Durable, long-lived and easy to redecorate



Partitions

- Performer page 14

Floor Linings

- Brio page 154



Sector generic systems

These systems can be found across the entire building spectrum.



Partitions

- Wet Area Partitions page 40
- Shaftwall page 78



Hospitals, clinics, surgeries

Specialist systems designed to meet HTM document requirements.

- Impact resistant acoustic partitions

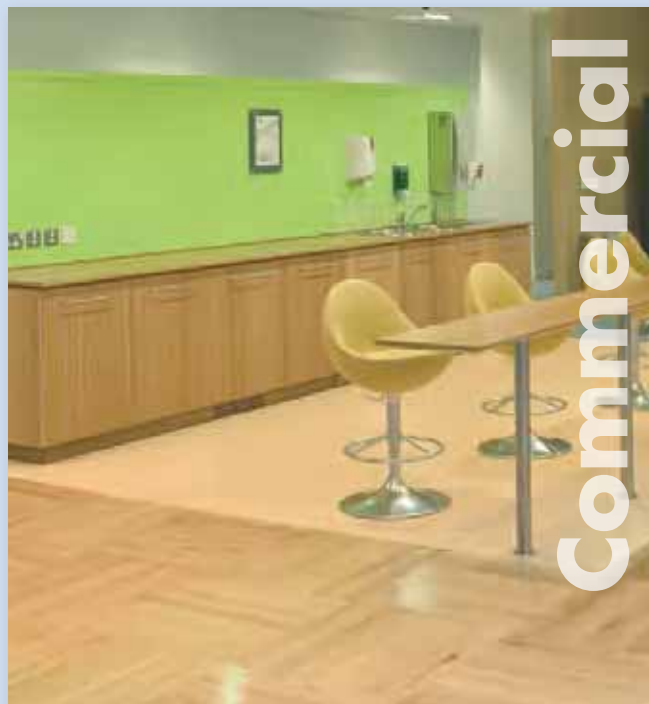


Partitions

- Performer page 14
- X-Ray Partitions page 46
- Silent Spacesaver page 54

Soffit Linings

- C-Form Suspended Ceiling page 128
- MF Suspended Ceiling page 138



Offices, administrative areas within buildings, commercial and retail environments

- Systems designed to meet wide ranging thermal and acoustic Building Regulations criteria
- Solutions designed to provide fire resistance periods of up to 2 hours
- Dry lining solutions for tall separating walls



Partitions

- Performer page 14
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Product innovation: delivering solutions

We know that finding the best solution for your application is paramount and we are continually improving our ranges and introducing new products with new benefits to give you the leading design edge, through simplicity of construction, performance and value for money. These pages cherry pick

Controlled acoustics – unrestricted design

- Seamless patterns allow creative freedom
- 17 style options
- Combines aesthetics and acoustic control

Apertura
pages 270-277



Eliminate tile failure

- Dedicated tile backers for floors and walls
- Unaffected by water
- Will NOT deteriorate in moisture laden conditions
- Protects tiles from failure

Aquapanel Interior
pages 264-269

**Aquapanel Floor
Tile Underlay**
page 267

Rapid weatherproofing of structure

- Fast closure of buildings
- Unaffected by water
- Perfect for external soffits and ceilings
- Lighter and faster than traditional brick or block facades

**Aquapanel
External Linings**
pages 282-289



Directly applied, pre-mixed plasters

- Pre-mixed, ready-to-use plasters
- Fast spray application
- Can be applied directly over concrete
- No water on-site

Readymix Plasters
page 248

Reduce plastering schedules

- Fast spray application – up to 3 times faster than traditional
- Superb coverage and finish
- Cleaner sites with better health and safety
- Part E compliant

**MPFinish and MP75
Projection Plasters**
page 246





Optimise underfloor heating efficiency

- Strong, engineered dry screed board
- Thermally transparent
- Fast to install
- Optimises efficiency of underfloor heating systems

➤ **Brio Dry Floor Screed**
pages 278-281



Instant energy saving

- Gives instant energy saving on refurbishments
- Combines lining with high efficiency insulation
- Code for Sustainable Homes solutions
- Maximises internal space

➤ **Insulating Laminates**
pages 228-231

Future proof constructions

- Improved performance in many areas
- Can reduce layers of boards
- Reduce materials and waste on site
- Optimise design and construction solutions

➤ **High Performance Plasterboards**
pages 223-226



X-Ray protection without lead

- Removes the need for lead and all its problems
- Easy and fast to install
- Allows much greater design flexibility
- HPA tested, protection you can trust

➤ **Safeboard**
page 227

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Our Systems

These are systems that meet all your application and construction needs.

Innovation, ease of use and integration go together to provide powerful, high performance and simple-to-implement solutions across all building sectors.



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Partitions

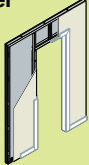

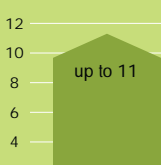
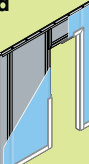
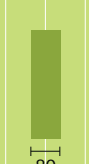

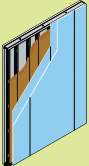

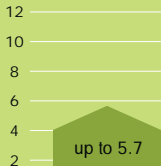
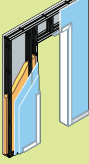

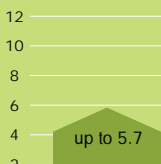


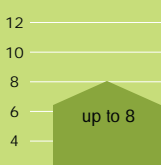
The Knauf range of drywall partitions is the result of decades of experience in developing, testing and supporting warranted systems that meet the needs of the modern building.

Quickly and simply constructed from high quality Knauf components, our partitions are guaranteed to perform. You can specify Knauf partitions safe in the knowledge that these components have been comprehensively tested together to ensure performance, and that our support extends from concept to site.

[Download Spec Sheet](#)

System Selector

Partitions

	Key features	Fire resistance ¹ (mins)					Sound reduction ² (dB (R _w))					Partition width (mm)	Maximum height ⁴ (m)
		0	30	60	90	120	35	45	55	65	75		
Performer Page 14 	<ul style="list-style-type: none"> Simple, fast space division Minimum components Range of finishing options Economical Cross-sector application 	up to 120					36 - 57						
Easybuild Page 48 	<ul style="list-style-type: none"> Optimum residential solution 900mm stud centres No insulation needed Meets 40dB sound reduction requirements 	30					40						
Silent Spacesaver Page 54 	<ul style="list-style-type: none"> High acoustic performance Low overall width High fire resistance 	60 - 90					57 - 62						
Isolator Page 66 	<ul style="list-style-type: none"> The best acoustic performance Twin frames provide physical separation Accommodates large service runs Separating Wall and Cinema Wall variants 	60 - 120					45 ³ - 76						
Shaftwall Page 78 	<ul style="list-style-type: none"> Simplifies lift shaft lining Quickly constructed from one side Unique 'C-T' Stud minimises components Up to 2 hours fire rating 	60 - 120					34 - 50						

¹ Please check individual system pages for specific fire ratings to EN and BS standards.

² Please check individual system pages for specific acoustic ratings.

³ (45dB D_{nT,w} + C_{tr}) Figure is an on-site figure to Approved Document Part E.

⁴ Please check individual system pages for achievable specific maximum heights.

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Knauf Performer

Knauf Performer is our most versatile partition solution, able to meet nearly every performance requirement. The Knauf Performer system is lightweight, strong and easy to install and can be specified with confidence for an enormous range of applications.

Head Track



Knauf 'U' Channel forms head plate.

Knauf Deep Flange 'U' Channel for deflection head

Stud

Knauf metal studs simply twist and snap into head and floor tracks.



Knauf 'C' Stud lightweight steel section.

Knauf Acoustic 'C' Stud for enhanced sound reducing constructions.



Knauf 'I' Stud allows taller, stiffer partitions.

Knauf Plasterboard



The full range of acoustic, fire resistant, moisture resistant, impact resistant and carbon neutral boards to provide performance and design solutions.



Floor Track



Knauf 'U' Channel secured to floor.

Download Spec Sheet

Knauf Performer Partitions

Knauf Performer copes easily with the most demanding fire, sound, moisture and impact resistance requirements. Knauf components are designed to work together guaranteeing you a fully integrated system.

Key Features:

- Versatile, light, fast and easy to install
- System can utilise the entire range of boards
- Optimised solutions to meet sector specific requirements
- Minimum amount of components required to construct
- Comprehensively tested, developed and site-proven

Door Head



Knauf Deep Flange 'U' Channel snapped, bent, returned and fixed to vertical stud.

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Other Components



Knauf Movement Control Joint is an aluminium 'V' section used to bridge gaps left for expansion and contraction.



Knauf Sealant seals gaps, minimises airborne sound transmission.

Knauf Fixing Channel/Knauf Flat Plate provides a fixing for horizontal joints or support for fixtures.



Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and readymix solutions.

See our full guide on page 194.



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Our range of Partition Solutions

includes:

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Shaftwall	page 78

Generate specifications at:

www.knaufdrywall.co.uk

Knauf Performer

Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Education



Healthcare

2 Find your performance levels

• Sound

• Dimensions

• Fire

• Impact Duty

3 Find your solution

Please note - you can find our full range of Performer Solutions in the Appendix on page 332.



Performer for Residential Projects

Performer PFR1/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 12.5mm Knauf Wallboard each side of 50mm Knauf 'C' Studs at 600mm centres, with 25mm Knauf Earthwool Acoustic Roll within the cavity	42dB(Rw)	30 mins	2500mm	77mm	Medium
Performer PFR2/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Wallboard each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres	40dB(Rw)	30 mins	4000mm	102mm	Heavy
Performer PFR3/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 12.5mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres	40dB(Rw)	30 mins	3600mm	97mm	Heavy



Performer for Educational Projects

Performer PFE1/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Impact Panel each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres	40dB(Rw)	60 mins	4000mm	102mm	Severe
Performer PFE2/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Impact Panel each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 25mm Knauf Earthwool Acoustic Roll within the cavity	49dB(Rw)	60 mins	4000mm	102mm	Severe

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

**Maximum heights calculated based on a limiting deflection of L/240 at 200Pa.

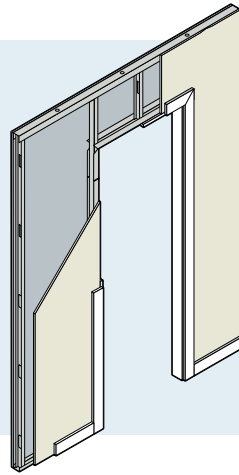
*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B, C, D, E.

Download
Spec Sheet

Looking for our full Knauf Performer performance tables?

These are Optimised Solutions designed to provide the most effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these, please see our performance tables in the appendices section on page 332 or contact our Knauf Drywall Technical team on 01795 416259.



Performance you can trust

All Knauf Performer Partitions utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Performer Partition is fully covered by our performance warranty.



Performer for Educational Projects continued

Performer PFE3/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Impact Panel each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 50mm Knauf Earthwool Acoustic Roll within the cavity	50dB(Rw)	60 mins	4000mm	102mm	Severe
Performer PFE4/08	Sound	Fire*	Max Height**	Width	Impact Duty***
2 layers of 15mm Knauf Impact Panel each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 25mm Knauf Earthwool Acoustic Roll within the cavity	57dB(Rw)	120 mins	5100mm	132mm	Severe
Performer PFE7/08	Sound	Fire*	Max Height**	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with Knauf Resilient Bars at 600mm vertical centres one side and 50mm Knauf Earthwool Acoustic Roll within the cavity	62dB(Rw)	90 mins	4200mm	148mm	Severe
Performer PFE8/08	Sound	Fire*	Max Height**	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with Knauf Resilient Bars at 600mm vertical centres both sides and 50mm Knauf Earthwool Acoustic Roll within the cavity	65dB(Rw)	90 mins	3200mm	164mm	Severe

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

**Maximum heights calculated based on a limiting deflection of L/240 at 200Pa.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

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Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Education



Healthcare

2 Find your performance levels

• Sound

• Dimensions

• Fire

• Impact Duty

3 Find your solution

Please note - you can find our full range of Performer Solutions in the Appendix on page 332.



Performer for Healthcare Projects

Performer PFH1/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with 25mm Knauf Earthwool Acoustic Roll within the cavity	45dB(Rw)	60 mins	3800mm	102mm	Severe
Performer PFH2/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Soundshield each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 25mm Knauf Earthwool Acoustic Roll within the cavity	48dB(Rw)	60 mins	4000mm	102mm	Severe
Performer PFH3/08	Sound	Fire*	Max Height**	Width	Impact Duty***
1 layer of 15mm Knauf Soundshield each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 2 layers 25mm Knauf Earthwool Acoustic Roll within the cavity	50dB(Rw)	60 mins	4000mm	102mm	Severe
Performer PFH4/08	Sound	Fire*	Max Height**	Width	Impact Duty***
2 layers of 12.5mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with 25mm Knauf Earthwool Acoustic Roll within the cavity	54dB(Rw)	60 mins	4600mm	122mm	Severe

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

**Maximum heights calculated based on a limiting deflection of L/240 at 200Pa.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

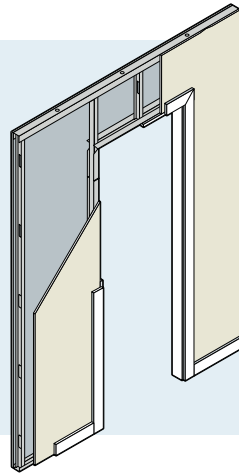
For systems which exceed the performance requirements noted above, please refer to the Knauf Silent Spacesaver and Knauf Isolator partition systems on pages 54 and 66.

Download
Spec Sheet

Looking for our full Knauf Performer performance tables?

These are Optimised Solutions designed to provide the most effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these, please see our performance tables in the appendices section on page 332 or contact our Knauf Drywall Technical team on 01795 416259.



Performance you can trust

All Knauf Performer Partitions utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Performer Partition is fully covered by our performance warranty.



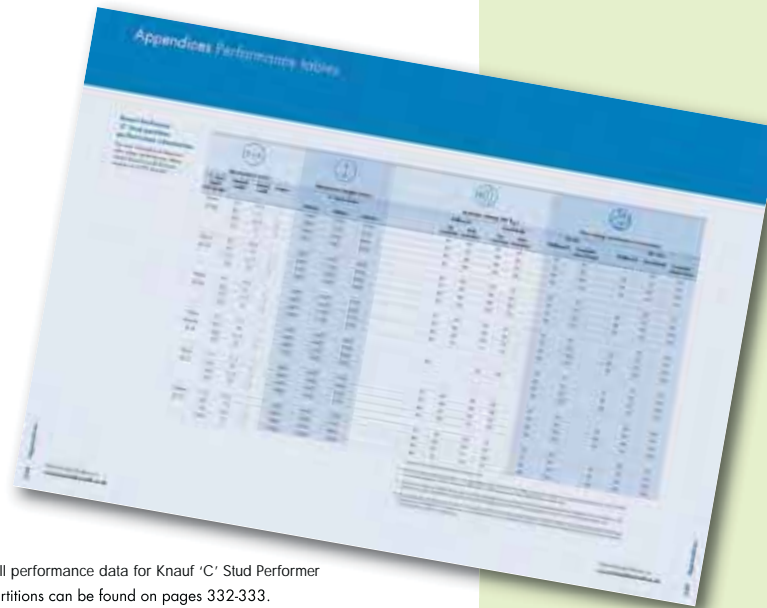
Performer Solutions for Commercial Projects

Commercial projects encompass a very wide range of situations and subsequent performance requirements, making a practical 'Optimised Solutions' list difficult to produce.

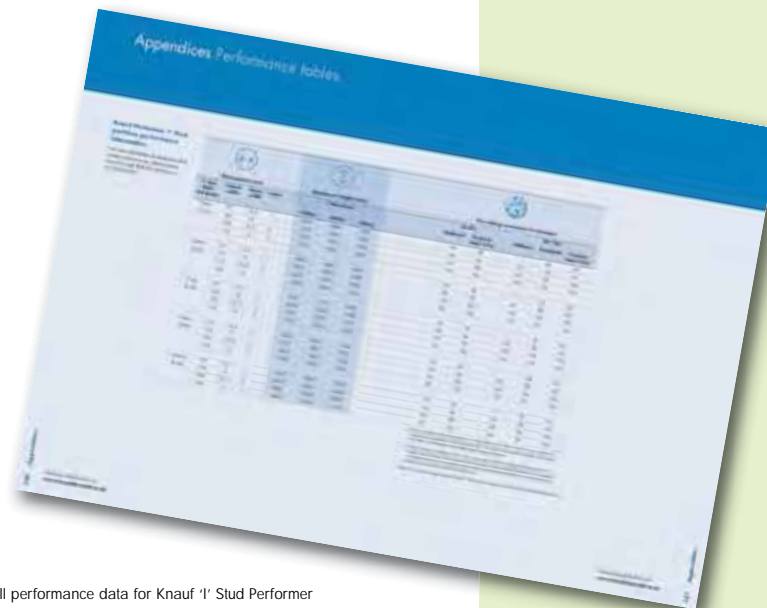
Please refer to our easy-to-use performance tables in the back of this manual to find your optimised solution.

Our Performer Partitions range includes solutions ranging from simple, narrow 30 minute fire rated partitions to high-privacy, tall 2 hour partitions.

If you have an unusual situation then Knauf Drywall Technical Services are on hand to help.



Full performance data for Knauf 'C' Stud Performer Partitions can be found on pages 332-333.



Full performance data for Knauf 'I' Stud Performer Partitions can be found on pages 334-335.

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Knauf Performer

Installation Procedures

Knauf Performer partitions are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Performer partitions must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Perimeter Framing 1,2

Knauf 'U' Channels should be used for the head and base of the partition. Knauf 'C' Studs should be used to form any abutments and to frame openings. Bed each section on two continuous beads of Knauf Sealant or Knauf Intumescent and Acoustic Mastic as specified. Secure with suitable fixings at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together. Replace Knauf 'U' Channel with a Knauf Deep Flange 'U' Channel when forming a deflection head.

Partitions constructed to provide fire and/or acoustic separation are required to span from structural floor to structural soffit.

Vertical Studs 3

Studs should be positioned within the channels to coincide with the abutments of the boards, at centres dependant on the performance requirement of the system. In general there is no requirement to secure the metal at this point as this will be achieved once the boards are screw-fixed.

Knauf 'C' and 'I' Studs should be trimmed to within 5mm of the slab to soffit height. For deflection heads: studs should be cut short to allow for required clearance within Knauf Deep Flange 'U' Channel.

Knauf 'C' Studs can be extended by forming a splicing detail. See details 30 and 31 on page 38.

Insulation

Subject to the performance requirements once the studs have been located in the Knauf 'U' Channels and one side has been boarded, Knauf insulation as specified should be inserted between the studs vertically. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or vertically between different rolls.

Support for Horizontal Joints in Facings

To back horizontal joints in outer board layers, Knauf Fixing Channel or Knauf Flat Fixing Plate should be fitted across the face of all studs, secured with 2 Knauf Wafer Head Jackpoint Screws per stud to both faces or between board layers.

Doorways 4,5,6,7

The head is formed with Knauf Deep Flange 'U' Channel, snipped and bent back and screw fixed with Knauf Wafer Head Jackpoint Screws to the studs. See details 28 and 29 on pages 36-37.

Boarding 8

All boards should be offered up to the frame with the face of the board outwards and secured with Knauf Drywall Screws at 300mm maximum centres. Fixing centres should be reduced to 200mm at corners.

Boarding should commence at one end and work across the partition. At head, floor and abutments, board edges should be bedded on to continuous beads of Knauf Sealant. Board joints in multiple layers should be staggered both vertically and horizontally by at least 600mm.

Deflection Heads

The maximum deflection should be no more than half the flange length of the Knauf Deep Flange 'U' Channel and for a downward direction.



1 After fixing the head track, the floor track should be positioned by using a vertical stud and a laser/spirit level.



2 Fixing Knauf 'C' Stud to form the partition frame abutment.



3 Twisting Knauf 'C' Stud into position.



4 Snip and bend back Knauf 'U' Channel for extra rigidity around door openings.



5 Snip and bend back Knauf Deep Flange 'U' Channel to form the door frame.



6 Fixing Knauf Deep Flange 'U' Channel to studs at door opening.



7 Insert timber battens in the Knauf 'C' Studs for extra rigidity around door frame if required.



8 Fixing Knauf Plasterboard to the completed framework.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

Generate specifications at:

www.knaufdrywall.co.uk

Knauf Performer

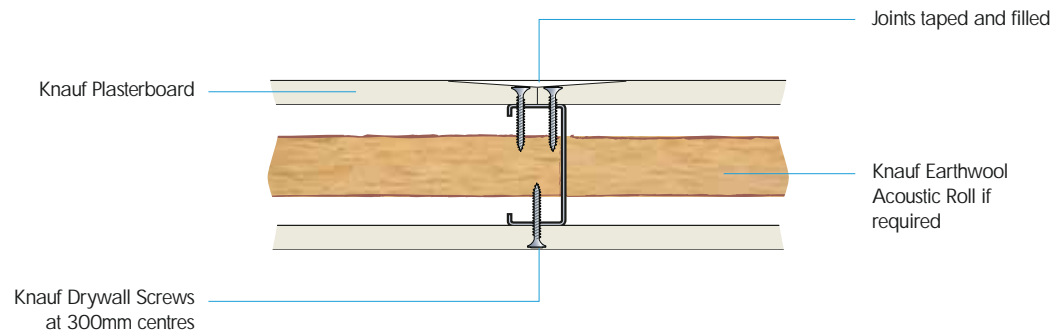
Application Details

These details represent some of the most common design situations relevant to the Knauf Performer partition system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

'C' and 'I' Stud Single Boarded

Detail 01

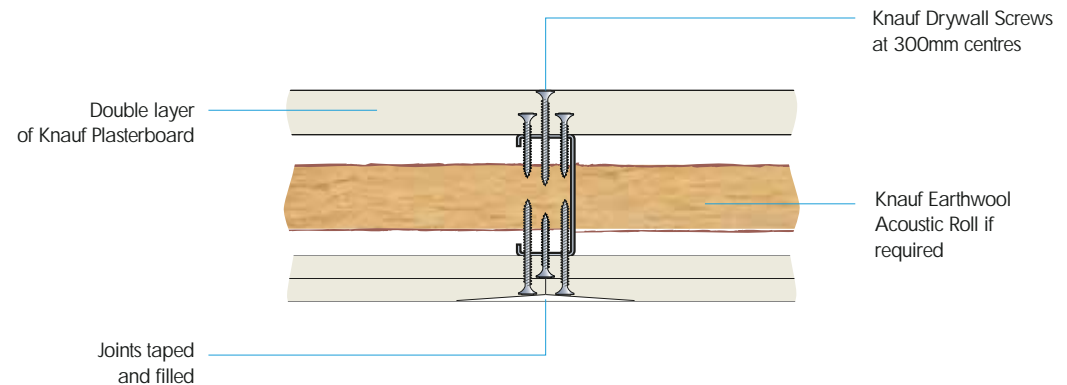
Any type of Knauf plasterboard can be fixed to Knauf 'C' and 'I' Studs, to achieve different performance requirements.



'C' and 'I' Stud Double Boarded

Detail 02

Double boarding is one method to achieve increased performance levels. For example: By double boarding with Knauf Standard Wallboard, up to 1 hour fire resistance can be achieved.



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Where you see these icons in a detail, that detail is particularly relevant to that sector.

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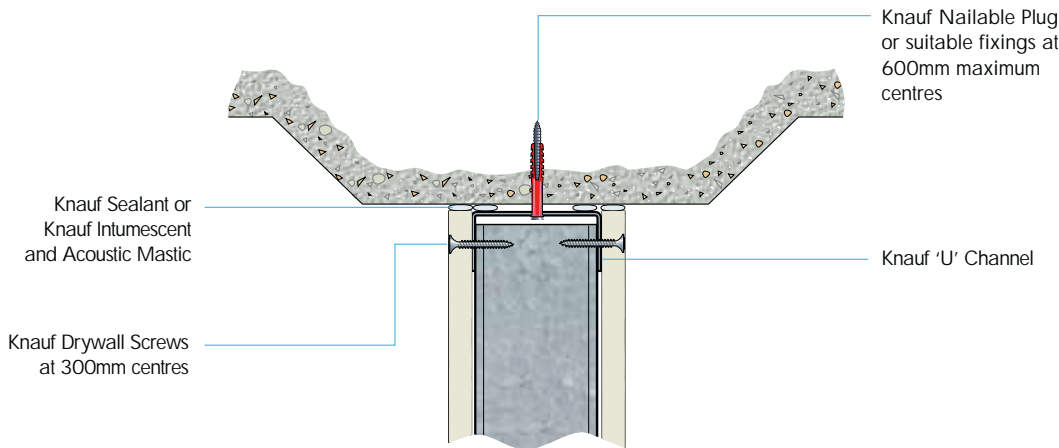
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Knauf Performer

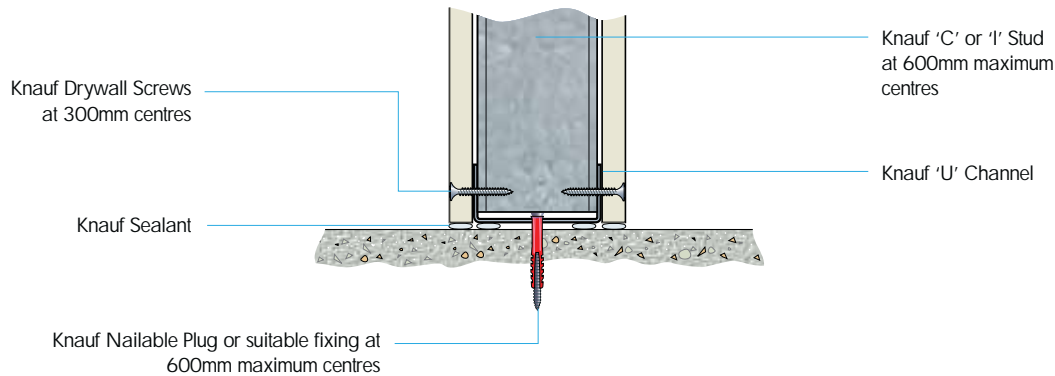
Standard Head and Floor

Detail 03

The Knauf 'U' Channel should be fixed to the structural soffit at maximum 600mm centres. Channels should be bedded securely onto continuous beads of Knauf Sealant to ensure optimum sound reduction by preventing air paths. If deflection of the soffit is expected please refer to deflection head detailing.



The Floor detail is a mirror image of the Standard Head Detail. Single facings are shown as an example. Partitions should always be fixed to the finished floor.



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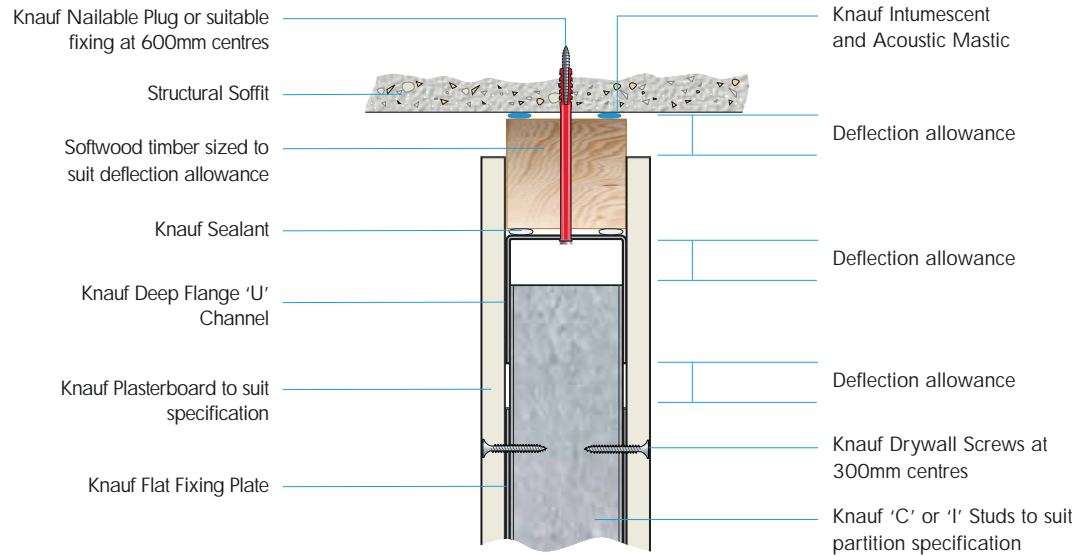
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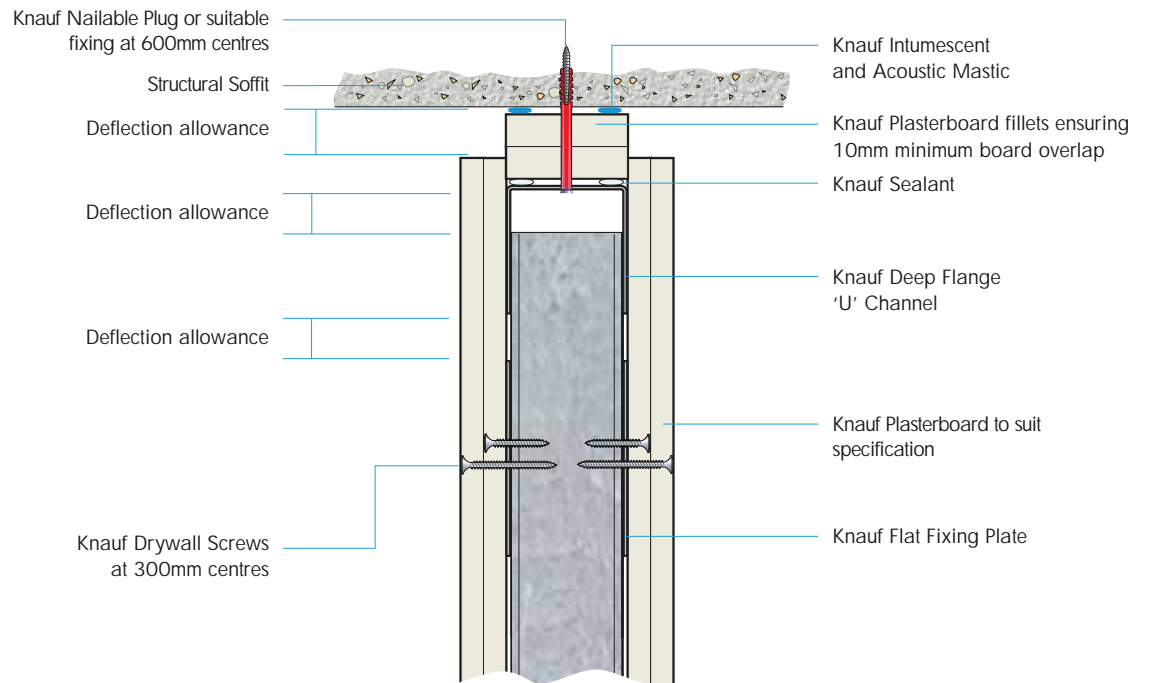
Deflection Head Detail, up to 30 Minutes

Detail 04



Deflection Head Detail, 30 Minutes Fire Resistance

Detail 05



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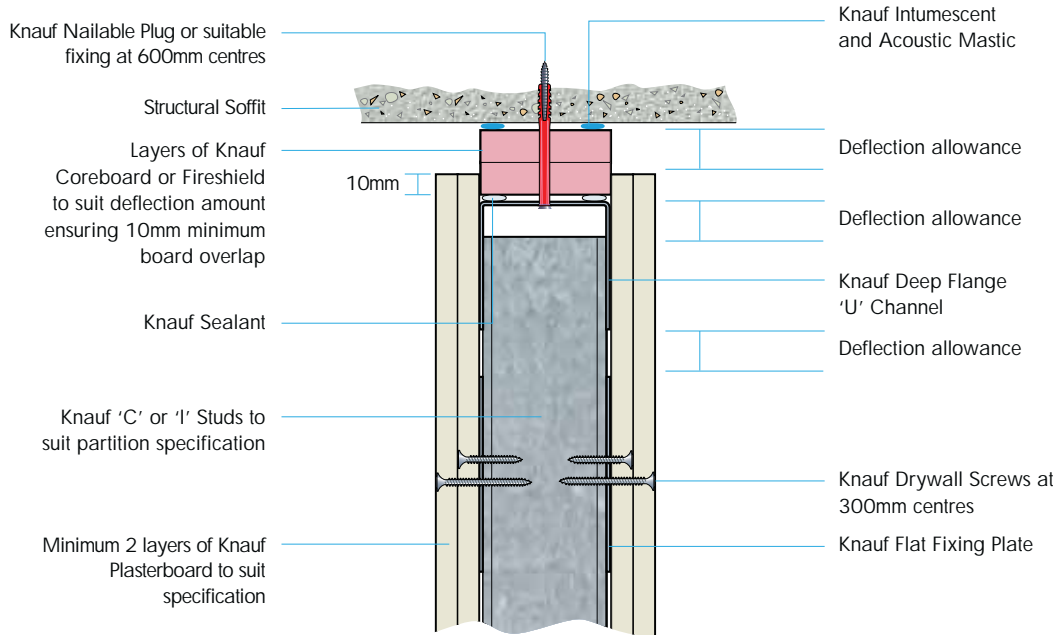
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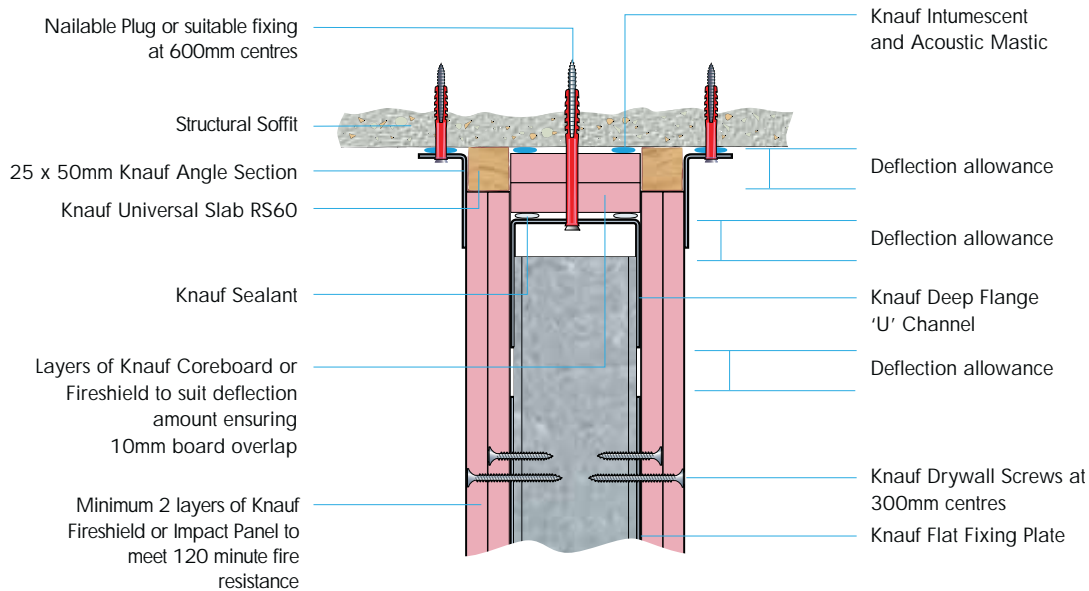
Deflection Head Detail, up to 90 Minutes Fire Resistance

Detail 06



Deflection Head Detail, 120 Minutes Fire Resistance

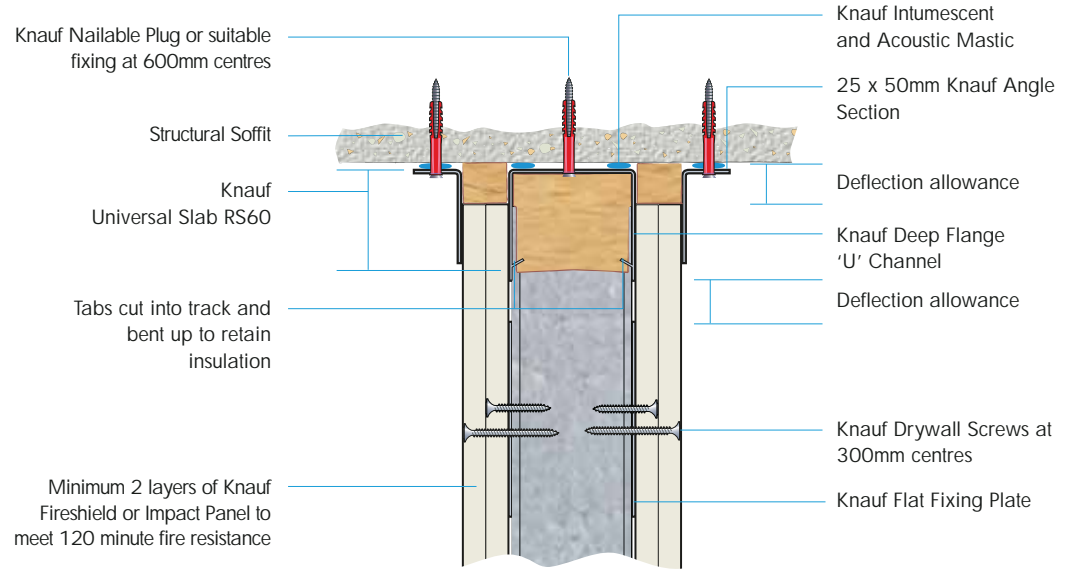
Detail 07



Knauf Performer

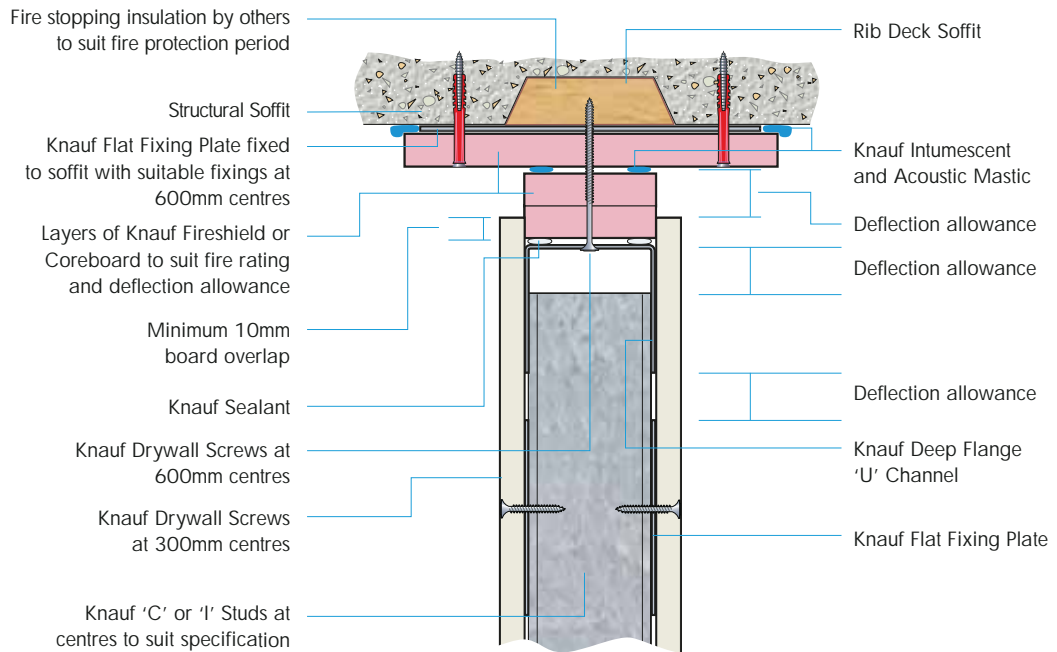
Deflection Head Detail, 120 Minutes Fire Resistance

Detail 08



Typical Head Detail to Rib-Deck, Fire Resistance Dependent on Partition Specification

Detail 09



Note: When partition line runs across line of rib deck soffit, fill with fire stopping insulation.

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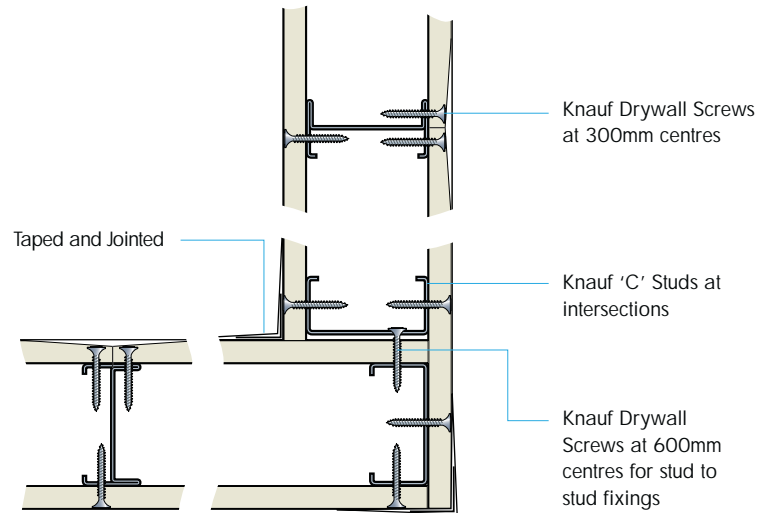
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Knauf Performer

Corner 90°

Detail 10

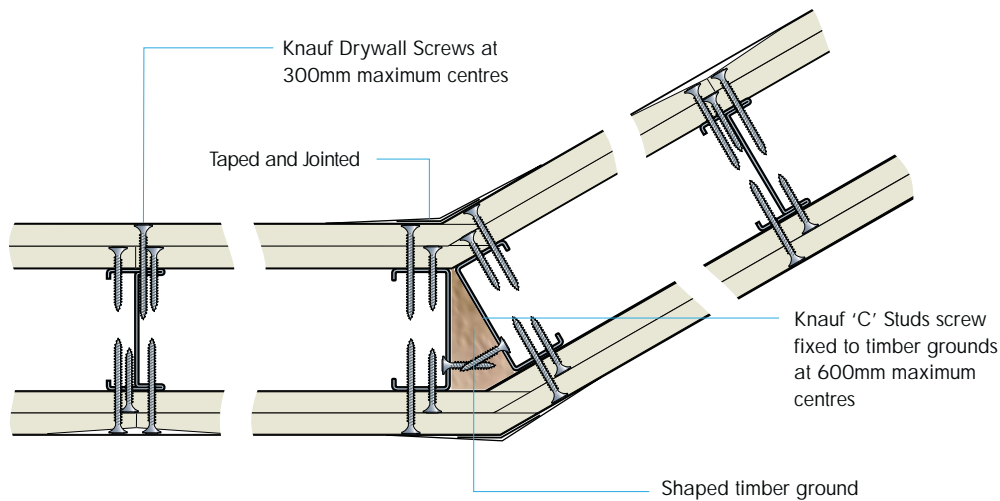
Fixings at the junction should be made from stud to stud.
Knauf 'C' Studs form intersections in both 'I' and 'C' stud Performer partitions.



Splayed Corner

Detail 11

Treated and prepared timber grounds can be incorporated to create splayed corners.
Knauf 'C' Studs form intersections in both 'I' and 'C' stud Performer partitions.



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Abutment T-Junction

Detail 12

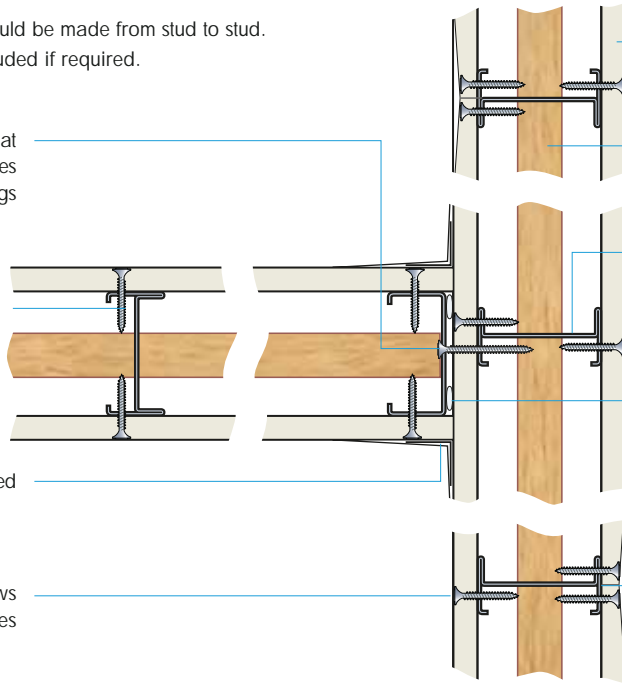
Fixing at the junctions should be made from stud to stud.
Extra studs should be included if required.

Knauf Drywall Screws at 600mm maximum centres for stud to stud fixings

Knauf Drywall Screws at 300mm centres

Taped and Jointed

Knauf Drywall Screws at 300mm centres



Knauf Plasterboard to suit specification

Knauf insulation if required

Additional Knauf 'C' or 'I' Stud at intersection

Knauf Sealant

Knauf 'C' or 'I' Stud to suit specification

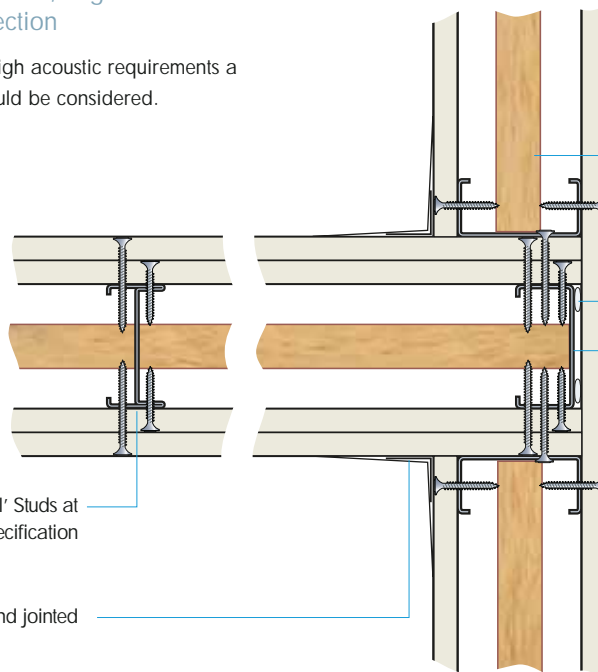
Abutment T-Junction, High Performance Flanking Intersection

Detail 13

Where there are high acoustic requirements a flanking detail should be considered.

Knauf 'C' or 'I' Studs at centres to specification

Taped and jointed



Knauf Plasterboard to suit specification

Knauf insulation if required

Knauf Sealant

Knauf 'C' Studs at abutments

Knauf Drywall Screws at 300mm centres

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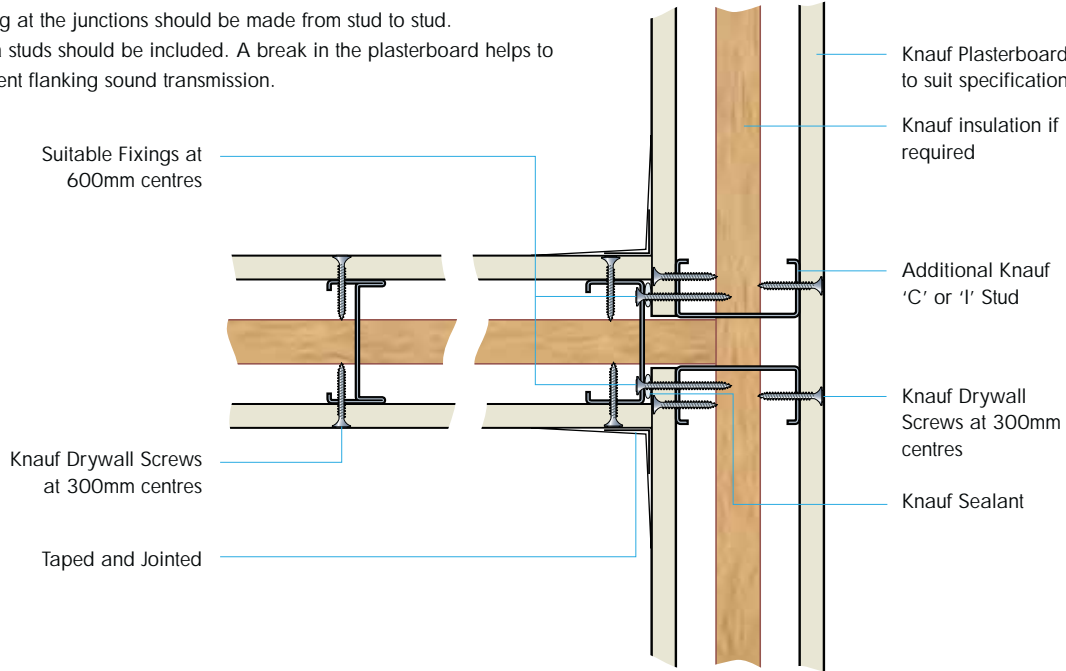
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Abutment T-Junction, Alternative Flanking Detail

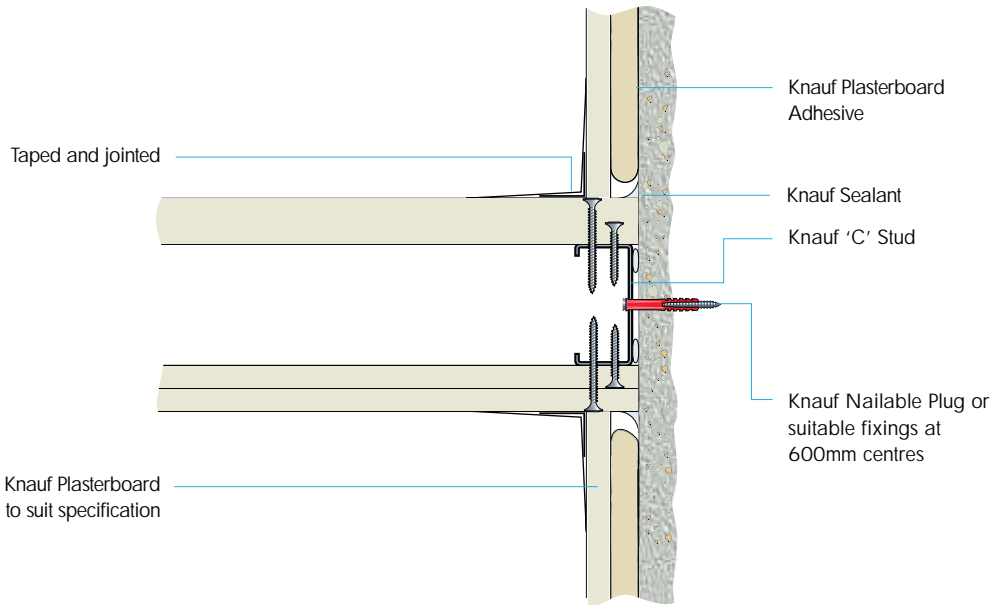
Detail 14

Fixing at the junctions should be made from stud to stud. Extra studs should be included. A break in the plasterboard helps to prevent flanking sound transmission.



Abutment - Direct Bonding where Partition is Fire Rated

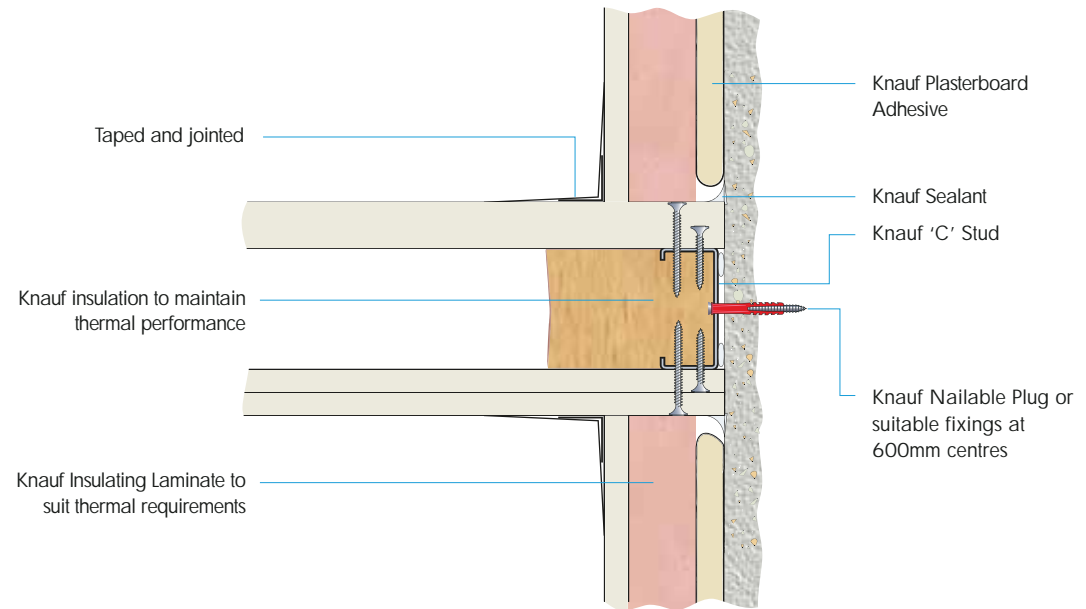
Detail 15



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Abutment - Direct Bonding of Knauf Insulating Laminate where Partition is Fire Rated

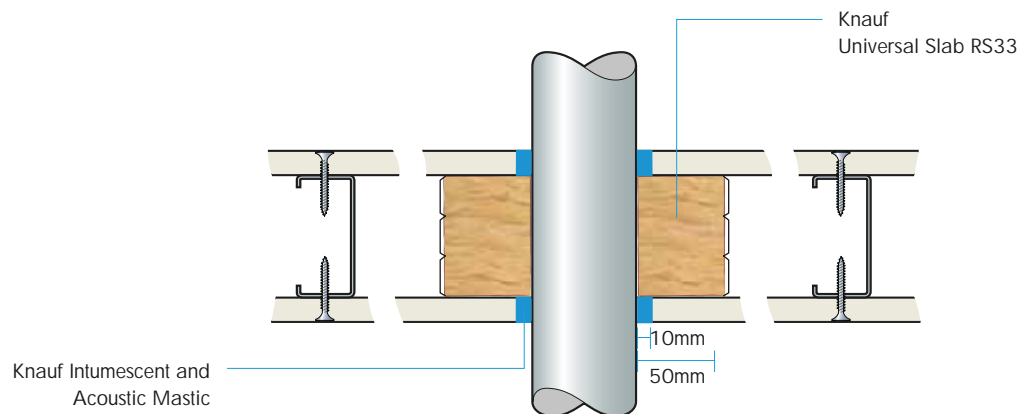
Detail 16



Pipe Penetration

Detail 17

Suitable for small pipes - typically up to 40mm diameter. The mineral wool must be secured around the pipe with wire or mesh.



Note: Check with pipe manufacturer that pipe material is compatible with Knauf Intumescent and Acoustic Mastic.

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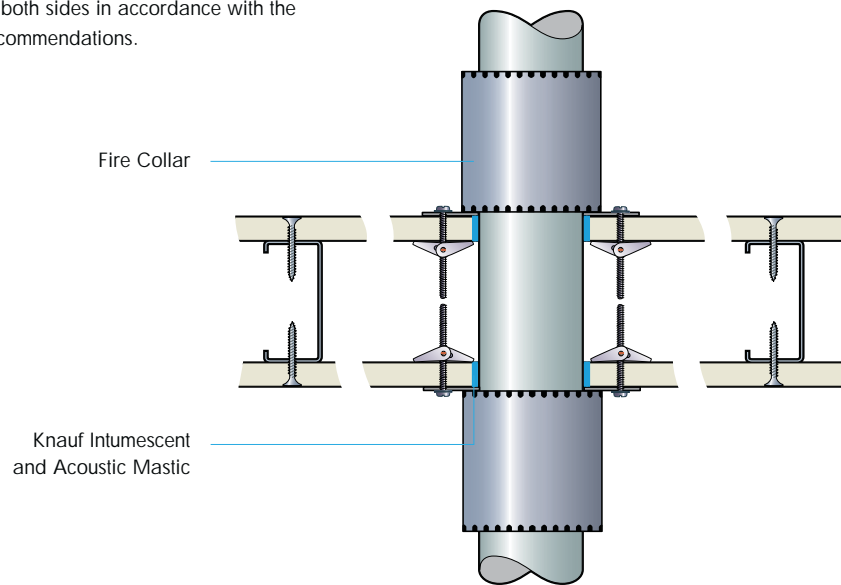
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Pipe Penetration

Detail 18

For pipes with a diameter up to 160mm, a Fire Collar is fixed to both sides in accordance with the manufacturers recommendations.



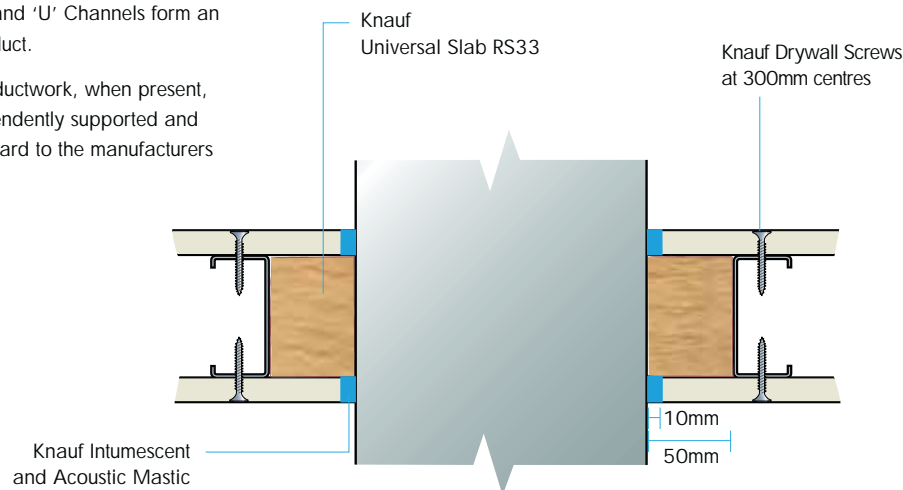
Note: Check with pipe manufacturer that pipe material is compatible with Knauf Intumescent and Acoustic Mastic.

Duct Penetration

Detail 19

For pipes and ducts above 160mm diameter. Knauf 'C' Studs and 'U' Channels form an opening for the duct.

Fire dampers in ductwork, when present, should be independently supported and installed with regard to the manufacturers instructions.



Note:

The Performer details for penetration and sockets can be applied to all Knauf drywall partitions in this Manual

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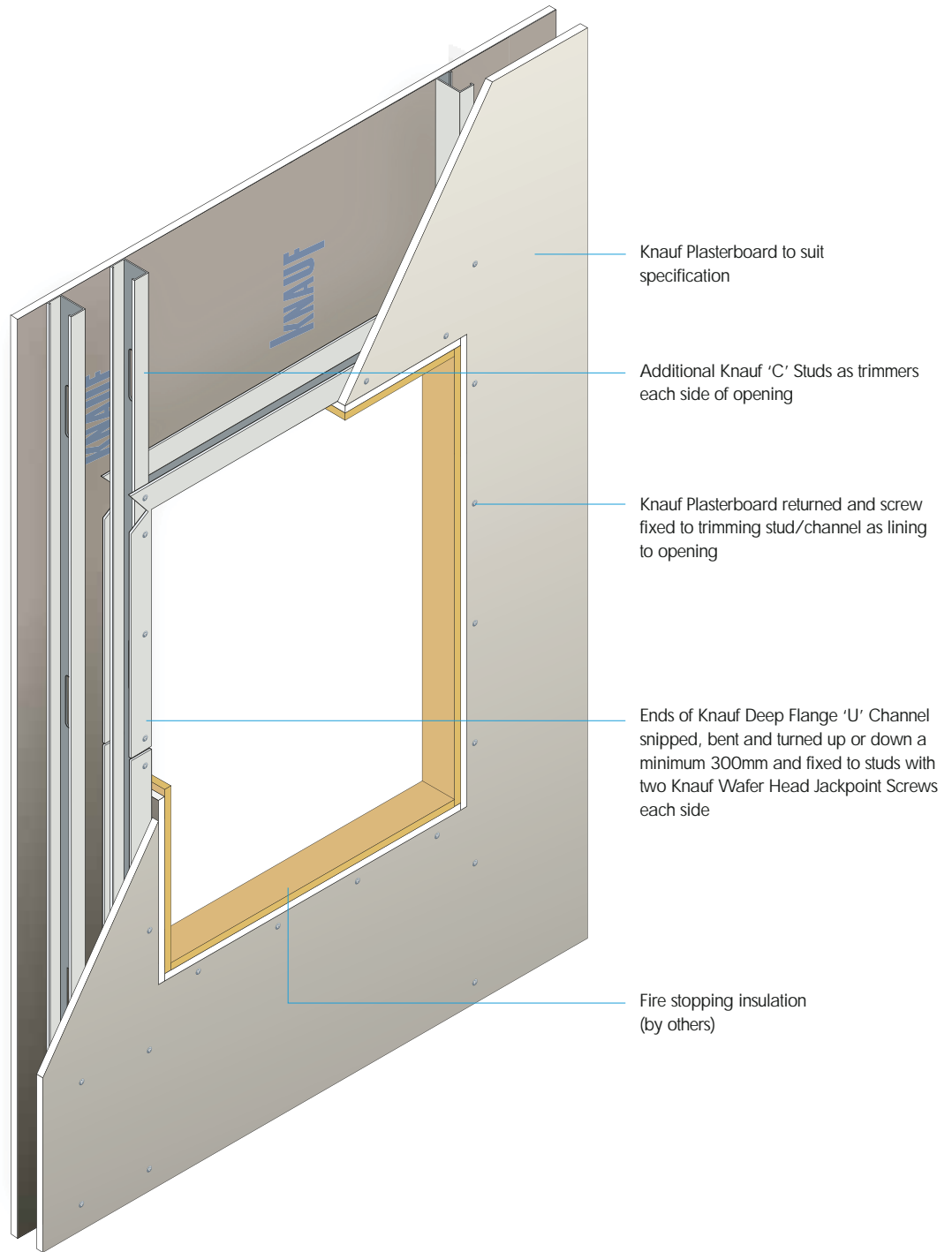
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Knauf Performer

Typical Framing Out Detail

Detail 20



Knauf Plasterboard to suit specification

Additional Knauf 'C' Studs as trimmers each side of opening

Knauf Plasterboard returned and screw fixed to trimming stud/channel as lining to opening

Ends of Knauf Deep Flange 'U' Channel snipped, bent and turned up or down a minimum 300mm and fixed to studs with two Knauf Wafer Head Jackpoint Screws each side

Fire stopping insulation (by others)

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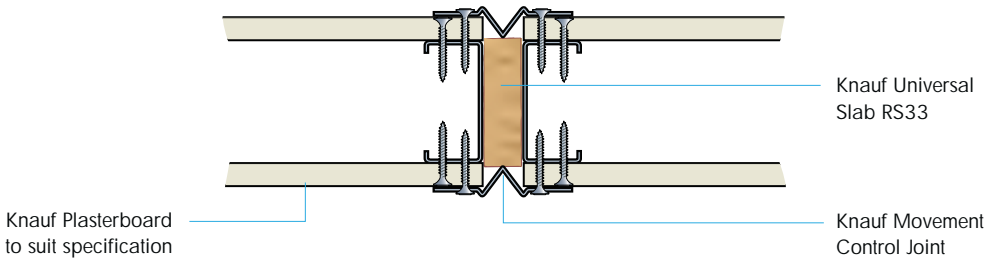
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Knauf Performer

Movement Control Joint

Detail 21

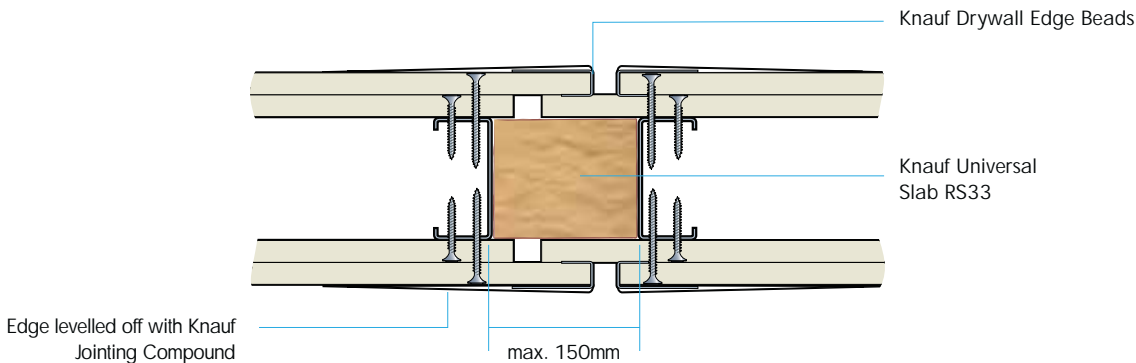
Allows lateral movement of up to 7mm. The control joint must be fixed at 150mm centres on both edges. This detail maintains the fire resistance of a 1 hour partition.



Expansion Joint

Detail 22

This allows more movement than the previous detail, in conjunction with a shadow gap formed by Knauf Drywall Edge Beads. This detail can provide up to 2 hours fire resistance, when designed into a double layer Knauf Performer 2 hour partition.



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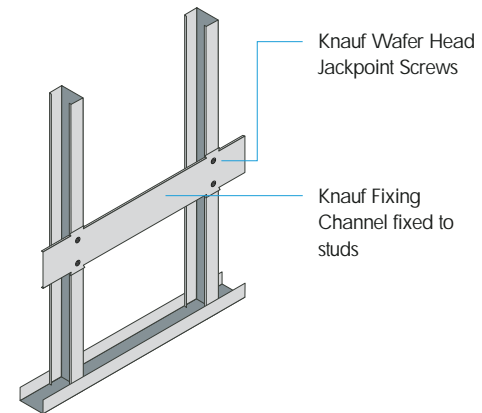
Knauf Performer

Light Weight Fixings Parallel to Surface

Detail 23

Suitable for medium weight fixings where the applied load is fixed and continuous, and for lightweight fixings where the load may be subject to some movement (e.g. through removable objects). Complies with BS 5234.

- Suggested applications: Curtain rails, pictures.

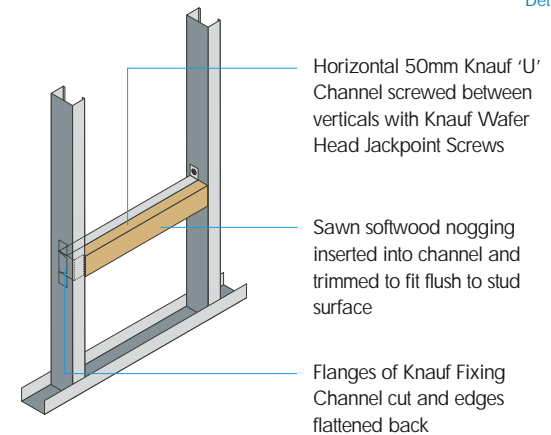


Heavy Weight Fixings Parallel to Surface

Detail 24

Suitable for heavyweight fixings where the applied load is fixed and continuous, and for medium weight fixings where the load may be subject to some movement (eg. through removable objects). Complies with BS 5234.

- Suggested applications: baths (lateral location only), cupboards, shelving, handrails, radiators.

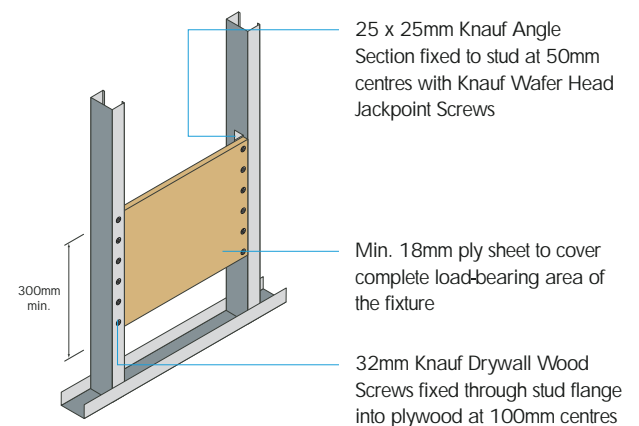


Heavy Weight Fixings with Moment

Detail 25

For use where the applied load is not directly adjacent to the board surface, thus producing a twisting force that the other fixing details are not capable of withstanding. It is also suitable for fixing items that are likely to receive rougher than usual treatment. Complies with BS 5234.

- Suggested applications: TV mounting arms, pay telephones and hoods, disabled grab rails.



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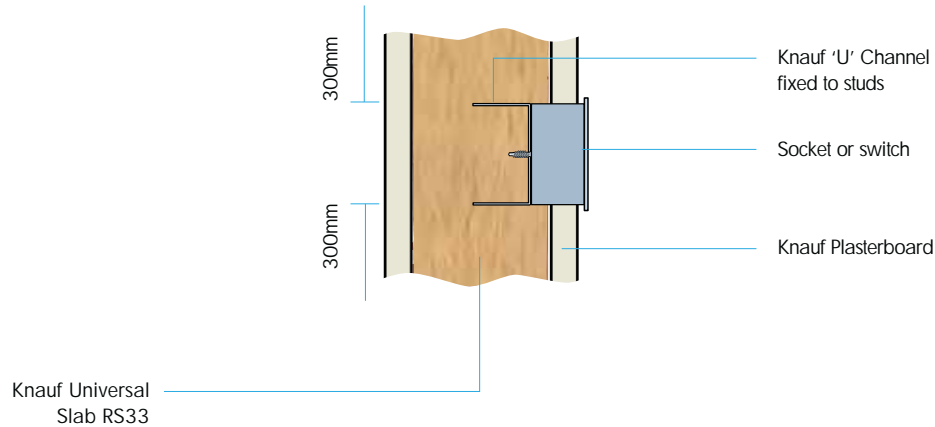
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Knauf Performer

Sockets and Switches

Detail 26

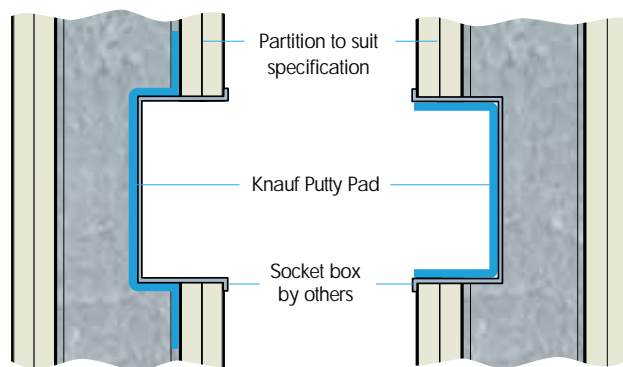
These can be fixed back to Knauf 'U' Channels or sections of Knauf Fixing Channels fitted between studs. Mineral wool packing maintains the fire resistance of the partition up to 1/2 hour. For higher fire resistance periods, contact Knauf Drywall Technical Services.



Sockets and Switches

Detail 27

Knauf Putty Pads are quick and easy to install and are capable of maintaining a fire rating of up to 2 hours in drywall applications and an acoustic rating of up to 60dB(Rw). Robust Detail approved making them also ideal for use with Knauf Isolator Partitions.



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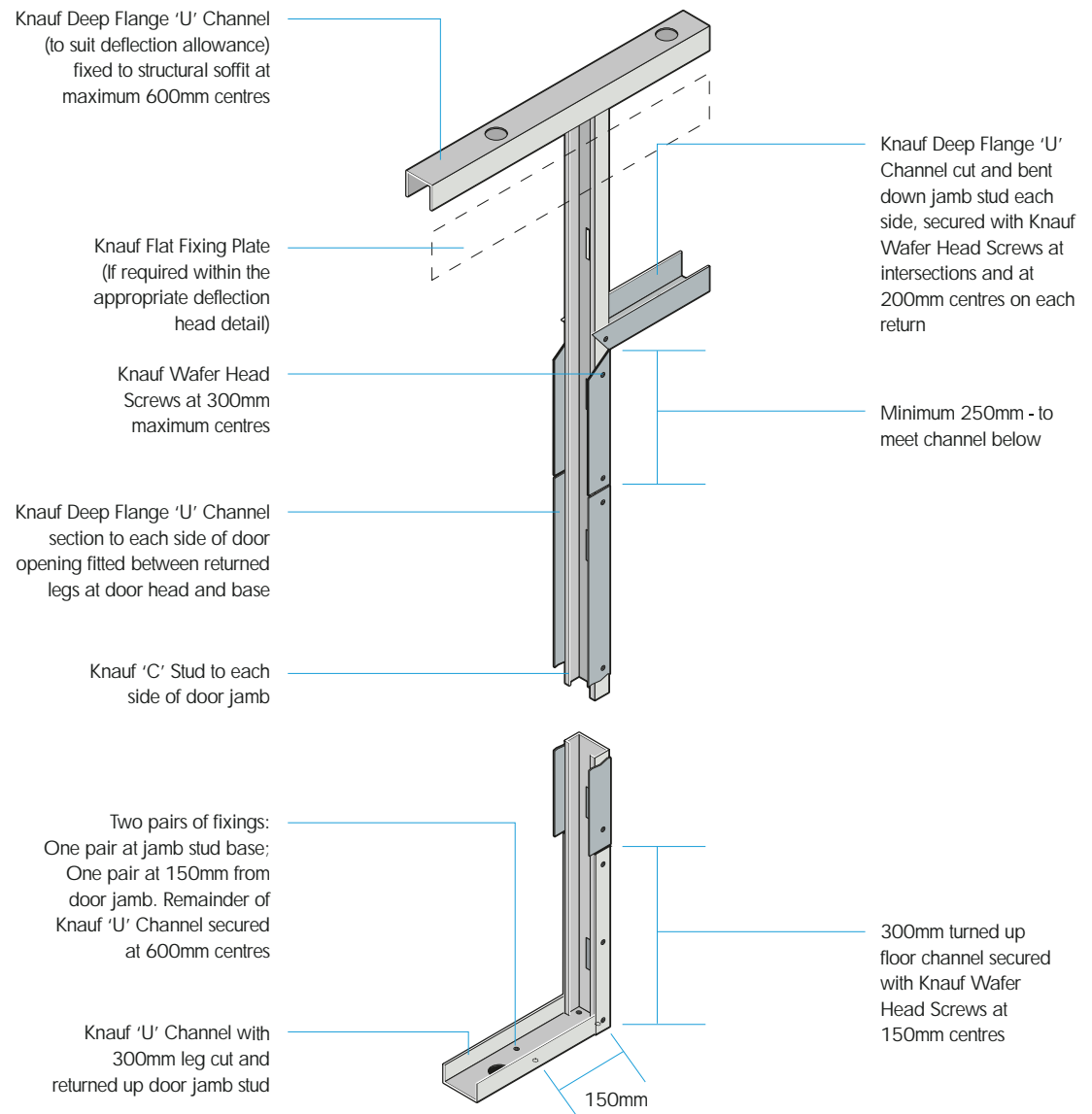
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Knauf Performer

0 - 60Kg Door Jamb

Detail 28

Knauf 'U' Channel is snipped, bent back and screwed to the Knauf 'C' Stud with Knauf Wafer Head Jackpoint Screws.



Note: Timber ground not required for structural performance, however may be required by door manufacturer. Door jamb arrangement repeated both sides of door opening. Position of flat fixing plate to suit deflection allowance (if required).

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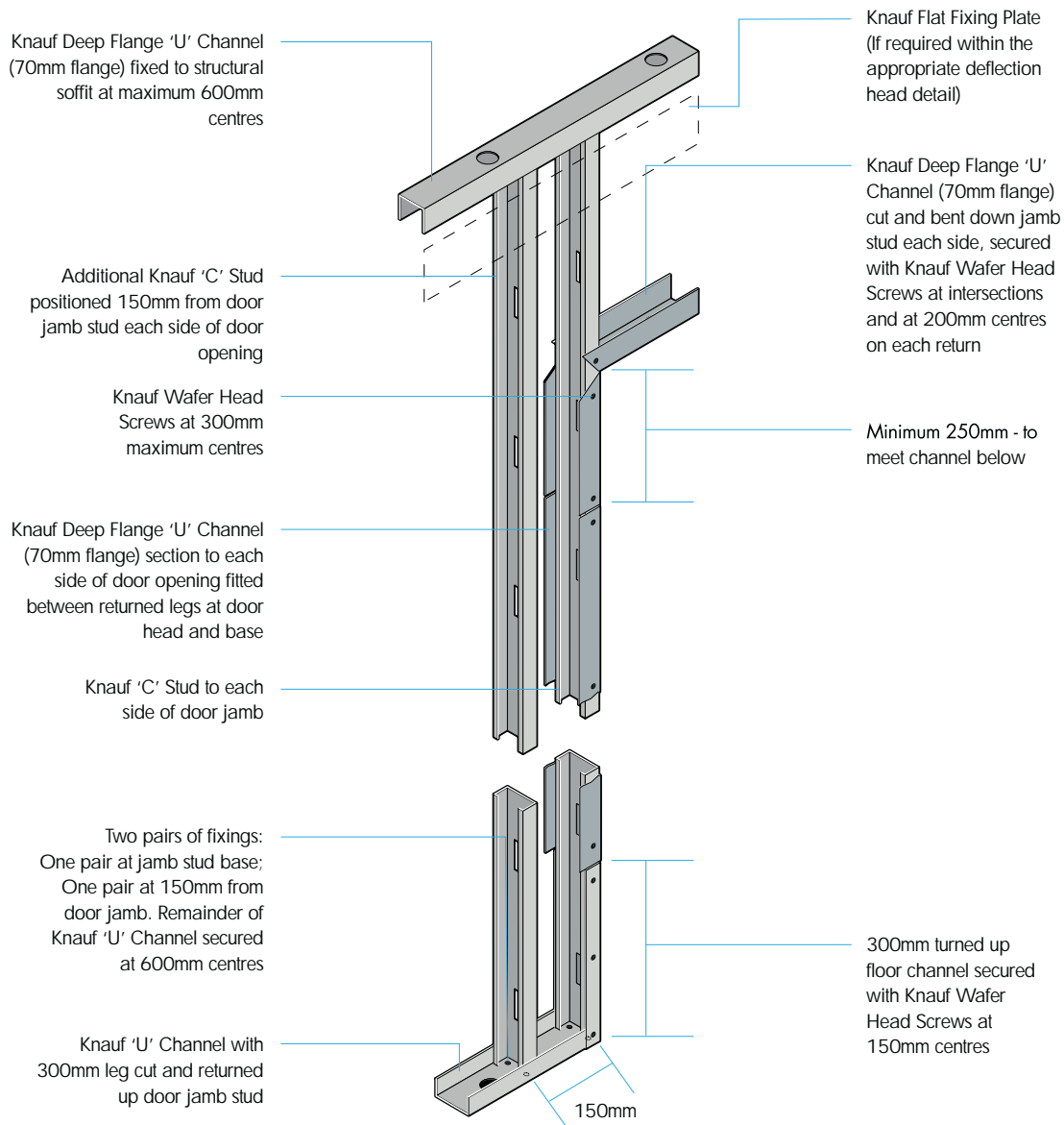
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Knauf Performer

60 - 100Kg Door Jamb

Detail 29

Knauf 'U' Channel is snipped, bent back and screwed to the Knauf 'C' Stud with Knauf Wafer Head Jackpoint Screws.



Note: Timber ground not required for structural performance, however may be required by door manufacturer. Door jamb arrangement repeated both sides of door opening. Position of flat fixing plate to suit deflection allowance (if required).

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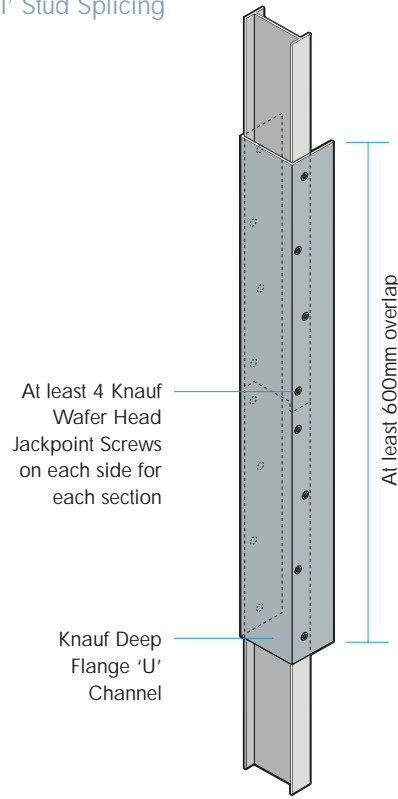
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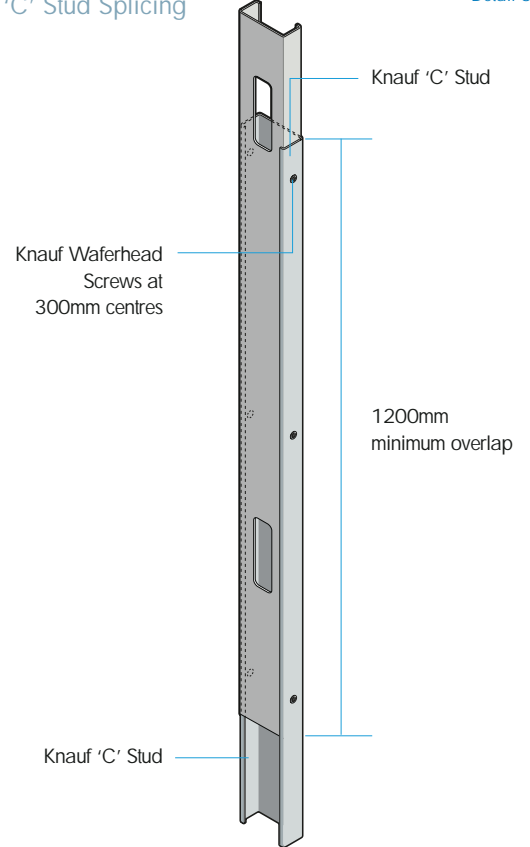
'I' Stud Splicing

Detail 30



'C' Stud Splicing

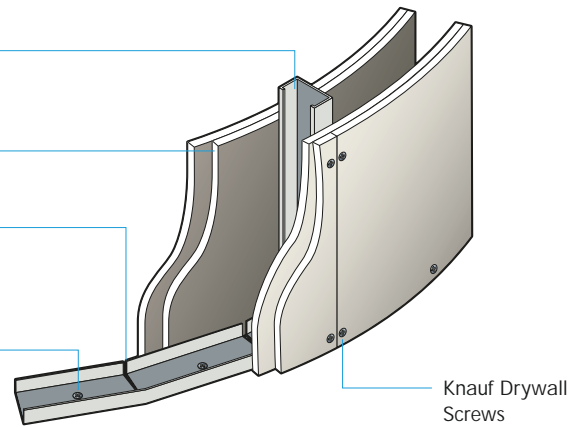
Detail 31



Curved Partition

Detail 32

- Knauf 'C' or 'I' Studs to suit specification
- Knauf Plasterboard fixed horizontally to suit specification
- Knauf 'U' Channel snipped at regular centres to form curve. (Refer to table below for correct centres)
- Knauf 'U' Channel fixed with Knauf Nailable Plug or suitable fixing for background



Radius	'U' Channel Cuts at (centres)	'U' Channel Fixed at (centres)	Studs* at (centres)
5 Metres plus	300mm	600mm	600mm
3 - 5 Metres	100mm	400mm	300mm
1 - 3 Metres	50mm	300mm	150mm

*Stud centres also dependant on partition maximum height

Knauf recommended minimum board bending radii*:

Knauf Board Thickness	Minimum Radius
9.5mm	1 Metre
12.5mm	1.5 Metre
15mm	2.5 Metre

*Note: Based on Knauf Wallboard.

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40 Wet Area Partitions



Wet Area Partitions

Knauf Aquapanel Interior cement boards are unaffected by water, adding an extra dimension to Knauf Performer Partitions and making them the ideal wet area solution to receive tiles or one of our wet area finishes.

Knauf Aquapanel Performer Partitions are purpose designed for full or part tiled situations in commercial non-loadbearing applications. They use fast drywall construction techniques and can be specified with confidence in wet areas.

These systems utilise Knauf Aquapanel Interior cement board to receive tiles or Knauf Aquapanel Interior Skim, with moisture resistant Knauf Sound Moistureshield for the non-wet area side of the partition, if applicable.

The boards are fixed onto strong, light, galvanised Knauf Acoustic 'C' Studs using the same techniques as other Knauf Performer partition systems. This results in a tough partition that won't be damaged by water, ensuring any tiles fitted are protected from failure.

Design freedom

Knauf Aquapanel Performer partitions can be curved to form aesthetic walls and can support heavy marble tiles up to 50kg/m² as well as Knauf Aquapanel Interior Skim, giving complete freedom to the designer.

Knauf Aquapanel cement board technology is revolutionising the way buildings are designed and constructed across Europe.

Developed by Knauf USG Systems, Aquapanel Interior cement board gives architects and contractors a proven alternative to brick and block construction in interior applications - where it offers significant performance advantages in wet and high humidity areas together with lower installation costs.

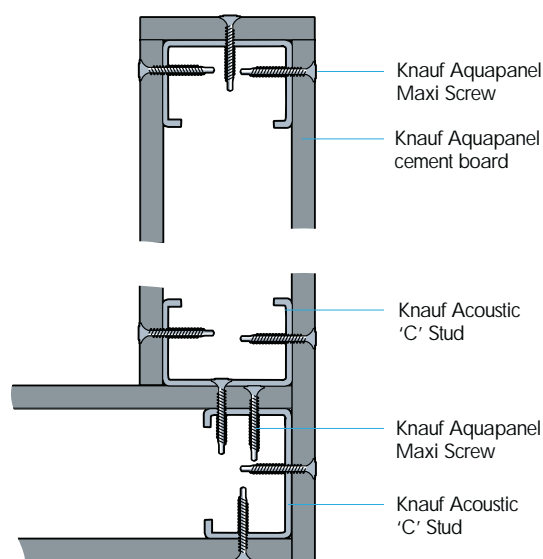
The Aquapanel cement board brand represents a range of extremely durable building materials providing solid substrates for wet areas with solutions for interior and exterior walls, linings, ceilings and floors.



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Typical Knauf Aquapanel Performer detail:

Corner formation and nib



Please Note: Aquapanel Interior is tiled onto the smooth side of the board.

Increased productivity and reduced call-backs

Knauf Aquapanel Interior is exceptionally tough and durable, providing a solid tile backing substrate for wet indoor areas such as swimming pools, leisure centres, changing rooms, toilet areas, laundries, bathrooms and kitchens.

Knauf Aquapanel Performer partitions deliver productivity gains by eliminating the time-consuming methods usually associated with specialised building methods and materials. With its unique score and snap facility Aquapanel Interior is easy to cut - making installation quick and simple.

The revolutionary EasyEdge design feature of Aquapanel Interior in conjunction with polyurethane Aquapanel Joint Adhesive improves adhesion between boards, resulting in a stronger structure.

Knauf Aquapanel Interior is ready-keyed for tiling, so no sealant is required. More on-site time savings result from the dry installation system. Overall productivity gains are reflected in shorter job schedules and lower in-place costs.

Avoid expensive tile failures

Tile failure is extremely costly in all instances. If a tile fails in a wet area you would normally expect the substrate behind to be damaged as well with traditional materials. Not only are there replacement costs of materials, but for many commercial and leisure applications tile failure may necessitate closing part of the premises.

Knauf Aquapanel systems provide the peace of mind that results from specifying a partition or lining that is specifically designed for the job. Galvanised metal components, special screws and high quality Aquapanel cement board linings ensure that Aquapanel systems are easy to install and continue to perform, even when wet.

Long-term, specifying Knauf Aquapanel Performer partitions results in a significant reduction in costly call-backs and reduced maintenance. Tiled areas are expensive and the small investment required to upgrade to Knauf Aquapanel Performer partitions is quickly recouped through minimising future costs.

Note: When used in a swimming pool environment all metal components need to be pre-coated galvanised profiles and manufactured to comply with EN13964; products with a continuously hot-dip metal coating Z100 - an additional 20 micron organic coating per face.



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Aquapanel Interior Brochure

A comprehensive Aquapanel Interior brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website: www.knaufdrywall.co.uk

Inside you will find installation and performance details for our range of Aquapanel Performer partitions and Aquapanel Interior linings.

Other Aquapanel systems:

Wet Area Linings	page 120
Tiled Floor Linings	page 166
Exterior Linings	page 170

Generate specifications at:
www.knaufdrywall.co.uk

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42 Wet Area Partitions

Aquapanel Interior

Knauf Aquapanel Interior cement board is exceptionally tough and durable, providing a solid tile backing substrate for wet indoor areas such as swimming pools, leisure centres, changing rooms, toilet areas, laundries, bathrooms and kitchens.

Head Track



Knauf 'U' Channel secured to the soffit forms head track.
Knauf Deep Flange 'U' Channel for deflection head details.

Stud



Knauf Acoustic 'C' Studs are lightweight steel sections used to form the vertical frame of the Knauf Aquapanel Interior partitions.

Boards

Knauf Aquapanel Interior partitions can be tiled on one or both sides



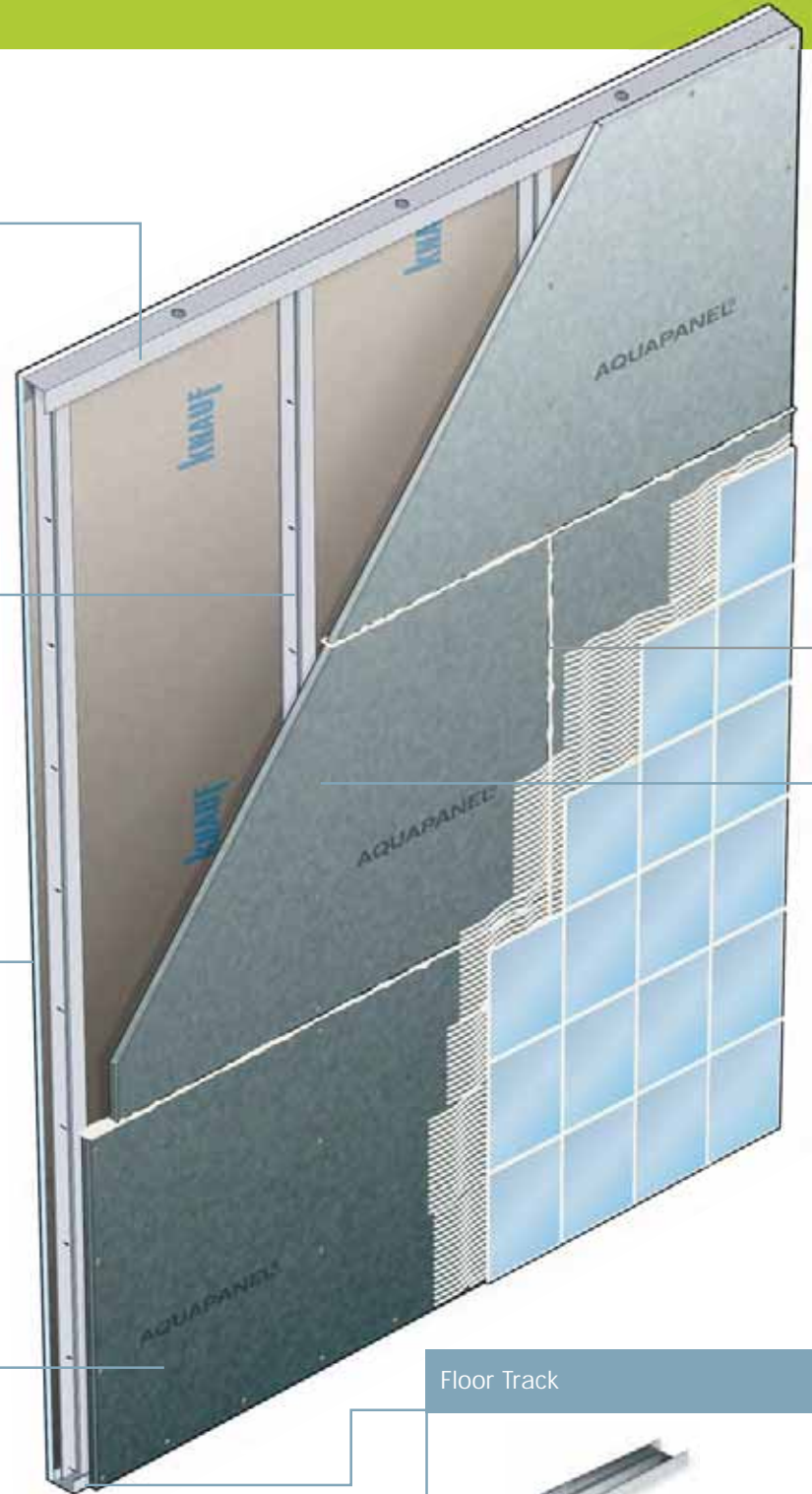
Knauf Sound Moistureshield to non-tiled side.

Knauf Aquapanel Interior cement board for use in wet and humid areas.

Floor Track



Knauf 'U' Channel is secured to the floor and used to frame out openings.



Download
Spec Sheet

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Knauf Aquapanel Interior partitions

Knauf Aquapanel Interior partitions are purpose designed for full or part tiled situations in commercial non-loadbearing applications. They use fast drywall construction techniques and can be specified with confidence in wet areas.

Key Features:

- Will not deteriorate in water
- Supports tiles up to 50kg/m²
- Resistant to mould and mildew
- Tough, strong and impact resistant
- Easy to cut and install

Other Components



Knauf Sealant – used to seal gaps to prevent airborne transmission of sound and vibration.

Joining*



Knauf Aquapanel Interior Joint Adhesive – PU gun applied adhesive used for jointing Knauf Aquapanel Interior cement boards.

*For smaller domestic jobs where studs are 450mm centres max, Knauf Aquapanel Interior Tape can be used for reinforcing joints. For more information refer to the Knauf Aquapanel Interior brochure, or Knauf Technical Services.

Fixings



Knauf Aquapanel Maxi Screws are corrosion resistant and designed for fixing Knauf Aquapanel Interior cement boards.

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Knauf Aquapanel Interior

Performance information

Knauf Aquapanel Interior systems provide the peace of mind that results from specifying a partition or lining that is specifically designed for the job. Galvanised metal components, specialist screws and high quality Knauf Aquapanel Interior cement board linings ensure that Knauf Aquapanel Interior partitions are easy to install and continue to perform, even when wet.



Knauf Aquapanel Interior Performance Information

Aquapanel AI1/11	Sound	Fire*	Max height**	Width
12.5mm Knauf Aquapanel Interior to each side of 50mm Knauf Acoustic 'C' Studs at 600mm centres with 50mm Knauf Earthwool Acoustic Roll within the cavity	44 dB (Rw)	-	2700mm	77mm
Aquapanel AI2/11	Sound	Fire*	Max height**	Width
12.5mm Knauf Aquapanel Interior to wet room side of 50mm Knauf Acoustic 'C' Studs at 600mm centres and 12.5mm Knauf Sound Moistureshield to the room side with 50mm Knauf Earthwool Acoustic Roll within the cavity	45 dB (Rw)	-	2700mm	77mm
Aquapanel AI3/11	Sound	Fire*	Max height**	Width
12.5mm Knauf Aquapanel Interior to each side of 70mm Knauf Acoustic 'C' Studs at 600mm centres with 50mm Knauf Universal Slab RS33 within the cavity	44 dB (Rw)	30 mins	3600mm	97mm
Aquapanel AI4/11	Sound	Fire*	Max height**	Width
12.5mm Knauf Aquapanel Interior to wet room side of 70mm Knauf Acoustic 'C' Studs at 600mm centres and 12.5mm Knauf Sound Moistureshield to the room side with 50mm Knauf Universal Slab RS33 within the cavity	45 dB (Rw)	30 mins	3600mm	97mm
Aquapanel AI5/11	Sound	Fire*	Max height**	Width
12.5mm Knauf Aquapanel Interior to wet room side of 70mm Knauf Acoustic 'C' Stud and 2 x 12.5mm Knauf Sound Moistureshield to the room side with 50mm Knauf Universal Slab RS33 within the cavity	48 dB (Rw)	60 mins	3600mm	109.5mm

* Fire rating quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

** Maximum heights calculated based on a limiting deflection of L/240 at 200Pa.

[Download Spec Sheet](#)

Knauf Aquapanel Interior

Installation Procedures

Knauf Aquapanel Interior partitions are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Aquapanel Interior partitions must be installed in accordance with Knauf Drywall's recommendations and relevant recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Framing

Knauf 'U' Channels should be used for the head and base of the partitions. Replace with Knauf Deep Flange 'U' Channel when forming a deflection head. Knauf Acoustic 'C' Studs should be used to form any abutments and to frame openings. Bed each section on two continuous beads of Knauf Sealant or Knauf Intumescent and Acoustic Mastic as specified. Secure with suitable fixings at 600mm centres.

Vertical Studs

Knauf Acoustic 'C' Studs should be positioned within the channels to coincide with the abutments of the boards, which will be fixed later, at maximum 600mm centres.

Knauf Acoustic 'C' Studs should be trimmed to within 5mm of the internal channel. For deflection heads only: studs should be cut short to allow for required clearance within Knauf Deep Flange 'U' Channel, up to a maximum of 25mm.

Knauf Acoustic 'C' Studs can be extended by forming an overlap, boxing them at that point and securing them with Wafer Head Jackpoint Screws. The overlap must be at least 600mm.

Insulation

Once the studs have been located in the Knauf 'U' Channels and one side has been boarded, insulation quilt if required should be inserted between the studs vertically.

Doorways

The head is formed with Knauf 'U' Channel, snipped and bent back and screw fixed with Knauf Wafer Head Jackpoint Screws to the studs. Please refer to pages 36-37 for door

jamb details.

Boarding

Knauf Aquapanel Interior cement boards are laid horizontally. Start at one end and align the first board along the studs. Take care to ensure the board is aligned correctly horizontally and vertically using a spirit level. Secure the board with Aquapanel Interior Maxi Screws at maximum 250mm centres, ensuring that the screws are at least 15mm from the board edge. Do not overdrive the screws.

In order to ensure the maximum adhesion is achieved when jointing, the adjacent edges of the fixed board and the next board in the sequence must be cleaned. Simply clean the edges with wet brush to remove traces of dust – the edges do not need to be soaked.

Using a suitable gun, apply a continuous bead of Knauf Aquapanel Interior Joint Adhesive to the adjacent edge(s) of the fixed board(s). The bead should be of sufficient size to fill the joint fully when the next board is offered up.

Important note: Knauf Aquapanel Interior Joint Adhesive must be applied before the next board is fixed, not after.

Align the next board and push it firmly into the bed of adhesive. The gap between boards should be less than 1mm. Secure the board with Knauf Aquapanel Interior Maxi Screws at maximum 250mm centres.

Continue to clean the adjacent edges, apply Knauf Aquapanel Interior Joint Adhesive and place and secure the next board until the wall is complete.

In order to achieve a strong joint, the Knauf Aquapanel Interior Joint Adhesive needs to be left to cure and expand before the excess can be scraped off.

Scrape of the excess Knauf Aquapanel Interior Joint Adhesive the next day using a flexible steel scraper.



Fixing Knauf Aquapanel Interior cement board



Cleaning the edges with a wet brush



Applying Knauf Aquapanel Interior Joint Adhesive



Scraping off the excess adhesive once cured

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46 X-Ray Partitions

X-Ray Partitions

Knauf X-Ray Partitions incorporate the revolutionary Knauf Safeboard into the Knauf Performer partition system to provide protection from X-Ray radiation without the need for lead. Our X-Ray Partitions are light, easy to install and safe.

Lead is a thing of the past - Knauf Safeboard is the future

Knauf Safeboard represents a revolution in x-ray protection: lead-free radiation shielding using drywall construction.

Traditional lead lined boards are heavy, expensive and time consuming to cut and install with the need for additional lead strips behind every joint. Often you need additional plasterboards over the top to suit fire or sound requirements.

Now Knauf Safeboard brings x-ray protection and fire and acoustic performance together in one easy-to-install board. Safeboard is simple to install and cuts and snaps like an ordinary plasterboard. Knauf Safeboard Jointing Compound is used to fill joints to complete the radiation shield.

HPA tested for UK X-ray shielding

The Health Protection Agency (HPA) have comprehensively tested and passed Knauf Safeboard to determine its lead equivalency in order for it to be specified to the requirements of the project's Radiation Protection Adviser.

Knauf Safeboard is a completely safe alternative to lead-lined products.

For more information on Knauf Safeboard lead equivalency and specifying and installing Knauf Safeboard systems contact Knauf Drywall Technical Services on 01795 416259.

Reduced costs, increased flexibility

Knauf X-Ray Partitions use Knauf Safeboard to provide lead-free x-ray radiation shielding. This makes them quick and easy to install - and just as easy to take down.

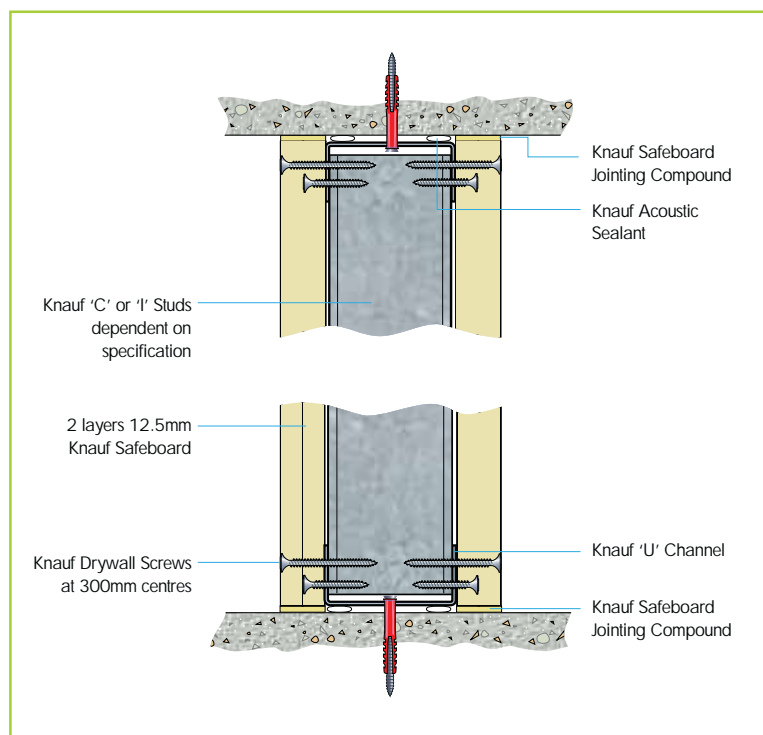
The flexibility to re-design interior layouts and to build in changes of use to rooms is increasingly important when considering modern, future-adaptable healthcare projects. Knauf X-Ray Partitions can be inexpensively designed in to suit mobile x-ray apparatus, and can be retro-fitted or removed far more easily than traditional lead-lined partitions.

For many low-level applications only a single layer of Knauf Safeboard may be needed, significantly reducing the cost of providing protection where previously the minimum available thickness of lead sheet would be more protection than is actually required.

Download
Spec Sheet



Typical Knauf X-Ray Performer detail:



Knauf X-Ray Partitions

Knauf X-Ray Partitions are installed in the same way as other Knauf Performer partition systems, with a few small differences:

The most important change is the use of Knauf Safeboard as the lining material. The Radiation Protection Adviser will determine the required amount of Knauf Safeboard needed for each situation in a project - this will relate to the number of sheets of Knauf Safeboard to be incorporated into the partition. Any remaining sheets that are needed will come from the Knauf range to suit the fire, acoustic and impact requirements for the partition.

Every layer of Knauf Safeboard needs to be fully jointed using Knauf Safeboard Jointing Compound to ensure the entire partition is acting as a radiation shield to the correct level. Safeboard Jointing Compound contains the same X-Ray shielding elements as Knauf Safeboard.

It is easy to visually inspect a Knauf X-Ray Partition to ensure the correct number of sheets of Safeboard have been used. Simply look at the cut edges of the sheets for the distinctive yellow core that denotes Safeboard.

- Suitable for providing radiation protection in X-ray diagnostics and low power X-ray therapy areas
- Fully HPA tested
- Cost effective
- Lightweight, easy to cut, easy to install
- Ideal for radiation protection in hospitals, dental practices, research establishments, manufacturing and industry
- 100% lead-free



For more information on Knauf Safeboard lead equivalency and specifying and installing Knauf Safeboard systems contact Knauf Drywall Technical Services on 01795 416259.



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Healthcare Expertise

As well as producing the revolutionary lead-free Knauf Safeboard X-Ray protection plasterboard we have a wealth of experience in providing solutions for healthcare environments, having supported many of the UK's largest hospital projects.

A free comprehensive Healthcare brochure is available as part of our Design Partner series. Order your copy from our literature line on 08700 613700, or you can download a copy from our website: www.knaufdrywall.co.uk

Inside you will find drywall-specific guidance on the various regulations and design considerations specific to healthcare, together with optimised drywall design solutions.



More on Knauf Safeboard:

Safeboard

page 227

Generate specifications at:

www.knaufdrywall.co.uk

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Knauf Easybuild



Knauf Easybuild has been developed to reduce the number of components and speed up the construction of internal partitions in Residential situations. Easybuild is the most efficient solution for your residential project.

48 Easybuild

Head Track



Knauf 'U' Channel secured to the soffit forms head plate.

Stud



Knauf Acoustic 'C' Studs simply twist and snap into head and floor tracks.

Knauf Soundshield



15mm Knauf Soundshield maintains the strength of the partition and meets the acoustic requirements without the need for an insulation quilt.

Floor Track



Knauf 'U' Channel secured to floor.



Download
Spec Sheet

Generate specifications at:
www.knaufdrywall.co.uk

Easybuild Partitions

Knauf Easybuild has been designed to be constructed using the minimum of components, with studs at 900mm centres for speed and economy of installation.

Key Features:

- Minimum number of components
- Studs at 900mm centres
- No insulation quilt required
- Meets Part E 40dB(Rw) sound reduction requirements
- Simple and quick to install

Other Components



Knauf Fixing Channel/Knauf Flat Plate provides fixing for horizontal joints or support for fixtures.



Knauf Sealant seals gaps, minimises airborne sound transmission.

Fixings



Knauf Drywall Screws are self drilling and self tapping and are designed to work perfectly with Knauf Plasterboards.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.



49 Easybuild

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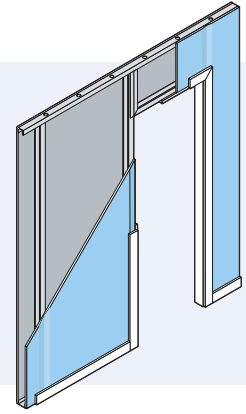
www.knaufdrywall.co.uk

Knauf Easybuild

Your optimum solution for internal residential partitions

Our efficient Knauf Easybuild partition system utilises high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Easybuild partition is fully covered by our performance warranty.



Easybuild for Residential Projects

Easybuild EBR1/ 08	Sound	Fire*	Max Height	Width	Impact Duty**
1 layer of 15mm Knauf Soundshield each side of 50mm Knauf Acoustic 'C' Studs at 900mm centres	40dB(Rw)	30 mins	2600mm	82mm	Medium

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

**Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

Knauf Easybuild

Installation Procedure

The Knauf Easybuild partition system is designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Easybuild must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Perimeter Framing 1,2

52mm Knauf 'U' Channels should be used for the head and base of the partition. 50mm Knauf Acoustic 'C' Studs should be used to form any abutments and to frame openings. Bed each section on two continuous beads of Knauf Sealant and secure with suitable fixings at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together.

Partitions constructed to provide fire and/or acoustic separation are required to span from structural floor to structural soffit.

Vertical Studs 3,4

50mm Knauf Acoustic 'C' Studs should be positioned within the channels to coincide with the vertical edge of the 900mm wide 15mm Knauf Soundshield boards, at 900mm centres. In general there is no requirement to secure the metal at this point as this will be achieved once the boards are screw-fixed. 50mm Knauf Acoustic 'C' Studs should be trimmed to within 5mm of the slab to soffit height.

Support for Horizontal Joints in Facings

To back horizontal joints, Knauf Fixing Channel or Knauf Flat Fixing Plate should be fitted across the face of all studs, secured with two Knauf Wafer Head Screws per stud to both faces.

Doorways 5,6

The head is formed with 52mm Knauf 'U' Channel, snipped, bent and screw fixed with Knauf Wafer Head Screws to the web of the door jamb studs. See detail 04 on page 53. In addition, a timber ground should be fitted within the door jamb studs to allow for fixing of the door set.

Boarding 7

All 900mm wide 15mm Knauf Soundshield boards should be offered up to the frame with the face of the board outwards and secured with Knauf Drywall Screws at maximum 400mm centres. Fixing centres should be reduced to 200mm at corners.

Boarding should commence at one end and work across the partition. At head, floor and abutments, board edges should be bedded onto continuous beads of Knauf Sealant.

Download
Spec Sheet



1 Fixing the head track.



2 Fixing the first stud to the adjoining wall.



3 Twisting Knauf Acoustic 'C' Studs into position.



4 Positioning studs at 900mm centres.



5 Inserting timber ground into jamb stud door opening.



6 Snip and bend Knauf 'U' Channel to form door head.



7 Fixing the 15mm Knauf Soundshield to the Knauf Acoustic 'C' Stud.



8 Tape and joint for a seamless finish.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

Generate specifications at:
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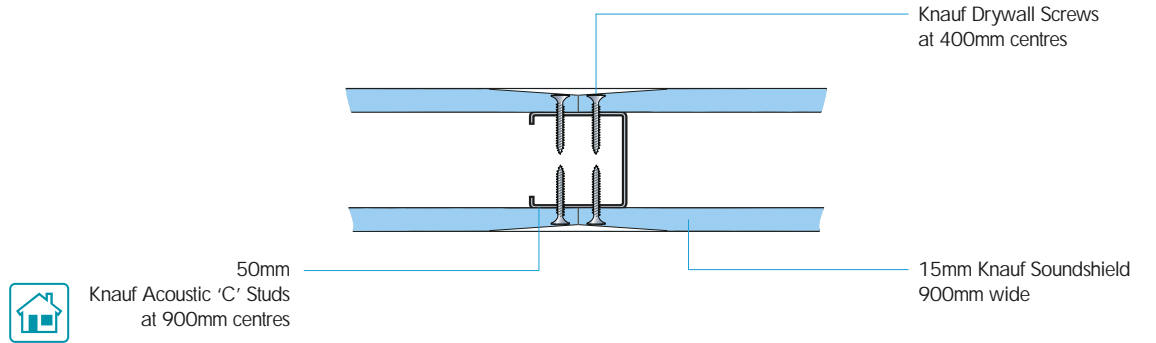
Knauf Easybuild

Application Details

These details represent some of the design situations relevant to the Knauf Easybuild partition system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve. The most common details, such as a T-Junction are similar to the Knauf Performer range.

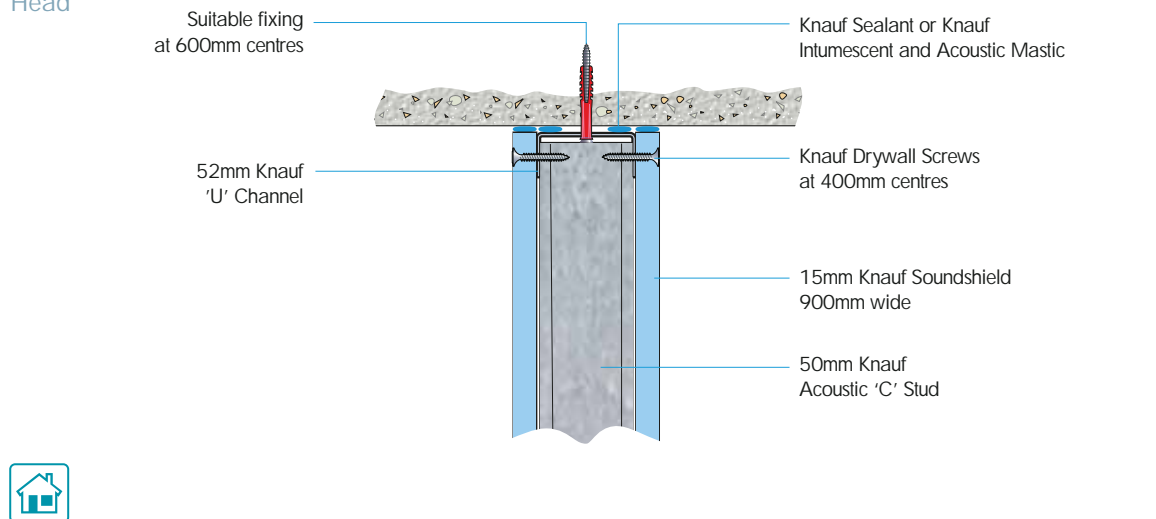
Standard Detail

Detail 01



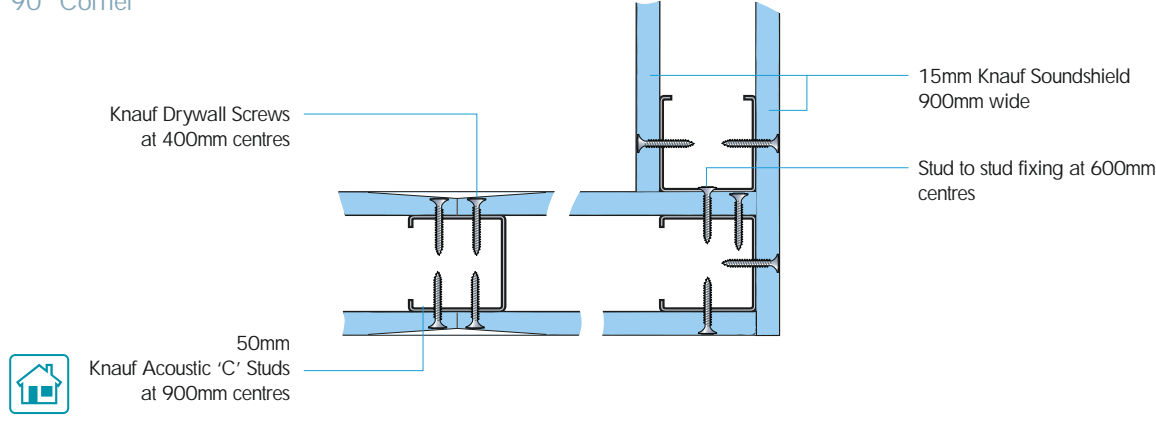
Head

Detail 02



90° Corner

Detail 03

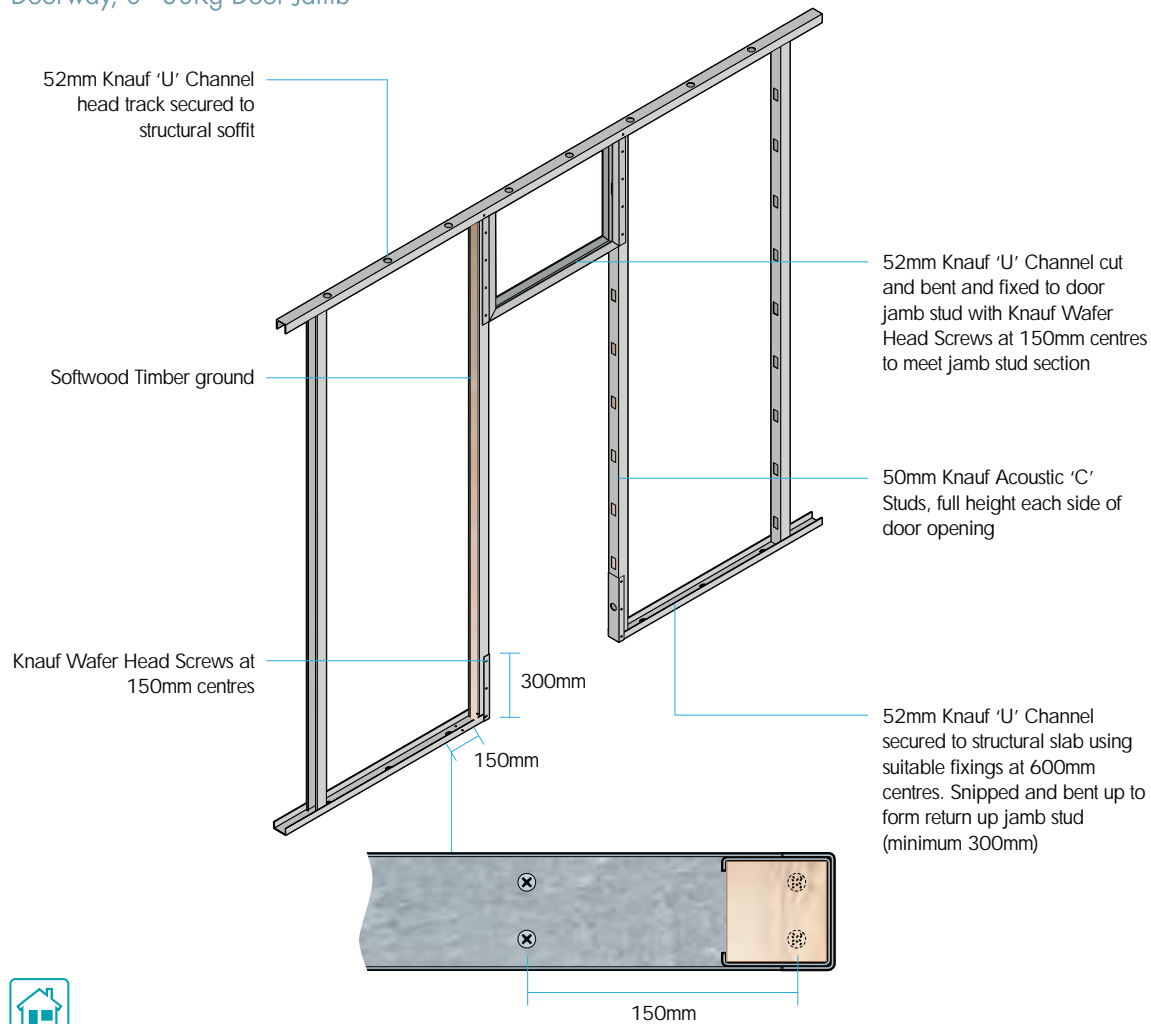


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Knauf Easybuild

Doorway, 0 - 30Kg Door Jamb

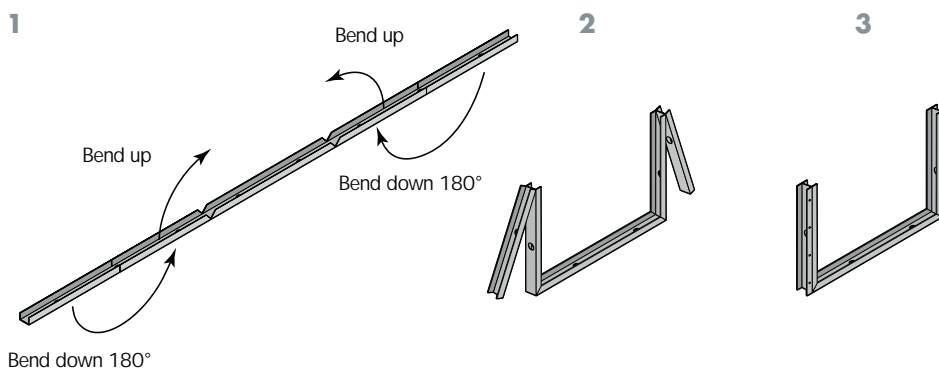
Detail 04



Folding

Forming door head where studs either side of door opening have a timber ground fitted.

Detail 05



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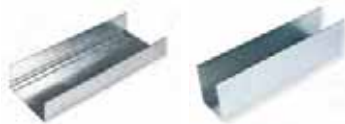
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Knauf Silent Spacesaver

Knauf Silent Spacesaver gives you the best of both worlds - high acoustic performance and narrow width. The Knauf Silent Spacesaver system is quick to install, lightweight and maximises space within buildings.

Head Track



Knauf 'U' Channel secured to soffit forms head plate.

Knauf Deep Flange 'U' Channel secured to soffit forms a deflection head.

Stud

Knauf 'I' Studs, with the Staggered Stud Clip simply twist and snap in to head and floor tracks.



Knauf 'I' Stud enables the staggered configuration.



Knauf Staggered Stud Clip.

Jointing

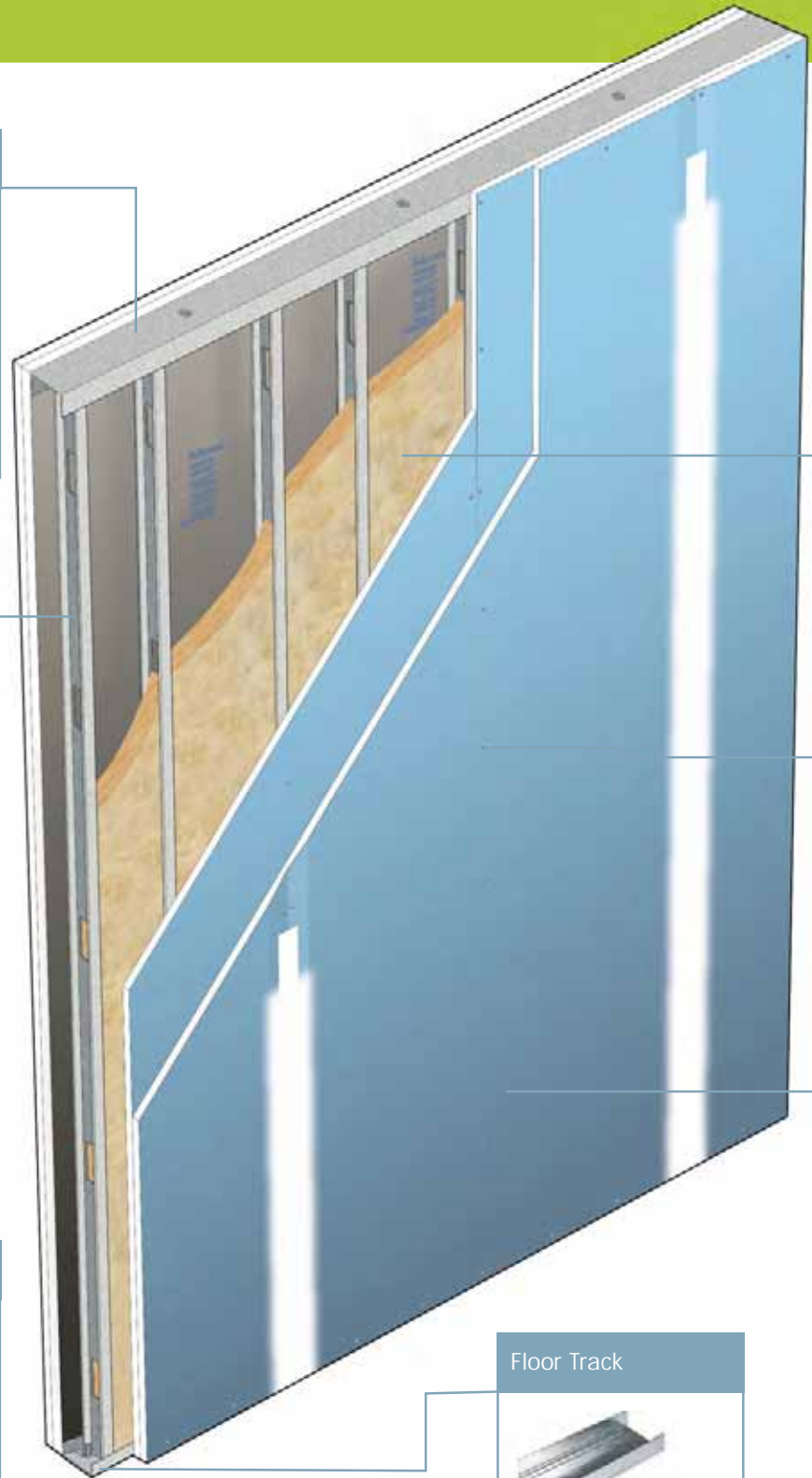


Use Knauf Joint Filler and Knauf Joint Cement Easy Sand to create strong, high quality joints.

Floor Track



Knauf 'U' Channel secured to floor.



Download
Spec Sheet

Silent Spacesaver Partitions

Knauf Silent Spacesaver is ideal in areas where floorspace is at a premium and there is a requirement for a partition to provide a high level of sound reduction.

Key Features:

- Low overall width
- High acoustic performance
- High fire resistance

Insulation



Knauf Earthwool Acoustic Roll as specified.

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Knauf Soundshield



High performance Knauf Soundshield Plasterboard reduces sound transmission through the partition.

Other Components



Knauf Movement Control Joint is an aluminium 'V' section used to bridge gaps left for expansion and contraction.

Knauf Sealant seals gaps, minimises airborne sound transmission.

Knauf Fixing Channel/Knauf Flat Fixing Plate provides fixing for horizontal joints or support for fixtures.

Knauf Sealant applicator to suit 0.9ltr cartridges of Knauf Sealant.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

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Generate specifications at:

www.knaufdrywall.co.uk

Knauf Silent Spacesaver

Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Healthcare

2 Find your performance levels

• Sound

• Dimensions

• Fire

• Impact Duty

3 Find your solution

Please note - you can find our full range of Silent Spacesaver Solutions in the Appendix on page 337.



Silent Spacesaver for Residential Projects

Silent Spacesaver SSR1/08

2 layers of 12.5mm Knauf Soundshield each side of 60mm (0.55mm) Knauf 'I' Studs staggered within 72mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity

Sound

Fire*

Max Height[†]

Width

Impact Duty^{***}

57dB(Rw)

60 mins

3500mm

122mm

Severe

Silent Spacesaver SSR2/08

2 layers of 15mm Knauf Soundshield each side of 60mm (0.55mm) Knauf 'I' Studs staggered within 72mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity

Sound

Fire*

Max Height[†]

Width

Impact Duty^{***}

60dB(Rw)

90 mins**

3500mm

132mm

Severe

* Fire ratings quoted in accordance with BS 476: Part 22:1987. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

[†] Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

** If 120 mins fire resistance is required, 2 layers of 15mm Fireshield/Impact Panel should be used. For adjustments in acoustic performance please contact Knauf Technical Services.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.



Silent Spacesaver for Commercial Projects

Silent Spacesaver SSC1/08

2 layers of 12.5mm Knauf Soundshield each side of 60mm (0.7mm) Knauf 'I' Studs staggered within 72mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity

Sound

Fire*

Max Height[†]

Width

Impact Duty^{***}

57dB(Rw)

60 mins

3800mm

122mm

Severe

Silent Spacesaver SSC2/08

2 layers of 15mm Knauf Soundshield each side of 60mm (0.7mm) Knauf 'I' Studs staggered within 72mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity

Sound

Fire*

Max Height[†]

Width

Impact Duty^{***}

60dB(Rw)

90 mins**

3800mm

132mm

Severe

* Fire ratings quoted in accordance with BS 476: Part 22:1987. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

[†] Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

** If 120 mins fire resistance is required, 2 layers of 15mm Fireshield/Impact Panel should be used. For adjustments in acoustic performance please contact Knauf Technical Services.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

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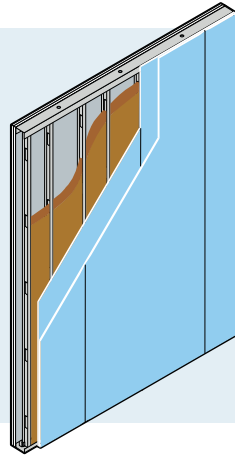
Generate specifications at:

www.knaufdrywall.co.uk

Looking for our full Knauf Silent Spacesaver performance tables?

These are Optimised Solutions designed to provide the most effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these, please see our performance tables in the appendices section on page 337 or contact our Knauf Drywall Technical team on 01795 416259.



Performance you can trust

All Knauf Silent Spacesaver partition systems utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Silent Spacesaver partition is fully covered by our performance warranty.



Silent Spacesaver for Commercial Projects continued

Silent Spacesaver SSC3/08

	Sound	Fire*	Max Height [#]	Width	Impact Duty ^{***}
2 layers of 12.5mm Knauf Soundshield each side of 92mm (0.9mm) Knauf 'I' Studs staggered within 148mm Knauf 'U' Channel. 25mm Knauf Earthwool Acoustic Roll within cavity	61dB(Rw)	60 mins	5700mm	198mm	Severe

Silent Spacesaver SSC4/08

	Sound	Fire*	Max Height [#]	Width	Impact Duty ^{***}
2 layers of 15mm Knauf Soundshield each side of 92mm (0.9mm) Knauf 'I' Studs staggered within 148mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity	62dB(Rw)	90 mins ^{**}	5700mm	208mm	Severe

* Fire ratings quoted in accordance with BS 476: Part 22:1987. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

[#] Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

^{**} If 120 mins fire resistance is required, 2 layers of 15mm Fireshield/Impact Panel should be used. For adjustments in acoustic performance please contact Knauf Technical Services.

^{***} Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.



Silent Spacesaver for Healthcare Projects

Silent Spacesaver SSH1/08

	Sound	Fire*	Max Height [#]	Width	Impact Duty ^{***}
2 layers of 15mm Knauf Soundshield each side of 60mm (0.7mm) Knauf 'I' Studs staggered within 72mm Knauf 'U' Channel. 50mm Knauf Earthwool Acoustic Roll within cavity	60dB(Rw)	90 mins ^{**}	3800mm	132mm	Severe

^{**} Fire ratings quoted in accordance with BS 476: Part 22:1987. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

[#] Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

^{**} If 120 mins fire resistance is required, 2 layers of 15mm Fireshield/Impact Panel should be used. For adjustments in acoustic performance please contact Knauf Technical Services.

^{***} Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

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Knauf Silent Spacesaver

Installation Procedures

Knauf Silent Spacesaver partitions are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Silent Spacesaver partitions must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Perimeter Framing 1,2

Knauf 'U' Channels should be used for the head and base of the partition and to form any abutments. Bed the Knauf 'U' Channels on two continuous beads of Knauf Sealant and secure with Knauf Nailable Plugs or suitable fixings at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together.

Partitions should always run full height to the structural soffit where possible.

Vertical Studs 3,4

Knauf 'I' Studs together with the Knauf Staggered Stud Clips should be positioned within the 'U' Channel at 300mm centres and arranged to achieve a stagger from within the Knauf 'U' Channel to coincide with the abutments of the boards, which will be fixed later. In general there is no requirement to secure the metal at this point as this will be achieved once the boards are screw-fixed.

Knauf 'I' Studs should be trimmed to within 5mm of the slab to soffit height.

Insulation 5

Once the studs have been located in the Knauf 'U' Channel and one side has been boarded, the insulation can be fitted either between the studs or wound through the studs depending on thickness. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or horizontally between different rolls. See detail 07 on page 63 for alternative insulation installation options.

Boarding 6

All boards should be offered up to the frame with the decorative face of the board outwards. The inner layer of boards should be offered up to the frame and fixed with Knauf Drywall Self Drilling or Jackpoint Self Drilling Screws (ensuring 10mm penetration into the stud) at 300mm centres and reduced to 200mm centres at external corners. Boarding should commence at one end fixed vertically and across the partition. The boards should be trimmed to fit accurately to abutments and the head and base, and should be tightly butted together over the centre of the stud faces. The outer layer of boards should be staggered and screw-fixed to the frame vertically with Knauf Drywall Self Drilling or Jackpoint Self Drilling Screws.

Knauf Sound Moistureshield is used for the outer layer in areas of high humidity such as bathroom and kitchen areas.



Applying two continuous beads of Knauf Sealant to perimeter framing.



Fixing Knauf 'U' Channel to form the perimeter frame.



A Knauf Staggered Stud Clip is fixed to the Knauf 'I' Stud.



Twisting Knauf 'I' Studs in position.



Installing insulation quilt horizontally between the studs.



Fixing Knauf Soundshield to the frame.



Taping and jointing for a seamless finish.



Finishing using Knauf plaster.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

Generate specifications at:

www.knaufdrywall.co.uk

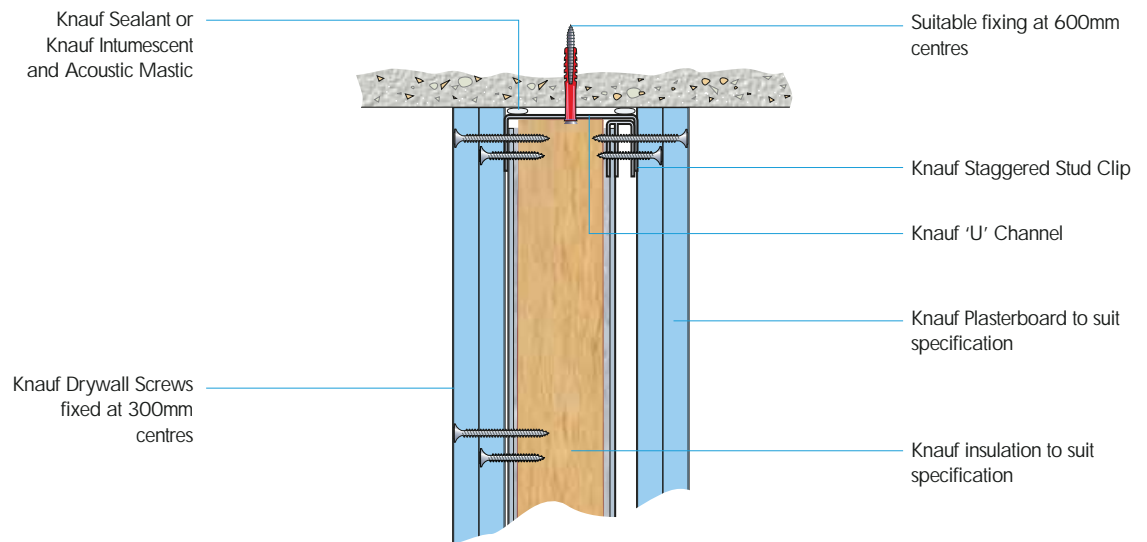
Knauf Silent Spacesaver

Application Details

These details represent some of the most common design situations relevant to the Knauf Silent Spacesaver partition system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

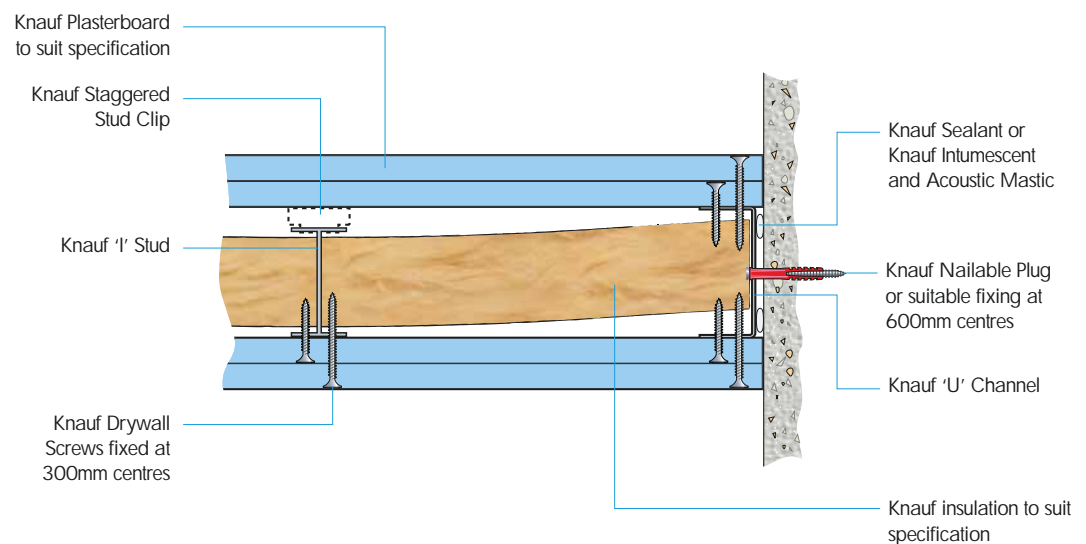
Head Detail

Detail 01



Abutment

Detail 02



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Where you see these icons, in a detail, that detail is particularly relevant to that sector.

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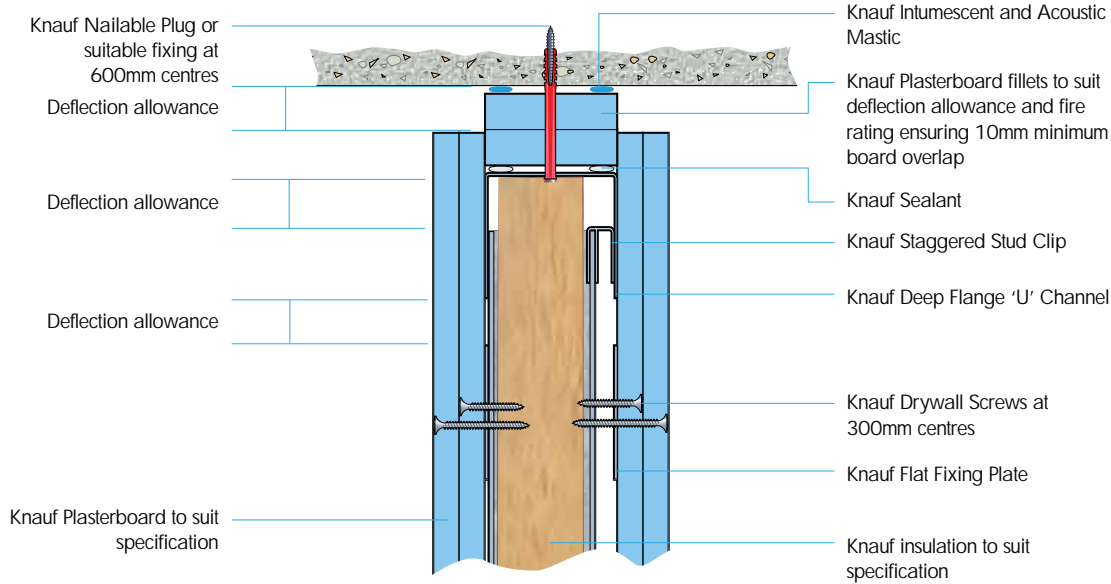
www.knaufdrywall.co.uk

Knauf Silent Spacesaver

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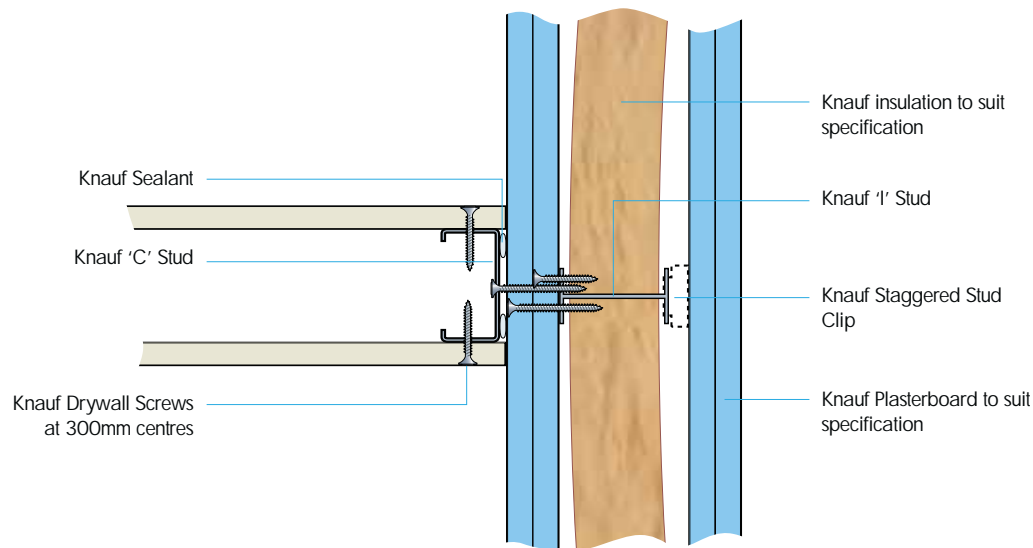
Deflection Head, up to 60 Minutes

Detail 03



T Junction

Detail 04



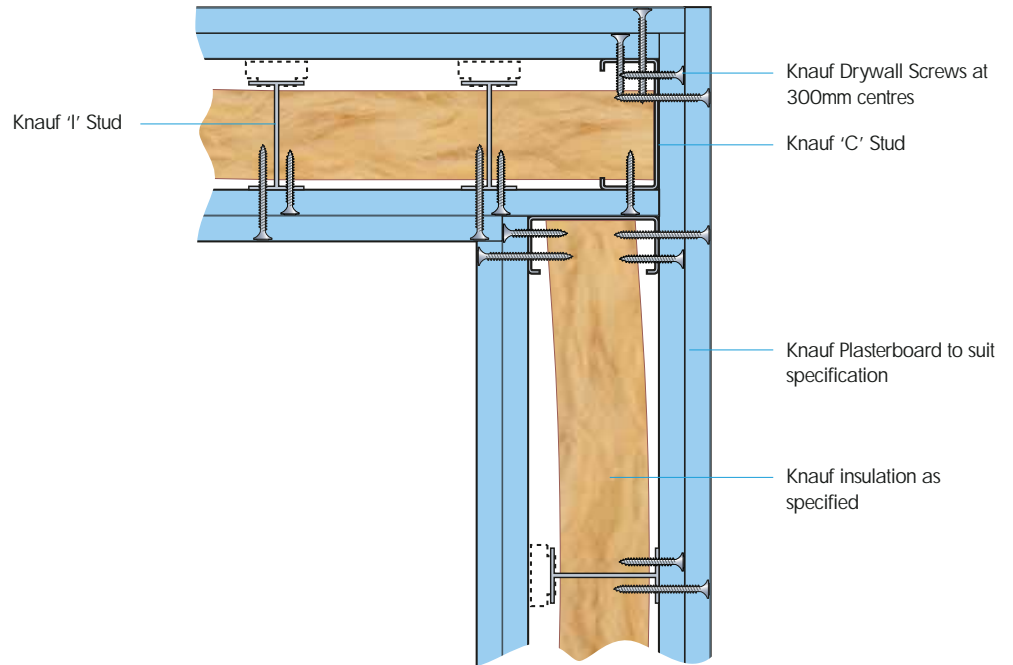
Note: See Performer section for generic penetration and socket details on page 14.

Generate specifications at:
www.knaufdrywall.co.uk

Knauf Silent Spacesaver

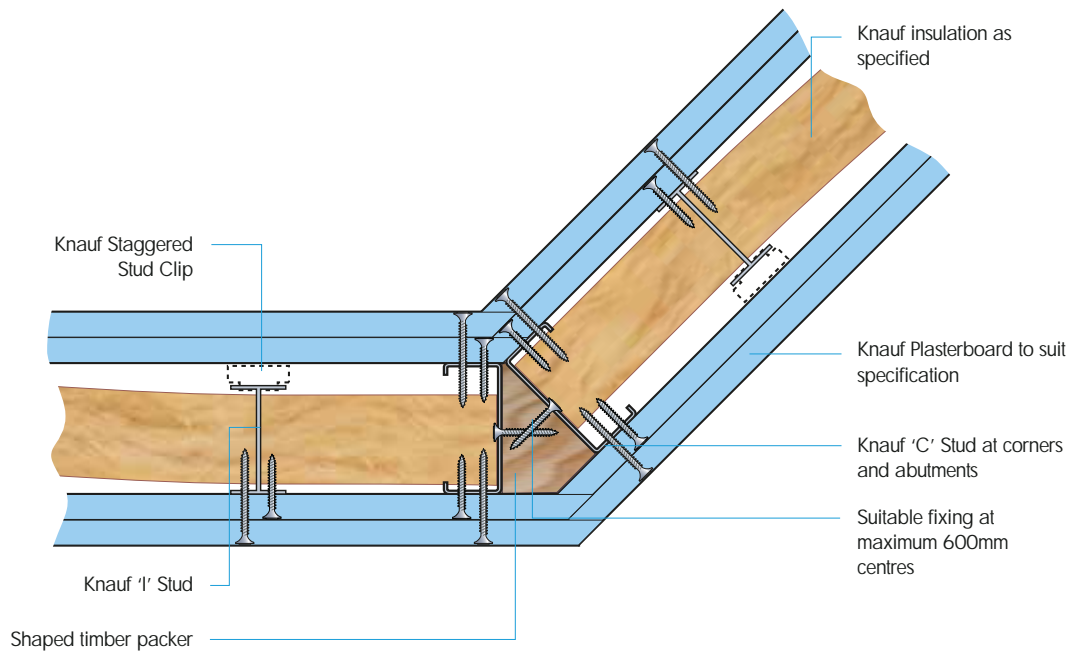
90° Corner

Detail 05



Splayed Corner

Detail 06



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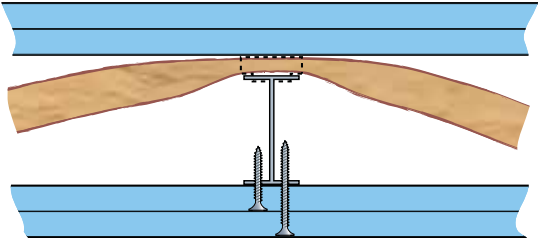
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Knauf Silent Spacesaver

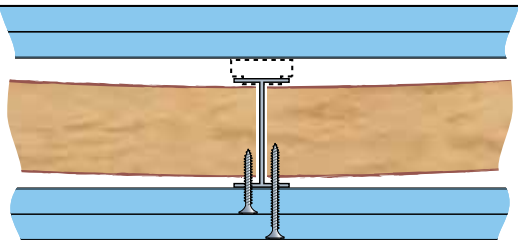
Alternative Insulation Installation Options

Detail 07

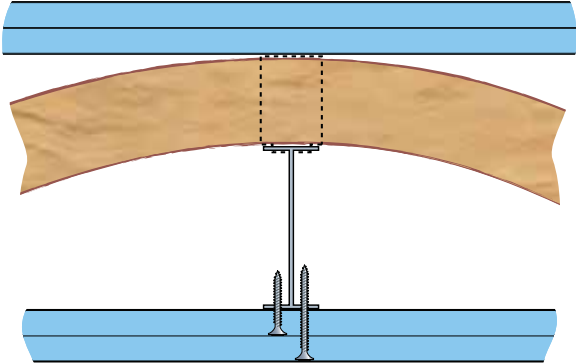
25mm Knauf Earthwool Acoustic Roll, 60mm Knauf 'I' Studs within 72mm Knauf 'U' Channel:



50mm Knauf Earthwool Acoustic Roll, 60mm Knauf 'I' Studs within 72mm Knauf 'U' Channel:



50mm Knauf Earthwool Acoustic Roll, 92mm Knauf 'I' Studs within 148mm Knauf 'U' Channel:



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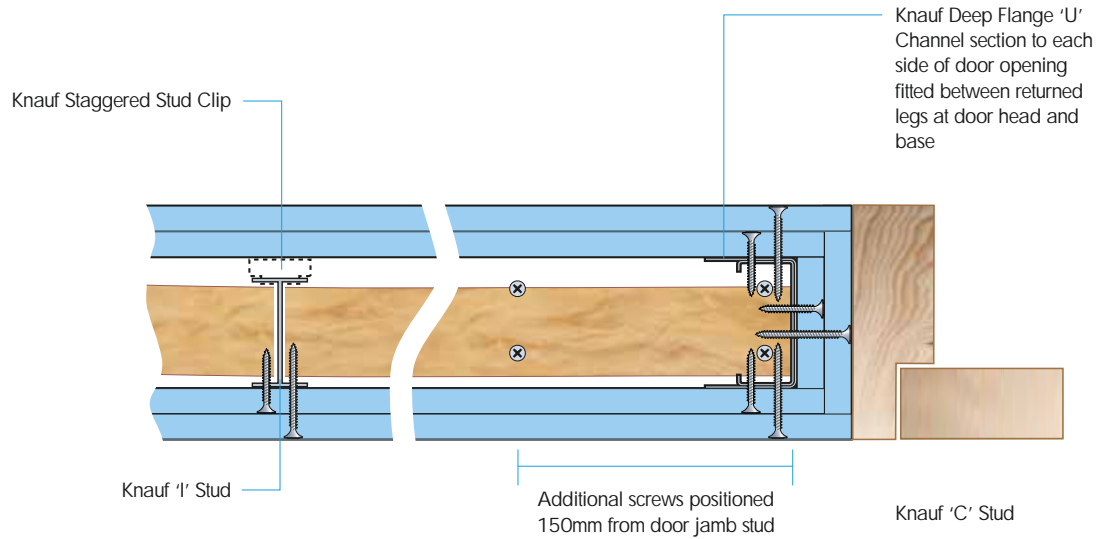
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Knauf Silent Spacesaver

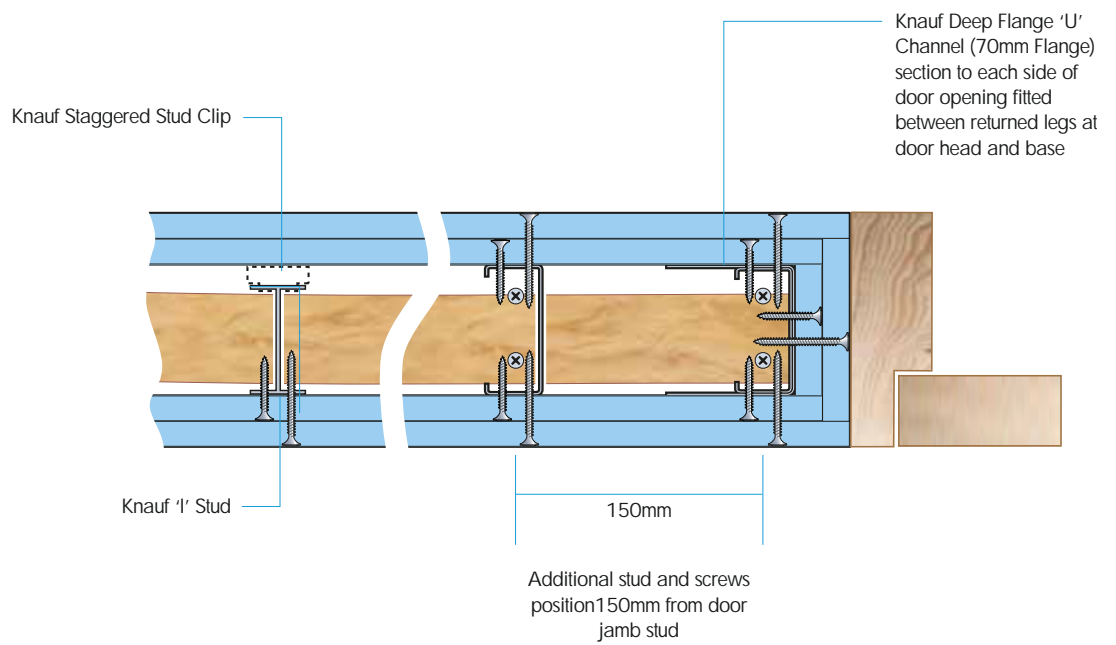
0-60kg Door Jamb

Detail 08



60-100kg Door Jamb

Detail 09



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Knauf Isolator

The Knauf Isolator system's twin frames provide separation which, combined with high performance Knauf Plasterboards and Knauf insulation, realise exceptional acoustic sound reduction of up to 76dB(Rw).

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Head Track



Knauf 'U' Channel secured to soffit forms head plate.

Knauf Deep Flange 'U' Channel for use when constructing deflection head detail.

Stud



Knauf 'C' Studs simply twist and snap in to head and floor tracks.

Angle Sections



Knauf Angle Sections are used to retain mineral wool packing in deflection head details.

Knauf Plasterboard

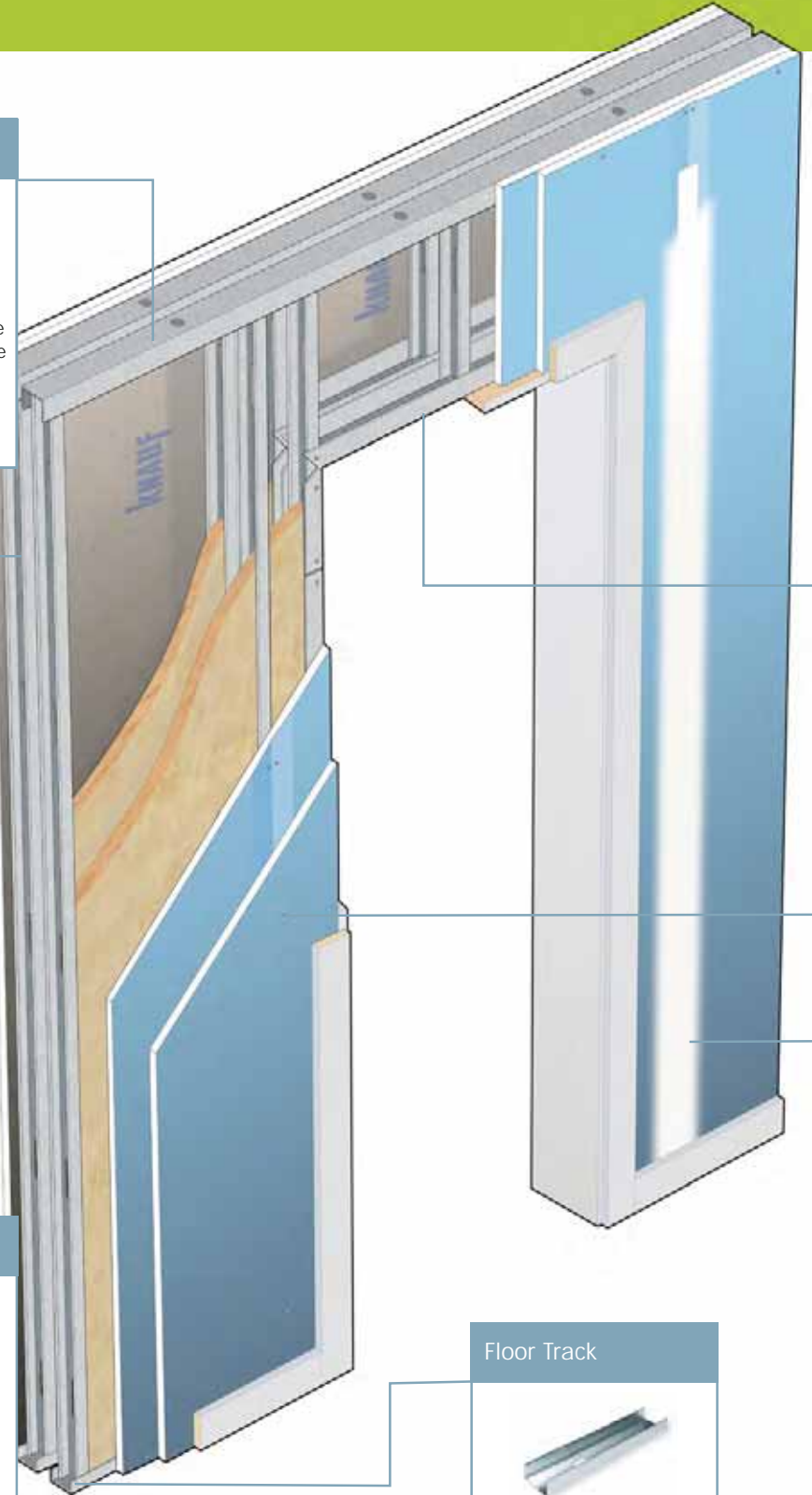


The full range of acoustic, fire resistant, moisture resistant, impact resistant and carbon neutral boards to provide performance and design solutions.

Floor Track



Knauf 'U' Channel secured to floor.



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Spec Sheet

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Isolator Partitions

Knauf Isolator can be used in residential or commercial sectors to provide the best possible sound isolation and privacy whilst enjoying all the benefits of dry wall construction.

Key Features:

- High acoustic properties
- Vertical service runs are easily accommodated within the metal framework
- Suitable for impact duty requirements up to Severe Duty

Door Head



Knauf 'U' Channel snipped, bent, returned and fixed to vertical stud.

Fixings



Knauf Drywall Screws are self drilling and self tapping, and designed to work perfectly with Knauf Plasterboards.

Jointing



Knauf Joint Cement Lite Easy Sand provides a superb finish with the minimum of effort.

Other Components



Knauf Movement Control Joint is an aluminium 'V' section used to bridge gaps left for expansion and contraction.



Knauf Sealant seals gaps, minimises airborne sound transmission.

Knauf Fixing Channel/Knauf Flat Plate provides fixing for horizontal joints or support for fixtures.

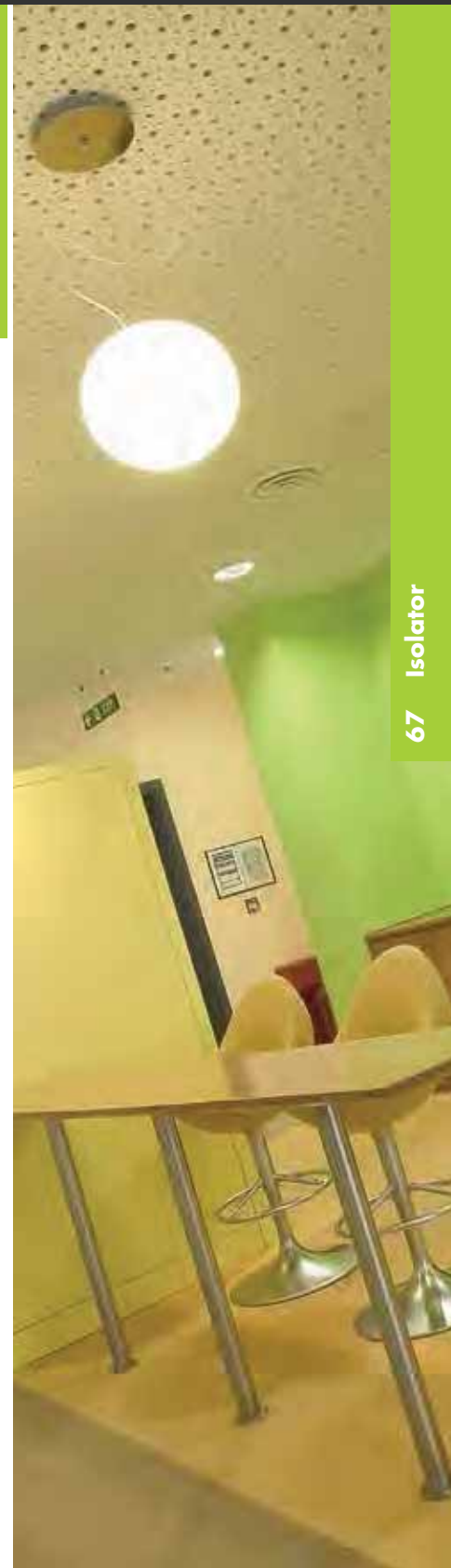


Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.



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Our range of Partition Solutions

includes:

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Easybuild	page 48
Silent Spacesaver	page 54
Shaftwall	page 78

Generate specifications at:

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Knauf Isolator

Fast track to your optimum solution

1 Choose your sector



Residential



Commercial

2 Find your performance levels

• Sound

• Dimensions

• Fire

• Impact Duty

3 Find your solution

Please note - you can find our full range of Isolator Solutions in the Appendix on page 336.



Isolator for Residential Projects

Isolator ILR1/08	Sound	Fire*	Max Height	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 50mm Knauf 'C' Studs at 600mm centres with 2 layers of 25mm Knauf Earthwool Acoustic Roll within cavity	63dB(Rw)	90 mins	2600mm	170mm	Severe
Isolator ILR2/08	Sound	Fire*	Max Height	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 50mm Knauf 'I' Studs at 600mm centres with 2 layers of 25mm Knauf Earthwool Acoustic Roll within cavity	63dB(Rw)	90 mins	3100mm	170mm	Severe
Isolator ILR3/08	Sound	Fire*	Max Height	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with 2 layers of 25mm Knauf Earthwool Acoustic Roll within cavity	65dB(Rw)	90 mins	3000mm	210mm	Severe
Isolator ILR4/08	Sound	Fire*	Max Height	Width	Impact Duty***
2 layers of 12.5mm Knauf Soundshield each side of 70mm Knauf 'C' Studs at 600mm centres with 50mm of Knauf Universal Slab RS33 insulation within cavity	45dB (DnT,w+Ctr)**	60 mins	3000mm	250mm	Severe

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

** Acoustic performance taken from compliance to Robust Detail E-WS-1.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

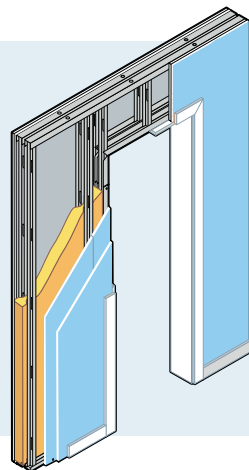
Download Spec Sheet

Generate specifications at:
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Looking for our full Knauf Isolator performance tables?

These are Optimised Solutions designed to provide the most effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these, please see our performance tables in the appendices section on page 336 or contact our Knauf Drywall Technical team on 01795 416259.



Performance you can trust

All Knauf Isolator Partition systems utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Isolator Partition is fully covered by our performance warranty.



Isolator for Commercial Projects

Isolator ILC1/08	Sound	Fire*	Max Height	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 70mm Knauf 'I' Studs at 600mm centres with 2 layers of 25mm Knauf Earthwool Acoustic Roll within cavity	65dB(Rw)	90 mins	4300mm	210mm	Severe
Isolator ILC4/11	Sound	Fire*	Max Height†	Width	Impact Duty***
2 layers of 15mm Knauf Soundshield each side of 92mm Knauf 'I' Studs at 600mm centres with 100mm Knauf Mineral Wool (min.10kg/m ³) within cavity	69dB(Rw)	90 mins	5700mm	300mm	Severe
Isolator ILC5/11	Sound	Fire*	Max Height†	Width	Impact Duty***
3 layers of 15mm Knauf Soundshield each side of 92mm Knauf 'I' Studs at 600mm centres with 100mm Knauf Mineral Wool (min.10kg/m ³) within cavity	75dB(Rw)	120 mins	5700mm	550mm	Severe
Isolator ILC6/11	Sound	Fire*	Max Height†	Width	Impact Duty***
3 layers of 15mm Knauf Soundshield each side of 92mm Knauf 'I' Studs at 600mm centres with 2 layers of 100mm Knauf Mineral Wool (min.10kg/m ³) within cavity	76dB(Rw)	120 mins	5700mm	550mm	Severe

*Fire ratings quoted in accordance with BS 476: Part 22: 1987. For ratings in accordance with EN 1364-1: 1999, please contact Knauf Technical Services.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

† Maximum height data relates to the use of unbraced Knauf 'I' Stud systems.

Note: For data in relation to the use of Knauf 'C' Studs, braced at maximum 1500mm centres with acoustic braces (by others), please contact Knauf Drywall Technical Services.

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Knauf Isolator

Installation Procedures

Knauf Isolator partitions are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Isolator partitions must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Perimeter Framing **1,2**

Knauf 'U' Channels should be used for the head and base of the partition. Knauf 'C' Studs should be used to form any abutments and to frame openings. Bed each section on two continuous beads of Knauf Sealant and secure with Knauf Nailable Plugs or suitable fixings at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together. Replace Knauf 'U' Channel with Knauf Deep Flange 'U' Channel when forming a deflection head.

Partitions should always run full height up to the structural soffit.

Vertical Studs **3**

Studs should be positioned within the channels to coincide with the abutments of the boards, which will be fixed later. The centres (either 300, 400 or 600mm) depend on the performance requirements. The studs of the separate frames may require bracing using Knauf Fixing Channel, and acoustic bracing (by others), at maximum 1500mm centres depending on the height of the partition - please check with Knauf Drywall Technical Services.

Knauf 'C' Studs should be trimmed to within 5mm of the slab to soffit height. For deflection heads only: studs should be cut short to allow for required clearance within Knauf Deep Flange 'U' Channel. This should be no more than half the flange length of the Deep Flange 'U' Channel.

Knauf 'C' Studs can be extended by forming an overlap, boxing them at that point and securing them with Knauf Wafer Head Jackpoint Screws. The overlap must be at least 600mm.

Insulation **4**

Once the studs have been located in the Knauf 'U' Channels and one side has been boarded, the specified Knauf insulation can be inserted between the studs horizontally. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or horizontally between different rolls.

Support for Horizontal Joints in Facings

To back horizontal joints in outer board layers, Knauf Fixing Channel or Knauf Flat Fixing Plate should be fitted across the face of all studs, secured with 2 Knauf Wafer Head Jackpoint Screws per stud to both faces.

Doorways

The head is formed with Knauf 'U' Channel, bent back and screw fixed with Knauf Wafer Head Jackpoint Screws to the studs.

Boarding **5,6**

All boards should be offered up to the frame with the face of the board outwards, and secured with Knauf Drywall Screws at 300mm centres. Fixing centres should be reduced to 200mm at corners.

Boarding should commence at one end and work across the partition. At head, foot and abutments, board edges should be bedded onto continuous beads of Knauf Sealant. Board joints in multiple layers should be staggered both vertically and horizontally by 600mm.



1 Applying continuous beads of Knauf Sealant to perimeter framing.



2 After fixing the head track, the floor track should be positioned by using a vertical stud and a spirit level.



3 Bracing Knauf 'C' Studs with Knauf Fixing Channel at maximum 1500mm vertical centres (if required).



4 Inserting Knauf insulation quilt between the Knauf 'C' Studs.



5 Fixing Knauf Plasterboard to the Knauf 'C' Studs.



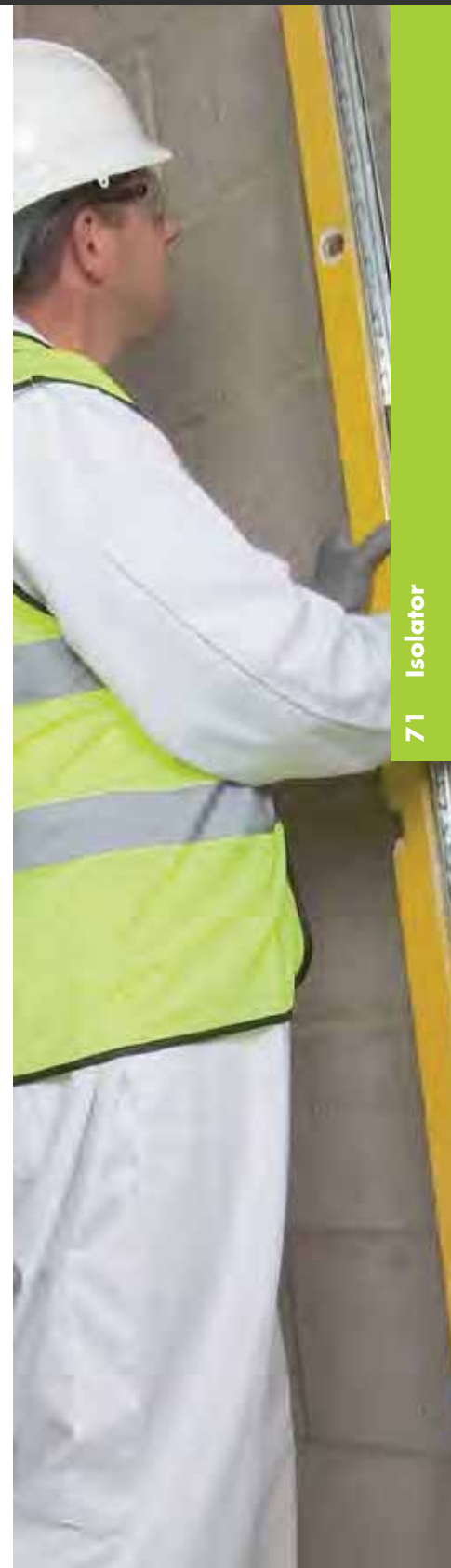
6 Stagger the boards, to ensure all joints overlap.



7 Taping and jointing for a seamless finish.



8 Finishing using Knauf plaster.



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We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

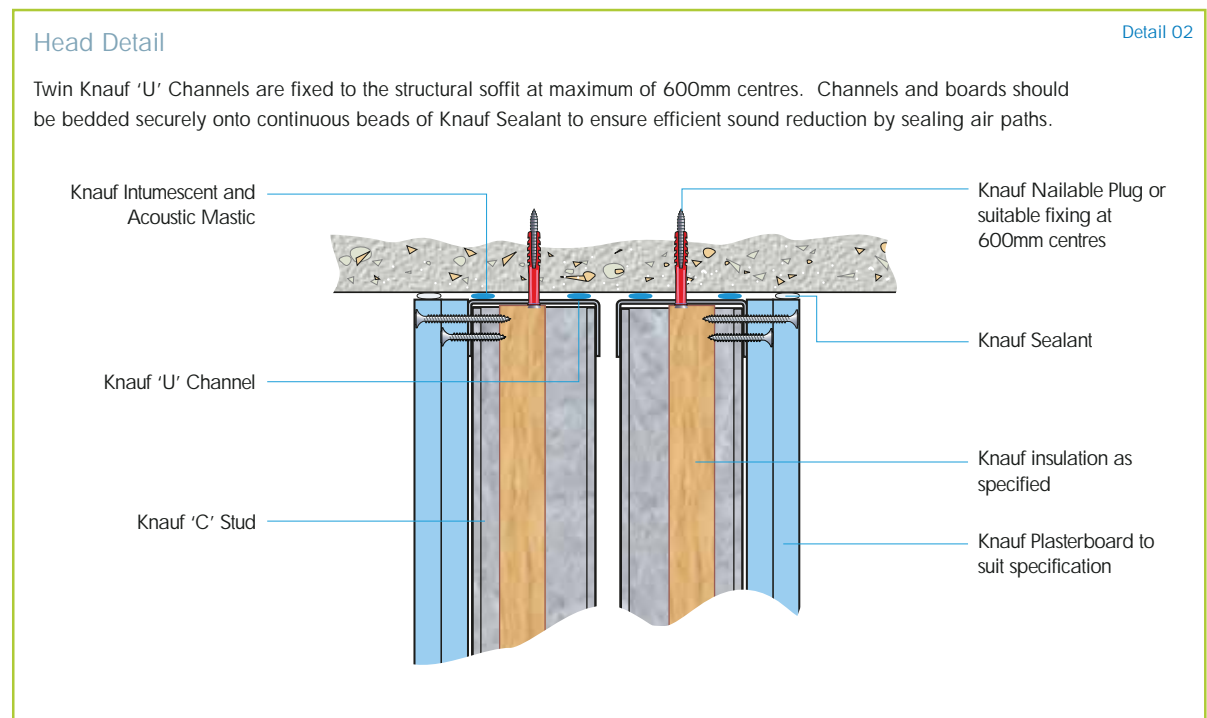
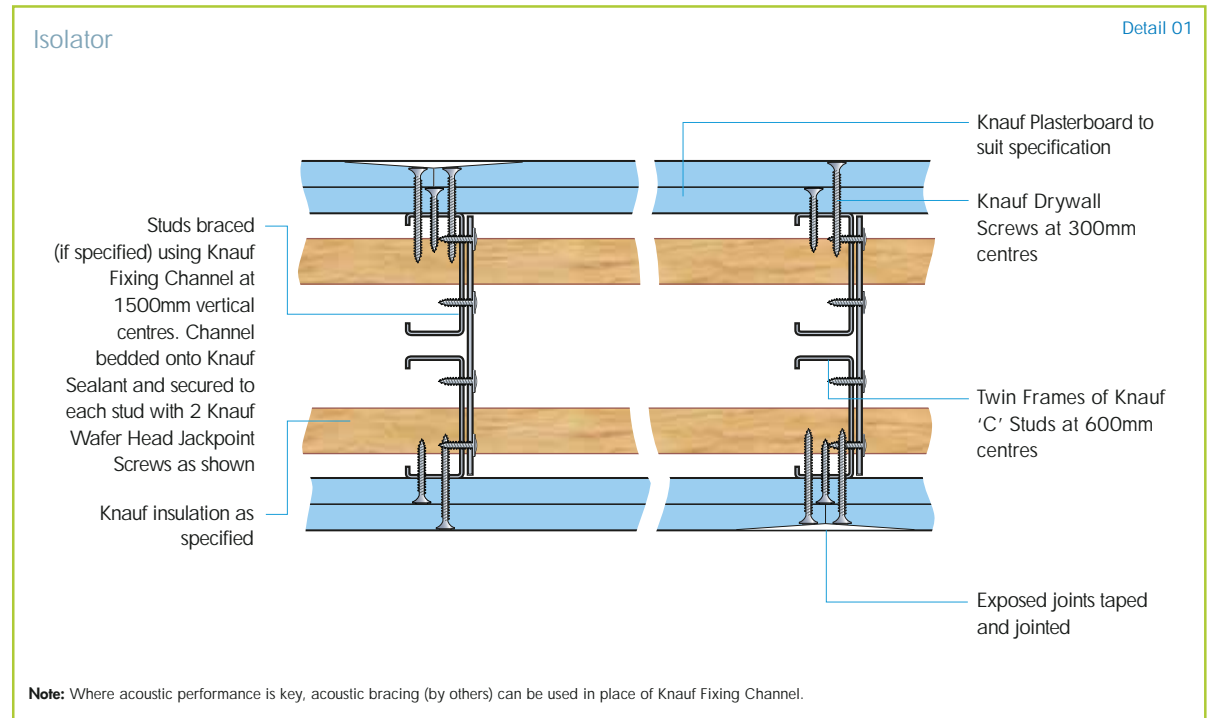
Generate specifications at:

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Knauf Isolator

Application Details

These details represent some of the most common design situations relevant to the Knauf Isolator partition system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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Spec Sheet



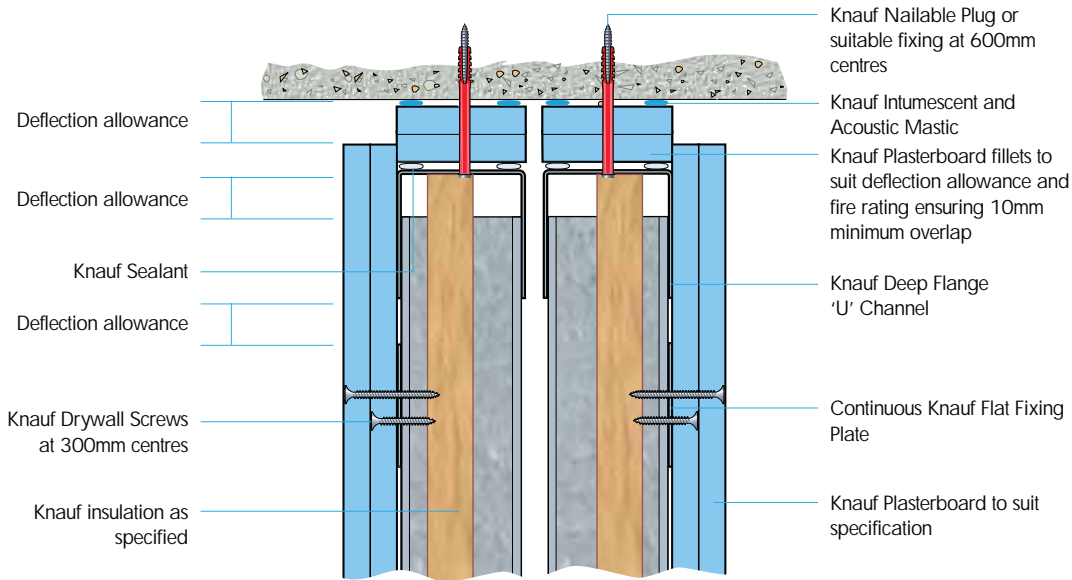
Where you see these icons in a detail, that detail is particularly relevant to that sector.

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Knauf Isolator

Deflection Head, 90 Minutes Fire Resistance

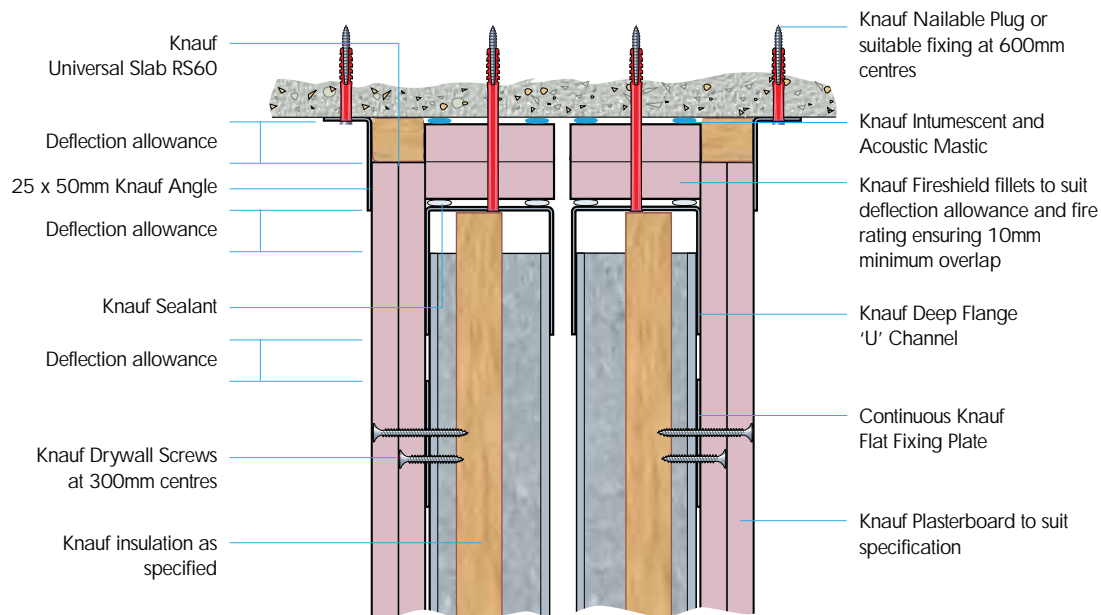
Detail 03



Note: Maximum deflection to be no more than half the flange length in a downward direction.

Deflection Head, 120 Minutes Fire Resistance

Detail 04



Note: Maximum deflection to be no more than half the flange length in a downward direction.

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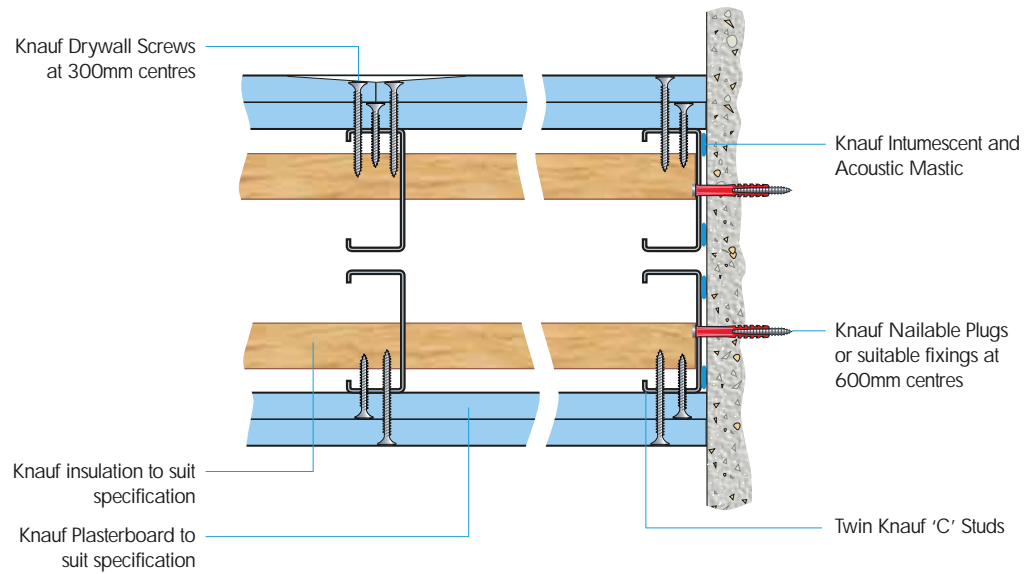
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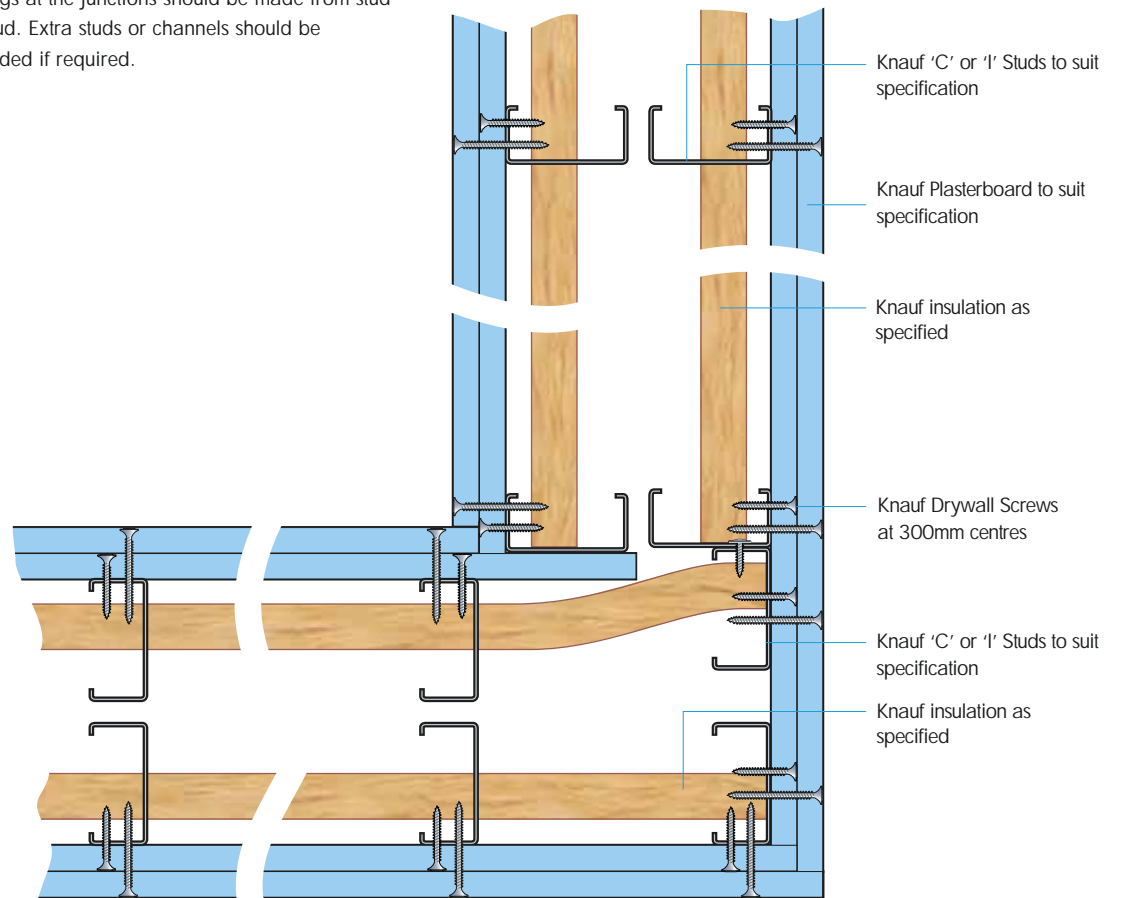
Detail 05



90° Corner

Detail 06

Fixings at the junctions should be made from stud to stud. Extra studs or channels should be included if required.



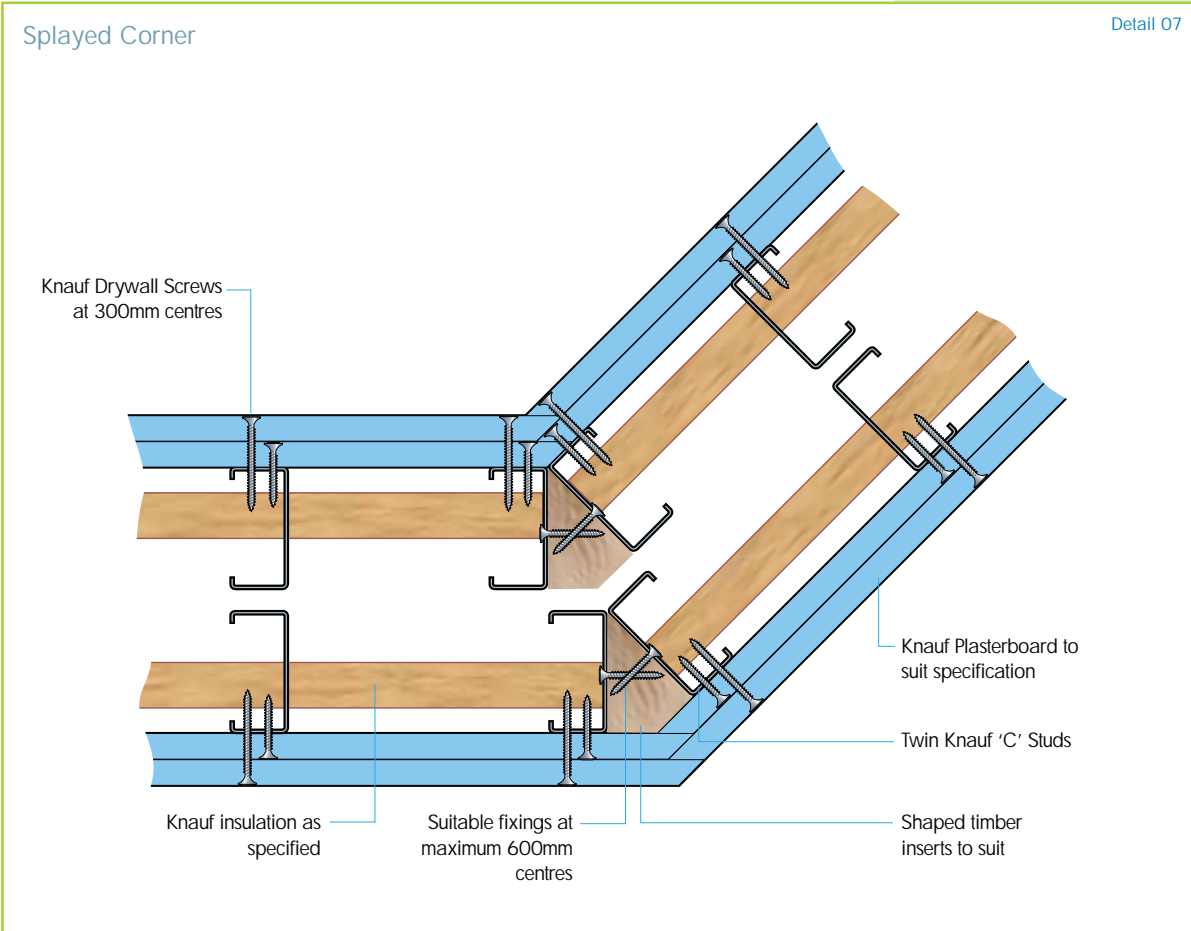
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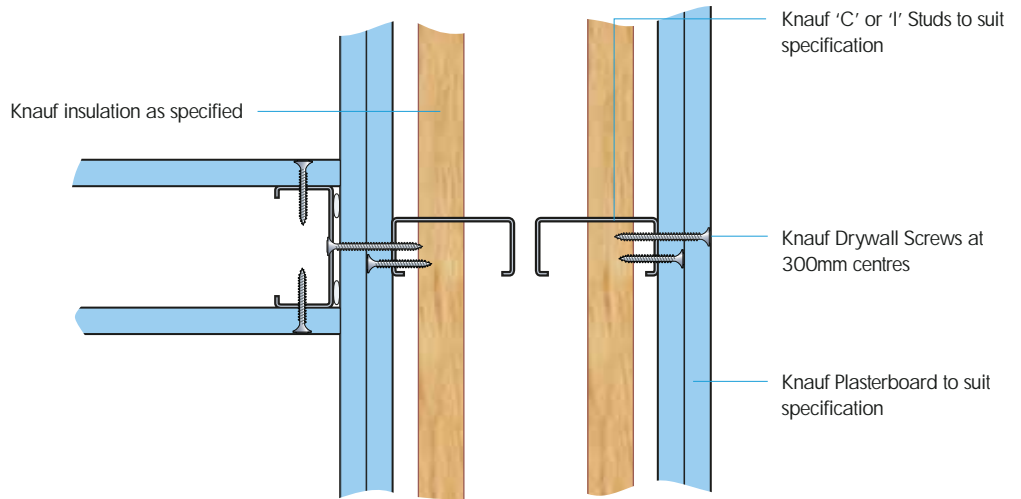
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T-Junction

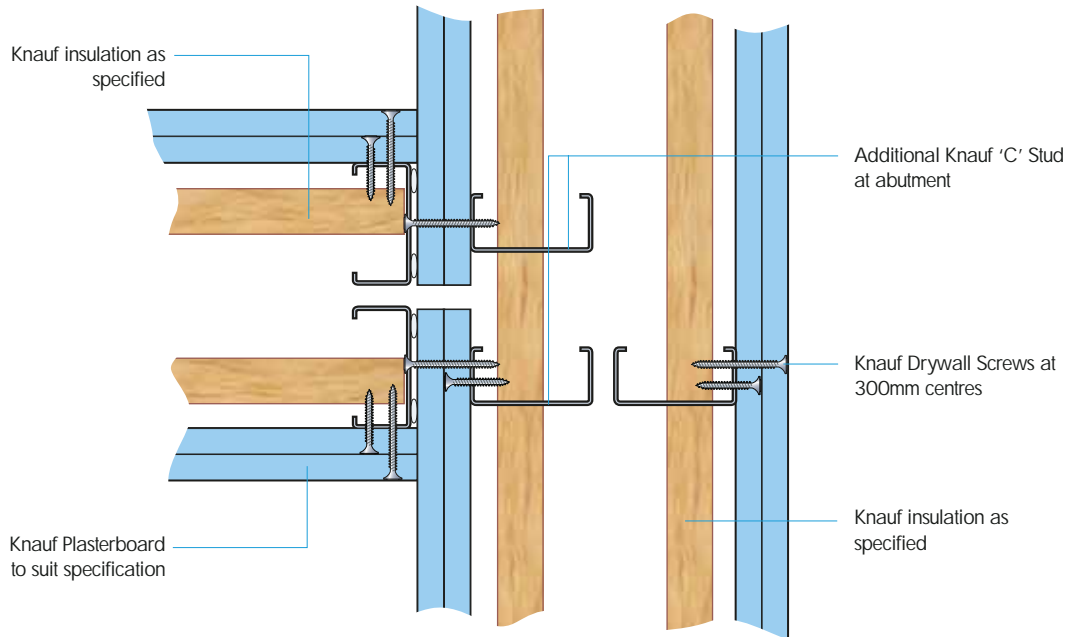
Detail 08

Fixings at the junction should be made from stud to stud. Extra studs should be included if required.



T-Junction

Detail 09



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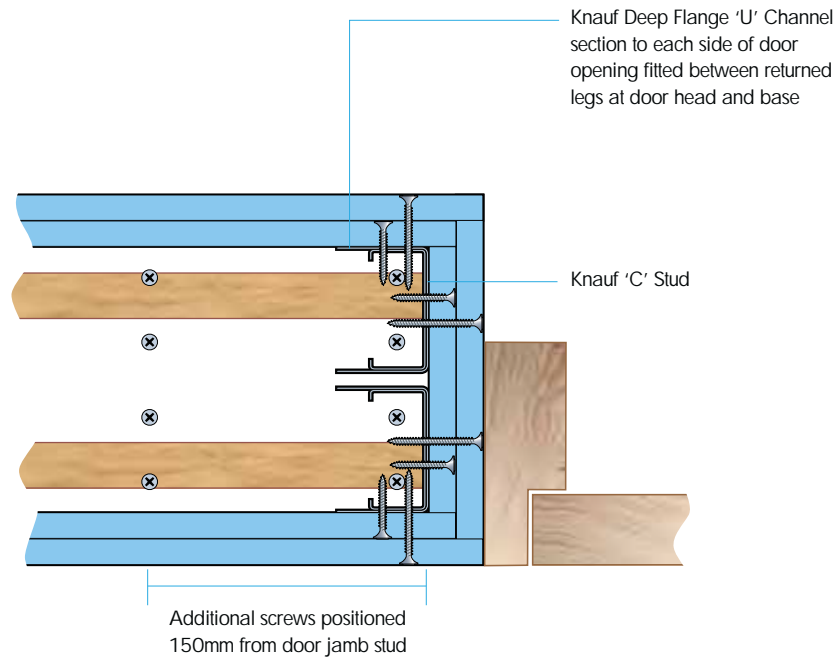
Where you see these icons in a detail, that detail is particularly relevant to that sector.

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Knauf Isolator

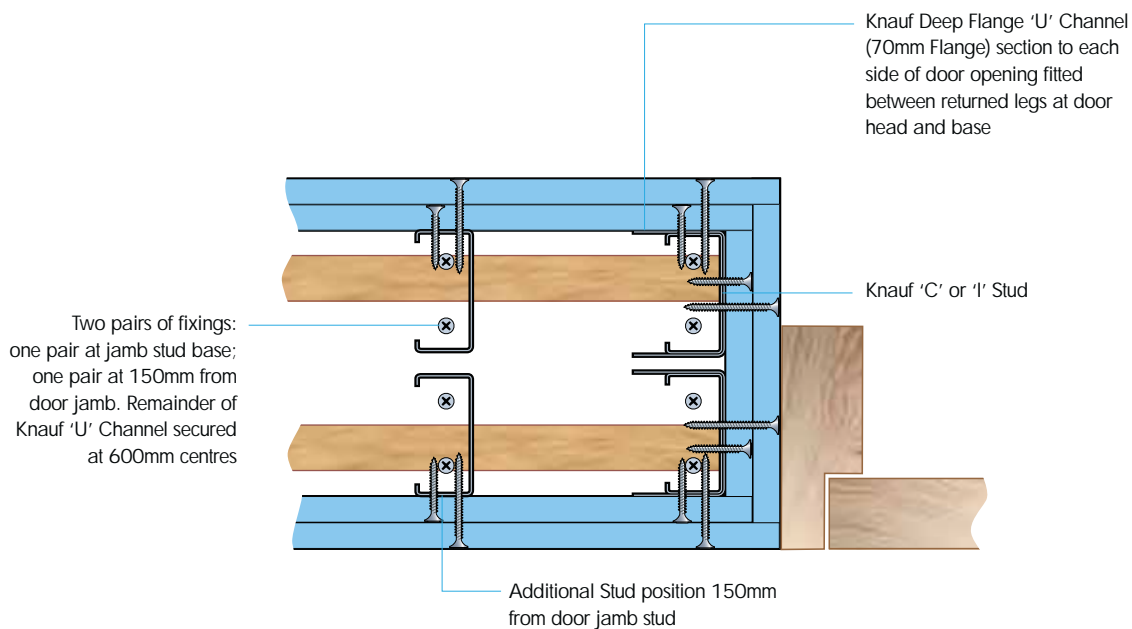
Door Jamb 0 - 60Kg

Detail 10



Door Jamb 60 - 100Kg

Detail 11



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Knauf Shaftwall

Knauf Shaftwall is our innovative system to form enclosures around service and lift shafts whilst working from one side. The unique Knauf 'C-T' Stud makes this possible with a minimum of components.

Head Track



Knauf 'J' Channel secured to soffit forms head plate.



Knauf Deep Flange 'U' Channel for forming deflection heads.

Stud

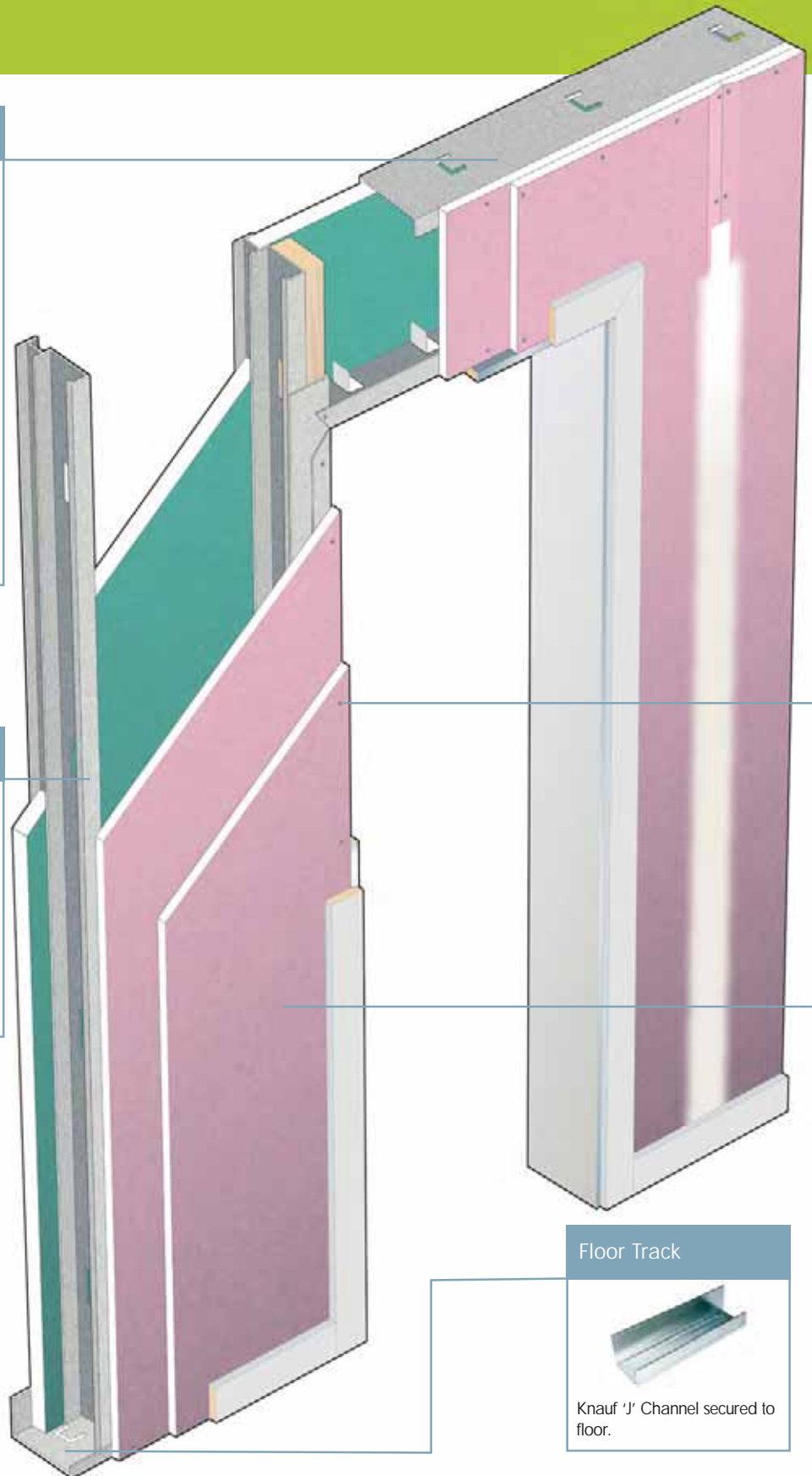


Knauf 'C-T' Studs. This unique section enables construction from one side with the minimum of components.

Floor Track



Knauf 'J' Channel secured to floor.



Download
Spec Sheet

Shaftwall Partitions

Knauf Shaftwall is perfect for all situations where access from one side is restricted, giving a high fire performance whilst being simple to construct.

Key Features:

- Quickly constructed from one side
- Up to 2 hours fire resistance
- Robust
- Proven in tall buildings across the UK
- Uses our unique and clever Knauf 'C-T' Stud

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Plasterboard



Knauf Fireshield
Knauf Core Board
Knauf Fire Moistureshield
Knauf Impact Panel

Other Components



Knauf Movement Control Joint is an aluminium 'V' section used to bridge gaps left for expansion and contraction.



Knauf Sealant seals gaps, minimises airborne sound transmission.



Knauf Fixing Channel/Knauf Flat Plate provides fixing for horizontal joints or support for fixtures.



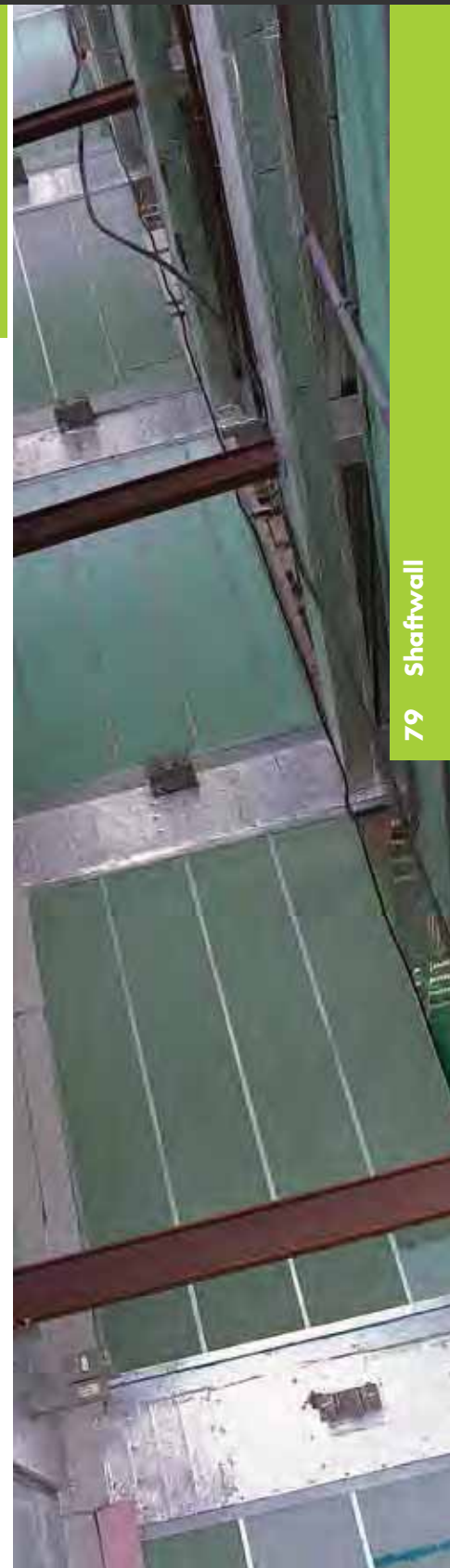
Knauf Core Board Channel used to provide fixing for horizontal Core Board joints.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.



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Our range of Partition Solutions

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Knauf Shaftwall

Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Healthcare



Education

2 Find your performance levels

• Sound

• Dimensions

• Fire

• Impact Duty

3 Find your solution

Please note - you can find our full range of Shaftwall Solutions in the Appendix on page 337.



Shaftwall solutions



Shaftwall SW1/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	34dB(Rw)	60 mins	4300mm	77mm	Severe
Shaftwall SW2/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	37dB(Rw)	90 mins	4900mm	87mm	Severe
Shaftwall SW3/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	41dB(Rw)	120 mins	5000mm	92mm	Severe
Shaftwall SW4/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, and 25mm Knauf Earthwool Acoustic Roll within cavity	41dB(Rw)	60 mins	4300mm	77mm	Severe
Shaftwall SW5/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	45dB(Rw)	90 mins	4900mm	87mm	Severe
Shaftwall SW6/08	Sound	Fire*	Max Height [†]	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 60mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	46dB(Rw)	120 mins	5000mm	92mm	Severe

* Fire ratings quoted in accordance with BS 476 Part 22: 1987 (Integrity only). The temperature of the exposed flange of the C-T Stud may exceed the requirements of BS476:Part 22:1987 within the quoted fire test period. Relaxation should be sought from the approving Authority on the basis that no combustible materials are likely to be stored adjacent to the structure where the full insulation period is required. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

[†] Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

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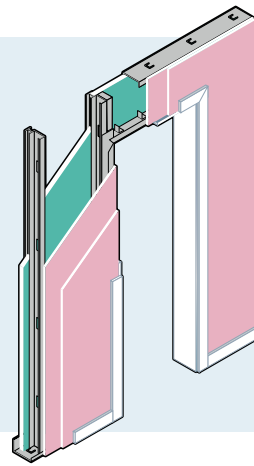
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Knauf Shaftwall Optimised Solutions

These are our Optimised Solutions; should your requirements fall outside these then please contact our Knauf Drywall Technical team who can provide detailed specification guidance for your project.

Knauf Drywall Technical Services:
01795 416259



Performance you can trust

All Knauf Shaftwall partitions utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channel and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system.

Insisting on genuine Knauf components throughout will ensure your Knauf Shaftwall partition is fully covered by our performance warranty.



Shaftwall solutions continued:



Shaftwall SW7/08	Sound	Fire*	Max Height†	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	40dB(Rw)	60 mins	6200mm	109mm	Severe
Shaftwall SW8/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	42dB(Rw)	90 mins	6400mm	119mm	Severe
Shaftwall SW9/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	43dB(Rw)	120 mins	6700mm	124mm	Severe
Shaftwall SW10/08	Sound	Fire*	Max Height†	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	45dB(Rw)	60 mins	6200mm	109mm	Severe
Shaftwall SW11/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	46dB(Rw)	90 mins	6400mm	119mm	Severe
Shaftwall SW12/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 92mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	48dB(Rw)	120 mins	6700mm	124mm	Severe

* Fire ratings quoted in accordance with BS 476 Part 22: 1987 (Integrity only). The temperature of the exposed flange of the C-T Stud may exceed the requirements of BS476:Part 22:1987 within the quoted fire test period. Relaxation should be sought from the approving Authority on the basis that no combustible materials are likely to be stored adjacent to the structure where the full insulation period is required. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

† Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

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Please note - you can find our full range of Shaftwall Solutions in the Appendix on page 337.



Shaftwall solutions continued:



Shaftwall SW13/08	Sound	Fire*	Max Height†	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	41dB(Rw)	60 mins	7400mm	163mm	Severe
Shaftwall SW14/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	45dB(Rw)	90 mins	7900mm	173mm	Severe
Shaftwall SW15/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs	45dB(Rw)	120 mins	8000mm	178mm	Severe
Shaftwall SW16/08	Sound	Fire*	Max Height†	Width	Impact Duty**
1 layer of 15mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	46dB(Rw)	60 mins	7400mm	163mm	Severe
Shaftwall SW17/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 12.5mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	50dB(Rw)	90 mins	7900mm	173mm	Severe
Shaftwall SW18/08	Sound	Fire*	Max Height†	Width	Impact Duty**
2 layers of 15mm Knauf Fireshield attached to non-shaft side of 146mm Knauf C-T Studs at 600mm centres, with 19mm Knauf Core Board secured between studs, with 25mm Knauf Earthwool Acoustic Roll within cavity	50dB(Rw)	120 mins	8000mm	178mm	Severe

* Fire ratings quoted in accordance with BS 476 Part 22: 1987 (Integrity only). The temperature of the exposed flange of the C-T Stud may exceed the requirements of BS476:Part 22:1987 within the quoted fire test period. Relaxation should be sought from the approving Authority on the basis that no combustible materials are likely to be stored adjacent to the structure where the full insulation period is required. For ratings in accordance with EN1364-1: 1999, please contact Knauf Technical Services.

† Maximum height calculated based on a limiting deflection of L/240 at 200Pa.

** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B, C, D, E.

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Knauf Shaftwall

Installation Procedures

Knauf Shaftwall partitions are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Shaftwall and Firefighting Shaftwall must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

Perimeter Framing **1,2**

Knauf 'J' Channels should be used for the head, base and any abutments. Bed each section onto two continuous beads of Knauf Intumescent and Acoustic Mastic and secure with suitable fixings at maximum 600mm centres and 50mm from ends of channels or studs. Separate channels forming the perimeter do not need to be joined, but should be tightly butted together.

Replace Knauf 'J' Channel with a Knauf Deep Flange 'U' Channel when forming a deflection head.

Vertical Studs

Knauf 'C-T' Studs should be positioned within the channels in sequence with Knauf Core Board, maintaining stud centres at maximum 600mm. In general, there is no requirement to secure the studs at this point as this will be achieved once the boards are screw fixed.

Knauf 'C-T' Studs should be trimmed to within 5mm of the slab to soffit height. For deflection heads only: studs should be cut short to a maximum of half the flange length of the Knauf Deep Flange 'U' Channel.

Whenever possible, full height Knauf 'C-T' Studs should be used. If splicing is necessary, then use Knauf 'C' Studs to extend 1200mm above and below the Knauf 'C-T' joint, fixed through with a minimum of 6 Knauf Wafer Head Jackpoint Screws.

See detail 11 on page 91.

Insulation (if required)

Once the 'C-T' studs have been located in the Knauf 'J' Channels and Knauf Core Board has been inserted, Knauf Earthwool Acoustic Roll can be inserted between the studs vertically. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or vertically between different rolls.

Support for Horizontal Joints in Facings

For the Knauf Fireshield decorative facing, Knauf Fixing Channel or Knauf Flat Fixing Plate should be fitted across the face of all studs secured with 2 Knauf Wafer Head Jackpoint Screws per stud to back the horizontal joints.

Doorways

The head is formed with Knauf 'J' Channel bent and screw fixed with Knauf Wafer Head Jackpoint Screws to Knauf Deep Flange 'U' Channels.

For doors weighing up to 50kg, Knauf Deep Flange 'U' Channels are used for the frame openings inserted with treated timber of 50mm thickness, cut to the size of the stud.

Boarding **3,4,5,6**

Installation of the Knauf Core Board should commence at one end and work across the shaftwall. Cut the first Knauf Core Board to fit into the Knauf 'J' Channel frame. Pull out tabs in the flange of the 'J' Channel at right angles to retain the Knauf Core Board. You may require a length of timber to gently tap the stud into place, as it is designed to be a tight fit. The next Knauf Core Board is fitted into the 'C-T' Stud and the process is repeated until one side of the shaftwall is complete. For airtight shafts, apply Knauf Sealant to the Knauf Core Board edges prior to installation.

For joints in the Knauf Core Board install Knauf Core Board Channel to the top edge of the Knauf Core Board and screw fix 150mm wide Core Board strip across the joints into the Core Board Channel. See detail 12 on page 91.

All other boards should be offered up to the frame with the face of the board outwards and secured with Knauf Drywall Screws at 300mm centres. Fixing centres should be reduced to 200mm at corners.

Boarding should commence at one end and work across the partition. At head, base and abutments, board edges should be bedded onto continuous beads of Knauf Sealant. Board joints in multiple layers should be staggered both vertically and horizontally by a minimum of 600mm.

Firefighting Shafts

When constructing a firefighting lift shaft, Knauf Fire Moistureshield is used as it is highly durable and able to withstand the effects of impact and water, to which it would be subjected during a fire, without losing its fire resistance or integrity when tested to BS 5588: Part 5:1991. This means that the fire crews maintain protected access to all floors within the building.



Fixing Knauf 'J' Channel to the soffit.



Fixing Knauf 'J' Channel to the abutting wall.



The retention clips are easy to release with the Knauf Core Board in place.



Positioning Knauf C-T Stud to lock Knauf Core Board into place.



Knauf 'J' Channels are used vertically at corners and abutments.



Fixing Knauf Fireshield.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations. See page 292 for more information.

Generate specifications at:
www.knaufdrywall.co.uk

Knauf Shaftwall

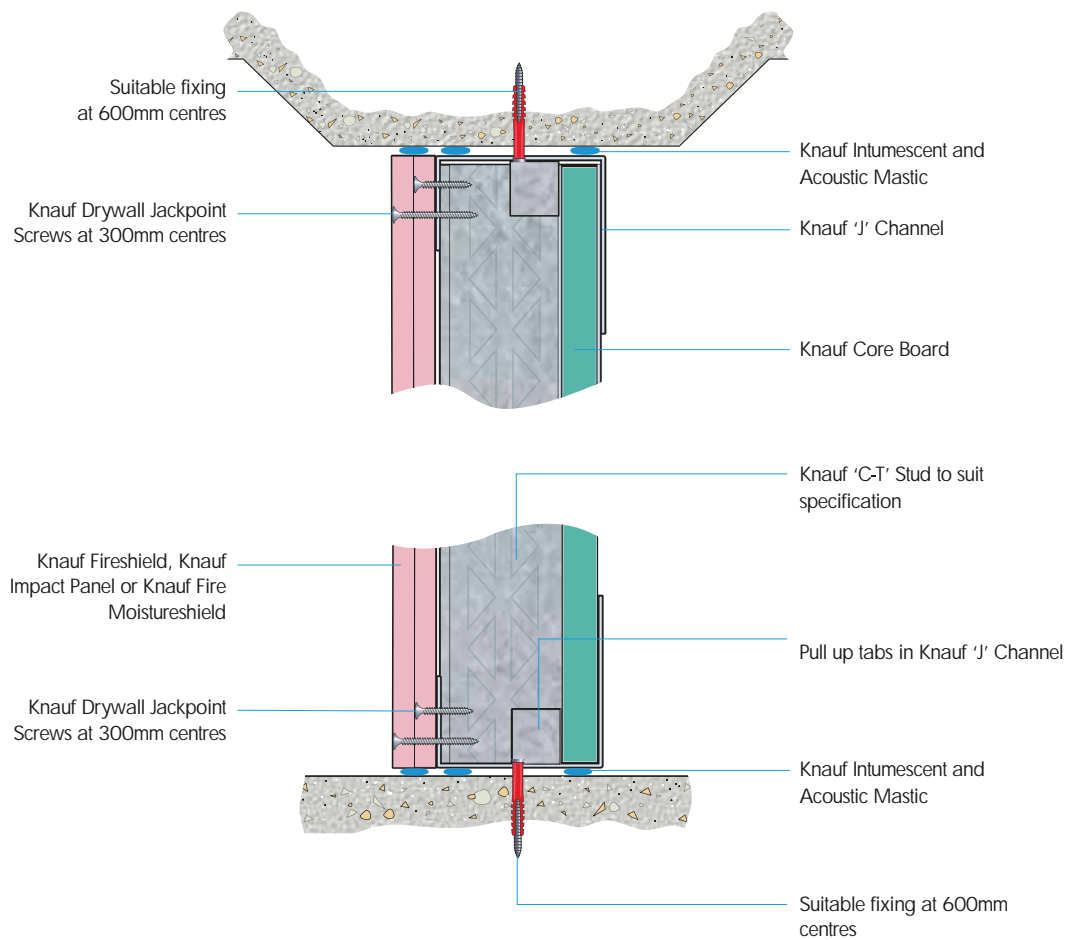
Application Details

These details represent some of the most common design situations relevant to the Knauf Shaftwall partition system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

Standard Head & Base

Detail 01

This detail is used where the structural soffit is rigid and no allowance is needed for vertical deflection. Channels and boards should be bedded onto continuous beads of Knauf Intumescent and Acoustic Mastic to ensure efficient sound reduction by sealing air paths.



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Where you see these icons in a detail, that detail is particularly relevant to that sector.

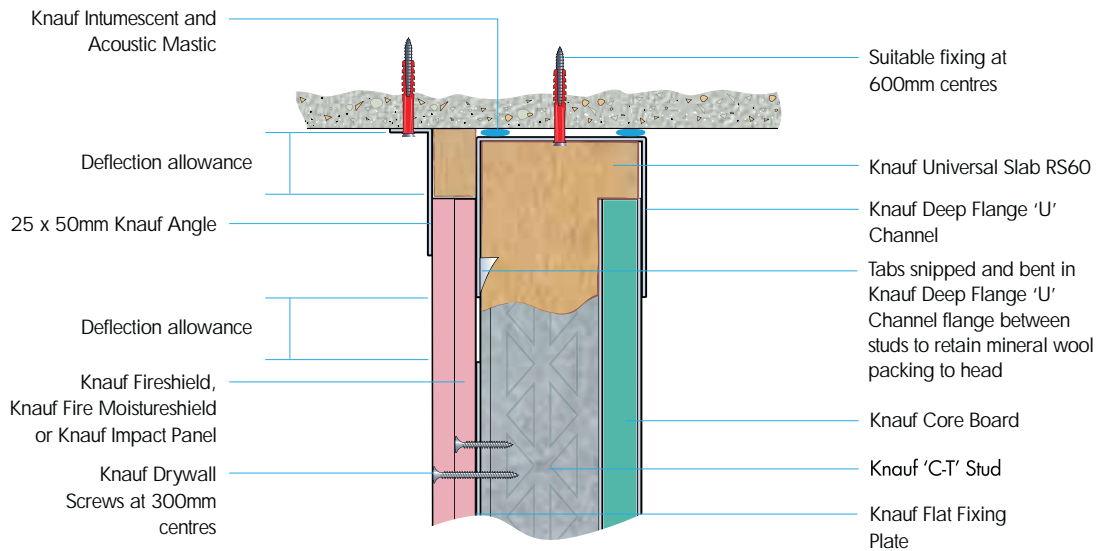
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Knauf Shaftwall

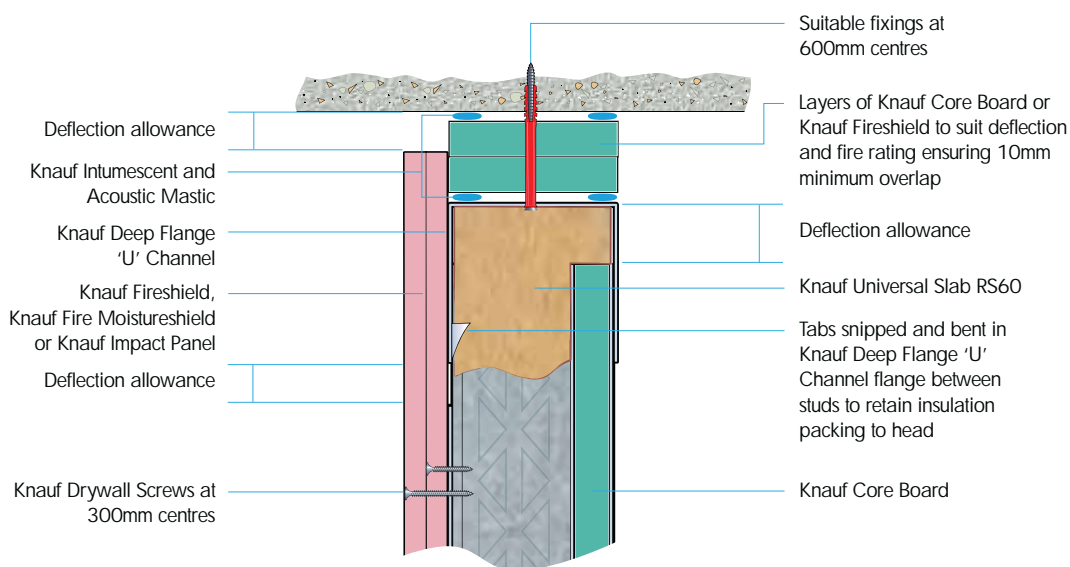
Deflection Head Detail, up to 120 Minutes Fire Resistance

Detail 02



Alternative Deflection Head Detail, up to 120 Minutes Fire Resistance

Detail 03



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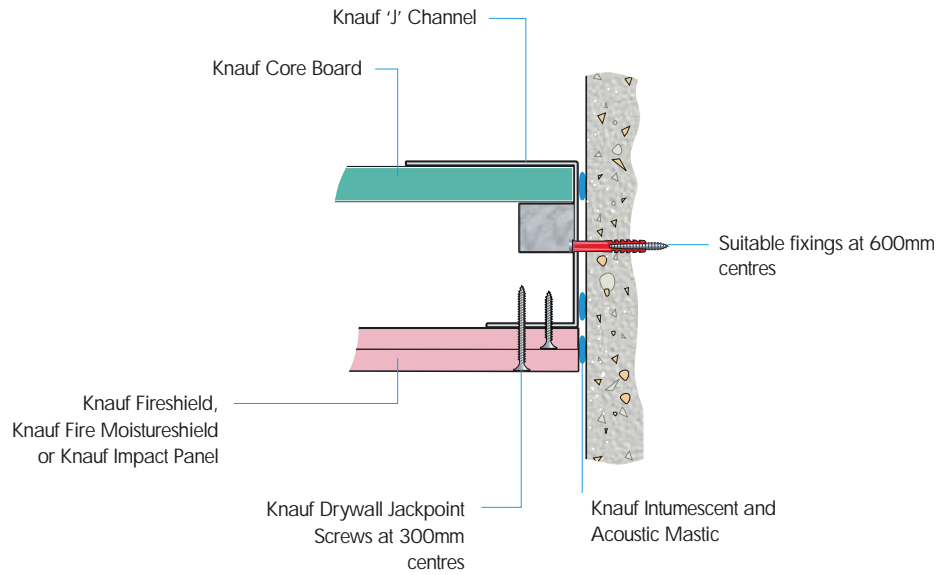
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Knauf Shaftwall

Abutment

Detail 04

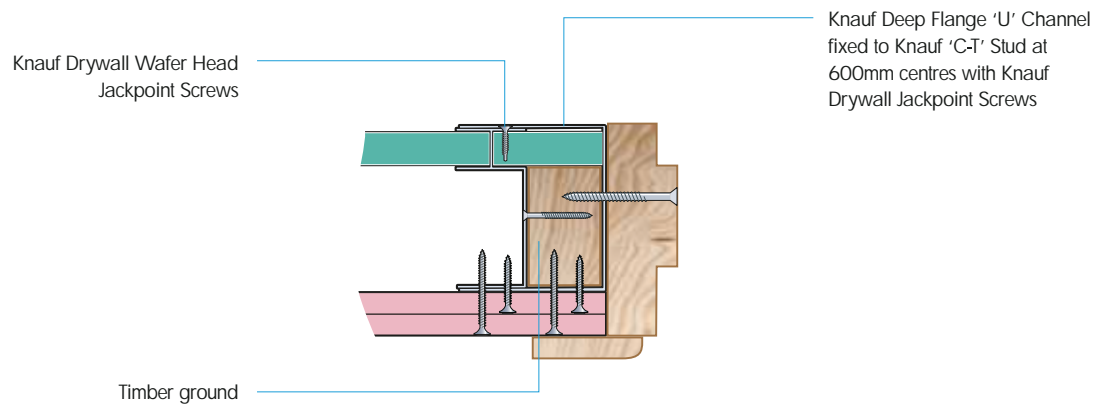
Abutments are formed similarly to the floor detail.



Door Jamb

Detail 05

Suitable for doors weighing up to 60kg. A box section formed from a Knauf 'C-T' Stud and Knauf Deep Flange 'U' Channel forms the jamb.



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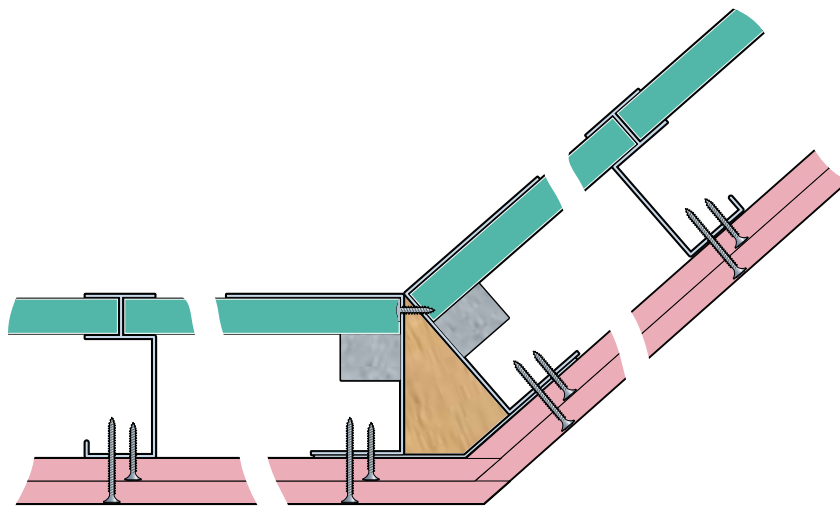
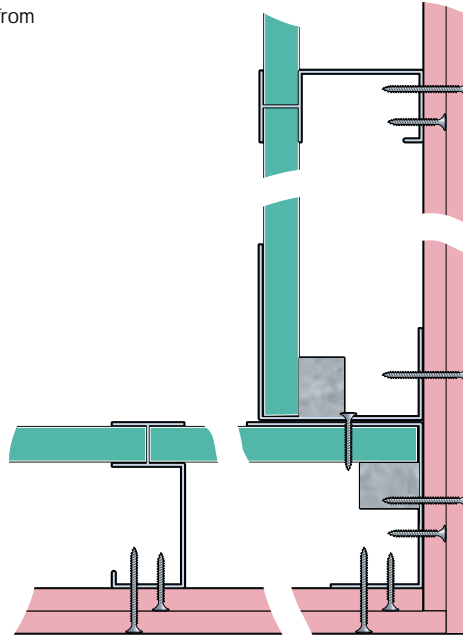
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Corner 90°

Fixing at the junction should be made from 'J' Channel to 'J' Channel.

Detail 06



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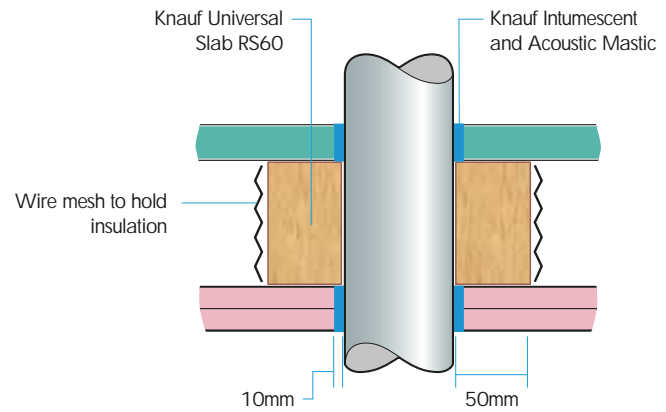
Pipe Penetration

Detail 08

Suitable for small pipes – typically up to 40mm diameter.

The mineral wool must be secured around the pipe with wire or mesh.

Note: Check with pipe manufacturer that pipe material is compatible with Knauf Intumescent and Acoustic Mastic.

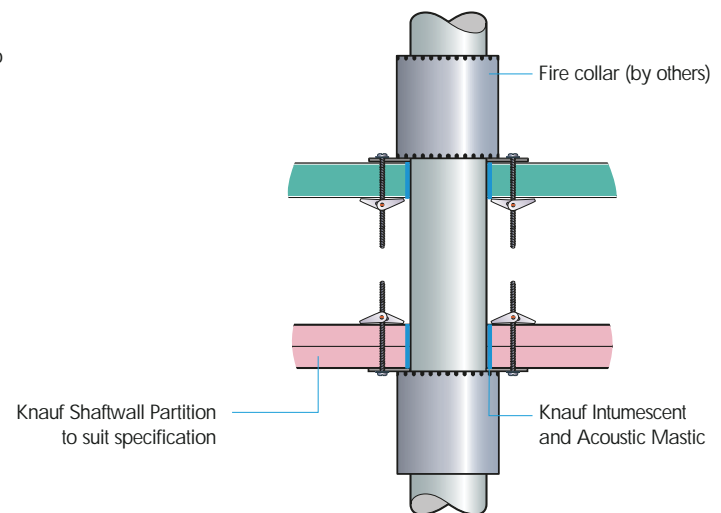


Pipe Penetration

Detail 09

For PVC pipes, with a diameter of up to 160mm, a Fire Collar is fixed to both sides in accordance with the manufacturers recommendations.

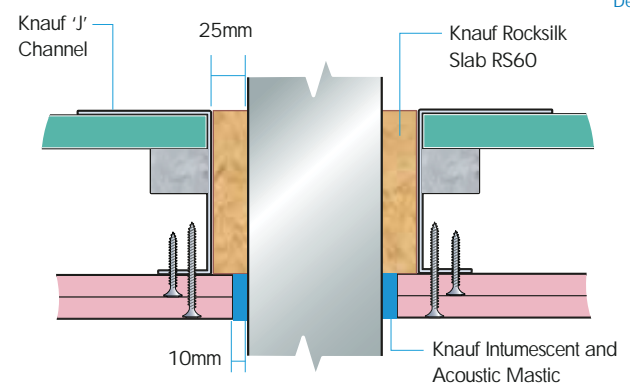
Note: Check with pipe manufacturer that pipe material is compatible with Knauf Intumescent and Acoustic Mastic.



Duct Penetration

Detail 10

For steel pipes and ducts above 160mm diameter Knauf 'J' Channels form an opening for the duct. Fire dampers in ductwork, when present, should be independently supported and installed in accordance with the manufacturers instructions.



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Knauf Shaftwall

Stud Splicing

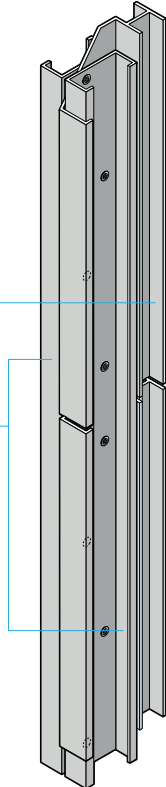
Detail 11

Whenever possible, full height Knauf 'C-T' Studs should be used. If splicing is necessary then this detail incorporating Knauf 'C' Studs or Knauf 'U' Channels should be used.

Joints should be staggered vertically, the Knauf 'C' Stud sizes listed below should be used for the Knauf 'C-T' Studs indicated.

Knauf 'C-T' Stud

Knauf 'C' Studs extending 1200mm above and below the 'C-T' joint, fixed through with a minimum of 6 Knauf Wafer Head Jackpoint Screws.



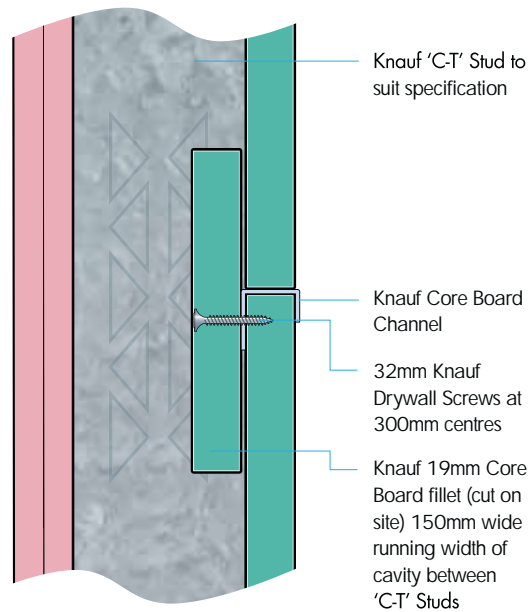
Size 'C-T' Stud	Use 'C' Stud
60mm	30mm*
92mm	50mm
146mm	92mm

*Knauf Apertura 'U' Channel should be used

Core Board Horizontal Joint

Detail 12

Where horizontal joints occur install the Knauf Core Board Channel to the top edge of the Knauf Core Board, and screw fix 150mm wide Core Board strips across the joint to maintain the fire performance.



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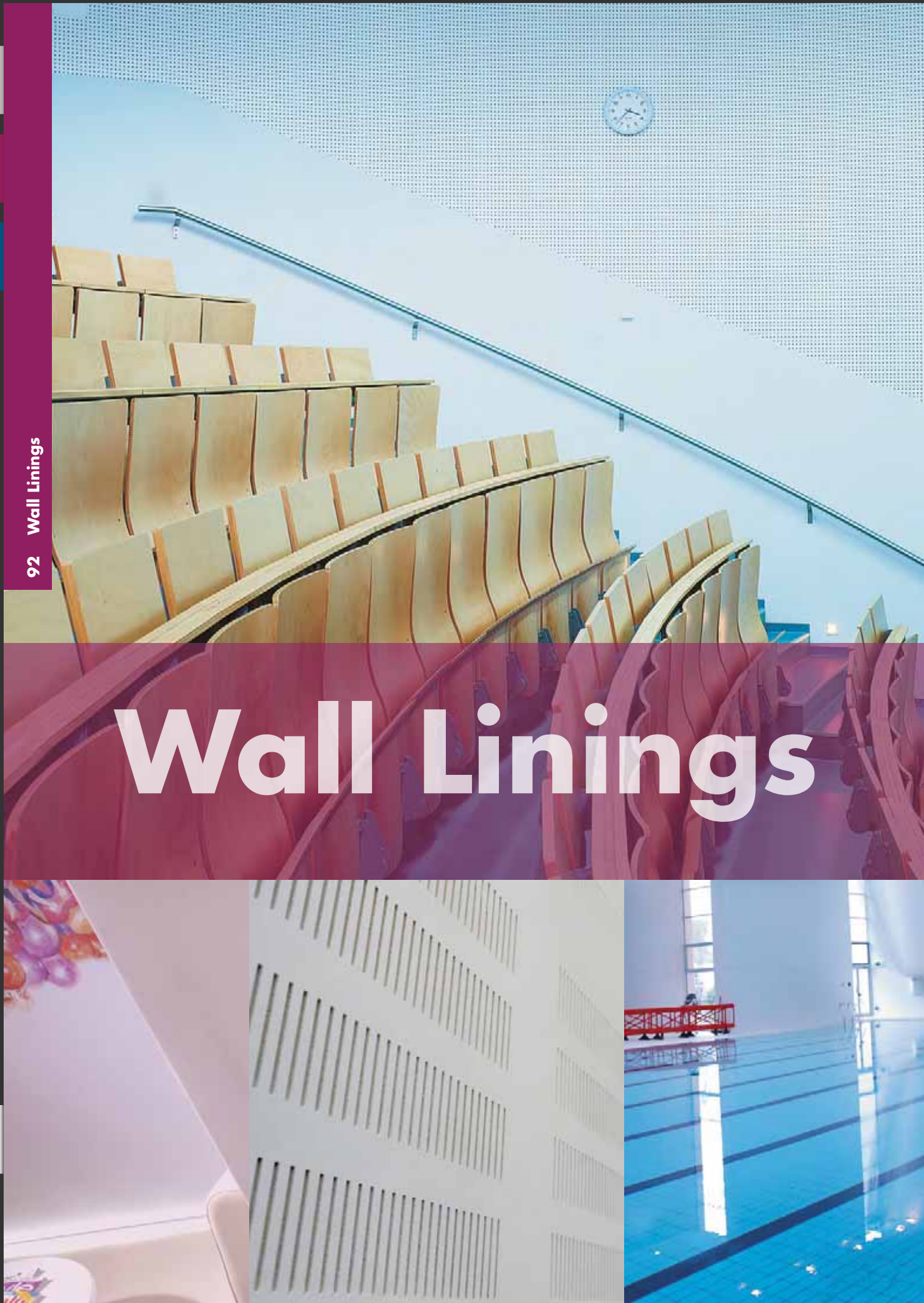
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Wall Linings

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Our versatile range of wall lining systems makes it easy to produce a high quality, high performance finished wall regardless of the background.

Whether your priority is acoustic control, fire resistance, minimum stand-off, maximum service cavity space, high insulation or to support tiles, we have a solution already designed to suit.

As well as complete dry lining solutions we also provide fast-drying parge coats to ensure air-tightness, and a range of readymix and gypsum-based spray applied projection plasters to suit backgrounds from masonry and smooth concrete to plasterboard.

Wall Linings

Direct Bonding and Metal Furring

94

- Quick and economical to install
- Minimum stand-off distance
- No need to mechanically fix to the background

Wall Liner

104

- Can overcome substantial background irregularities
- Accommodates large service runs and insulation
- Little or no background preparation required

Independent 'I' Stud

110

- Can provide fire ratings up to 90 minutes
- No limit to stand-off distance allowing large cavities
- Perfect for very tall linings

Acoustic Linings

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Wet Area Linings

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Thermal Linings

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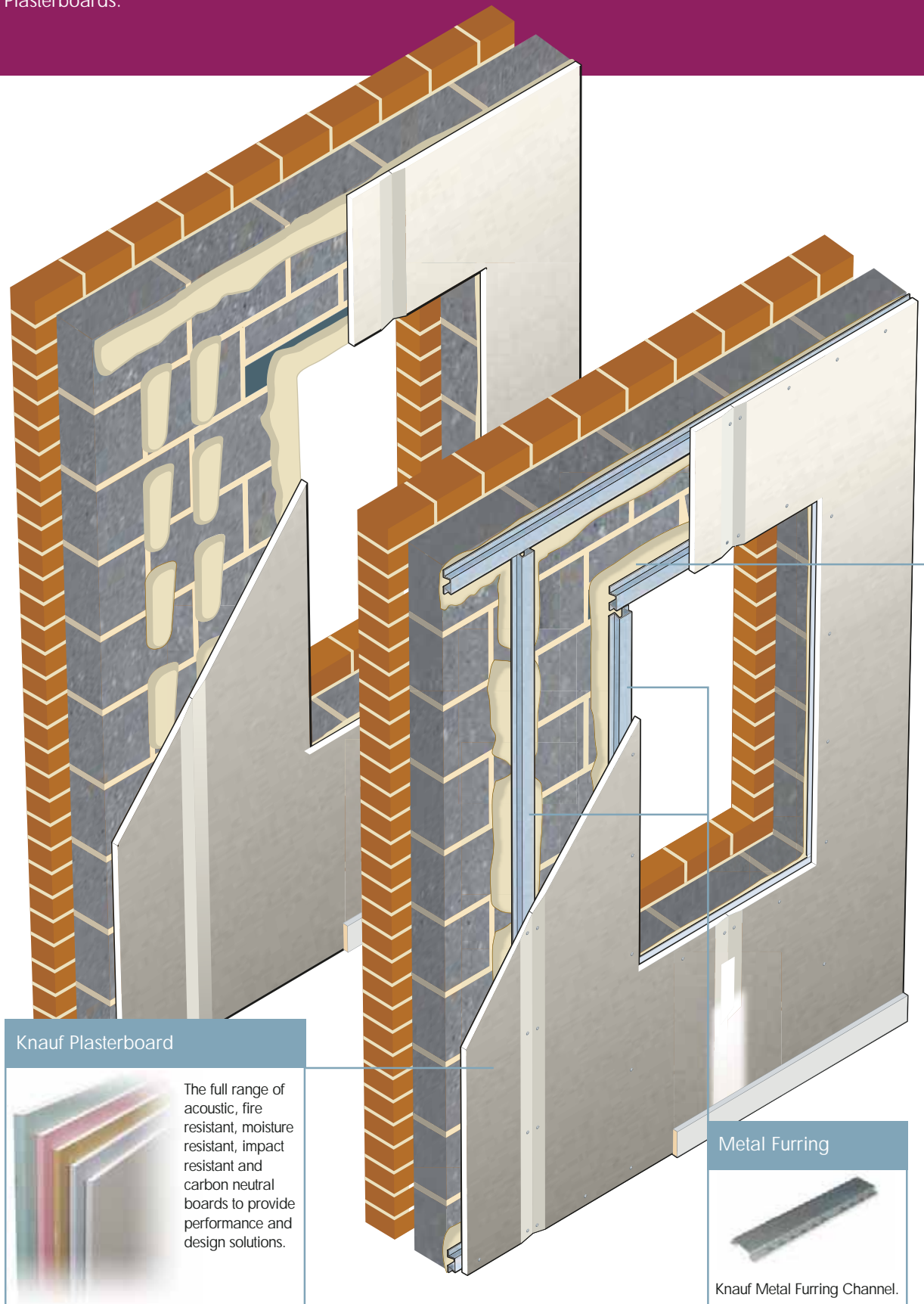
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Knauf Direct Bonding and Metal Furring

Knauf Direct Bonding and Metal Furring Linings are the simplest and quickest of drylining systems to install. They are suitable for most brick, block and concrete backgrounds and will work with a wide range of Knauf Plasterboards.

94 Direct Bonding



Knauf Plasterboard



The full range of acoustic, fire resistant, moisture resistant, impact resistant and carbon neutral boards to provide performance and design solutions.

Metal Furring



Knauf Metal Furring Channel.

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Direct Bonding

Knauf Direct Bonding provides a high quality, robust lining in the shortest possible time frame, speeding up projects. If a board must be mechanically fixed then Knauf Metal Furring can be used.

Key Features:

- Quick and economical to install
- Easily accommodates services
- No need to mechanically fix to background
- Does not take up valuable room area

Plasterboard Adhesive



Knauf Plasterboard Adhesive is used to quickly bond Knauf Plasterboards or Metal Furring Channels to masonry backgrounds.

Insulating Laminates



Our range of high efficiency Insulating Laminate boards provide instant energy savings.

Other Components



The Knauf Jointing range ensures that strong, high quality joints are easy to achieve.



Use Knauf Gypsum Parge Coat to seal masonry walls ensuring all gaps are filled especially at junctions and corners.



Knauf Sealant seals gaps, minimises airborne sound transmission and vibrations.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

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Knauf Direct Bonding and Metal Furring

Installation Procedures

Knauf linings are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Direct Bonding and Metal Furring lining systems must be installed in accordance with Knauf's recommendations and the recommendations of BS 8212: 1995 & BS 8000: Part 8: 1994.

Preparation

Pre-treat backgrounds if necessary and remove all release agents.

If Direct Bonding a masonry separating wall, it may be necessary to apply a coat of Knauf Gypsum Parge Coat at a minimum thickness of 6mm to the entire wall surface. Ensure all gaps are sealed, especially at junctions and corners. Knauf Gypsum Parge Coat should have a key applied, and then be allowed to set fully prior to Direct Bonding with Knauf Plasterboards.

In all instances, the background should be plumbed for alignment, making allowances for over sailing high spots on the masonry. Mark guidelines on the floor and soffit to establish the new wall plane.

Mark vertical guidelines on the background to establish the bonding positions as determined by lining system type and the board size and thickness as shown in the table below.

Perimeter

A continuous band of Knauf Plasterboard Adhesive should be applied around the wall perimeter, service penetrations and openings to improve the air tightness and reduce the effects of cold convection currents impairing the thermal performance of the wall construction.

Application of Knauf Plasterboard Adhesive and Boarding

Apply Knauf Plasterboard Adhesive dabs, spaced intermittently up the wall along the vertical guidelines. The size and position of the dabs will vary depending on the dry lining system being used.

Direct Bonding:

If Direct Bonding, dabs should be applied at 300mm vertical centres and each dab should be 250mm long and 50 to 75mm wide. The dabs should be applied between 10 and 25mm thick and sufficient for the fixing of one board at a time.

After dabbing out and before the dabs have set, offer up the plasterboard and press firmly into place, aligning the board so that it is plumb. Ensure the plasterboard is clear of the ground by at least 10mm; this can be accommodated by an off-cut of board. Modest pressure on the plasterboard will ensure a positive bond.

1

Knauf Insulating Laminates require secondary fixing with two mid-placed Knauf Nailable Plugs, penetrating the backgrounds through the dab by at least 40mm.

Metal Furring:

5,6,7

When using the Knauf Metal Furring system, dabs should be applied at 450mm centres and each dab should be 200mm long and 50mm wide.

Knauf Metal Furring Channels should be bedded into the dabs and continuous bands of Knauf Plasterboard Adhesive. These can be manipulated with a straight edge to ensure that they align with the guidelines marked on the floor.

Additional lengths of Knauf Metal Furring Channel are positioned around service penetrations and door and window openings.

Once the Knauf Plasterboard Adhesive has fully set (approximately 3-4 hours), Knauf Plasterboards can be screw fixed into the Metal Furring Channels using Knauf Drywall Screws at nominal 300mm centres. Fixings should be to all vertical and horizontal sections of Knauf Metal Furring Channel.

2

3,4

Dab centres when direct bonding using Knauf Plasterboard Adhesive

Thickness of Wallboard	Width	Adhesive Centres	Row of Dabs per Board
9.5mm	900mm	450mm	3
9.5mm	1200mm	400mm	4
12.5mm	1200mm	600mm	3

Direct Bonding



Applying a continuous band of Knauf Plasterboard Adhesive around the perimeter.



Applying Knauf Plasterboard Adhesive dabs at the required centres.



Offering up Knauf Plasterboard and pressing into place.



Offering up Knauf Thermal Laminate for a better thermal performance.

Metal Furring



Applying Knauf Plasterboard Adhesive around the perimeter and at the required centres.



Ensuring Knauf MF Channels are fixed plumb.



Fixing Knauf Plasterboard onto the Knauf MF Channel.



Finishing using Knauf Plaster.



97 Direct Bonding

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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations. See page 292 for more information.

Generate specifications at:
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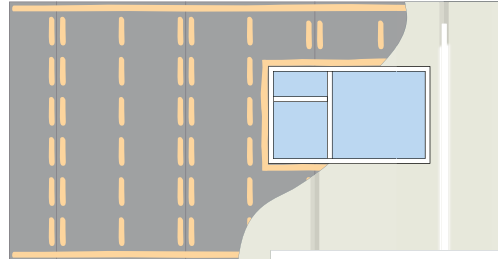
Knauf Direct Bonding

Application Details

These details represent some of the most common design situations relevant to the Knauf Direct Bonding system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

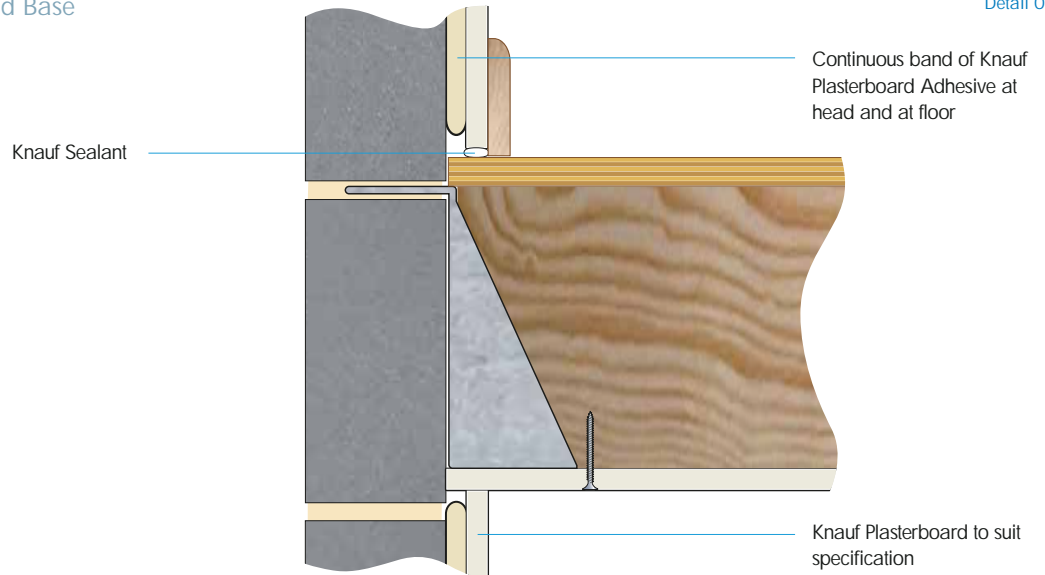
Dab Layout

Detail 01



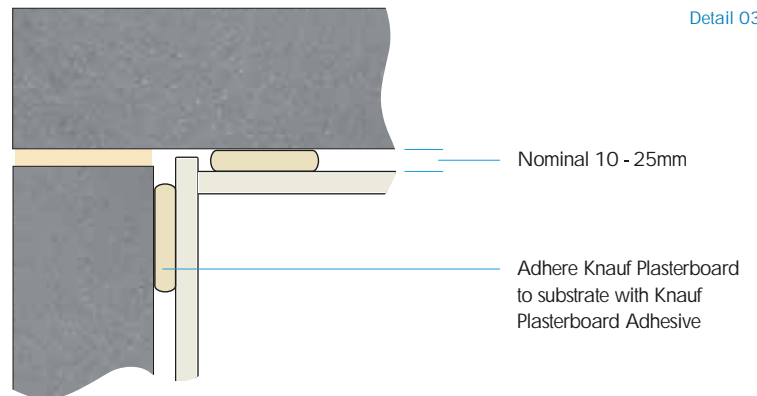
Head and Base

Detail 02



Internal Corner

Detail 03



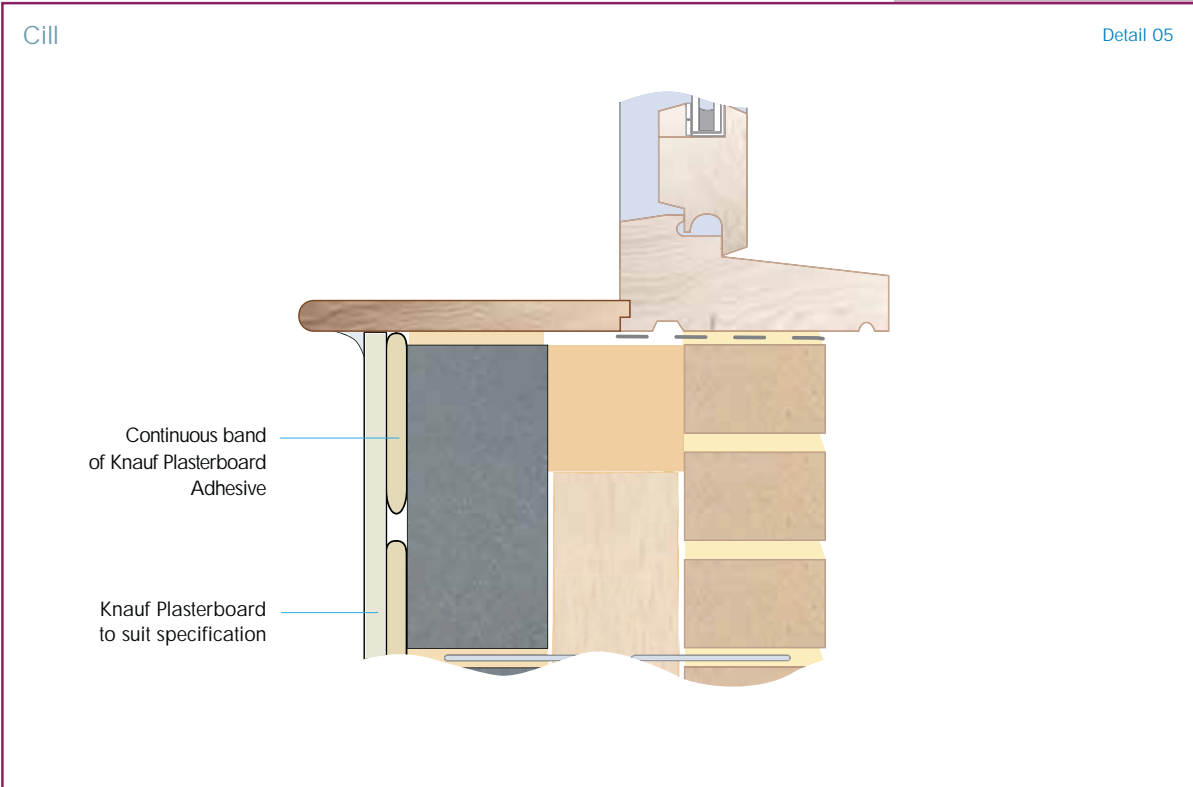
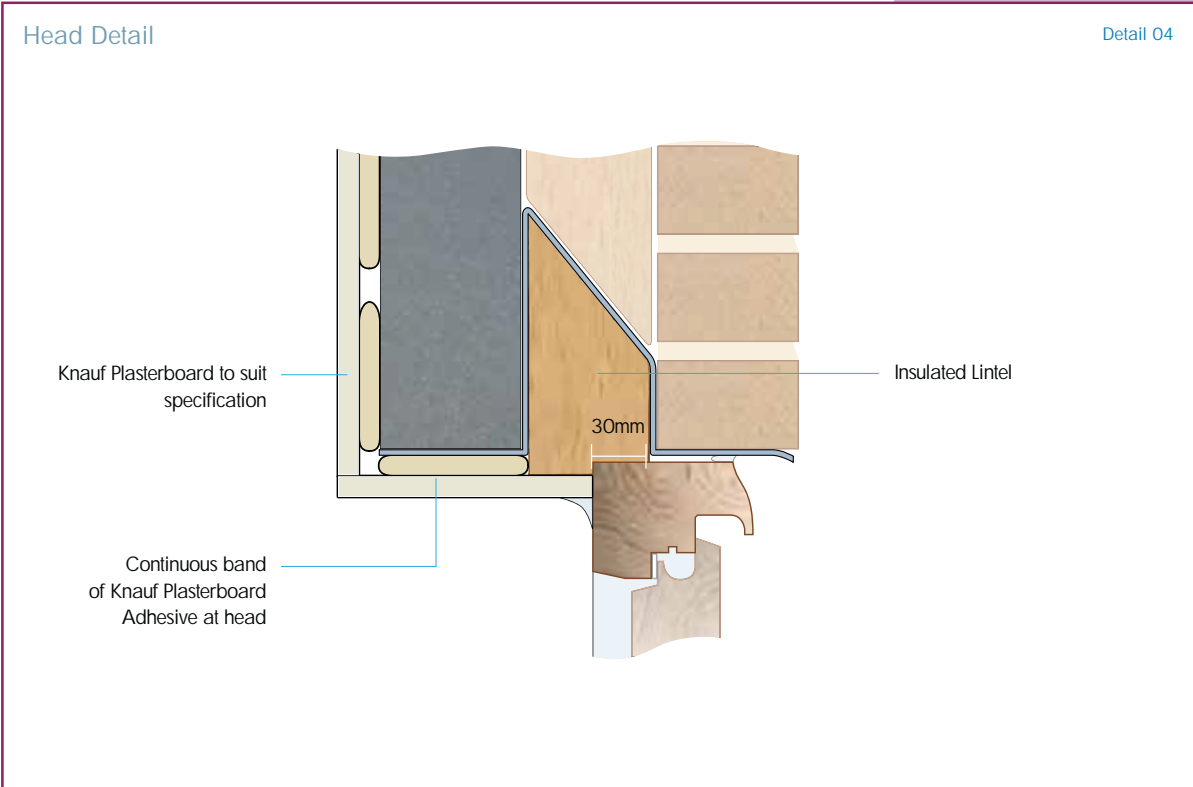
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Knauf Direct Bonding



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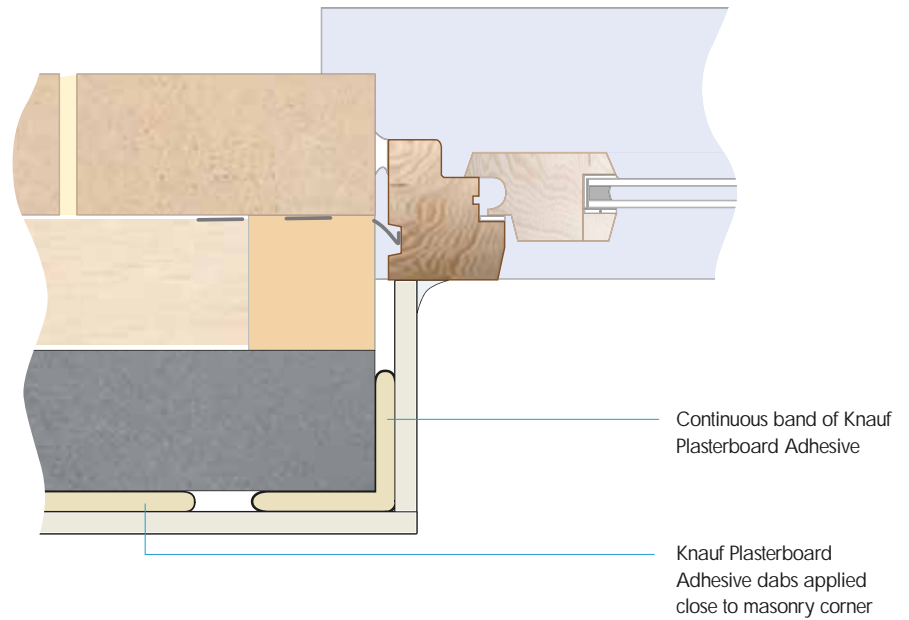
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100 Direct Bonding

Knauf Direct Bonding

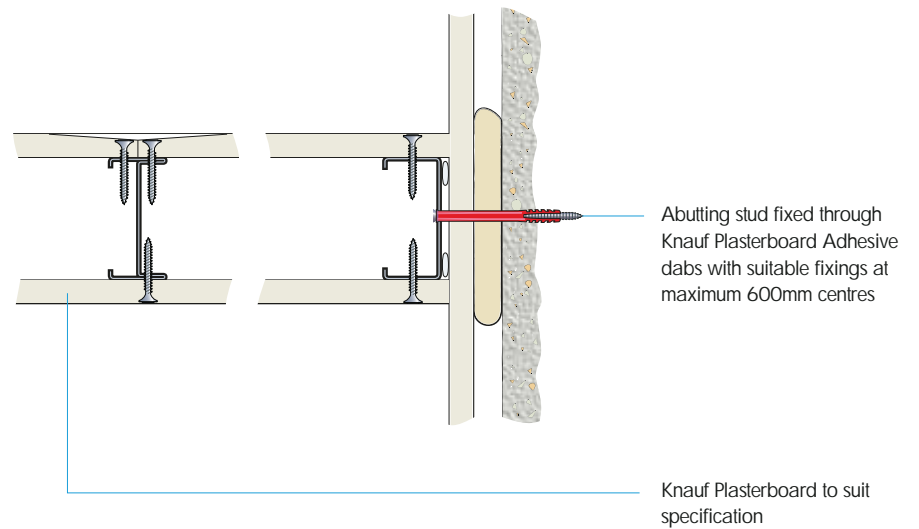
Jamb

Detail 06



Abutment, for Non-Fire Rated Partition

Detail 07



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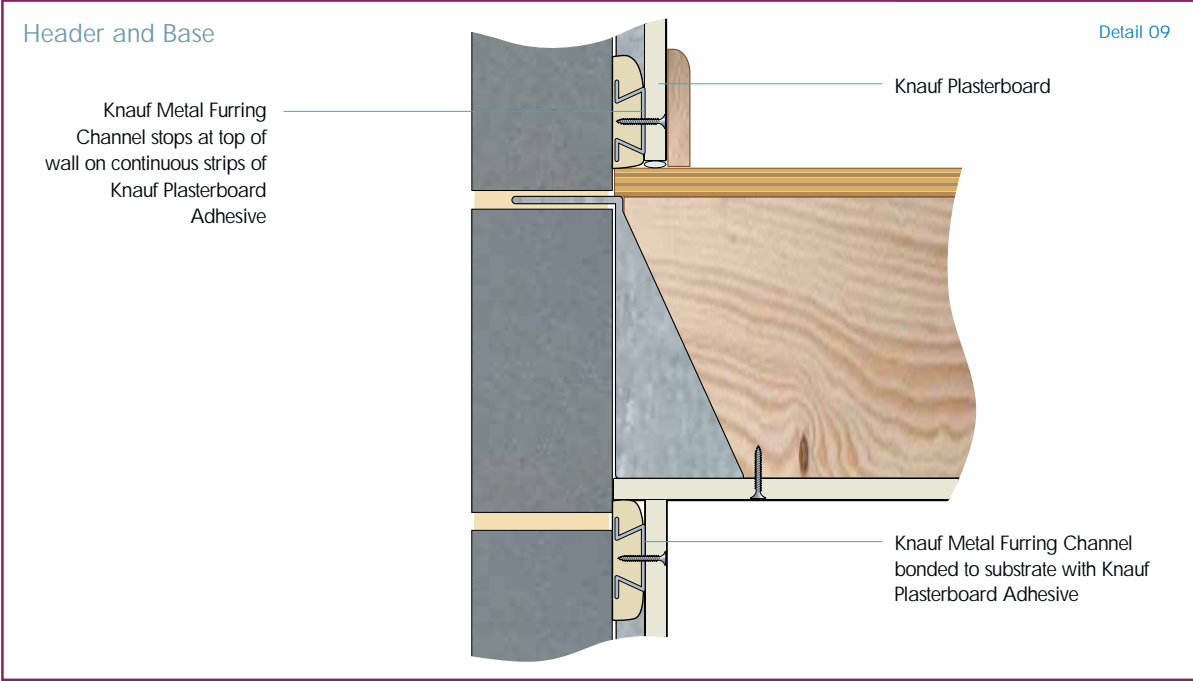
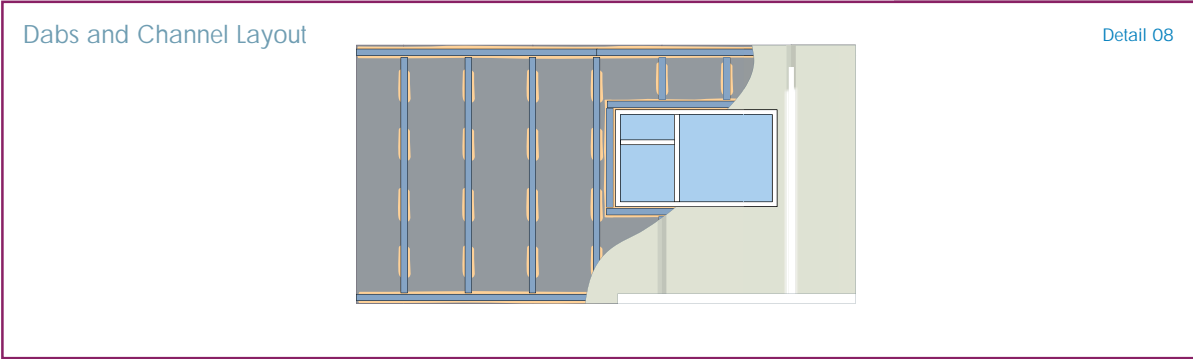
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Knauf Metal Furring

Application Details

These details represent some of the most common design situations relevant to the Knauf Metal Furring system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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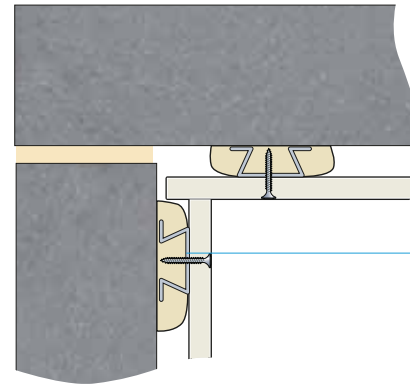
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102 Metal Furring

Metal Furring

Internal Corner

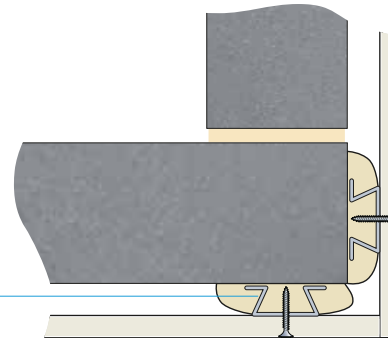
Detail 10



Knauf Metal Furring Channel bonded to substrate with Knauf Plasterboard Adhesive

External Corner

Detail 11



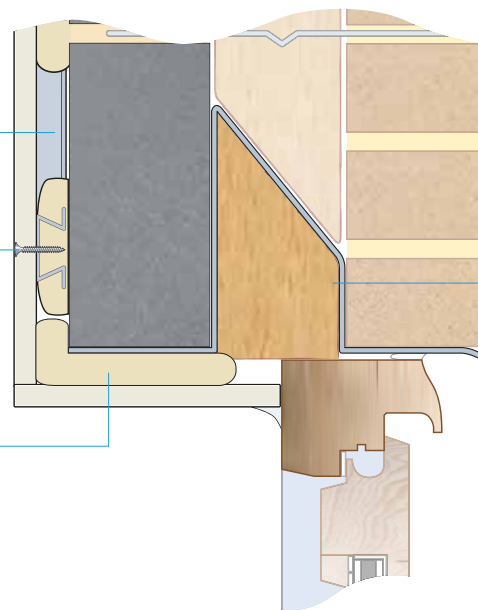
Knauf Metal Furring Channel bonded to substrate with Knauf Plasterboard Adhesive

Knauf Plasterboard

Knauf Drywall Screws at 200mm centres

Head Detail

Detail 12



Knauf Metal Furring Channel

Knauf Drywall Screws

Continuous band of Knauf Plasterboard Adhesive at head

Insulated Lintel

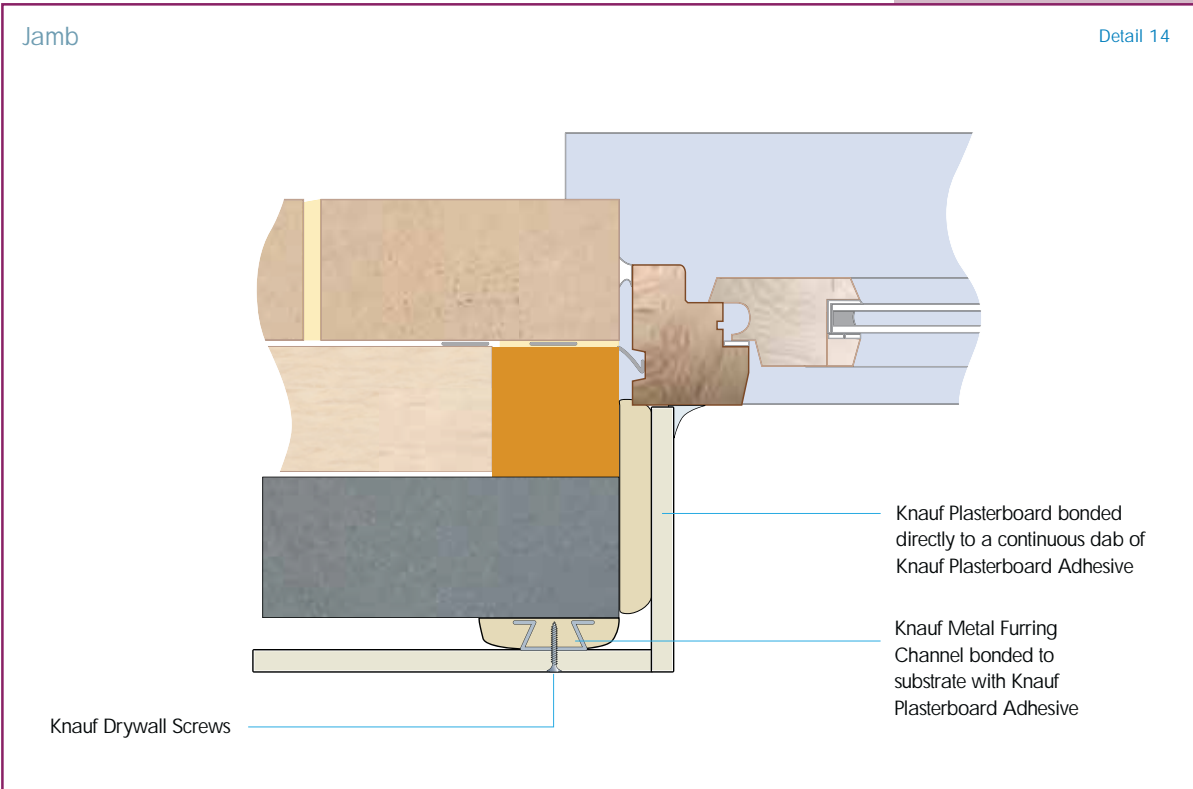
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Metal Furring



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Knauf Wall Liner

The Knauf Wall Liner System is extremely versatile and can be specified for application on masonry backgrounds with moderate irregularities between 20mm and 125mm. It can accommodate any of the range of Knauf Plasterboards.

104 Wall Liner

Head Track



Knauf 'U' Channel - Perimeter Support secured to soffit forms head plate.

Wall Lining Stud



Knauf 'C' Channel.

Brackets



Knauf Universal Bracket.

Knauf Plasterboard

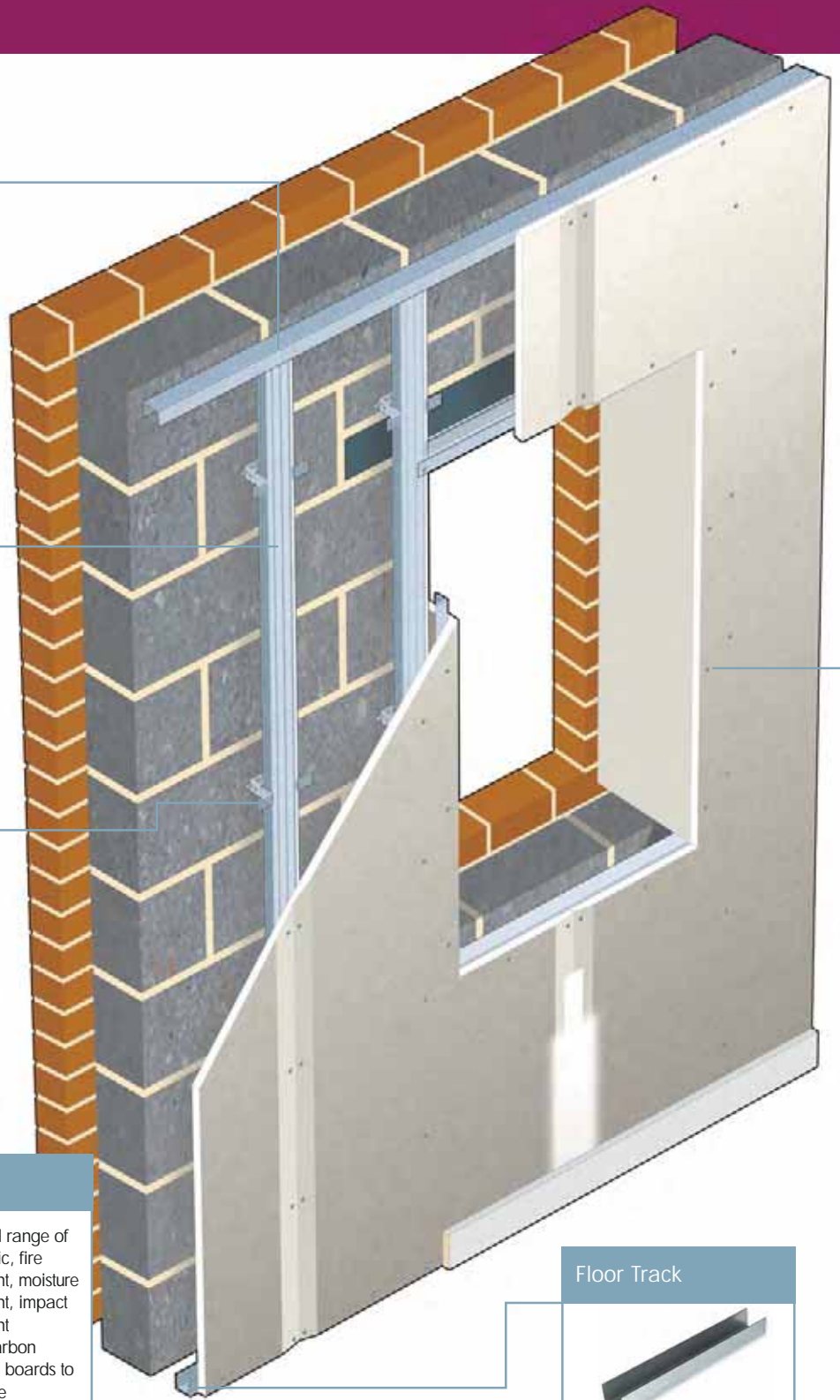


The full range of acoustic, fire resistant, moisture resistant, impact resistant and carbon neutral boards to provide performance and design solutions.

Floor Track



Knauf 'U' Channel - Perimeter Support secured to floor.



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Wall Liner

The Knauf Wall Liner System is a strong impact resistant system that corrects background irregularities and requires little or no background preparation.

Key Features:

- Can overcome substantial irregularities on background
- The lining void can accommodate large service runs and any required insulation
- Little or no background preparation is required

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Laminates



The Knauf Insulating Laminate range provides instant energy savings.

Other Components



Knauf Movement Control Joint is an aluminium 'V' section used to bridge gaps left for expansion and contraction.



Knauf Sealant seals gaps, minimises airborne sound transmission and air leakage.



Knauf Fixing Channel/Knauf Flat Fixing Plate provides fixing for horizontal joints or support for fixtures.



Use Knauf Gypsum Parge Coat to seal masonry walls ensuring all gaps are filled especially at junctions and corners.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

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Knauf Wall Liner

Installation Procedures

Knauf Wall Linings are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Wall Liner must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 & BS 8000: Part 8: 1994.

Preparation

Mark guidelines on the floor and soffit to establish the positions of floor and head tracks relative to the stand-off distance required.

Mark vertical guidelines on the background to establish the Knauf 'C' Channel positions at maximum 600mm centres for 12.5mm Knauf Plasterboard.

Depending on the required storey height, mark the wall with the location of intermediate Knauf Universal Brackets in line with the channel guidelines and maximum 900mm vertical centres.

Position service runs and outlets.

Framing 1,2,3

Knauf 'U' Channel - Perimeter Support channels should be used for the head and base of the lining. Bed each section on two continuous beads of Knauf Sealant along the guidelines using fixings appropriate for the background. Fix at nominal 600mm centres.

Fix the intermediate Knauf Universal Brackets to the background, at the marked positions, using fixings appropriate for the background.

Offer up the Knauf 'C' Channels to engage with the Knauf Universal Brackets and with the floor and head tracks. Extend the length of Knauf 'C' Channels where necessary by using Knauf 'C' Channel Connectors. Adjust the studs for position and alignment.

Secure the Knauf 'C' Channels to the Knauf Universal Brackets using two Knauf Wafer Head Jackpoint Screws per side, per bracket. Depending on the stand-off distance, bend back the legs of the crimped universal brackets so as not to obstruct the fixing of the board.

Fix Knauf Angle Sections at external corners and reveals, where appropriate.

Insulation

Install insulation quilt where required, between and behind the vertical Knauf 'C' Channels for continuity and to prevent slumping.

Boarding 4

The plasterboard lining is fixed by screwing into the metal framework, using Knauf Drywall Screws at 300mm centres. Reduce to 200mm at corners. Fixings should be to all horizontal and vertical members.



Fixing Knauf 'U' Channel - Perimeter Support to the soffit.



Marking position for the Knauf Universal Bracket.



Fixing Knauf 'C' Channel to the Knauf Universal Bracket.

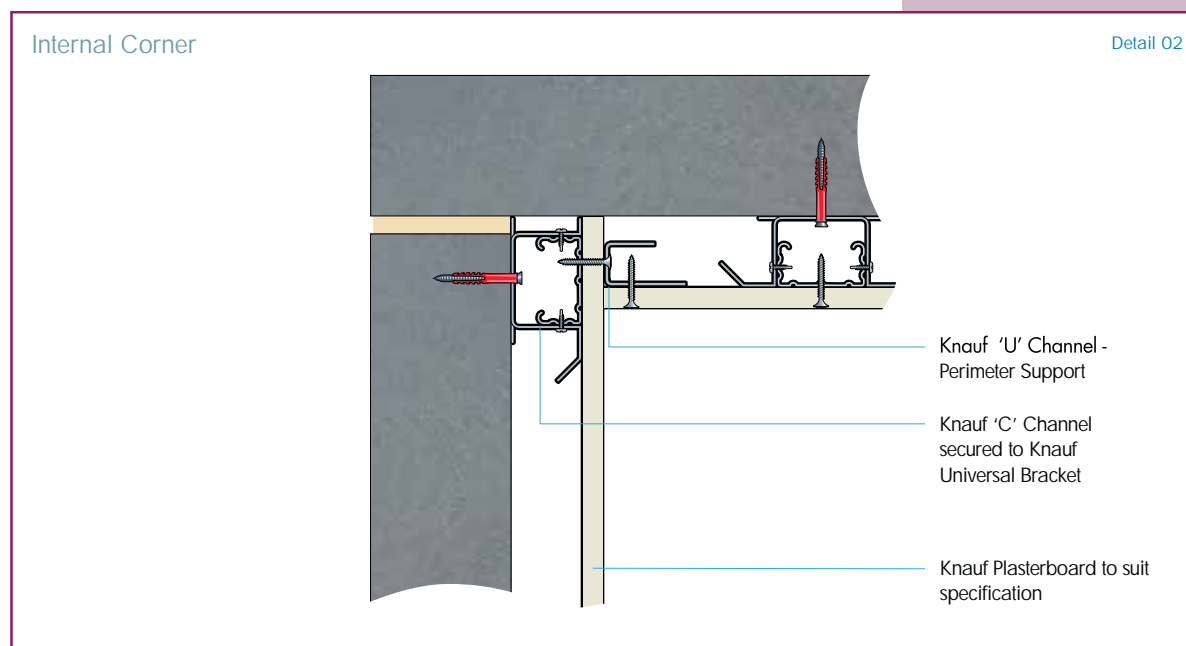
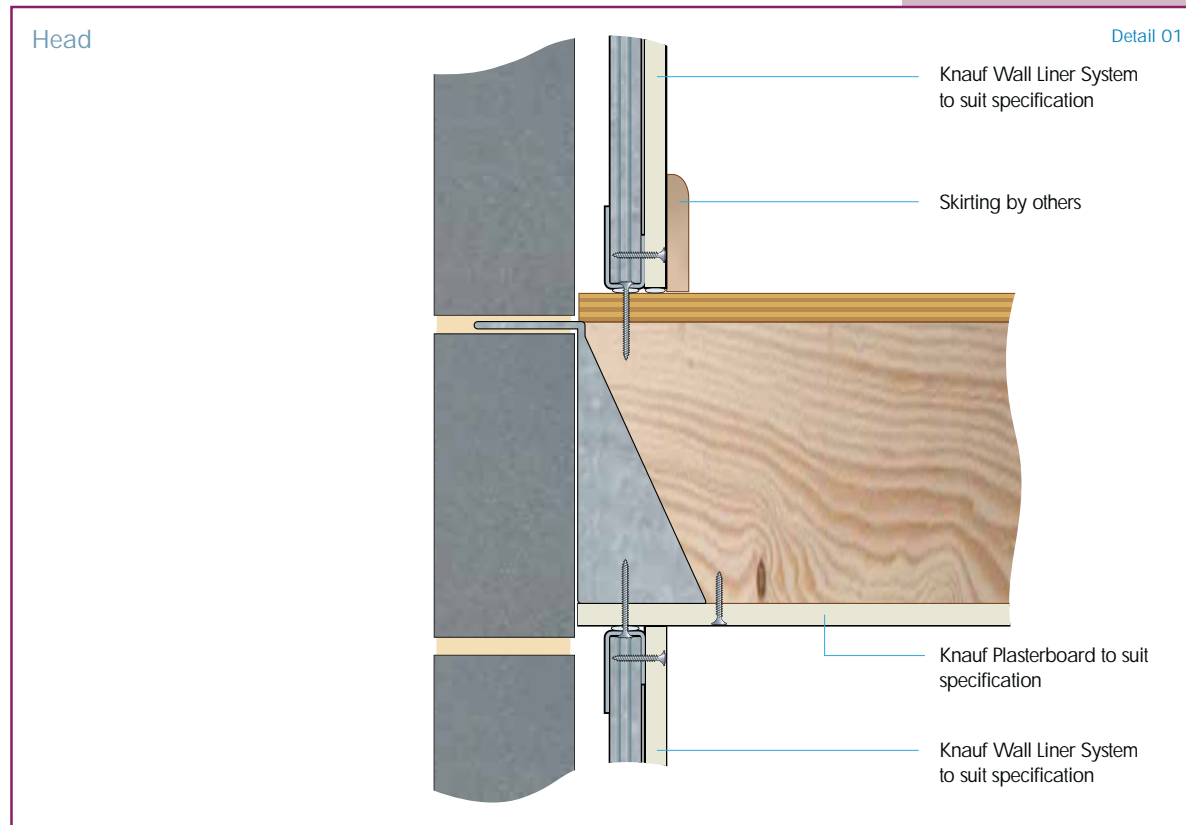






Fixing Knauf Plasterboard to the Knauf 'C' Channel.

Knauf Wall Liner

Application Details

These details represent some of the most common design situations relevant to the Knauf Wall Liner system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



    Where you see these icons in a detail, that detail is particularly relevant to that sector.

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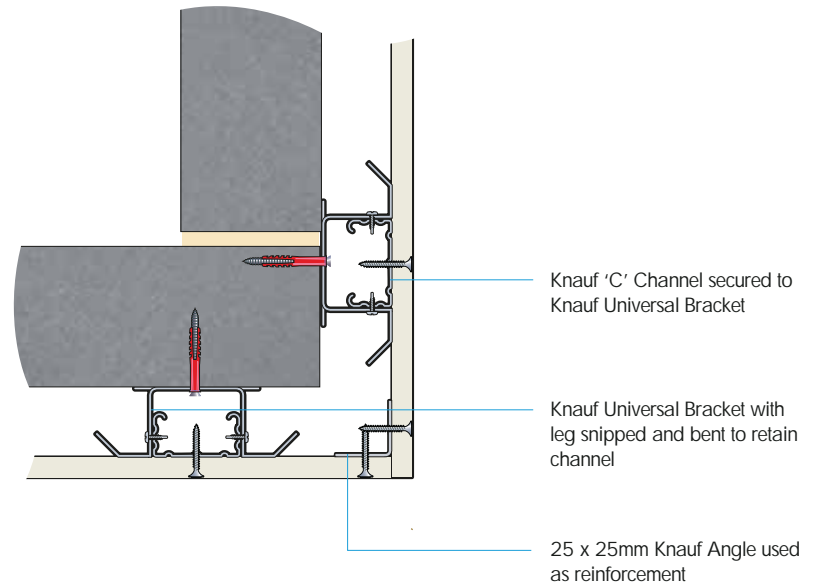
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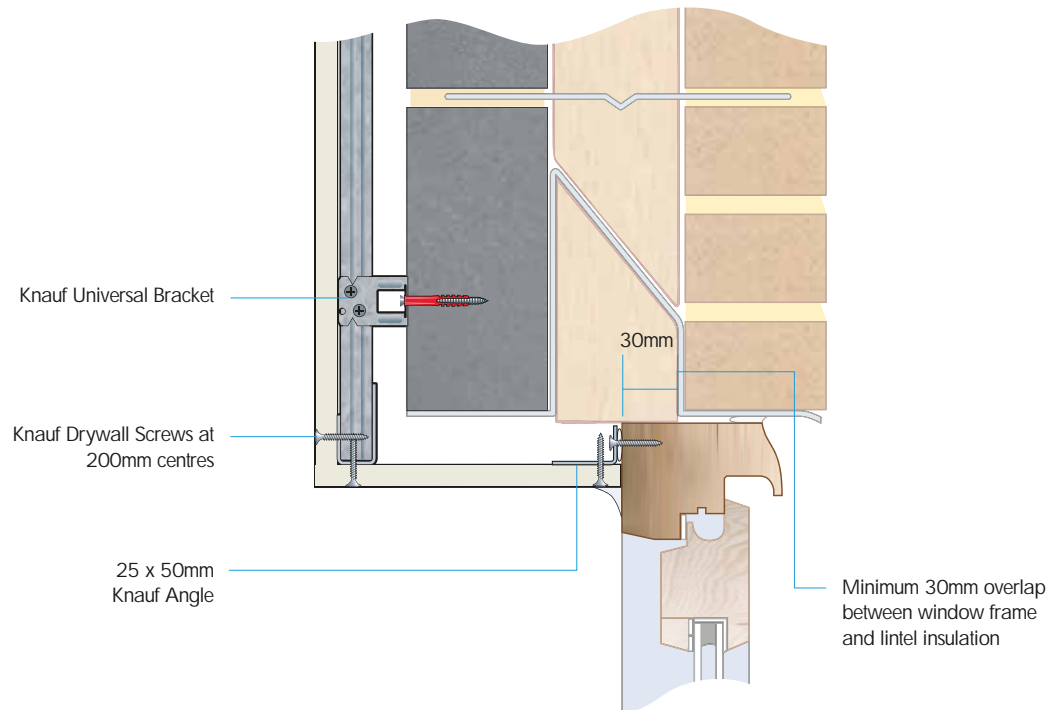
External Corner

Detail 03



Reveal Head

Detail 04



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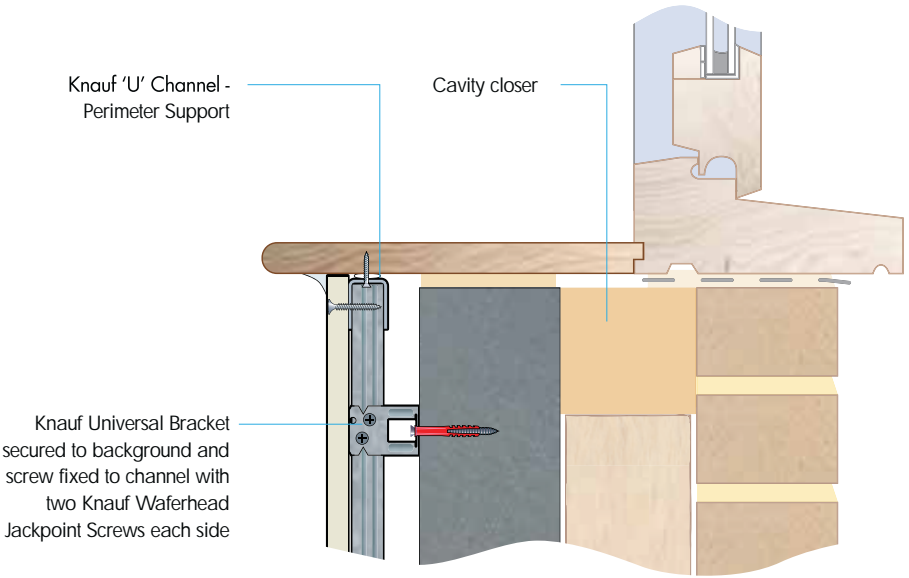
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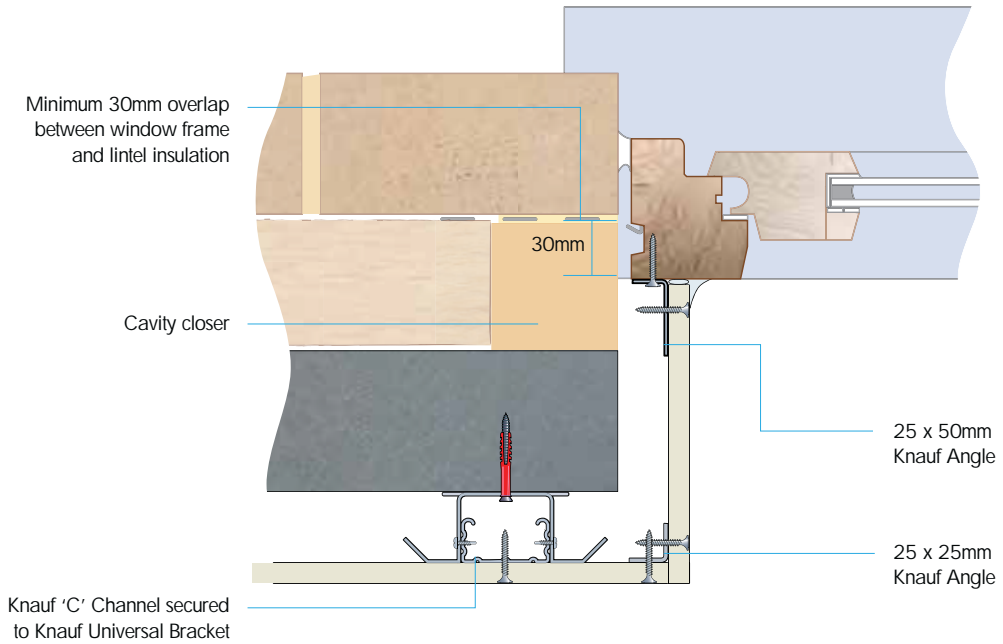
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Detail 05



Reveal Detail

Detail 06



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Knauf Independent 'I' Stud

Knauf Independent 'I' Stud is a fully independent wall lining system that can be used in all building types to upgrade the acoustic, fire and thermal performance of an existing masonry wall and to deal with any irregularities.

110 Independent 'I' Stud

Head Track



Knauf 'U' Channel secured to soffit forms head track.

Wall Lining Stud



Strong Knauf 'I' Studs complete the frame.

Knauf Plasterboard

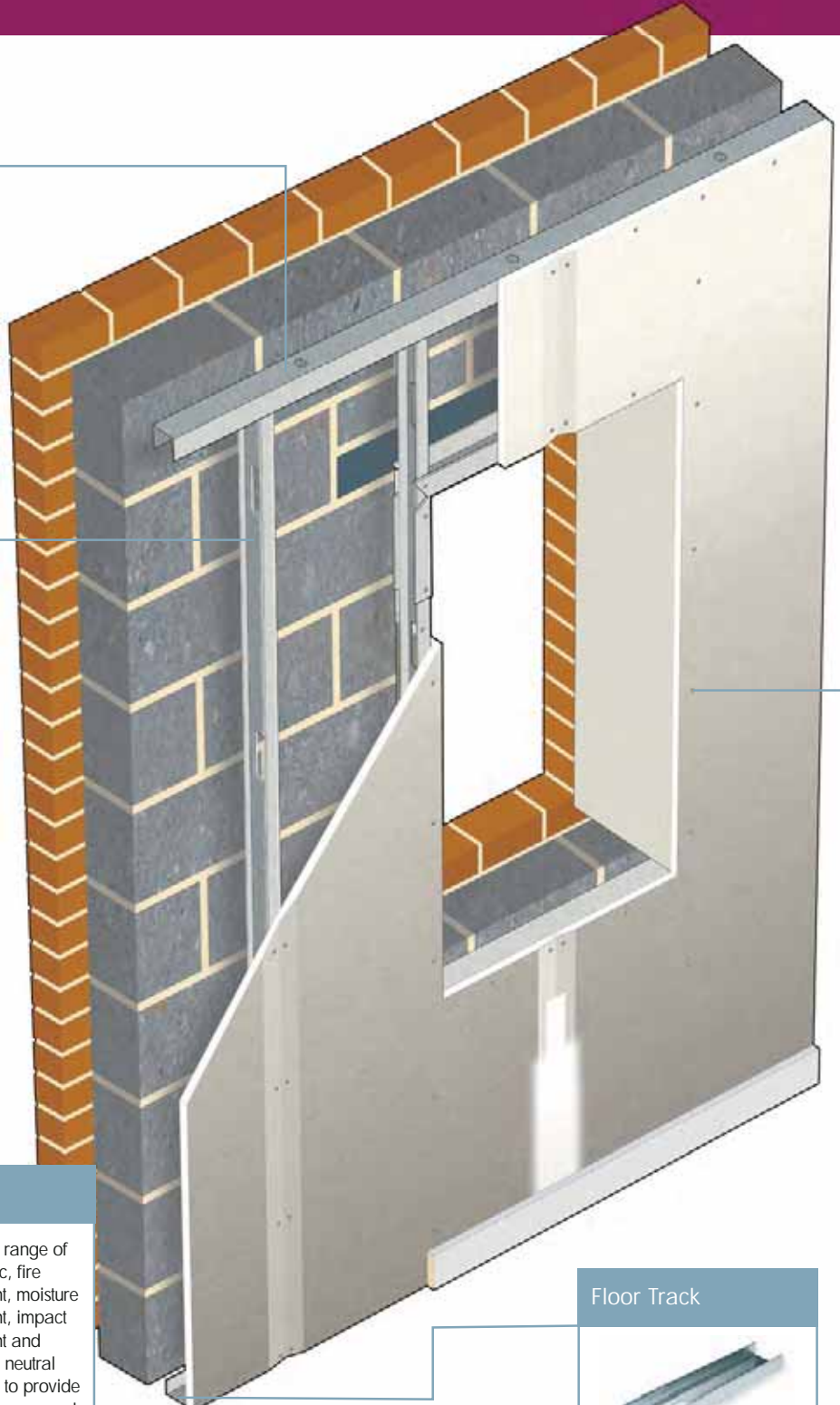


The full range of acoustic, fire resistant, moisture resistant, impact resistant and carbon neutral boards to provide performance and design solutions.

Floor Track



Knauf 'U' Channel secured to floor.



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Independent 'I' Stud

Knauf Independent 'I' Stud is particularly suited where it is important to avoid damaging or fixing back to the original wall and when a fire rating is required.

Key Features:

- Can be fire rated up to 90 minutes
- No limit to stand off distance
- As easy to install as a drywall partition
- Tall linings up to 10m can be constructed

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Other Components



The Knauf Jointing range ensures that strong, high quality joints are easy to achieve.



Use Knauf Gypsum Parge Coat to seal masonry walls ensuring all gaps are filled especially at junctions and corners.



Knauf Sealant seals gaps, minimises airborne sound transmission.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.



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Knauf Independent 'I' Stud

Optimised Solutions

All Knauf Independent 'I' Stud systems utilise high quality, purpose designed Knauf Plasterboards, Knauf Studs and Channels and Knauf Accessories. These components are carefully matched to realise the performances detailed below and are tested together as a whole system. Insisting on genuine Knauf components throughout will ensure your Knauf Independent 'I' Stud system is fully covered by our performance warranty.



Independent 'I' Stud for Commercial Projects

Independent I Stud Lining IWLC1/08	Fire*	Max Height**	Impact Duty***
1 layer of 12.5mm Knauf Fireshield to one side of 50mm (0.55mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	30 mins	3100mm	Medium
Independent I Stud Lining IWLC2/08	Fire*	Max Height**	Impact Duty***
1 layer of 15mm Knauf Fireshield to one side of 60mm (0.55mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	60 mins	3500mm	Severe
Independent I Stud Lining IWLC3/08	Fire*	Max Height**	Impact Duty***
1 layer of 15mm Knauf Fireshield to one side of 70mm (0.70mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	60 mins	4300mm	Severe
Independent I Stud Lining IWLC4/08	Fire*	Max Height**	Impact Duty***
2 layers of 12.5mm Knauf Wallboard to one side of 70mm (0.70mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	60 mins	4300mm	Severe
Independent I Stud Lining IWLC5/08	Fire*	Max Height**	Impact Duty***
2 layers of 12.5mm Knauf Wallboard to one side of 92mm (0.90mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	60 mins	5700mm	Severe
Independent I Stud Lining IWLC6/08	Fire*	Max Height**	Impact Duty***
2 layers of 15mm Knauf Fireshield to one side of 70mm (0.70mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	90 mins	4300mm	Severe
Independent I Stud Lining IWLC7/08	Fire*	Max Height**	Impact Duty***
2 layers of 15mm Knauf Fireshield to one side of 146mm (0.90mm) Knauf 'I' Studs at 600mm centres forming independent lining to external steel cladding	90 mins	8000mm	Severe

* Fire resistance period for complete wall structure including external steel cladding to BS476:Part 22: 1987 (Integrity only).

** Maximum heights calculated based on a limiting deflection of L/240 at 200Pa.

*** Impact Duty rated in accordance with BS 5234: Part 2: 1992 Annexes B,C,D,E.

[Download Spec Sheet](#)

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Knauf Independent 'I' Stud

Installation Procedures

Knauf Independent 'I' Stud linings are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

The Knauf Independent 'I' Stud system must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994

Preparation

Mark guidelines on the floor and soffit to establish the positions of floor and head tracks.

Perimeter Framing 1,2

Knauf 'U' Channels should be used for the head and base and to form any abutments and to frame openings. Bed each section onto two continuous beads of Knauf Sealant and secure with Knauf Nailable Plugs at maximum 600mm centres and 50mm from ends of channels or studs. Separate studs and channels forming the perimeter need not be joined, but should be tightly butted together.

Vertical Studs 3,4,5

Studs should be positioned within the channels to coincide with the abutments of the boards, which will be fixed later. The centres (either 300, 400 or 600mm) depend on the performance requirements. In general there is no requirement to secure the metal at this point as this will be achieved once the boards are screw fixed.

Knauf 'I' Studs should be trimmed to within 5mm of the slab to soffit height.

Extend the length of Knauf 'I' Studs where necessary by splicing the Knauf 'I' Studs with Knauf Deep Flange 'U' Channel. See detail 30, page 38 (Performer).

Angle Sections

Fix Knauf Angle Sections at external corners and reveals, where appropriate.

Insulation

Install Knauf Earthwool Acoustic Roll where required, between and behind the vertical Knauf 'I' Studs.

Support for Horizontal Joints

To back horizontal joints in outer board layers, Knauf Fixing Channel or Knauf Flat Fixing Plate should be fitted across the face of all studs secured with two Knauf Wafer Head Screws per stud or between board layers.

Boarding 6

All boards should be offered up to the frame with the face of the board outwards and secured with Knauf Drywall Screws at 300mm centres. Fixing centres should be reduced to 200mm at corners.

Fixings should be to all horizontal and vertical members.



Installing floor track.



Installing head track.



Twisting Knauf 'I' Studs into place.



Adjusting the stud position.



Measuring the distance between studs.



Fixing Knauf Plasterboards to complete the lining.

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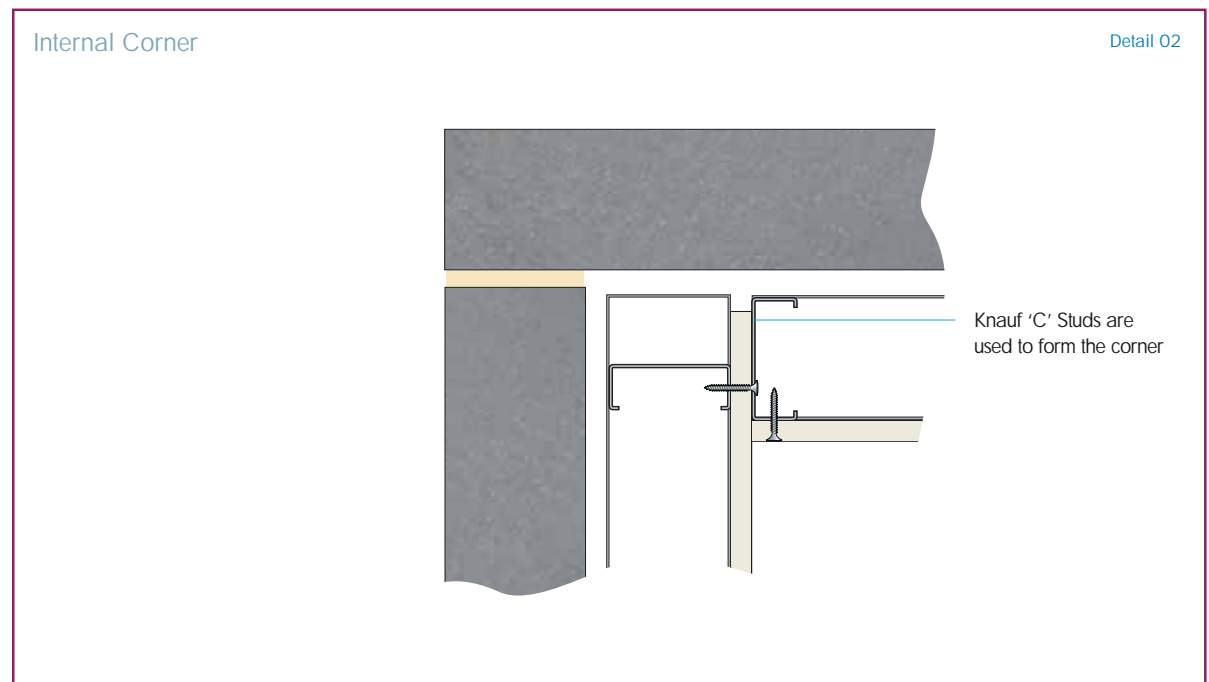
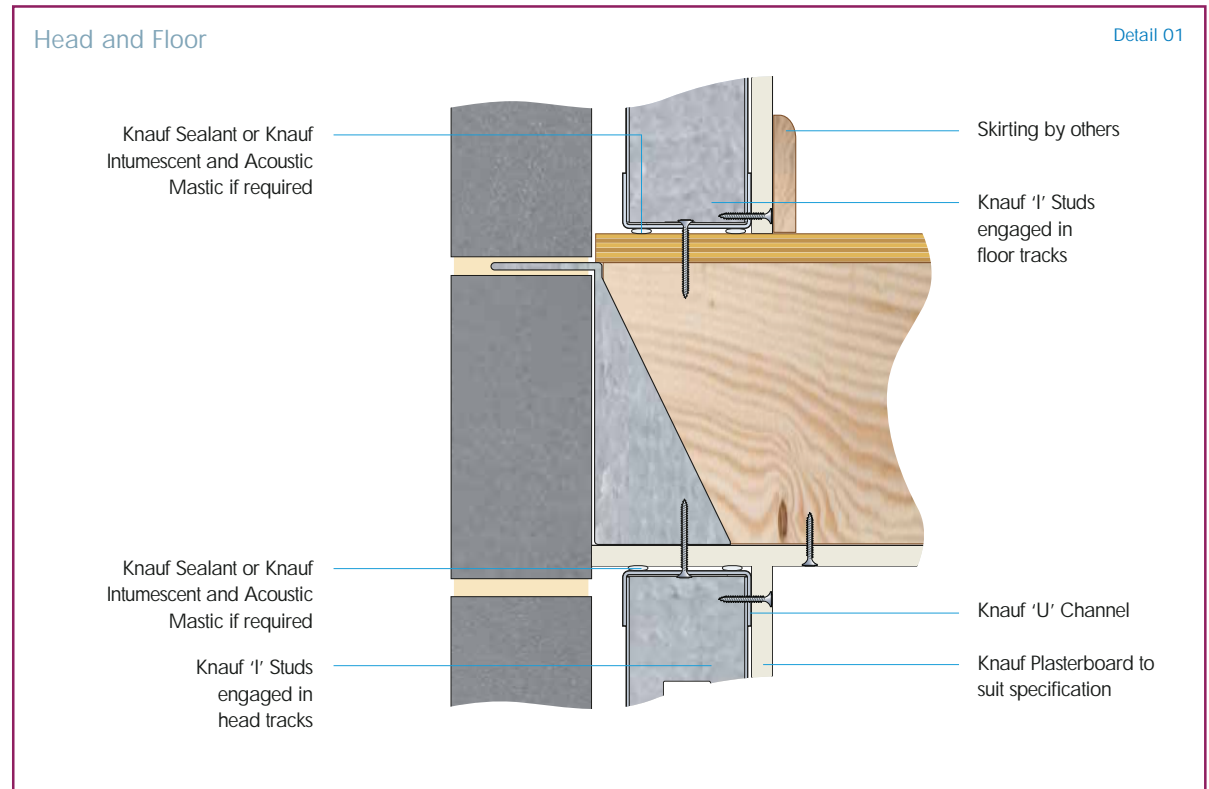
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Knauf Independent 'I' Stud

Application Details

These details represent some of the most common design situations relevant to the Knauf Independent 'I' Stud system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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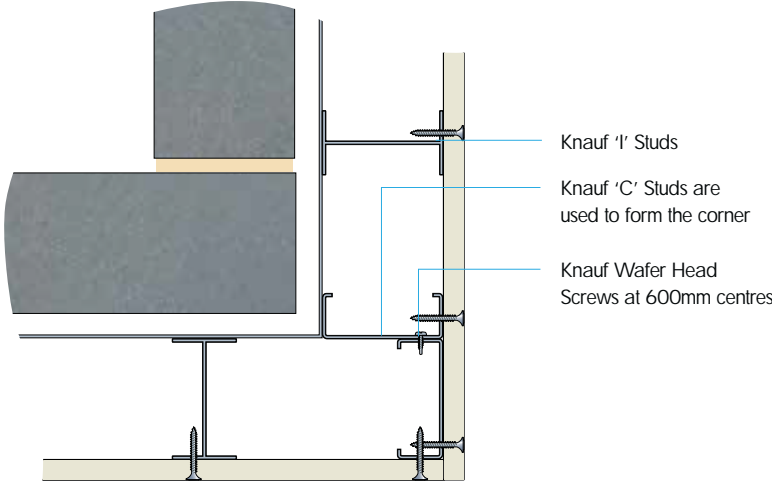
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Knauf Independent 'I' Stud

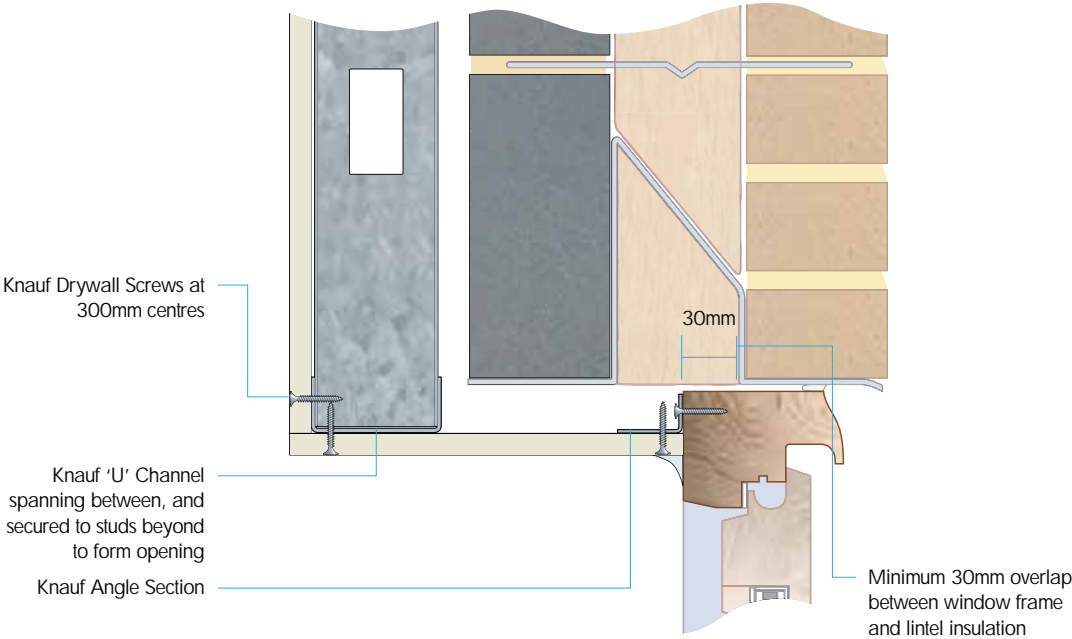
External Corner

Detail 03



Reveal Head

Detail 04



Note: Where opening is over 1500mm wide contact Knauf Technical Services for more information. Consideration should be given to the use of sealant to prevent air leakage.

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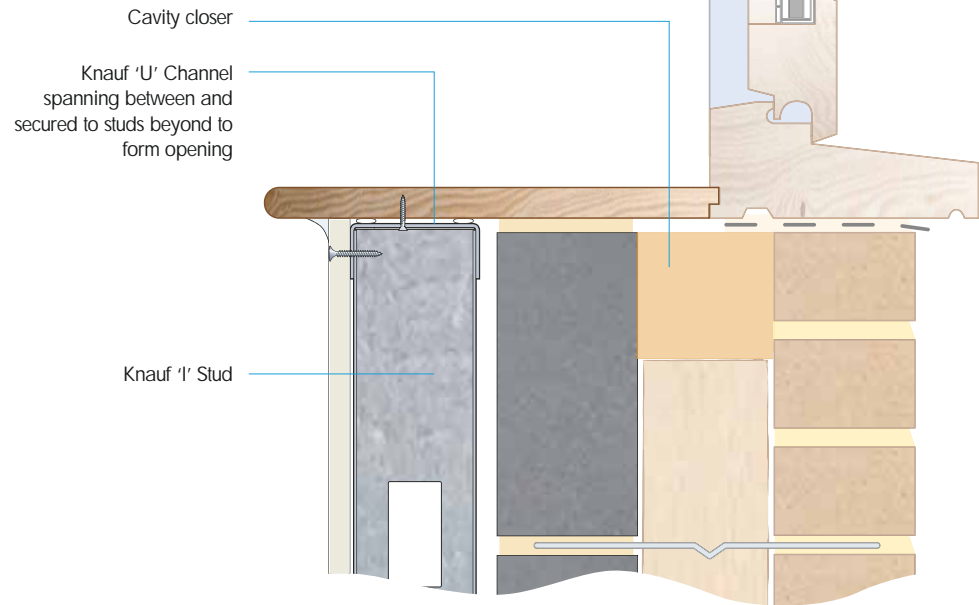
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Knauf Independent 'I' Stud

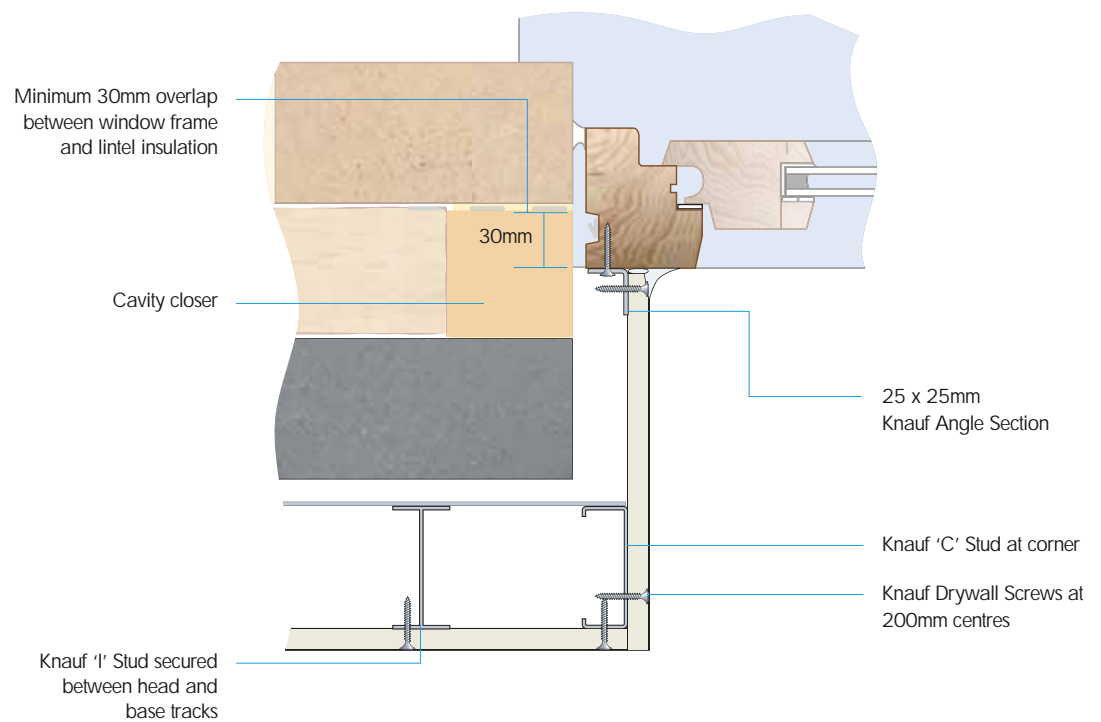
Reveal Cill

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Detail 06



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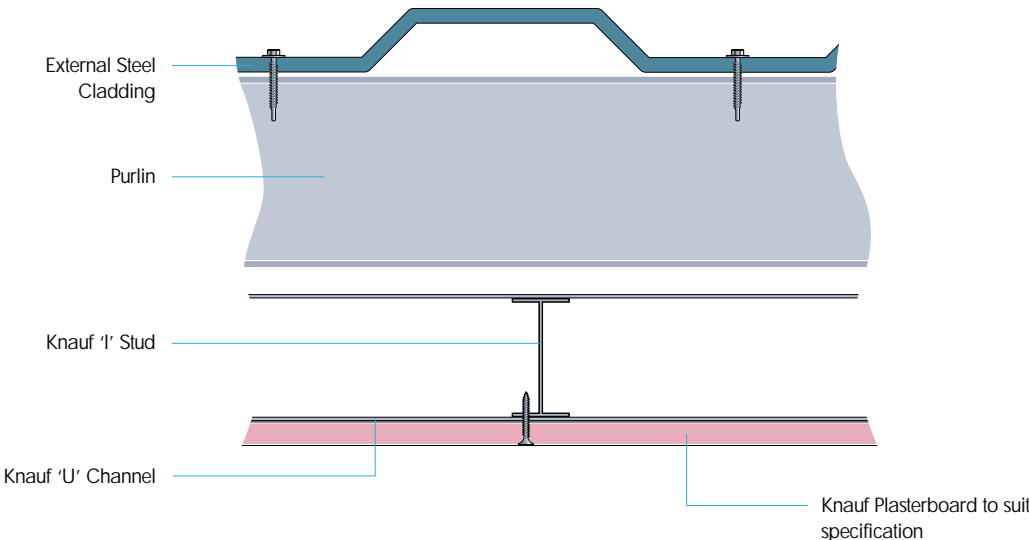
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Knauf Independent 'I' Stud

Steel Cladding

Detail 07

The Knauf Independent 'I' Stud wall lining system is perfect for tall, steel cladding situations that require a fire rating.



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Acoustic and Aesthetic Linings

Knauf Apertura Linings give you the freedom to carefully control the acoustic properties of a room whilst creating stunning, seamless jointed aesthetics.

Knauf Apertura aesthetic sound absorption solutions

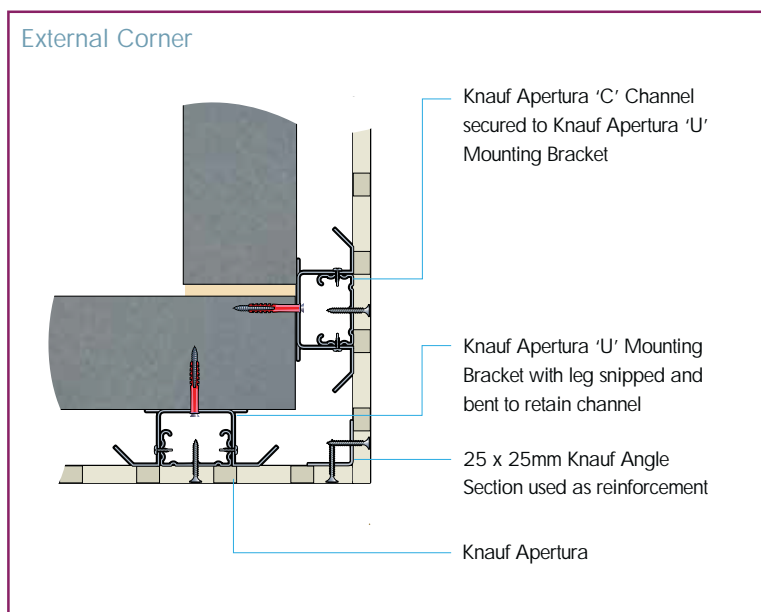
Accurate and effective sound absorption is crucial to the effectiveness of many rooms including learning environments, communal areas and atriums. Knauf Apertura perforated and patterned sound absorption boards provide effective control over reverberation whilst offering the designer complete creative freedom and a quality of finish that simply cannot be achieved with tiles.

Seventeen different styles, two fleece colours and the Knauf Uniflott tapeless jointing system offer total control over the look of the room.

[Download
Spec Sheet](#)



Typical Knauf Apertura Wall Liner detail:



Knauf Apertura Wall Liner

The Knauf Apertura Wall Liner system is purpose designed to suit the acoustic and aesthetic characteristics of Knauf Apertura boards in commercial non-loadbearing applications. They use fast drywall construction techniques and can be specified with confidence in public areas.

The Knauf Apertura Wall Liner system is adjustable and can reduce stand-off distances to as little as 42.5mm whilst accommodating deep service voids if needed. The void depth and inclusion of Knauf acoustic insulation can be varied to tune the sound absorption characteristics of the lining.

Seamless finishing

Knauf Apertura boards are jointed using the tapeless Knauf Uniflott system. This unique system provides a highly desirable seamless finish which is both quick and easy to achieve, allowing the finished pattern to flow uninterrupted throughout the room.

Knauf Apertura uses a combination of four precision-cut edges and the strong Uniflott tapeless jointing system to provide the stunning seamless finish that is a signature of Knauf Apertura installations.

Apertura board designs

Knauf Apertura is available in a wide range of different designs, which can be further modified by filling individual holes within the pattern. See page 270 for more information.

- Circular straight line perforation (5 designs)
- Circular double perforation (2 designs)
- Circular random perforation (2 designs)
- Square straight line perforation (2 designs)
- Square pattern (3 designs)
- Slotted pattern (3 designs)



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Apertura Brochure

A comprehensive Apertura brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website: www.knaufdrywall.co.uk

Inside you will find installation and performance details for our range of Apertura linings and Apertura ceilings, as well as the complete range of patterns available.

More Apertura information:

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Apertura range	page 272

Generate specifications at:
www.knaufdrywall.co.uk

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120 Wet Area Linings



Wet Area Linings

Knauf Aquapanel Interior cement boards are unaffected by water, adding an extra dimension to metal Knauf Lining systems and making them the ideal wet area solution to receive tiles or one of our wet area finishes.

Knauf Aquapanel cement board technology is revolutionising the way buildings are designed and constructed across Europe.

Developed by Knauf USG Systems, Aquapanel Interior cement board gives architects and contractors a proven alternative to brick and block construction in interior applications - where it offers significant performance advantages in wet and high humidity areas together with lower installation costs.

The Aquapanel cement board brand represents a range of extremely durable building materials providing solid substrates for wet areas with solutions for interior and exterior walls, linings, ceilings and floors.

Knauf Aquapanel Linings

Knauf Aquapanel Wall Liner and Independent 'I' Stud Linings are purpose designed for full or part tiled situations in commercial non-loadbearing applications. They use fast drywall construction techniques and can be specified with confidence in wet areas.

These systems utilise Knauf Aquapanel Interior cement board to receive tiles or Knauf Aquapanel Interior Skim.

The Knauf Aquapanel Wall Liner system is adjustable and can reduce stand-off distances to as little as 27mm whilst accommodating deep service voids if needed.

The boards are fixed onto strong, light galvanised Knauf metal sections; Knauf Apertura 'C' Channels for the Wall

Liner system and Knauf 'I' Studs for the Independent I-Stud system. In both cases the result is a tough lining that won't be damaged by water, ensuring any tiles fitted are protected from failure.

Design Freedom

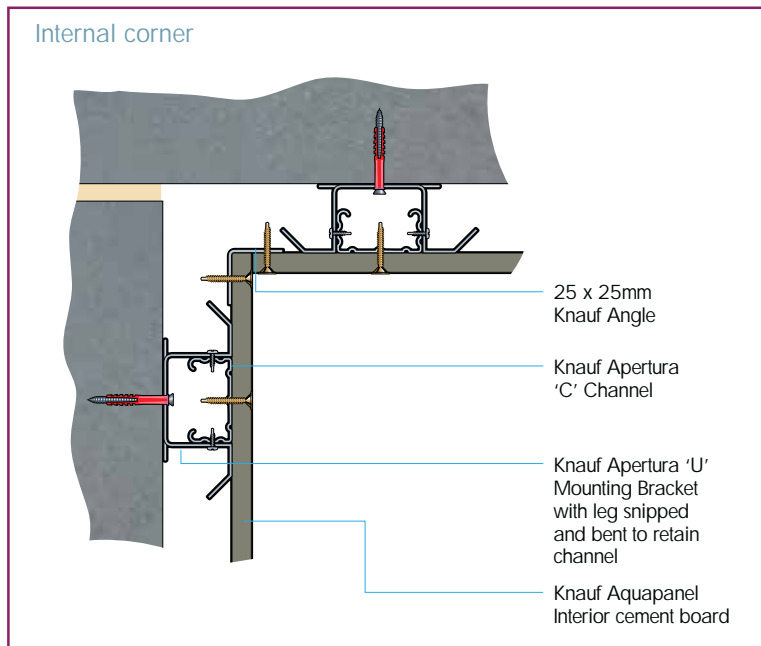
Knauf Aquapanel linings can be curved to form aesthetic finished walls and can support heavy marble tiles up to 50kg/m² as well as Knauf Aquapanel Interior Skim, giving complete freedom to the designer.

Note: When used in a swimming pool environment all metal components need to be pre-coated galvanised profiles and manufactured to comply with EN13964; products with a continuously hot-dip metal coating Z100 - an additional 20 micron organic coating per face.



[Download Spec Sheet](#)

Typical Knauf Aquapanel Wall Liner detail:



Increased productivity and reduced call-backs

Knauf Aquapanel Interior is exceptionally tough and durable, providing a solid tile backing substrate for wet indoor areas such as swimming pools, leisure centres, changing rooms, toilet areas, laundries, bathrooms and kitchens.

Knauf Aquapanel Linings deliver productivity gains by eliminating the time-consuming methods usually associated with specialised building areas and materials. With its unique score and snap facility Aquapanel Interior is easy to cut - making installation quick and simple.

The revolutionary EasyEdge design feature of Aquapanel Interior in conjunction with polyurethane Aquapanel Joint Adhesive improves adhesion between boards, resulting in a stronger structure.

Knauf Aquapanel Interior is ready-keyed for tiling, so no sealant is required. More on-site time savings result from the dry installation system. Overall productivity gains are reflected in shorter job schedules and lower in-place costs.

Avoid expensive tile failures

Tile failure is extremely costly in all instances. If a tile fails in a wet area you would normally expect the substrate behind to be damaged as well with traditional materials. Not only are there replacement costs of materials, but for many commercial and leisure applications tile failure may necessitate closing part of the premises.

Knauf Aquapanel systems provide the peace of mind that results from specifying a partition or lining that is specifically designed for the job. Galvanised metal components, special screws and high quality Aquapanel cement board linings ensure that Aquapanel systems are easy to install and continue to perform, even when wet.

Long-term, specifying Knauf Aquapanel Linings results in a significant reduction in costly call-backs and reduced maintenance. Tiled areas are expensive and the small investment required to upgrade to a Knauf Aquapanel Lining is quickly recouped through minimising future costs.



Fixing Knauf Aquapanel using Knauf Aquapanel Maxi Screws.



Cleaning the edges with a wet brush.



Applying Knauf Aquapanel Joint Adhesive.



Scraping off the excess adhesive once dry.



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Aquapanel Interior Brochure

A comprehensive Aquapanel Interior brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website:

www.knaufdrywall.co.uk

Inside you will find installation and performance details for our range of Aquapanel Interior linings and Aquapanel Performer partitions.

More Aquapanel information:

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122 Thermal Linings

Thermal Linings

Knauf Thermal Insulating Linings save money on new-build projects by combining the functions of insulating and lining, whilst providing an instant energy saving upgrade to external walls in refurbishment situations. They offer a fast and effective way to comply with the Building Regulations and the Code for Sustainable Homes.

Knauf Insulating Laminates

Knauf Insulating Laminates are fixed using the Knauf Direct Bonding system, see page 94, to line brick or block walls, or mechanically fixed to structural timber walls in new, refurbished or extended residential and commercial buildings. Using highly efficient insulation materials keeps installed costs to a minimum without losing valuable room space.

Knauf Insulating Laminates are used to accelerate building schedules in new constructions by combining the functions of insulating and lining.

Specifying Knauf Thermal Insulating Linings in conjunction with the other insulating elements of the wall is one of the simplest ways to meet the requirements of the Building Regulations and the Code for Sustainable Homes.

Upgrading existing building stock

Real energy savings and reduced carbon emissions depend on bringing the UK's vast stock of inefficient old buildings up to modern thermal performance standards as soon as possible.

The Knauf Insulating Laminate range of quick-to-install thermal plasterboards provide instant cost effective dry lining and insulation solutions for all solid and cavity-walled buildings, cutting energy needs dramatically.

Upgrading a single typical residential house will reduce CO₂ output by approximately 0.5 to 3 tonnes a year. Much bigger reductions are seen with older office blocks, industrial buildings and residential towers.

Knauf Insulating Laminates range

The Knauf Insulating Laminates range utilises a wide variety of different insulating backing materials and thicknesses to ensure that the most economical solution is available for your project.

For more information on the complete range see page 228. For help with your thermal calculations when determining which laminate would best suit your needs, please contact Knauf Drywall Technical Services on 01795 416259.



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Code for Sustainable Homes solutions

The Code for Sustainable Homes requires progressive improvement to insulation levels and efficiency in new build housing, culminating in level 6 - carbon zero homes – in 2016. Knauf Drywall systems can significantly contribute towards achieving these targets.

Set out in the following tables are some ready-made solutions guaranteed (with correct installation) to meet the code levels indicated. Many other solutions are possible and if you have specific requirements, please contact Knauf Drywall Technical Services on 01795 416259.



Timber Frame (140mm Knauf Earthwool Frametherm 32)			
Target U-value (W/m ² K)		Masonry outer leaf	Tile/timber clad outer leaf
0.15	Code 5/6	75mm Knauf PIR Laminate	–
0.18	Code 4	55mm Knauf Thermal Laminate Plus	50mm Knauf PIR Laminate
0.21	Code 3	40mm Knauf Thermal Laminate	40mm Knauf Thermal Laminate

Timber Frame (90mm Knauf Earthwool Frametherm 32)			
Target U-value (W/m ² K)		Masonry outer leaf	Tile/timber clad outer leaf
0.18	Code 4	75mm Knauf PIR Laminate	75mm Knauf PIR Laminate
0.21	Code 3	65mm Knauf PIR Laminate	65mm Knauf PIR Laminate

Masonry Wall (partial fill with minimum 50mm PIR rigid insulation)					
Target U-value (W/m ² K)		Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)
0.15	Code 5/6	–	–	–	75mm Knauf PIR Laminate
0.18	Code 4	75mm Knauf PIR Laminate	75mm Knauf PIR Laminate	75mm Knauf PIR Laminate	55mm Knauf Thermal Laminate Plus
0.21	Code 3	55mm Knauf Thermal Laminate Plus	55mm Knauf Thermal Laminate Plus	45mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate

Masonry Wall (full fill with minimum 100mm Knauf Earthwool DriTherm Cavity Slab)					
Target U-value (W/m ² K)		Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)
0.15	Code 5/6	–	–	75mm Knauf PIR Laminate	75mm Knauf PIR Laminate
0.18	Code 4	65mm Knauf PIR Laminate	65mm Knauf PIR Laminate	65mm Knauf PIR Laminate	55mm Knauf Thermal Laminate Plus
0.21	Code 3	55mm Knauf Thermal Laminate Plus	55mm Knauf Thermal Laminate Plus	55mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate

Thermal Linings

Part L1A and Part L2A solutions for new build

Approved Documents L1A and L2A set out the Building Regulation requirements for new buildings. Further details on these documents and methods of compliance are shown on pages 304 and 312.



Timber Frame (with 140mm Crown FrameTherm 32)		
Target U-value (W/m ² K)	Masonry outer leaf	Tile/timber clad outer leaf
0.25 ^{L1A}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.30 ^{L1A}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.35 ^{L1B}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate

Timber Frame (with 90mm Crown FrameTherm 32)		
Target U-value (W/m ² K)	Masonry outer leaf	Tile/timber clad outer leaf
0.25 ^{L1A}	45mm Knauf Thermal Laminate Plus	55mm Knauf Thermal Laminate Plus
0.30 ^{L1A}	30mm Knauf Thermal Laminate	40mm Knauf Thermal Laminate
0.35 ^{L1B}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate

Masonry wall (partial fill with minimum 50mm PIR rigid insulation)				
Target U-value (W/m ² K)	Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)
0.25 ^{L1A}	40mm Knauf Thermal Laminate	30mm Knauf Thermal Laminate	30mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.30 ^{L1A}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.35 ^{L1B}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate

Masonry wall (full fill with minimum 100mm Crown DriTherm 37)				
Target U-value (W/m ² K)	Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)
0.25 ^{L1A}	40mm Knauf Thermal Laminate	40mm Knauf Thermal Laminate	30mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.30 ^{L1A}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.35 ^{L1B}	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate

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Part L1B and Part L2B solutions for refurbishment

Approved Documents L1B and L2B set out the Building Regulation requirements for refurbishment in buildings. Further details on these documents and methods of compliance are shown on pages 305 and 313.



Solid Masonry Wall (Knauf Independent I Stud with 70mm Knauf RocksilK Flexible Slab between studs)						
Target U-value (W/m ² K)	Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)	Brick (0.77)	
0.27 (Scotland)	55mm Knauf PIR Laminate	55mm Knauf Thermal Laminate Plus	55mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate	50mm Knauf PIR Laminate	
0.30 (England)	55mm Knauf Thermal Laminate Plus	45mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate	55mm Knauf Thermal Laminate Plus	
0.35 (England)	40mm Knauf Thermal Laminate Plus	40mm Knauf Thermal Laminate	30mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	35mm Knauf Thermal Laminate Plus	

Solid masonry wall (Direct bond lining)						
Target U-value (W/m ² K)	Dense block (1.13)	Medium block (0.51)	Lightweight aggregate (0.34)	Lightweight aircrete (0.11)	Brick (0.77)	
0.27 (Scotland)	-	-	-	50mm Knauf PIR Laminate	-	
0.30 (England)	-	75mm Knauf PIR Laminate	65mm Knauf PIR Laminate	55mm Knauf Thermal Laminate Plus	75mm Knauf PIR Laminate	
0.35 (England)	65mm Knauf PIR Laminate	65mm Knauf PIR Laminate	65mm Knauf PIR Laminate	40mm Knauf Thermal Laminate Plus	65mm Knauf PIR Laminate	



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126 Soffit Linings

Soffit Linings

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Soffit linings have to perform many tasks, from providing fire resistance and hiding services above, to providing acoustic control and an architectural feature.

Together with all these tasks a soffit lining needs to be strong, both to resist cracking from movement and because any failure at height is dangerous, particularly in a public environment.

Knauf Drywall soffit linings are manufactured from high quality, system-tested components that are designed to work together under the most demanding circumstances.

Soffit Linings

C-Form Suspended Ceiling

128

- Our strongest suspended ceiling system
- Recommended for large spans and ceiling areas
- Recommended when creating deep service voids

MF Suspended Ceiling

138

- Simple and fast to install
- Shapes, features and openings are easily created
- Can provide up to 2 hours fire protection

Acoustic and Aesthetic Ceilings

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Warm Roof Linings

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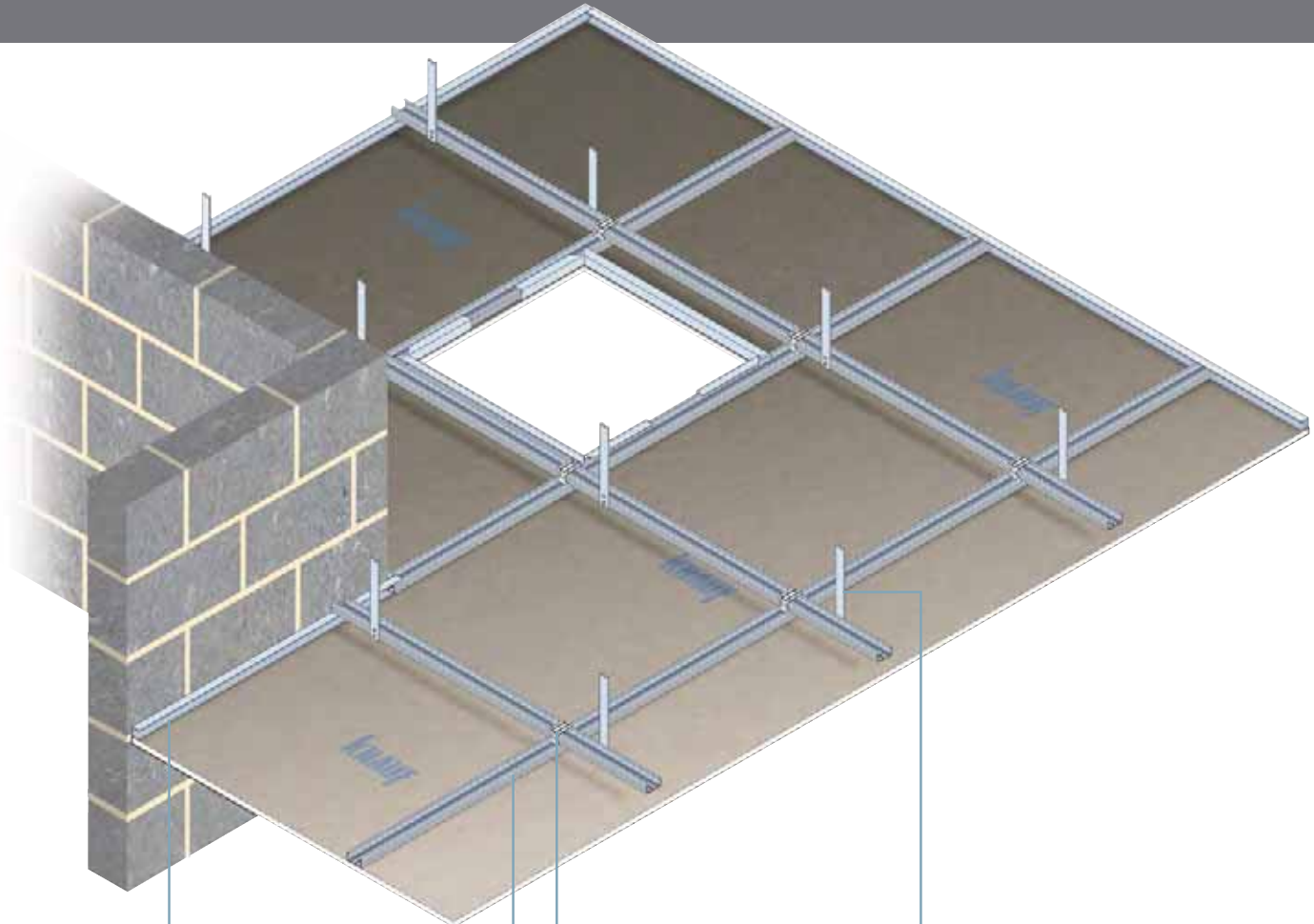
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128 C-Form - Suspended Ceilings

Knauf C-Form - Suspended Ceilings

The Knauf C-Form Suspended Ceiling System uses the minimum number of different components and is extremely easy and quick to install. The system is very strong and perfect for larger ceiling areas.



Metal Components



Knauf 'U' Channel - Perimeter Support.

Metal Components



The Knauf Intersection Connector is used to join the upper and lower Knauf 'C' Channels.

Metal Hangers



Knauf Strap Hanger.

Plasterboard



Our full range of Knauf Plasterboards is available to use with the Knauf C-Form Suspended Ceiling System.

Metal Components



Knauf 'C' Channel forms the main suspension grid.

Fixings



Knauf Drywall Screws are self drilling and self tapping and are designed to work perfectly with Knauf Plasterboards.

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Generate specifications at:
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C-Form Suspended Ceilings

The Knauf C-Form Suspended Ceiling system can provide up to 2 hours fire protection and easily accommodates changes in level.

Key Features:

- Recommended for large ceiling areas and long spans
- Recommended when creating deep voids
- Extremely strong and resistant to movement

Fixings



Knauf Nut and Bolt.

Metal Components



Use Knauf Universal Bracket as an alternative to Knauf Strap Hanger for shallow voids.

Metal Components



The Knauf 'C' Channel Connector is used to extend Knauf 'C' Channels.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

Metal Components



Knauf Soffit Cleat.

Metal Components



Knauf Angle Section.



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Our range of Ceiling Solutions includes:

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Knauf C-Form

Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Education



Healthcare

2 Find your performance levels

• Fire

• Dimensions

• Loading

3 Find your solution

If your requirements fall outside these please contact Knauf Drywall Technical Services.



Fire Protection to Floor or Roof Cavity above



Soffit Lining CF1/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
2 layers of 12.5mm Knauf Wallboard, fixed to the underside of a Knauf C-Form Ceiling system, with 100mm Knauf Earthwool Acoustic Roll within cavity in the void	30 mins	1200mm	1200mm	450mm	19.6

Soffit Lining CF2/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
2 layers of 15mm Knauf Fireshield, fixed to the underside of a Knauf C-Form Ceiling system, with 30mm Knauf Universal Slab RS45 in the void	60 mins	900mm	900mm	450mm	27.4

* Fire Resistance period in accordance with BS476:Part 22:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the resistance period if not treated correctly.



Fire Protection to Steel Beams supporting Concrete Floors



Soffit Lining CF3/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
1 layer of 12.5mm Knauf Fireshield fixed to the underside of a Knauf C-Form Ceiling system	30 mins	1200mm	1200mm	450mm	12.0

Soffit Lining CF4/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
2 layers of 12.5mm Knauf Fireshield fixed to the underside of a Knauf C-Form Ceiling system	60 mins	1200mm	1200mm	450mm	22.0

* Fire Resistance period in accordance with BS476:Part 23:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the resistance period if not treated correctly.

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Knauf C-Form Optimised Solutions

These are our Optimised Solutions; should your requirements fall outside these then please contact our Knauf Drywall Technical team who can provide detailed specification guidance for your project.

Knauf Drywall Technical Services:
01795 416259



Performance you can trust

All Knauf C-Form suspended ceilings utilise high quality, purpose designed Knauf Plasterboards, Knauf Metal Components and Knauf Accessories, tested and warranted to work together as a whole system.



Fire Protection to Timber Floor Construction



Soffit Lining CF5/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
1 layer of 12.5mm Knauf Fireshield fixed to the underside of a Knauf C-Form Ceiling system	30 mins	1200mm	1200mm	450mm	12.0

Soffit Lining CF6/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
2 layers of 12.5mm Knauf Fireshield fixed to the underside of a Knauf C-Form Ceiling system	60 mins	1200mm	1200mm	450mm	22.0

Soffit Lining CF7/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
3 layers of 15mm Knauf Fireshield fixed to the underside of a Knauf C-Form Ceiling system, with 40mm Knauf Universal Slab RS45 in the void	120 mins	900mm	900mm	450mm	39.8

* Fire Resistance period in accordance with BS476:Part 21:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the resistance period if not treated correctly.

Ceiling System Loading Information

The addition of services, ventilation and lighting can add significant loading to the ceiling system if the additional mass is to be borne by the ceiling. Please check the table below to see if the support channels need reducing to ensure the system is adequately specified to perform safely.

C-Form Ceiling

Total load including weight of ceiling system (kg/m²) - this should include any additional lighting/ventilation system

	15	20	25	30	35	40	45	50
Suspension Hanger centres (mm)	1200	1200	1000	900	900	900	600	600
Upper 'C' Channel centres (mm)	1200	1200	1000	900	900	900	600	600
Lower 'C' Channel centres (mm)	450	450	450	450	450	450	450	450

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Knauf C-Form

Installation Procedures

Knauf Ceiling systems are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

The Knauf C-Form Suspended Ceiling system must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 & BS 8000: Part 8: 1994.

When creating an airtight space, methods for the reduction of potential 'ceiling lift' should be considered. For further advice contact Knauf Drywall Technical Services.

Perimeter Fixing **1**

20mm Knauf 'U' Channel - Perimeter Support Channels should be secured to the walls at the required heights, at maximum 600mm centres and 50mm from the ends of channels. The top of the channel should align with the underside of the upper Knauf 'C' Channel.

Knauf 'U' Channel - Perimeter Support channels forming the perimeter do not need to be mechanically fixed together.

Suspension **2**

Select the fixing centres suited to the ceiling loading. See page 131.

Fix Knauf Soffit Cleats to the structural soffit with suitable fixings. Choose either Knauf Angle Section or the flexible Knauf Strap Hanger and fix to the Knauf Soffit Cleat. When creating a shallow ceiling void, Knauf Universal Brackets can be used.

Upper 'C' Channels

The centres of the upper Knauf 'C' Channels depend on the loading requirements. See page 131.

Knauf Angle Section or Knauf Strap Hanger should be fixed staggered to either side of the Knauf 'C' Channel with two Knauf Wafer Head Jackpoint Screws. The upper 'C' Channels should lay on the upper flange of the 20mm Knauf 'U' Channel - Perimeter Support.

Lower 'C' Channels **4,5,6**

The lower Knauf 'C' Channels should be positioned at 450mm centres within the perimeter channels to coincide with the abutments of the boards, which will be fixed later.

Connect the lower 'C' Channels to the upper 'C' Channels by means of Knauf Channel Intersection Connectors. These connectors fit over the upper 'C' Channels and snap-fix into the lower 'C' Channels.

Insulation

Once the upper and lower Knauf 'C' Channels have been connected and before the boarding has started, the specified Knauf insulation should be inserted above the upper 'C' Channels. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or between different rolls.

3 Movement Control Joints

Create movement control joints where ceiling runs exceed 10m, coinciding where possible with movement joints in the surrounding structure.

Boarding **7**

All boards should be offered up to the ceiling grid with the decorative face of the boards outwards and secured with Knauf Drywall Screws at maximum 230mm centres. Fixing centres should be reduced to 150mm at corners.

Boards should be mounted at 90° to the direction of the ceiling channels.



Fixing Knauf Perimeter Channel.



Fixing Knauf Angle Section as hanger.



Fixing Knauf Angle Section to upper Knauf 'C' Channel.



Positioning lower Knauf 'C' Channel into Knauf Perimeter Channel.



Measuring the distance between lower Knauf 'C' Channels.



Connecting lower and upper Knauf 'C' Channel with Knauf Channel Intersection Connectors.



Screw fixing the Knauf Plasterboard to the lower Knauf 'C' Channels.



Spray applied Knauf Readymix Plasters make finishing ceilings safe, easy and fast.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

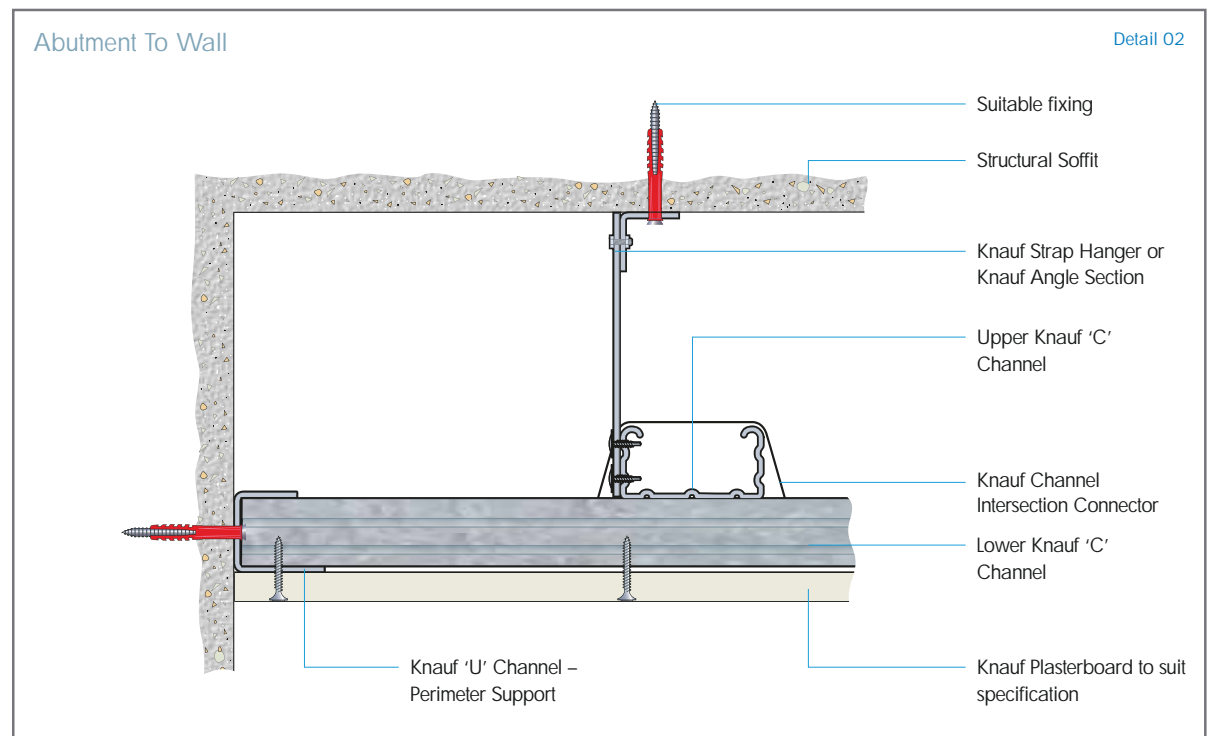
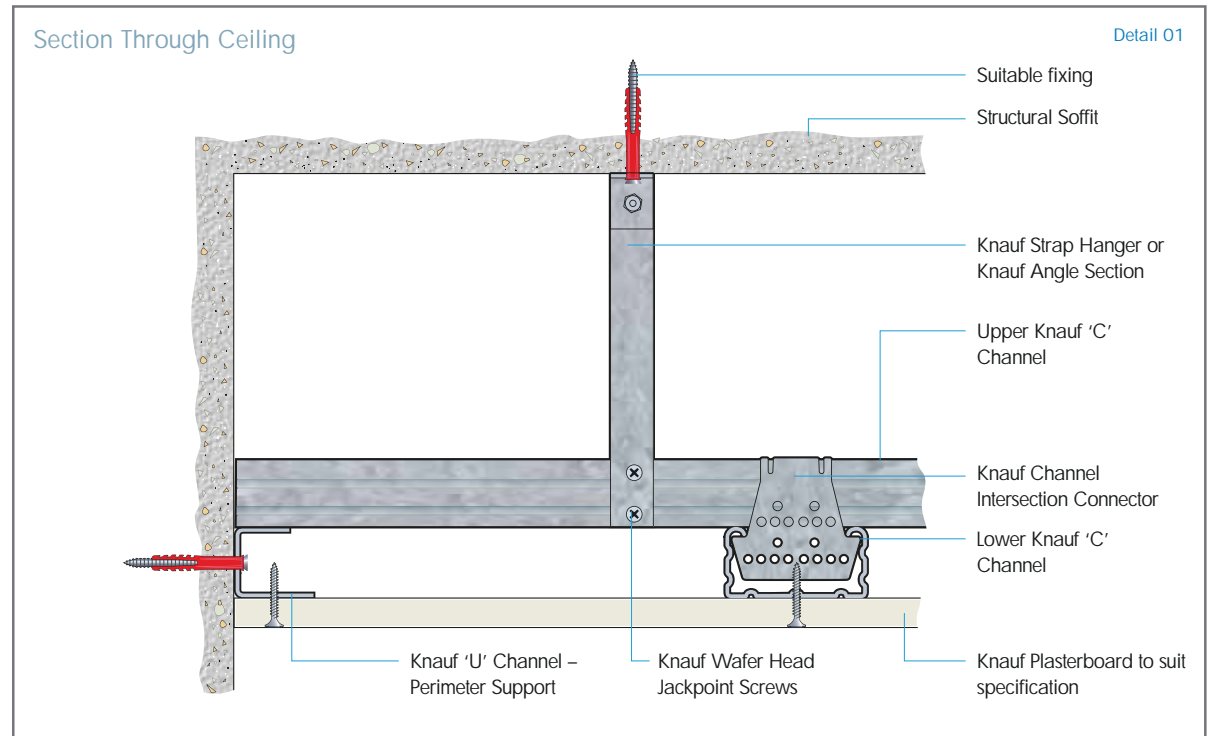
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Knauf C-Form

Application Details

These details represent some of the most common design situations relevant to the Knauf C-Form system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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Where you see these icons in a detail, that detail is particularly relevant to that sector.

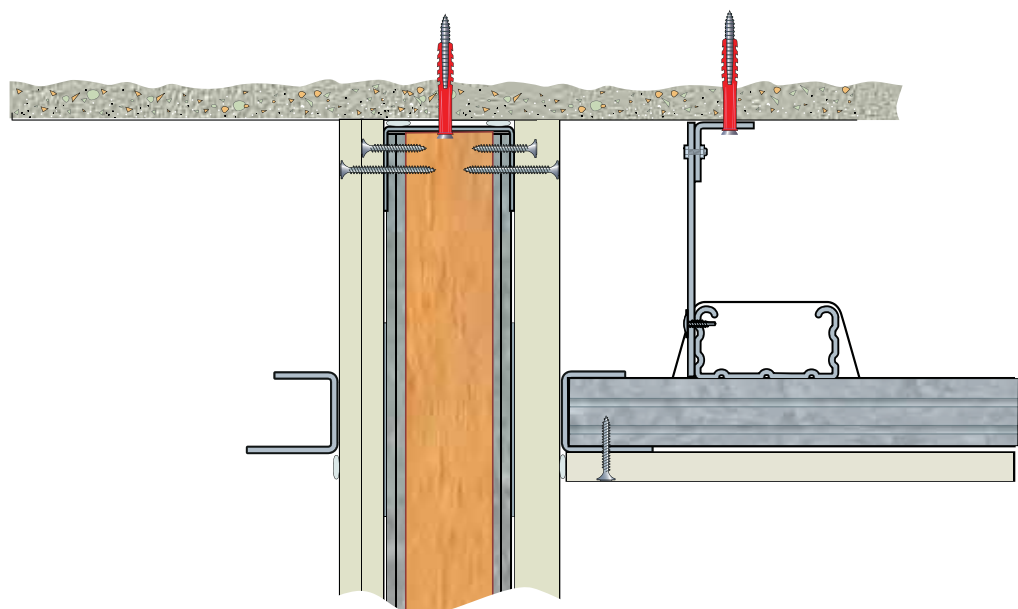
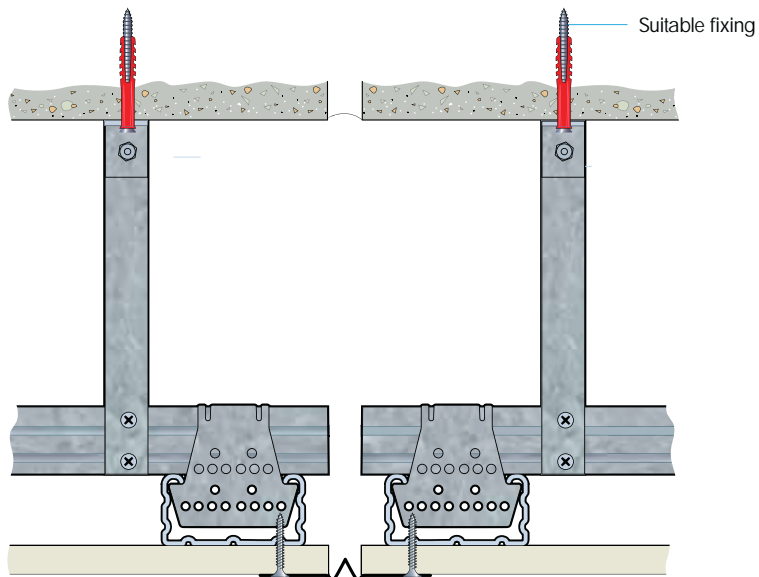
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Knauf C-Form

Movement Control Joint

Detail 03

Can be formed simply with standard components as shown, ideally coinciding with movement joints in the building structure.



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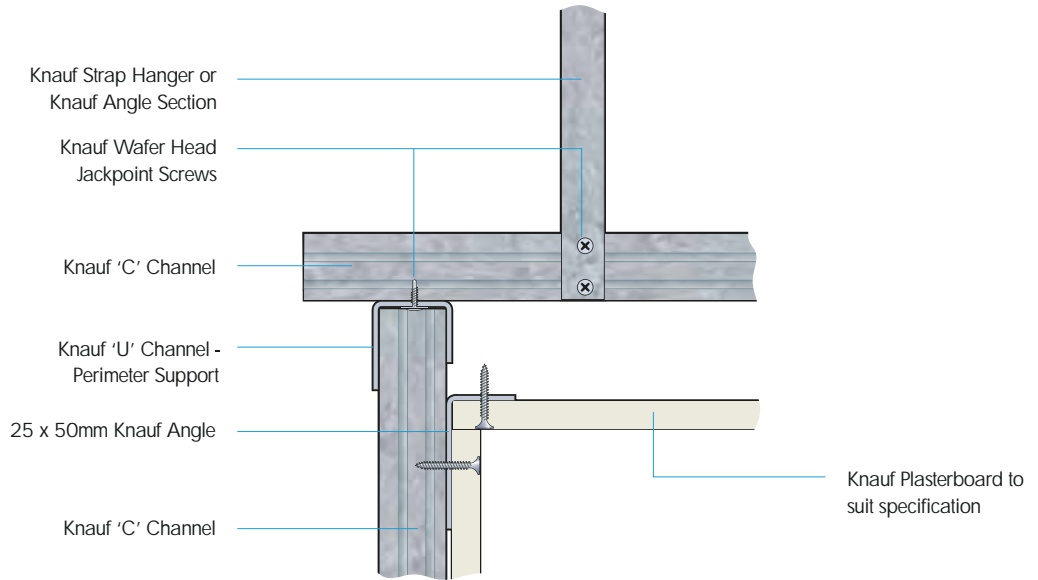
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Knauf C-Form

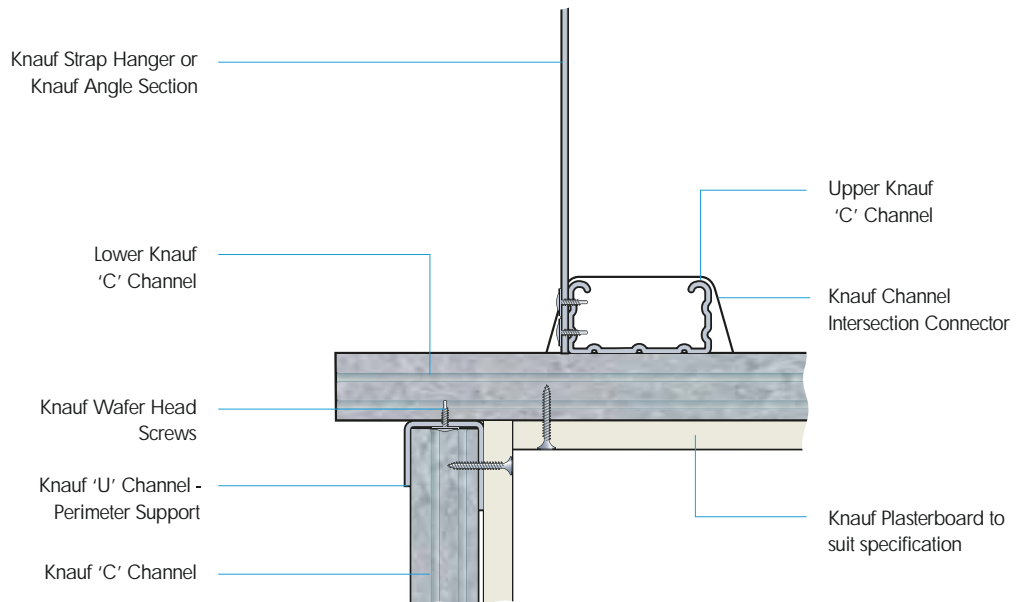
Change of Level and Bulkhead

Detail 05



Change of Level and Bulkhead

Detail 06



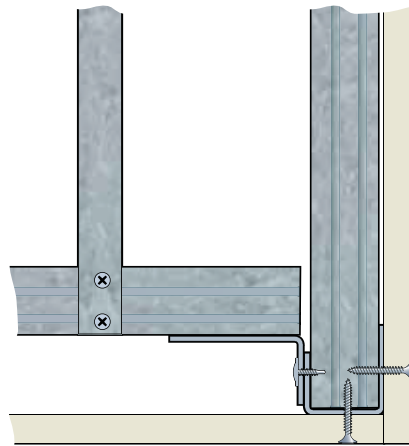
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Knauf C-Form



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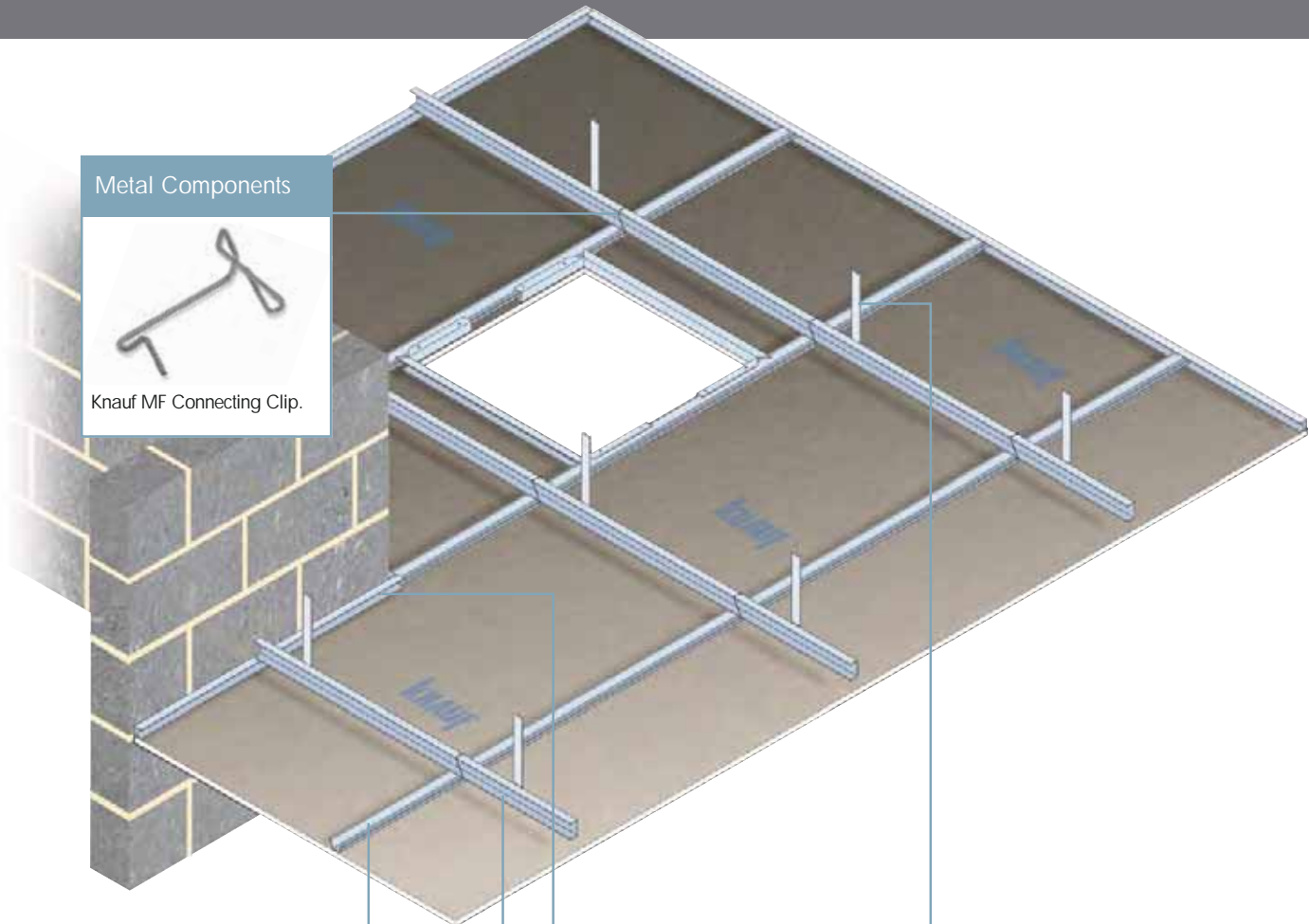
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Knauf MF - Suspended Ceilings

The Knauf MF Suspended Ceiling System is versatile and easy to install. Deep voids are easily created to hide services and the ceiling can be used to provide fire protection.

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Metal Components



Knauf MF Connecting Clip.

Metal Components



Knauf MF Ceiling Channel forms the lower suspension grid.

Metal Components



Knauf MF Primary Support Channel forms the upper suspension grid.

Metal Components



Knauf MF Perimeter Channel.

Metal Hangers



Knauf Strap Hanger.



Knauf Angle Section.

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MF Suspended Ceilings

The Knauf MF Suspended Ceiling system is very familiar to contractors who will easily be able to form openings, bulkheads and coffers.

Key Features:

- Simple and fast to install
- Can provide fire protection of up to 2 hours
- Shapes, features and openings are easily created

Fixings



Knauf Drywall Screws are self drilling and self tapping and designed to work perfectly with Knauf Plasterboards.

Metal Components



Knauf Soffit Cleat.

Fixings



Knauf Nut and Bolt.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

Plasterboard



Our full range of Knauf Plasterboards is available to use with the Knauf MF Suspended Ceiling System.

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Our range of Ceiling Solutions includes:

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Knauf MF - Suspended Ceilings



Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Education



Healthcare

2 Find your performance levels

• Fire

• Dimensions

• Loading

3 Find your solution

If your requirements fall outside these please contact Knauf Drywall Technical Services.



Fire Protection to Floor or Roof Cavity above



Soffit Lining MF1/08

2 layers of 12.5mm Knauf Wallboard, fixed to the underside of a Knauf MF Ceiling system, with 100mm Knauf Earthwool Acoustic Roll in the void

Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
30 mins	1200mm	1200mm	450mm	19.6

Soffit Lining MF2/08

2 layers of 15mm Knauf Fireshield, fixed to the underside of a Knauf MF Ceiling system, with 30mm Knauf Universal Slab RS45 in the void

Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
60 mins	1200mm	1200mm	450mm	27.4

* Fire Resistance period in accordance with BS476:Part 22:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the fire resistance period if not treated correctly.



Fire Protection to Steel Beams supporting Concrete Floors



Soffit Lining MF3/08

1 layer of 12.5mm Knauf Fireshield fixed to the underside of a Knauf MF Ceiling system

Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
30 mins	1200mm	1200mm	450mm	12.0

Soffit Lining MF4/08

2 layers of 12.5mm Knauf Fireshield fixed to the underside of a Knauf MF Ceiling system

Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
60 mins	1200mm	1200mm	450mm	22.0

* Fire Resistance period in accordance with BS476:Part 23:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the fire resistance period if not treated correctly.

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Where you see these icons in a detail, that detail is particularly relevant to that sector.

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Knauf MF Optimised Solutions

These are our Optimised Solutions; should your requirements fall outside these then please contact our Knauf Drywall Technical team who can provide detailed specification guidance for your project.

Knauf Drywall Technical Services:
01795 416259



Performance you can trust

All Knauf MF suspended ceilings utilise high quality, purpose designed Knauf Plasterboards, Knauf Metal Components and Knauf Accessories, tested and warranted to work together as a whole system.



Fire Protection to Timber Floor Construction



Soffit Lining MF5/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
1 layer of 12.5mm Knauf Fireshield fixed to the underside of a Knauf MF Ceiling system	30 mins	1200mm	1200mm	450mm	12.0

Soffit Lining MF6/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
2 layers of 12.5mm Knauf Fireshield fixed to the underside of a Knauf MF Ceiling system	60 mins	1200mm	1200mm	450mm	22.0

Soffit Lining MF7/08

	Fire*	Suspension Hangers	Upper Channels	Lower Channels	System Weight (kg/m ²)
3 layers of 15mm Knauf Fireshield fixed to the underside of a Knauf MF Ceiling system, with 40mm Knauf Universal Slab RS45 in the void	120 mins	1200mm	900mm	450mm	39.8

* Fire Resistance period in accordance with BS476:Part 21:1987

Note: Consideration to the effect on fire performance must be given when installing services, as penetrations may affect the fire resistance period if not treated correctly.

Ceiling System Loading Information

The addition of services, ventilation and lighting can add significant loading to the ceiling system if the additional mass is to be borne by the ceiling. Please check the table below to see if the support channels need reducing to ensure the system is adequately specified to perform safely.

MF Ceiling

Total load including weight of ceiling system (kg/m²) - this should include any additional lighting/ventilation system

	15	20	25	30	35	40	45	50
Suspension Hanger centres (mm)	1200	1200	1200	1200	1200	1200	1200	1200
MF Primary Support Channel centres (mm)	1200	1200	1200	1200	900	900	600	600
MF Ceiling Channel centres (mm)	450	450	450	450	450	450	450	450

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Knauf MF - Suspended Ceilings

Installation Procedures

Knauf MF Ceiling systems are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf MF Ceiling Systems must be installed in accordance with Knauf Drywall's recommendations and the recommendations of BS 8212: 1995 and BS 8000: Part 8: 1994.

When creating an airtight space, methods for the reduction of potential 'ceiling lift' should be considered. For further advice contact Knauf Drywall Technical Services.

Perimeter Fixing 1

Knauf MF Perimeter Channels should be secured to the walls at the required heights, at maximum 600mm centres and 50mm from the ends of channels. The top of the Knauf MF Perimeter Channels should align with the underside of the Knauf MF Primary Support Channel.

The Knauf MF Perimeter Channels forming the perimeter and the Knauf Primary Support Channel do not need to be mechanically fixed together.

Suspension 2

Select the fixing centres suited to the ceiling loading. See page 141.

Fix Knauf Soffit Cleats to the structural soffit with suitable fixings. Choose either Knauf Angle Section or the flexible Knauf Strap Hanger and fix to the Knauf Soffit Cleat, using Knauf MF Nut and Bolt.

When creating a shallow ceiling void, Knauf Universal Brackets can be used.

MF Primary Support Channels

The centres of the primary support channels depend on the loading requirement, determined in the MF loading information table.

Knauf Angle or Knauf Strap Hanger should be fixed to the Knauf Primary Support Channels with two Knauf Wafer Head Jackpoint Screws. The Primary Support Channels should lay on the upper flange of the Perimeter Channel.

Joints in MF Ceilings

If straight lengths of Knauf MF Primary Support Channels need jointing, place the channels back to back, with a minimum 150mm overlap, and fix with two Knauf Wafer Head Jackpoint Screws.

MF Ceiling Channels 4,5

The Knauf MF Ceiling Channels should be positioned at 450mm centres within the perimeter channels to coincide with the abutments of the boards, which will be fixed later.

Connect the Knauf MF Ceiling Channel to the Knauf MF Primary Support Channels by means of Knauf MF Connecting Clips. These clips fit over the Knauf MF Primary Support Channels and snap-fix over the MF Ceiling Channels.

Insulation

3 Once the primary support and the ceiling channels have been connected and before the boarding has started, Knauf insulation as specified should be inserted above the primary support channels. Care should be taken to ensure that the insulation is fitted neatly without gaps at abutments or between different rolls.

Movement Control Joints

Create movement control joints where ceiling runs exceed 10m, coinciding where possible with movement joints in the surrounding structure.

Boarding 6

All boards should be offered up to the ceiling grid with the face of the boards outwards and secured with Knauf Drywall Screws at 230mm centres. Fixing centres should be reduced to 150mm at corners.

Boards should be mounted at 90° to the direction of the ceiling channels.



Fixing Knauf MF Perimeter Channel.



Fixing the Knauf Angle Section to joist to form hanger.



Fixing the Knauf Angle Section to Knauf MF Primary Support Channel.



Connect the Knauf Primary Support Channel to the Knauf MF Ceiling Channel with Knauf MF Connecting Clips.



Adjusting the Knauf MF Ceiling Channel.



Fixing Knauf Plasterboard to Knauf MF Ceiling Channels.



Knauf Universal Brackets can be used as an alternative to Knauf Angle Section for shallow voids.



Spray applied Knauf Readymix Plasters make finishing ceilings safe, easy and fast.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

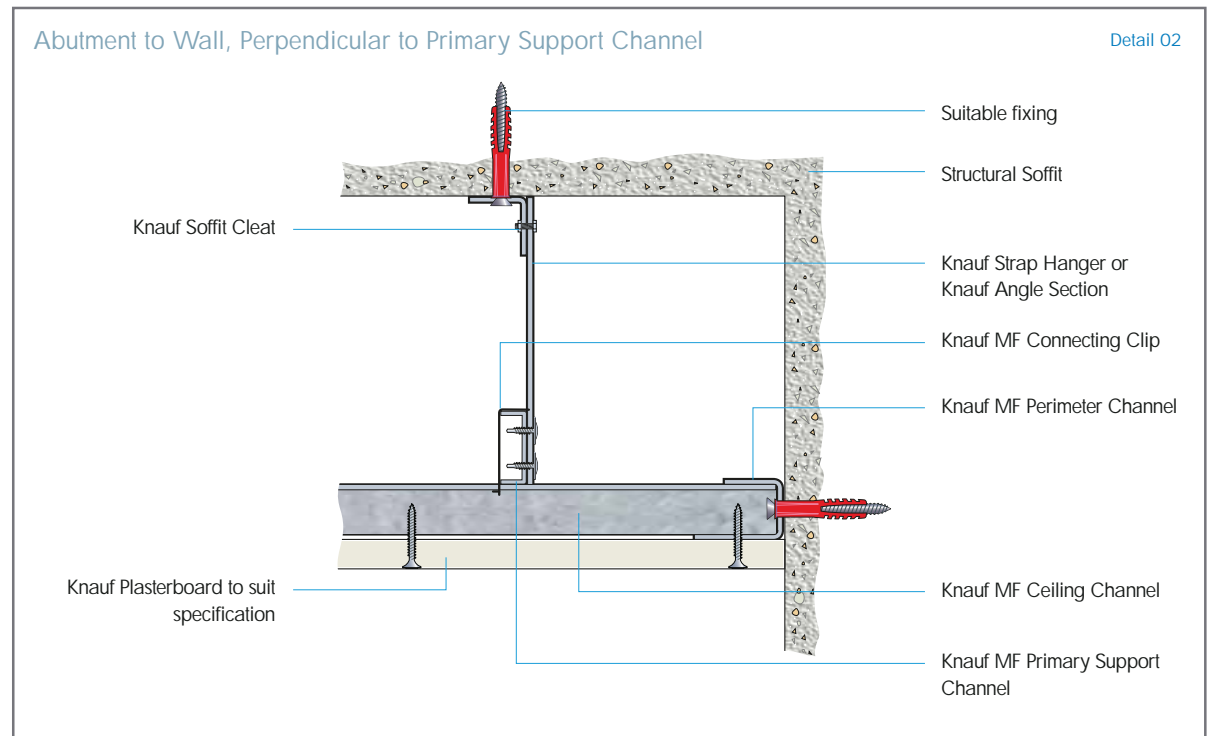
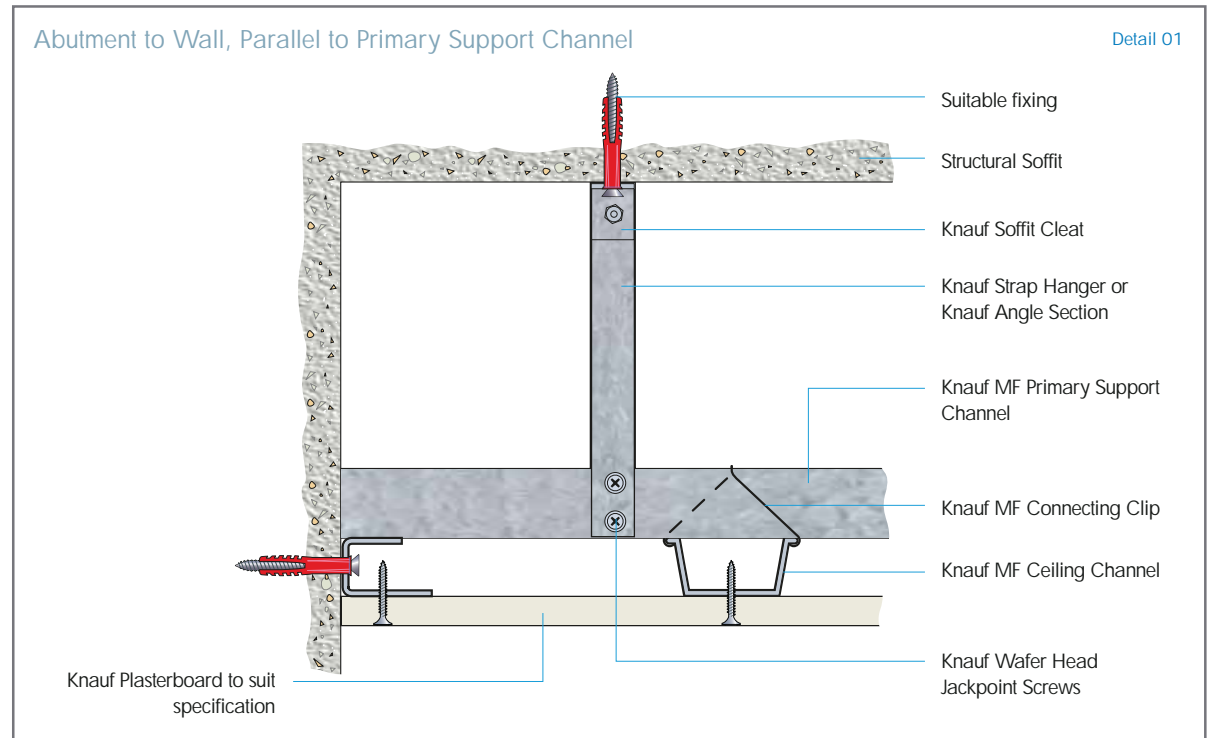
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Knauf MF - Suspended Ceilings

Application Details

These details represent some of the most common design situations relevant to the Knauf MF system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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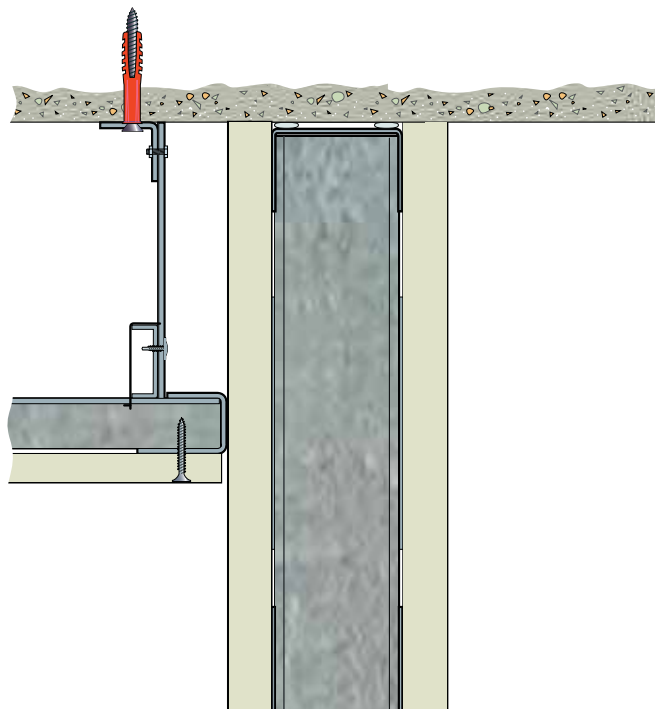
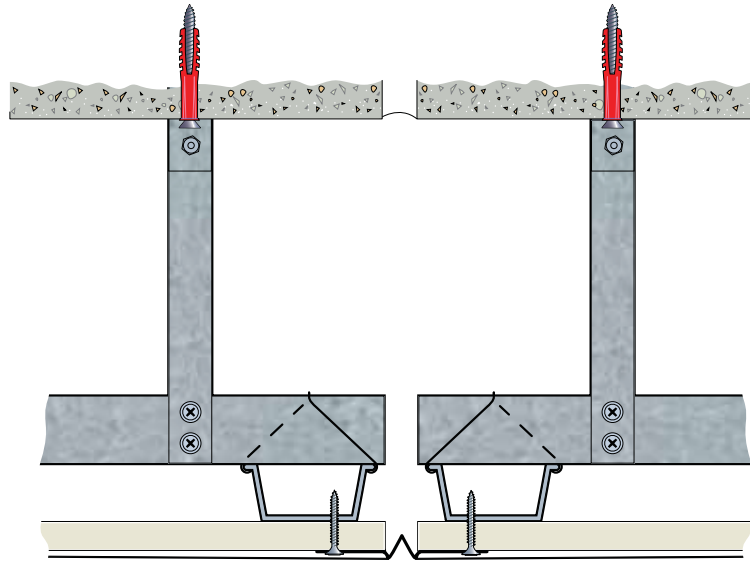
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Knauf MF - Suspended Ceilings

Movement Control Joint

Detail 03

Can be formed simply with standard components as shown, ideally coinciding with movement joints in the building structure.



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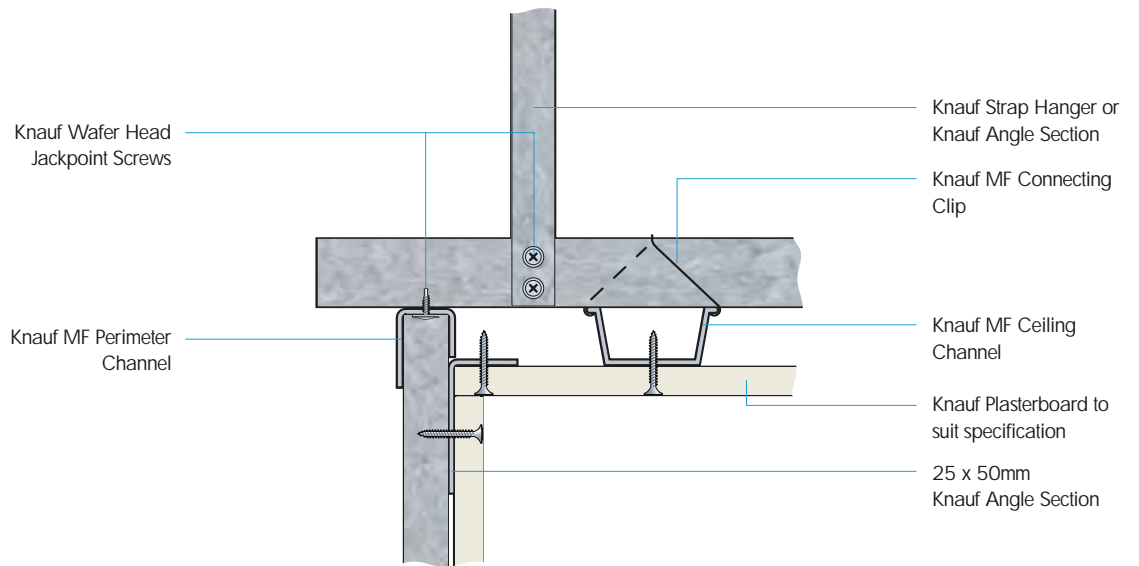
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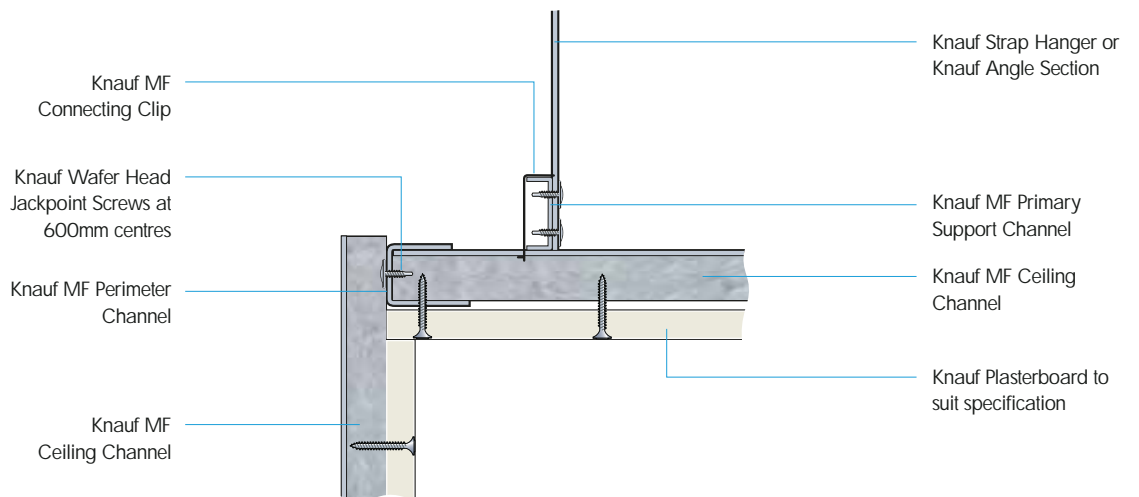
Change of Level and Bulkhead

Detail 05



Change of Level and Bulkhead

Detail 06



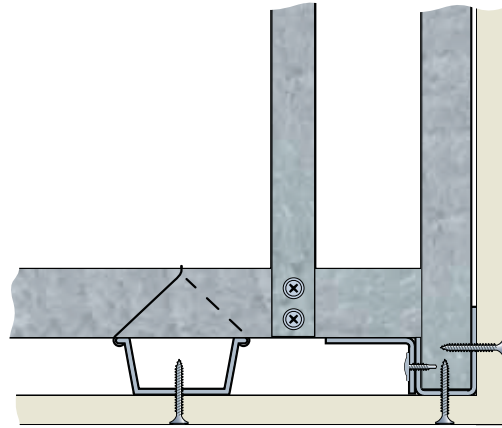
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Knauf MF - Suspended Ceilings



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Acoustic and Aesthetic Ceilings

Knauf Apertura Ceilings give you the freedom to carefully control the acoustic properties of a room whilst creating stunning, seamless jointed aesthetics.

Apertura aesthetic sound absorption solutions

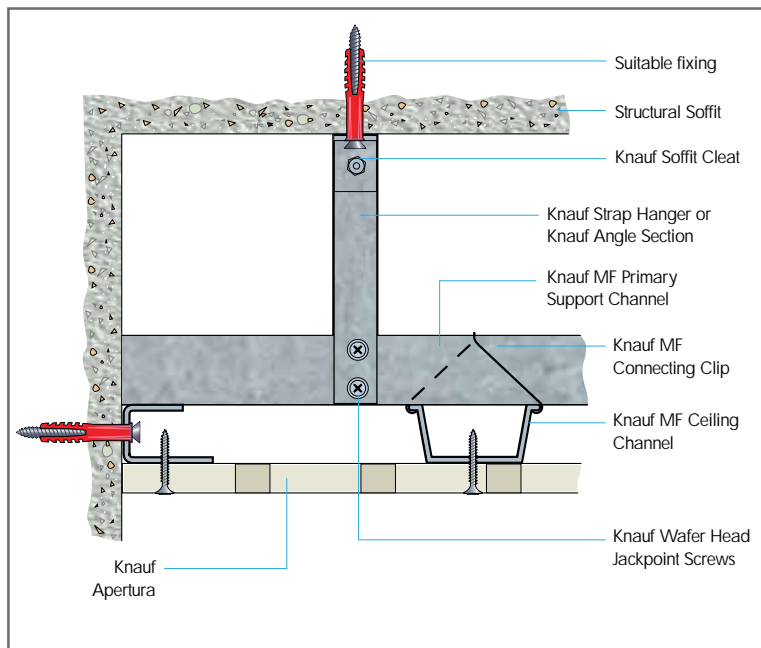
Accurate and effective sound absorption is crucial to the effectiveness of many rooms including learning environments, communal areas and atriums. Knauf Apertura perforated and patterned sound absorption boards provide effective control over reverberation whilst offering the designer complete creative freedom and a quality of finish that simply cannot be achieved with tiles.

Seventeen different styles, two fleece colours and the Knauf Uniflott tapeless jointing system offer total control over the look of the room.



[Download Spec Sheet](#)

Typical Knauf Apertura Ceiling detail:



Knauf Apertura Ceiling system

Knauf Apertura boards are fixed onto a double lightweight metal framework of Knauf MF Primary Support and MF Ceiling Channels with Knauf MF Perimeter Channels using fast drywall construction techniques, suspended by angle sections fixed to the structural soffit with soffit cleats.

The void depth and inclusion of Knauf acoustic insulation can be varied to tune the sound absorption characteristics of the ceiling.

Sound absorption ready for Part E

Every Knauf Apertura ceiling provides a Part E 'Class D' sound absorption performance with a void depth of just 60mm. A 'Class C' performance can be achieved with many of the designs. Retail centres, office complexes, hospitals, schools, showrooms and galleries are typical examples of where Knauf Apertura has been used to provide a striking design feature with superior sound absorption to create a high quality environment.

Seamless finishing

Knauf Apertura boards are jointed using the tapeless Knauf Uniflott system. This unique system provides a highly desirable seamless finish which is both quick and easy to achieve, allowing the finished pattern to flow uninterrupted throughout the room.

Knauf Apertura uses a combination of four precision-cut edges and this strong tapeless jointing system to provide the stunning seamless finish that is a signature of Knauf Apertura installations.

Apertura board designs

Knauf Apertura is available in a wide range of different designs, which can be further modified by filling individual holes within the pattern. See page 270 for more information.

- Circular straight line perforation (5 designs)
- Circular double perforation (2 designs)
- Circular random perforation (2 designs)
- Square straight line perforation (2 designs)
- Square pattern (3 designs)
- Slotted pattern (3 designs)



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Apertura Brochure

A comprehensive Apertura brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website: www.knaufdrywall.co.uk

Inside you will find installation and performance details for our range of Apertura ceilings and Apertura linings, as well as the complete range of patterns available.

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150 Ceiling Linings

Ceiling Linings Direct to Joists

High quality Knauf Plasterboards are designed to be easy to cut, lift and fix to the underside of timber joists to complete a floor that meets all the relevant fire and acoustic regulations.

Designed to work with modern timber construction

Modern timber joist floors come in a variety of guises from traditionally-based solid timber joists to composite engineered I-Beam solutions. We have developed products such as our high acoustic performance plasterboard, Knauf Soundshield and Knauf Resilient Bar around the requirements of flooring as well as partitions, and have tested our products with the majority of common solutions.

Tried and tested solutions

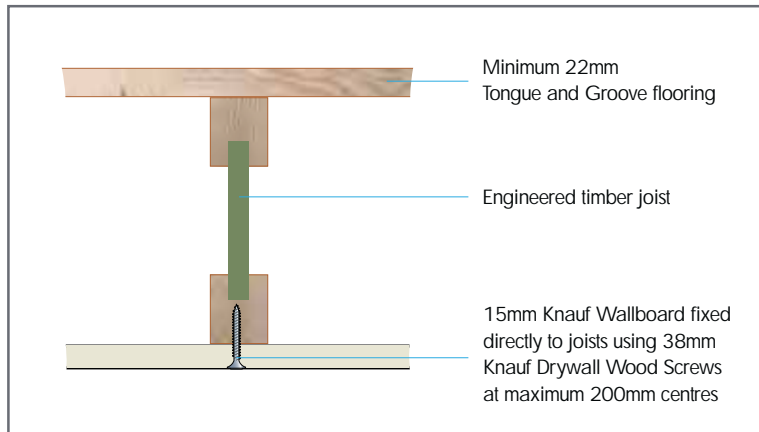
Floors in general, and timber floors in particular create a number of challenges for the ceiling below. All floors will deflect and it is essential from a decoration point of view that the correct materials are used to resist cracking at joints. Knauf Jointing Compounds and Knauf Joint Tapes have been rigorously tested and developed to provide a robust lining that resists cracking. Specifying Knauf Drywall Wood Screws also minimises the chances of 'nail popping', caused when the timber itself warps or shrinks due to moisture changes.

Timber joist floors incorporating Knauf Plasterboards have been substantively tested for fire, acoustic and robustness performance.

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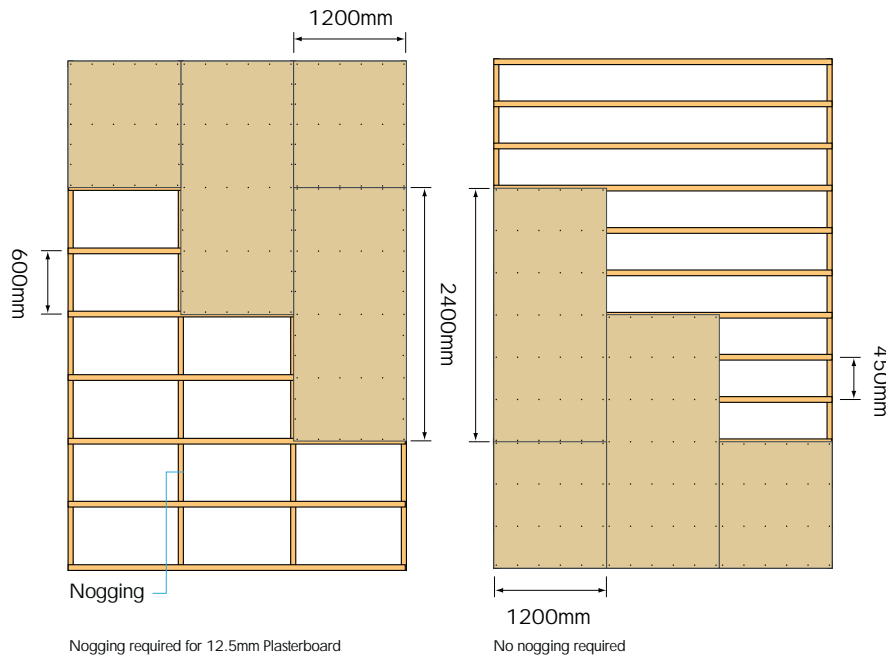


Typical Knauf direct to joist design detail:



Nogging layout for Knauf Ceiling Lining direct to joists

Noggings are required to support board edges when using 12.5mm thick plasterboard with joists at 600mm centres. No noggings are required where joist centres are at 450mm or lower centres, or when installing 15mm Knauf Plasterboard onto joists at 600mm centres. See the diagram below.



Optimised Solutions - Knauf Ceiling Linings direct to joists



Internal Floors for Residential Projects

Internal Floor IFR1/08	Sound	Fire**
22mm T&G Floor Boarding over solid timber joists. 1 layer of 12.5mm Knauf Soundshield* fixed to underside of joists	40dB(Rw)	30 mins
Internal Floor IFR2/08	Sound	Fire**
22mm T&G Floor Boarding over solid timber joists. 1 layer of 15mm Knauf Wallboard fixed to underside of joists	40dB(Rw)	30 mins
Internal Floor IFR3/08	Sound	Fire**
22mm T&G Floor Boarding over timber 'I' joists. 1 layer of 15mm Knauf Wallboard fixed to underside of joists	40dB(Rw)	30 mins

* If joists are at greater than 450mm centres, timber noggings of nominal size 38mm x 38mm are required between joists and at ceiling perimeter to support board edges.

** Fire ratings quoted in accordance with BS 476 Part 22:1987. For ratings in accordance with EN1364 - 1:1999, please contact Knauf Drywall Technical Services.



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152 Warm Roof Linings

Warm Roof Linings

Knauf thermal insulating warm roof linings save money on new-build and loft conversion projects by combining the functions of insulating and lining. They offer one of the easiest and most effective ways to comply with the Building Regulations and help meet the Code for Sustainable Homes.

Knauf Thermal Laminates are mechanically fixed directly over the rafters, with additional Knauf insulation between the rafters. Using highly efficient insulation materials as part of the lining means there is no need to extend the rafters, keeping installed costs to a minimum without losing valuable room space.

Specifying Knauf thermal insulating warm roof linings in conjunction with the other insulating elements of the roof is one of the simplest ways to meet the requirements of the Building Regulations and help meet the Code for Sustainable Homes.

Upgrading existing building stock

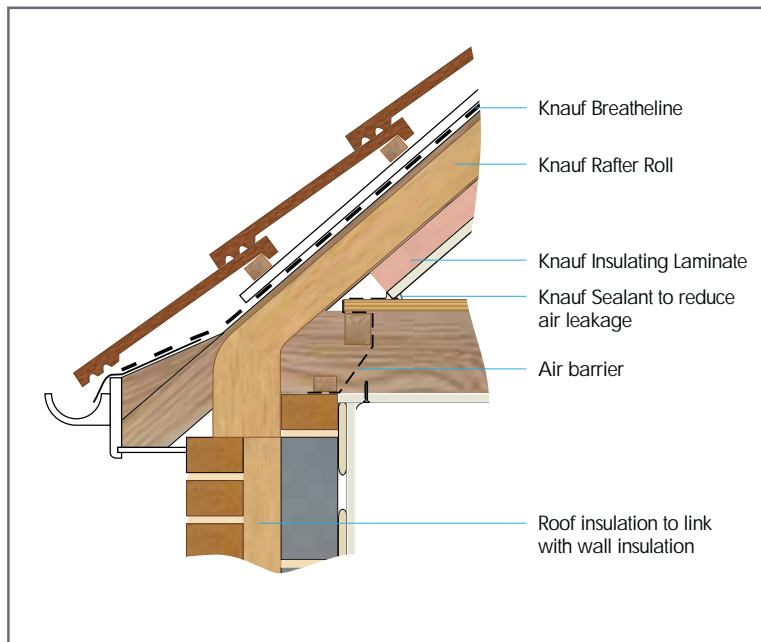
Real energy savings and reduced carbon emissions depend on bringing the UK's vast stock of inefficient old buildings up to modern thermal performance standards as soon as possible. Combining a loft conversion with a thermal upgrade makes the most efficient use of the building footprint whilst significantly reducing energy usage into the future.

The Knauf Insulating Laminate range of quick-to-install thermal plasterboards provide instant cost effective dry lining and insulation solutions for all sloping roof situations, cutting energy needs dramatically.

[Download Spec Sheet](#)



Typical Knauf Warm Roof Lining design detail:



Which Knauf Insulating Laminate should I use?

Part L Solutions

U Values for roofs with insulation between and Knauf Insulated Laminates fixed to rafters.

Target U Value (W/m ² K)	Knauf Rafter Roll 100mm	Knauf Rafter Roll 150mm	Knauf Rafter Roll 200mm	Knauf Rafter Roll 200mm
0.19 (L1A)	65mm Knauf PIR Laminate	40mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate
0.20 (L1B)	65mm Knauf PIR Laminate	35mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate	22mm Knauf Thermal Laminate

Code for Sustainable Homes Solutions

U Values for roofs with insulation between and Knauf Insulated Laminates fixed to rafters.

Target U Value (W/m ² K)	Knauf Rafter Roll 100mm	Knauf Rafter Roll 150mm	Knauf Rafter Roll 200mm	Knauf Rafter Roll 200mm
0.15 (code 5/6-2016)	-	65mm Knauf PIR Laminate	45mm Knauf Thermal Laminate Plus	50mm Knauf PIR Laminate
0.17 (code 4-2013)	-	50mm Knauf PIR Laminate	30mm Knauf Thermal Laminate	40mm Knauf Thermal Laminate Plus
0.18 (code 3-2010)	75mm Knauf PIR Laminate	55mm Knauf Thermal Laminate Plus	22mm Knauf Thermal Laminate	40mm Knauf Thermal Laminate

Notes:

An additional vapour control layer is needed for Knauf Thermal Laminate Plus solutions above.

An additional vapour control layer is needed for Knauf Thermal Laminate solutions above, or specify Knauf Thermal Laminate Vapourcheck. When specifying the depth of insulation, consideration should be made to allow for ventilation space.



153 Warm Roof Linings

Knauf Insulating Laminates

For more information on our complete Insulating Laminate range see pages 228-231.

Knauf Insulating Laminates also provide instant energy savings when used to upgrade existing walls and can offer cost effective solutions where used as part of new build specification. See pages 122-125.



Other Soffit Lining Solutions

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Knauf Brio represents a landmark in the development of high quality, easily installed dry floor screed boards. With systems for optimising underfloor heating efficiency and for impact sound reduction, Knauf Brio floor linings bring huge benefits for many projects.

Installed and ready for traffic in a fraction of the time of traditional wet screeds, Knauf Brio is exceptionally lightweight, whilst still providing a tough, impact resistant surface.

In a further innovation we have also taken our renowned Aquapanel cement board experience and applied it to floor linings to produce a 6mm Aquapanel Floor Tile Underlay board solution.

Floor Linings

Brio WarmFloor 156

- Maximises the efficiency of underfloor heating systems
- Ultra-slim complete underfloor heating installations can be achieved

Brio DryFloor 157

- Completely dry installation
- Can be trafficked immediately

Brio AcousticFloor 157

- Removes the need for acoustic battens
- Perfect for upgrading existing floors

Tiled Floor Linings 166

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Knauf Brio

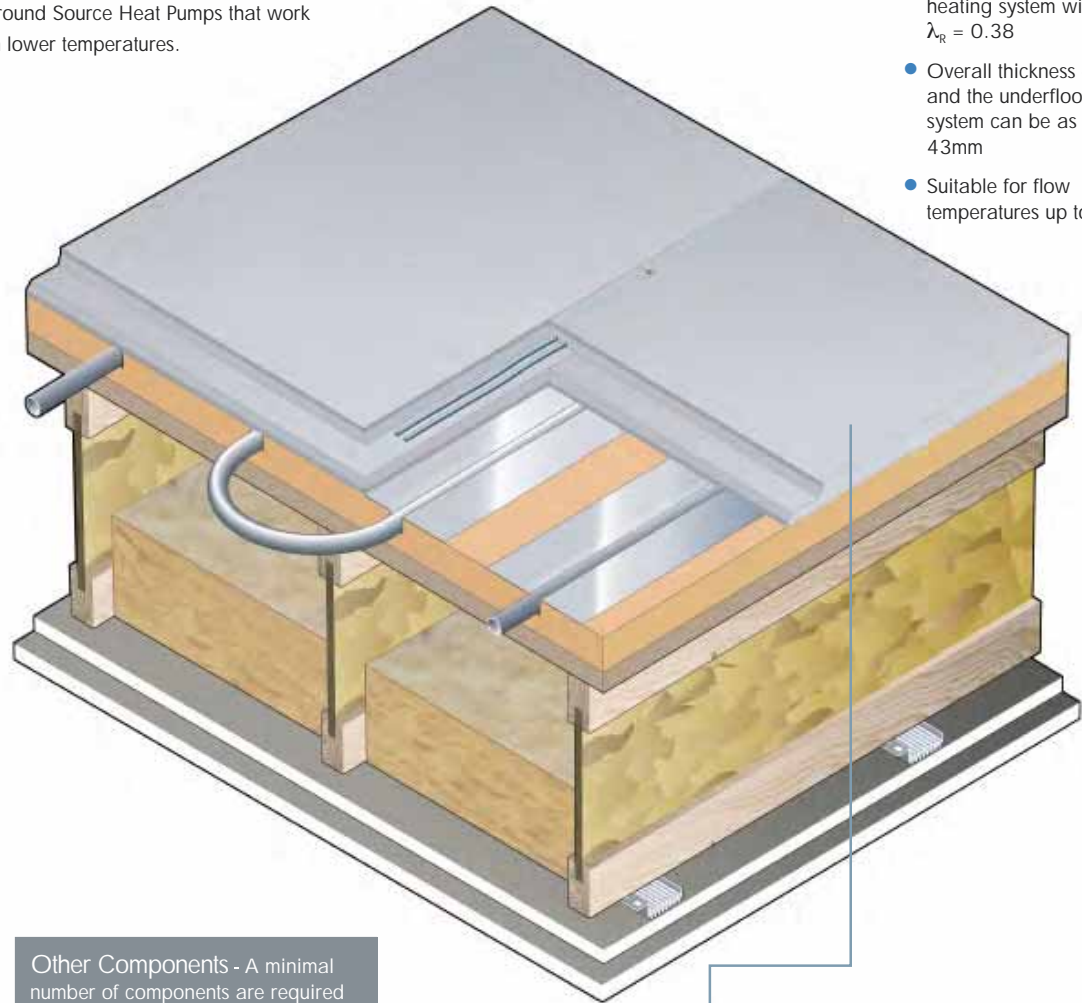
Knauf Brio dry screed flooring is incredibly clean, easy and fast to install, leaving a high quality, strong impact resistant floor surface with a minimum increase in floor height. Knauf Brio offers floor solutions for standard and acoustic floors.

Brio WarmFloor

Knauf Brio's outstanding heat transfer efficiency ($\lambda_r = 0.38$) makes it the perfect environmental and economic choice for use with underfloor heating, especially with Air and Ground Source Heat Pumps that work on lower temperatures.

Key Features:

- Maximises the thermal efficiency of an underfloor heating system with $\lambda_r = 0.38$
- Overall thickness of Brio and the underfloor heating system can be as little as 43mm
- Suitable for flow temperatures up to 55°C



156 Brio Dry Screed Floor

Other Components - A minimal number of components are required for a high quality installation



Knauf Brio Joint Adhesive.



Knauf Brio Screw.



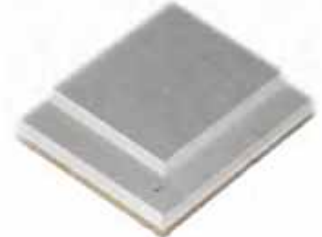
Knauf Brio Edge Strip.

Knauf Brio Flooring



Virtually thermally transparent dry floor screed panel, perfect over underfloor heating.

Knauf Brio WF Flooring



Resilient composite dry floor screed panel for impact sound reduction incorporating a wood fibre layer.

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Brio Dry Screed Flooring

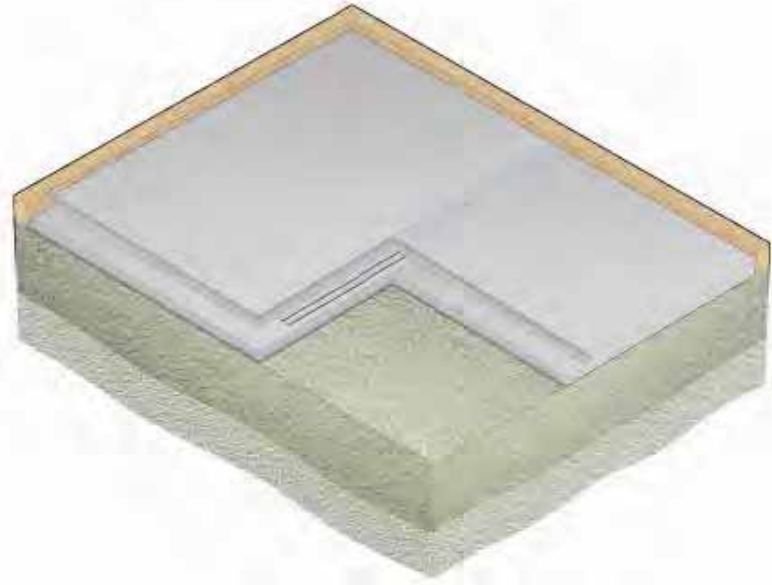
Knauf Brio is virtually thermally transparent making it the most suitable product available for underfloor heating applications. Knauf Brio WF incorporates a resilient layer to effectively dampen impact noise transmission.

Brio DryFloor

Knauf Brio replaces traditional wet screed methods, removing costly and frustrating drying-out times. It can take light traffic immediately after laying and after 4 hours the surface is ready to receive preparation for floor covering.

Key Features:

- Completely dry installation
- Can take traffic immediately

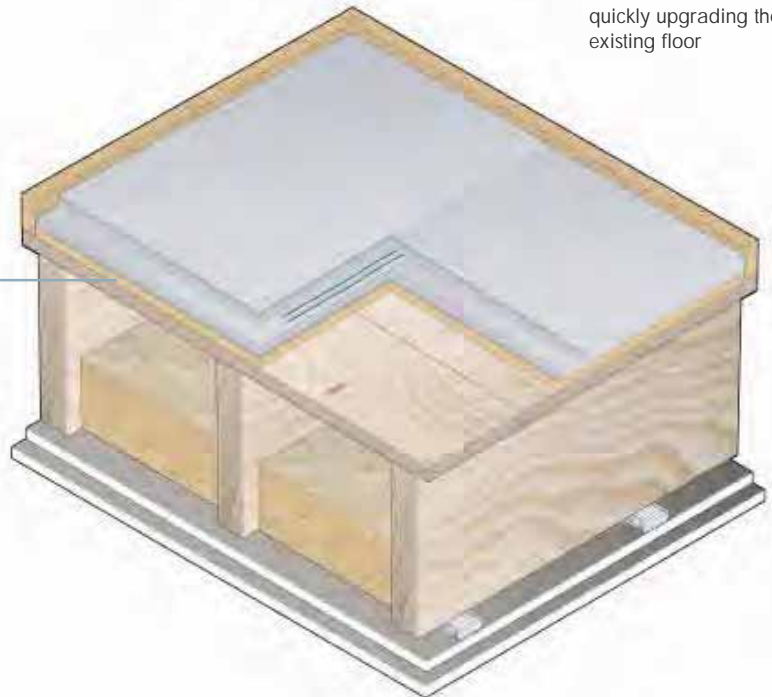


Brio AcousticFloor

Knauf Brio WF features a 10mm resilient layer, providing an effective floor treatment as part of an acoustic separating floor, and an instant upgrade in refurbishments.

Key Features:

- Removes the need for acoustic battens
- Perfect for refurbishments, quickly upgrading the existing floor



157 Brio Dry Screed Floor

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More Knauf Brio information:

Brio

page 278

Generate specifications at:
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Knauf Brio Dry Screed Flooring



Fast track to your optimum solution

1 Choose your sector



Residential



Commercial



Education

2 Find your performance levels

• Sound

• Profile

• Fire

• Loading

3 Find your solution

If you cannot find your ideal solution please contact Knauf Drywall Technical Services.



Brio WarmFloor System for use over Underfloor Heating

Brio WarmFloor BRW1/08	Minimum Profile from Deck/Substrate (including UFH System)	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point*** Loading	Area*** Loading
1 Layer of Knauf Brio 23 laid over a routed insulated tray between 20mm and 50mm depth, incorporating a wet underfloor heating system**, with 5mm Knauf Floor Foam below, fully supported by a level timber deck	48mm	Timber up to 9dB	60 mins	2KN	3KN/m ²

Brio WarmFloor BRW2/08	Minimum Profile from Deck/Substrate (including UFH System)	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point*** Loading	Area*** Loading
1 Layer of Knauf Brio 23 laid over a routed insulated tray between 25mm and 50mm depth, incorporating a wet underfloor heating system**, with 5mm Knauf Floor Foam below, fully supported by a level concrete substrate	48mm	Concrete up to 15dB	60 mins	2KN	3KN/m ²



Brio DryFloor System for Concrete or Timber

Brio DryFloor BRD1/08 (over Timber or Concrete Floor)	Minimum Profile from Deck/Substrate	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point*** Loading	Area*** Loading
1 Layer of Knauf Brio 18 laid over a maximum of 50mm floor grade insulation, fully supported by a timber deck or concrete substrate levelled with a suitable dry bulk leveller between 20mm - 30mm depth	38mm + insulation	Timber up to 13dB Concrete up to 19dB	90 mins	2KN	2KN/m ²

Brio DryFloor BRD2/08 (over Timber or Concrete Floor)	Minimum Profile from Deck/Substrate	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point*** Loading	Area*** Loading
1 Layer of Knauf Brio 18 laid over a maximum of 50mm floor grade insulation, fully supported by a level timber deck or level concrete substrate	18mm + insulation	Timber up to 9dB Concrete up to 16dB	30 mins	2KN	3KN/m ²

* Floor constructions vary considerably in their base performance and potential for improvement, particularly when dealing with refurbishments. The acoustic performance given above is only a guide. Please contact Knauf Drywall Technical Services for specific guidance on a particular floor construction.

** Wet pipe underfloor heating system to have a maximum flow temperature of 55°C.

*** Tested in accordance with DIN 1055 - 3.

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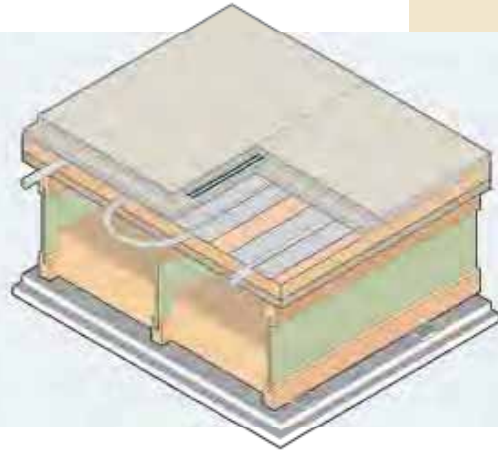
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Looking for a different Knauf Brio solution ?

These are Optimised Solutions designed to provide the most effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these please contact Knauf Drywall Technical Services

Knauf Drywall Technical Services:
01795 416259



Brio AcousticFloor System for Concrete or Timber

Brio AcousticFloor BRA1/08 (over Timber or Concrete Floor)	Minimum Profile from Deck/Substrate	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point** Loading	Area** Loading
1 Layer of Knauf Brio 18WF laid over a timber deck or concrete substrate levelled with a suitable dry bulk leveller between 20mm - 30mm depth	48mm	Timber up to 13dB	90 mins	2KN	2KN/m ²
		Concrete up to 19dB			
Brio AcousticFloor BRA2/08 (over Timber or Concrete Floor)	Minimum Profile from Deck/Substrate	Footfall Insulation Improvement ΔL (dB)*	Fire Resistance from above (DIN 4102-2)	Point** Loading	Area** Loading
1 Layer of Knauf Brio 18WF laid directly over a level timber deck or level concrete substrate	28mm	Timber up to 9dB	90 mins	2KN	3KN/m ²
		Concrete up to 17dB			

* Floor constructions vary considerably in their base performance and potential for improvement, particularly when dealing with refurbishments. The acoustic performance given above is a guide. Please contact Knauf Drywall Technical Services for specific guidance on a particular floor construction.

** Tested in accordance with DIN 1055 - 3.

General Notes: Further packing or resilient layers can be added to the build up of elements within the floor treatment. Please contact Knauf Technical Services for advice over thicknesses of 50mm. Polystyrene insulation must as per flooring guides: - 0-50mm a minimum of EPS 70, 0-100mm a minimum of EPS 100.

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Knauf Brio Dry Screed Flooring

Installation Procedures

Knauf Brio dry screed flooring is designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

Knauf Brio dry screed flooring must be installed in accordance with Knauf Drywall's recommendations and needs to be fully supported and installed on a level and flat base. This may require the substrate to be levelled in preparation, for example through the use of a wet screed or a dry bulk leveller with a minimum density of 370Kg/m³. It should be noted that dry bulk levellers are not considered suitable where the floor is to be subjected to dynamic loads.

Perimeter

Once the subfloor has been levelled, fit Knauf Brio Edge Strip to all perimeters. In order to prevent the flanking transmission of impact noise, cut the excess from the Knauf Brio Edge Strip at a minimum of 5mm above the Knauf Brio floor. This isolates the Knauf Brio floating floor from the walls and maintains the fire performance.

Laying Brio

Knauf Brio dry screed boards should be installed with the printed side showing on the upper face.

Over a solid, level subfloor

The first board should be laid in the far left corner of the room (see laying scheme diagram opposite). The edge profile of the boards abutting the walls should be cut with a circular saw or jigsaw to fit the contours of the wall. A suitable dust extraction system should be fitted to the saw.

Brio is installed continuously in a broken bond pattern with a minimum staggered overlap of 200mm (see laying scheme diagram opposite).

Over dry bulk levellers

Level the dry bulk leveller as per the manufacturers instructions. Install the Brio as above, but start in the opposite corner (see Laying Scheme diagram opposite), taking care not to disturb the uncovered bulk leveller.

Fixing

Knauf Brio boards are glued together then screwed as they are laid.

Apply two parallel beads of Knauf Brio Joint Adhesive to the lower rebate of the board using the special applicator nozzle. Offer up the next board, butting the joints tightly together; standing on the board will press the rebates firmly together creating a level surface.

Mechanically fix the Brio boards together using the correct Knauf Brio Screws along the blue fixing guideline at maximum 300mm centres once the first row is in place. This will ensure the surface remains level as the adhesive expands, creating a solid and stable finish.

Knauf Brio Joint Adhesive will expand and set in approximately 4 hours - care should be taken during this time to avoid excessive traffic. Once the adhesive has fully set any excess can be scraped off using a filling knife.

Door openings

When installing Knauf Brio over insulation in several adjoining rooms you should aim to continue the floor through the door gap. Any joint that occurs in, or just outside of the door gap should be supported with a wooden strip equal to the thickness of the insulation as per detail 06 on page 164.

Movement joints

Where Knauf Brio is being installed over an underfloor heating system movement control joints should be installed where the wall length exceeds 20m and in doorways where Brio is being run continuously. Movement control joints should also be installed to coincide with any movement joints in the structure.

4,5,6

Floor coverings

Knauf Brio is suitable to receive a wide variety of floor coverings including carpets, vinyl, tiles, wooden and laminate flooring.

Floor coverings should not be installed until 24 hours after the installation of the Knauf Brio dry floor screed.

Thin Vinyl and Elastic coverings

If an elastic vinyl or linoleum covering is to be installed then the surface of the Brio should be smoothed using a fine calcium sulphate self levelling screed.

Stone and ceramic tiles

Prime the surface of the Knauf Brio as per the tile adhesive manufacturers recommendations. If tiles larger than 330 x 330mm are to be installed please contact Knauf Drywall Technical Services for more information.

Wooden flooring

Adhere timber floor coverings to the Brio following the recommendations of the timber floor manufacturer. Some laminate floor coverings may be unsuitable for use over Knauf Brio when used with an underfloor heating system.

Wet areas

Fully tank the entire surface of the Brio to protect against leaks.

Underfloor Heating Considerations

Knauf Brio 23 should be specified for use over underfloor heating systems. The flow temperature for wet systems should not exceed 55°C.

Download
Spec Sheet



1 Installing Knauf Brio Edge Strip to the room perimeter.



2 Cutting the edge of the first board with a circular saw fitted with a dust extractor.



3 Laying the first sheet of Knauf Brio.



4 Applying Knauf Brio Joint Adhesive to the edge of the sheet.



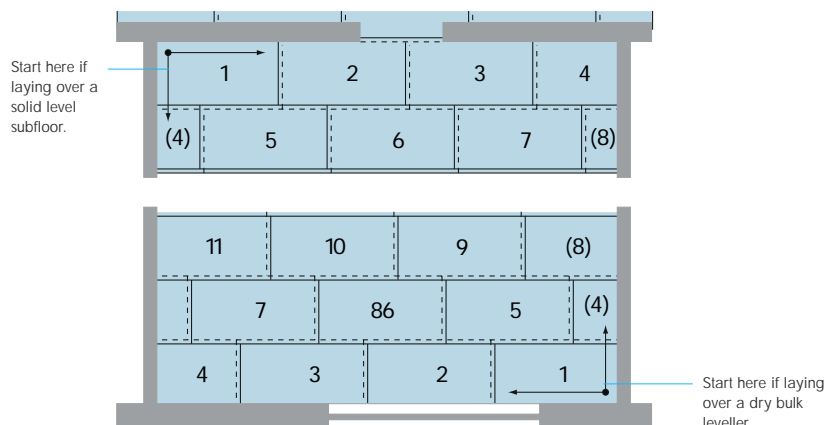
5 Laying the second sheet of Knauf Brio.



6 Screwing the sheets of Brio together using the correct size Knauf Brio Screws.

Laying Scheme

Use the laying order below when installing Knauf Brio



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

Generate specifications at:

www.knaufdrywall.co.uk

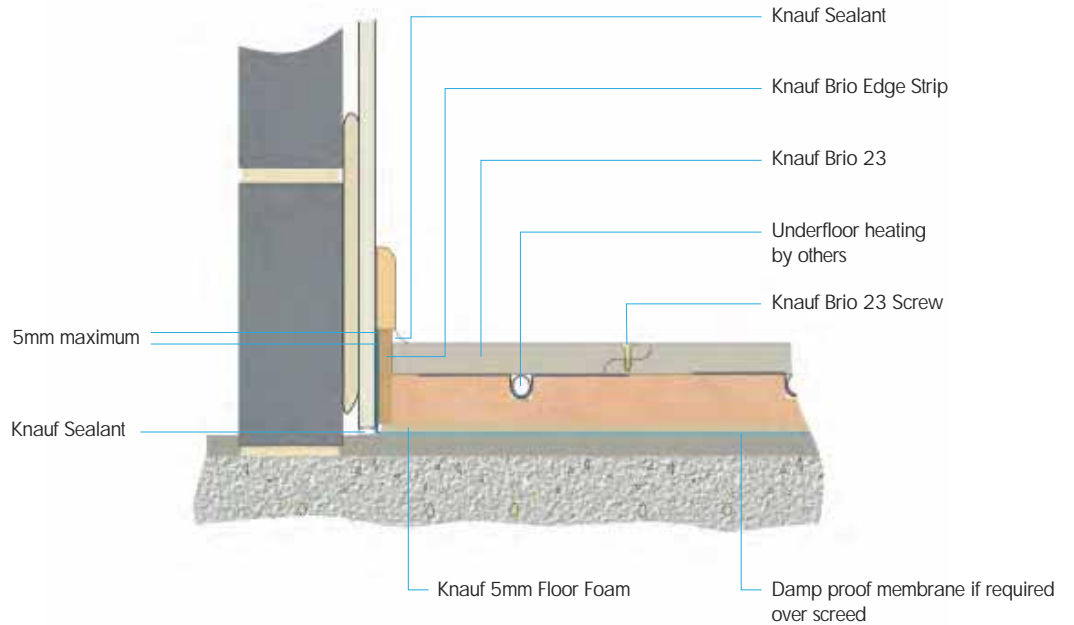
Knauf Brio

Application Details

These details represent some of the most common design situations relevant to Knauf Brio dry screed flooring installations. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

Brio WarmFloor Section over Concrete

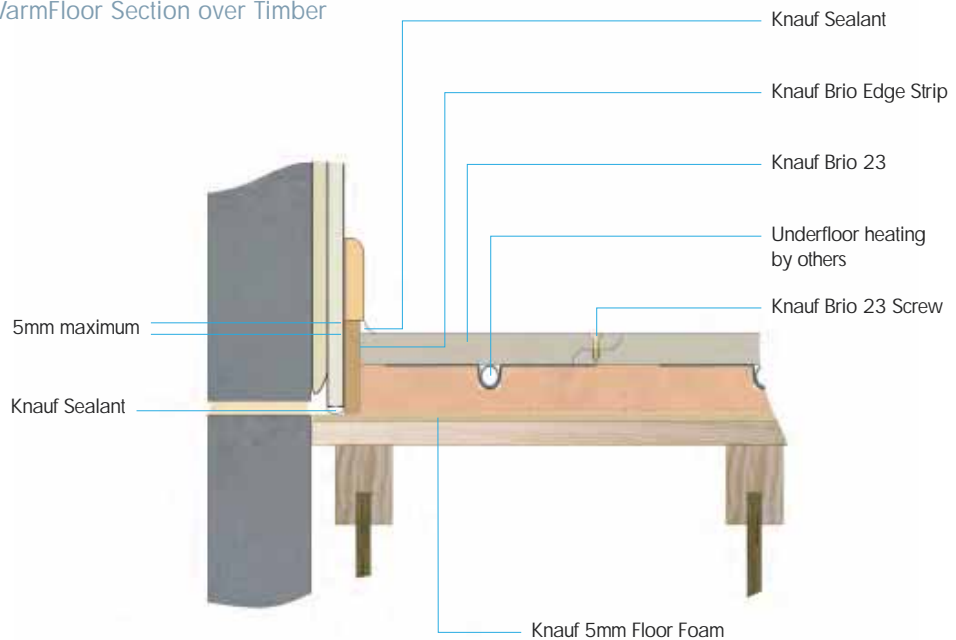
Detail 01



Note: Maximum dimension between top of Brio and underside of skirting to be no more than 5mm.

Brio WarmFloor Section over Timber

Detail 02



Note: Maximum dimension between top of Brio and underside of skirting to be no more than 5mm.

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Spec Sheet



Where you see these icons in a detail, that detail is particularly relevant to that sector.

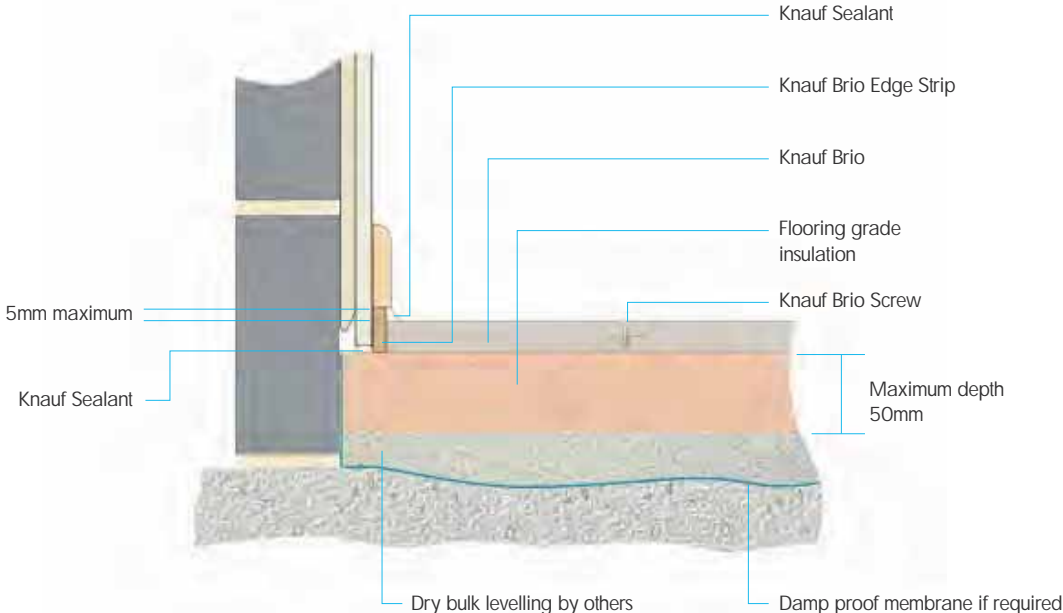
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Knauf Brio

Dry Screed Flooring

Brio DryFloor Section

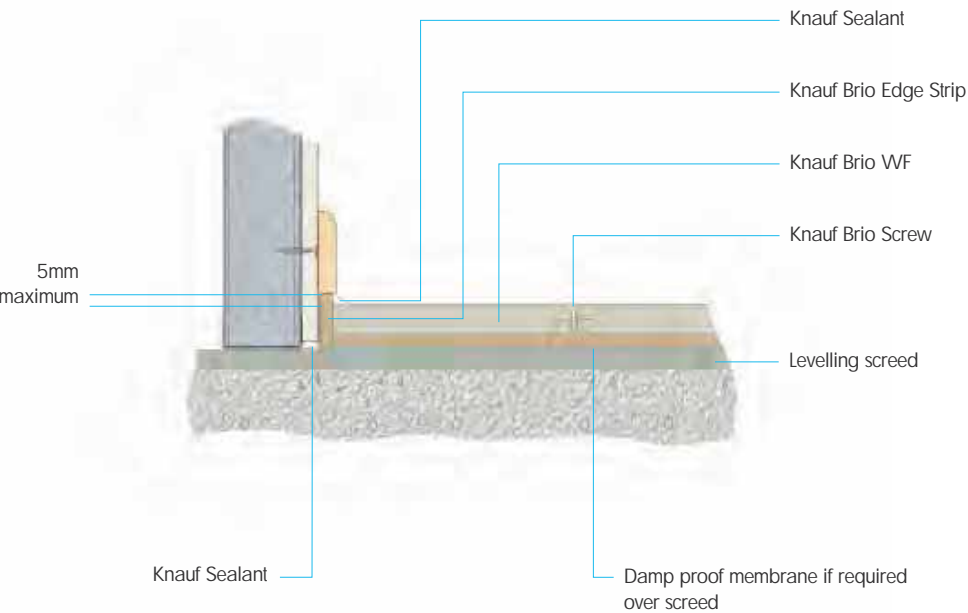
Detail 03



Note: Maximum dimension between top of Brio and underside of skirting to be no more than 5mm.

Brio AcousticFloor Section over Concrete

Detail 04



Note: Maximum dimension between top of Brio and underside of skirting to be no more than 5mm.

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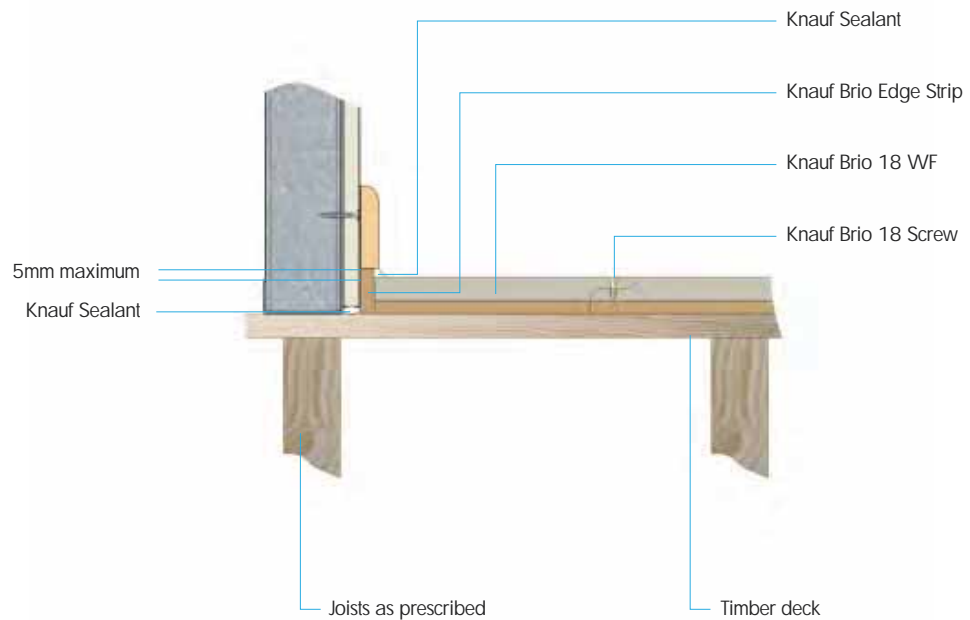
164 Brio Dry Screed Floor

Knauf Brio

Dry Screed Flooring

Brio AcousticFloor Section over Timber

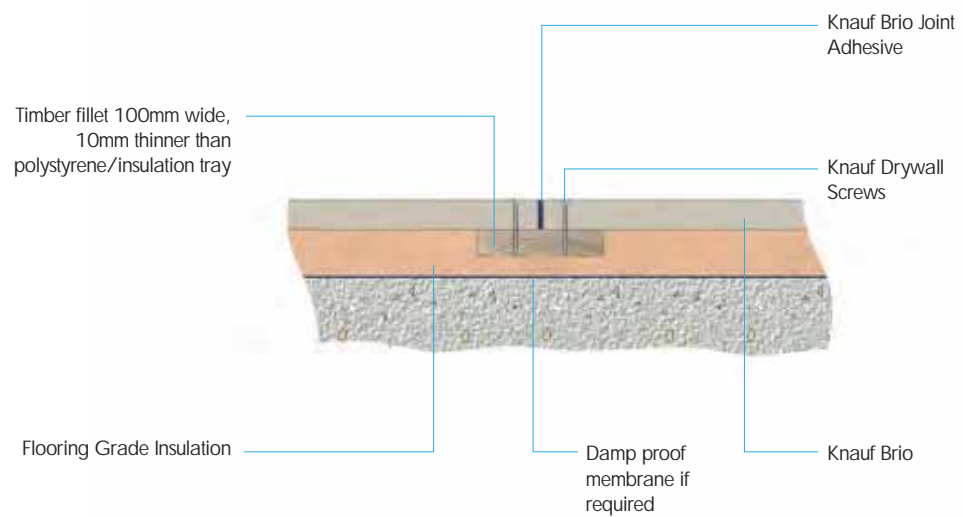
Detail 05



Note: Maximum dimension between top of Brio and underside of skirting to be no more than 5mm.

Butt Jointing Brio at Door Openings

Detail 06



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Spec Sheet

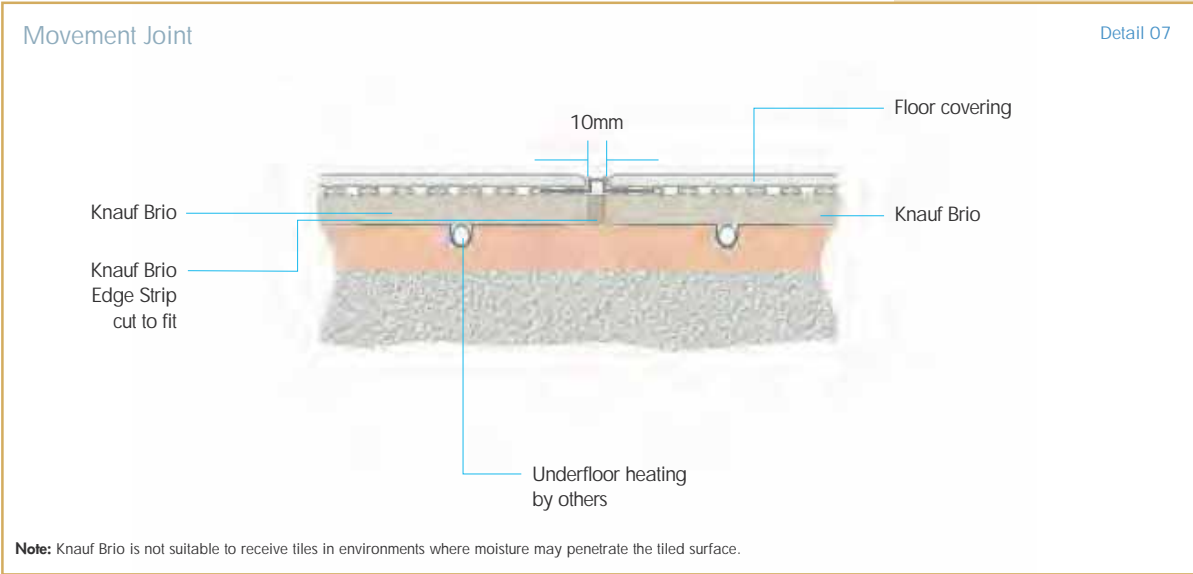


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Knauf Brio

Dry Screed Flooring



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166 Tiled Floor Linings

Tiled Floor Linings

Knauf 6mm Aquapanel Floor Tile Underlay is a strong, thin cement board that is unaffected by water, giving floor tiles full support and protection without compromising room height.

Knauf Aquapanel cement board technology is revolutionising the way buildings are designed and constructed across Europe.

Developed by Knauf USG Systems, 6mm Aquapanel Floor Tile Underlay cement board gives architects and contractors a proven solution to protect floor tiles against tile failure, with significant performance advantages in wet and high humidity areas together with low installation costs.

The Aquapanel cement board brand represents a range of extremely durable building materials providing solid substrates for wet areas with solutions for interior and exterior walls, linings, ceilings and floors.



Knauf Aquapanel Floor Tile Underlay

Aquapanel Floor Tile Underlay cement board is a light, highly stable, cementitious dry floor panel which provides the ideal thin substrate for the majority of modern tiles, and is particularly suitable for use on wooden subfloors.

Perfect for applications with a very low floor height, Aquapanel Floor Tile Underlay's slim 6mm thickness ensures an even transition between tiled floor and carpeting making the removal of thresholds unnecessary.

Architects and contractors have been relying on Knauf's Aquapanel Interior technology to protect their tiles in wet areas for many years, having proven itself as the most effective way to stop the causes of tile failure. Aquapanel Floor Tile Underlay uses exactly the same technology to protect floor tiles against failure.

All Knauf Aquapanel boards and components are non-organic, so there is no chance of mould or fungus growth.

Refurbishments

Aquapanel Floor Tile Underlay provides an easy solution for refurbishments where a tiled floor is desired, allowing a very thin floor construction to be maintained and providing an instant flat, keyed surface for new tiles.

[Download Spec Sheet](#)

Aquapanel Floor Tile Underlay is quick and easy to install and has minimal impact on floor height.



Note: For maximum tile sizes refer to the Aquapanel Floor Tile Underlay brochure.

Why specify Aquapanel Floor Tile Underlay?

- Minimum effect on floor height at only 6mm thick
- Suitable for all kinds of tiles including ceramic, mosaic and natural stone
- Light and easy for the installer to handle
- Solid portland cement substrate
- Incorporates shock-proof EasyEdge edge on both sides
- 100% water-resistant
- Resistant to mould and mildew
- Quick and simple score and snap cutting, and no pre-drilling required

Avoid expensive tile failures

Tile failure is extremely costly in all instances. If a tile fails in a wet area you would normally expect the substrate behind to be damaged as well with traditional materials. Not only are there replacement costs of materials, but for many commercial and leisure applications tile failure may necessitate closing part of the premises.

Knauf Aquapanel systems provide the peace of mind that results from specifying a backing material that is specifically designed for the job. Purpose designed accessories, waterproof screws and high quality Aquapanel cement board linings ensure that Knauf Aquapanel systems are easy to install and continue to perform, even when wet.

Long-term, specifying Knauf Aquapanel Floor Tile Underlay results in a significant reduction in costly call-backs and reduced maintenance. Tiled areas are expensive and the small investment required to upgrade to Knauf Aquapanel Floor Tile Underlay is quickly recouped through minimising future costs.



Aquapanel Floor Tile Underlay Brochure

A comprehensive Aquapanel Interior brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website: www.knaufdrywall.co.uk

167 Tiled Floor Linings



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168 External Linings

External Linings

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Dry construction is already the preferred method for many offsite and onsite projects due to the benefits it brings in reduced timescales, consistency and improved health and safety. Aquapanel Exterior external cladding systems take these benefits to the next stage.

Aquapanel Exterior has been developed using our unrivalled cement board experience to produce a completely non-organic, robust and stable substrate that is unaffected by water.

Once taped and jointed, Aquapanel Exterior can be left unfinished for up to 6 months, making use of even small windows of opportunity to completely close the external envelope, maximising the efficiency of the project schedule.

Aquapanel Exterior is easily curved, allowing for striking architectural features to be formed. Aquapanel Exterior is also ideal for creating external soffits and the illusion of an internal ceiling continuing through the façade to the outside of the building.

External Linings

Aquapanel Exterior Cladding System 170

- Fast closure of exterior walls
- Can be left unfinished for up to 6 months once taped and jointed
- Easily curved to create architectural features
- BBA Certified system

Aquapanel External Soffit Linings 180

- Unaffected by water and freeze thaw tested
- Easily create ceilings that “flow through” glazed external walls

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Aquapanel Exterior Cladding System

The Knauf Aquapanel Exterior System is an Exterior Cladding System for use on Timber Frame, Timber Battens and Metal Framed Structures. The System provides a fast, high quality and extremely economical alternative to traditional methods of construction.



170 Aquapanel Exterior

Jointing



Knauf Aquapanel Exterior Joint Filler.

Aquapanel Exterior Cement Board



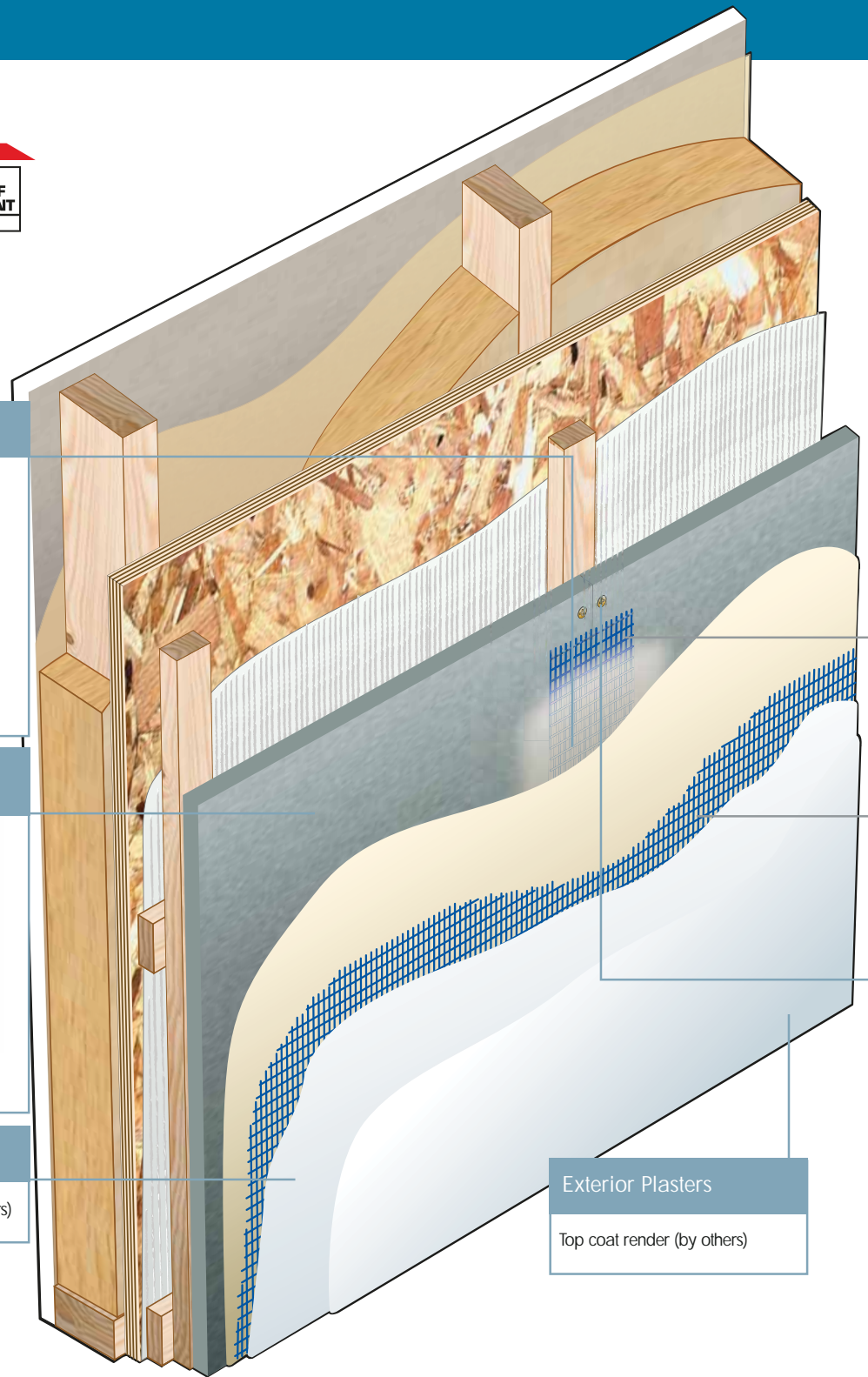
Knauf Aquapanel Exterior Cement Board.

Basecoat

Exterior basecoat (by others)

Exterior Plasters

Top coat render (by others)



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Aquapanel Exterior

Knauf Aquapanel Exterior enables fast closing of exterior stud walls, and can be left unfinished for 6 months whilst work continues inside.

Other Components



Knauf Aquapanel Exterior Reinforcing Tape.

Reinforcing Mesh (by others)

Key Features:

- Fast closure of exterior walls. Taped and jointed boards can be left unfinished for up to 6 months
- Easy to cut and fix (score and snap, no pre-drilling)
- Aquapanel Exterior Cement Board is a completely non-organic, robust and stable substrate
- Easily curved to a minimum 3 metre radius
- Lighter and faster than traditional brick and block construction of facades

Fixings



Knauf Aquapanel Maxi Screws.



Knauf Aquapanel Stainless Steel Screws.



All details and application to be read in conjunction with BBA Certificate No. 09/4633, available at: www.bbacer.com



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Aquapanel Exterior

Your optimum solution for fast closure of external walls

Knauf Aquapanel Exterior is suitable for use over a wide variety of timber and stud external walls, rapidly closing the external envelope.

The systems below are a few examples of typical solutions. Please contact Knauf Drywall Technical Services to discuss your particular situation.



Example external wall systems incorporating Knauf Aquapanel Exterior Linings:



Aquapanel Exterior Lining to Structural Metal Stud Wall 30 Minute Fire Rated*

External Lining:

1 layer of 12.5mm Knauf Aquapanel Exterior Cement Board, taped and jointed using Knauf Aquapanel Exterior Joint Filler Grey and Knauf Aquapanel Exterior Tape 10cm, with Knauf Aquapanel Tyvek Stuccowrap Breather Membrane behind

Structural Studwork (design to suit):

Minimum 75mm structural metal studs at maximum 600mm centres. 40mm Knauf Universal Slab RS45 within the cavity

Internal Lining:

1 layer of 15mm Knauf Fireshield fixed over a vapour control layer between stud and board

Fire:

30 mins*

* Fire performance for system is 30 minutes to EN 1363-1:1999-10 (rating from the outside of the wall to the inside).



Aquapanel Exterior Lining to Structural Metal Stud Wall 60 Minute Fire Rated**

External Lining:

1 layer of 12.5mm Knauf Aquapanel Exterior Cement Board, taped and jointed using Knauf Aquapanel Exterior Joint Filler Grey and Knauf Aquapanel Exterior Tape 10cm, with Knauf Aquapanel Tyvek Stuccowrap Breather Membrane behind

Structural Studwork (design to suit):

Minimum 75mm structural metal studs at maximum 600mm centres. 60mm Knauf Universal Slab RS60 within the cavity

Internal Lining:

2 layers of 15mm Knauf Fireshield fixed over a vapour control layer between stud and the inner board layer

Fire:

60 mins**

** Fire performance for system is 60 minutes to EN 1363-1:1999-10 (rating from the outside of the wall to the inside).

172 Aquapanel Exterior

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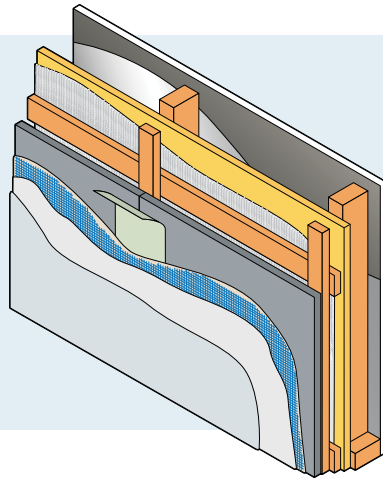
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Looking for a different Knauf Aquapanel Exterior solution?

These are typical solutions designed to provide an effective system to suit the specific performance criteria for that sector.

Should your requirements fall outside these, please contact Knauf Drywall Technical Services

Knauf Drywall Technical Services:
01795 416259



Aquapanel Exterior Lining to Structural Timber Stud Wall

External Lining:

1 layer of 12.5mm Knauf Aquapanel Exterior Cement Board, taped and jointed using Knauf Aquapanel Exterior Joint Filler Grey and Knauf Aquapanel Exterior Tape 10cm, backed by a 15mm Euroclass A2 fire rated Sheathing Board with a Knauf Aquapanel Tyvek Stuccowrap Breather Membrane between the boards

Structural Studwork (design to suit):

Minimum 120 x 60mm structural timber frame with studs at maximum 600mm centres. 120mm Knauf Universal Slab RS45 within the cavity

Internal Lining:

1 layer of 15mm Knauf Fireshield with a vapour control layer between stud and board

Fire:

30 mins / 90 mins***

*** Fire performance for system is 90 minutes to DIN 4102-2:1977-09 (rating from the outside of the wall to the inside) and 30 minutes to DIN 4102-2:1977-09 (rating from the inside of the wall to the outside).



Aquapanel Exterior Linings are trusted systems

Knauf Aquapanel Exterior Linings have been rigorously tested and are both BBA Certified and accepted by the NHBC and Zurich.

Extracts from BBA Certificate no. 09/4633

NHBC Standards 2008

"The NHBC accepts the use of the Knauf Aquapanel External System when installed and used in accordance with this Certificate, in relation to NHBC Standards, Part 6 Curtain Walling and Cladding, Chapters 6.2 External timber framed walls and 6.10 Light steel framed walls and floors."

Zurich Building Guarantee Technical Manual 2007

"In the opinion of the BBA, the Knauf Aquapanel External System, when installed and used in accordance with this Certificate, satisfies the requirements of the Zurich Building Guarantee Technical Manual, Section Superstructure, Sub-section Walls-cladding."



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Aquapanel Exterior

Installation Procedures

Knauf Aquapanel Exterior Cement Boards are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

Preparation

1 Use a knife to score the Knauf Aquapanel Exterior on one side so that the mesh is cut. Snap the scored edge and cut through the mesh on the rear side.

For sharp-edged cuts, for example exterior edges, use a hand-held circular saw with a dust extractor or a pendulum jigsaw. To make cut-outs for wiring and pipes, use a jigsaw or keyhole saw.

The diameter of the opening should be approximately 10mm greater than the diameter of the pipe. The remaining gap can be closed with a suitable sealant or sealing strip.

Knauf Aquapanel Exterior can be curved to a radius of 3 metres with a full board or to a 1 metre radius having cut the board into 300mm strips. Bend the Knauf Aquapanel Exterior panel prior to installation. The fine cracks that occur on the board surface will not cause any loss of performance to the final system when finished to a basecoat level.

Fixing Board

2 Apply Knauf Aquapanel Exterior horizontally to members at maximum 600mm centres. Ensure there is a gap of 3-5mm between the boards and that the members are central behind both boards.

When fitting Knauf Aquapanel Exterior, ensure that the vertical joints are centrally aligned to the board below.

When fitting Knauf Aquapanel Exterior around windows and doors ensure that no vertical joints coincide at window and door corners as this may allow moisture ingress.

1 Use Knauf Aquapanel Maxi Screws to fix the boards to metal members.

Use Knauf Aquapanel Exterior Stainless Steel Screws to fix the boards to the timber members.

Screws should be at least 15mm in from the edge of the Knauf Aquapanel Exterior and spaced at maximum 250mm centres.

Screws should not be over tightened.

Taping and Jointing

3,4 Immediately after installing the Knauf Aquapanel Exterior, protect the framework from weathering by filling all the joints with Knauf Aquapanel Exterior Joint Filler – Grey. Use the Knauf Aquapanel Exterior Joint Filler – Grey to fill the gaps between the board and then spread it over the face of the board ready to take the tape. Immediately embed Knauf Aquapanel Exterior Joint Tape (10cm) or Knauf Aquapanel Exterior Reinforcing Tape – as specified, centred over all of the joints. Scrape the excess Knauf Aquapanel Exterior Joint Filler – Grey from the Knauf Aquapanel Exterior Tape leaving it just covered.

Cover the screw heads with Knauf Aquapanel Exterior Joint Filler – Grey.

Corners are protected by applying exterior basecoat, then embedding a corner profile in a similar way to the joint tape.

Reinforce window and door corners with extra pieces of reinforcing mesh, cut to size 50 x 30cm, embedded into exterior basecoat as per corner profiles.

Finishing

5,6,7

Refer to installation instructions from the selected/specified render supplier, alternatively:

Cover the entire wall with basecoat to a depth of approximately 5mm.

Using a tile adhesive trowel create a notched layer of basecoat with notch depth of approx 8mm. Return the removed basecoat to the bucket to be reused later.

Embed reinforcing mesh over the entire surface. Overlap the reinforcing mesh by 100mm at edges. Apply a thin coat of basecoat over the mesh and notches just covering the mesh and creating a smooth finish. The finished layer should be approximately 5-7mm thick and the reinforcing mesh should be in the top third of the finished surface. Before continuing with the next steps, allow the basecoat to fully dry.

Exterior Render

8

Render must be applied in accordance with BS EN 13914-4:2005, Code of Practice for External Rendering.

Fully mix the renders before applying them to ensure that the colour is true right through. Apply the chosen exterior finish to each wall area.

The scaffold around the finished wall must be covered to protect from rain or weathering until the finish is fully dry.



Scoring Knauf Aquapanel Exterior with a knife.



Fixing the boards to the background members.



Embedding Knauf Aquapanel Exterior Joint Tape.



Covering screw heads with Knauf Aquapanel Joint Filler - Grey.



Applying notches within the basecoat.



Applying reinforcing mesh.



Covering mesh with basecoat.



Applying finish.



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Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

See page 292 for more information.

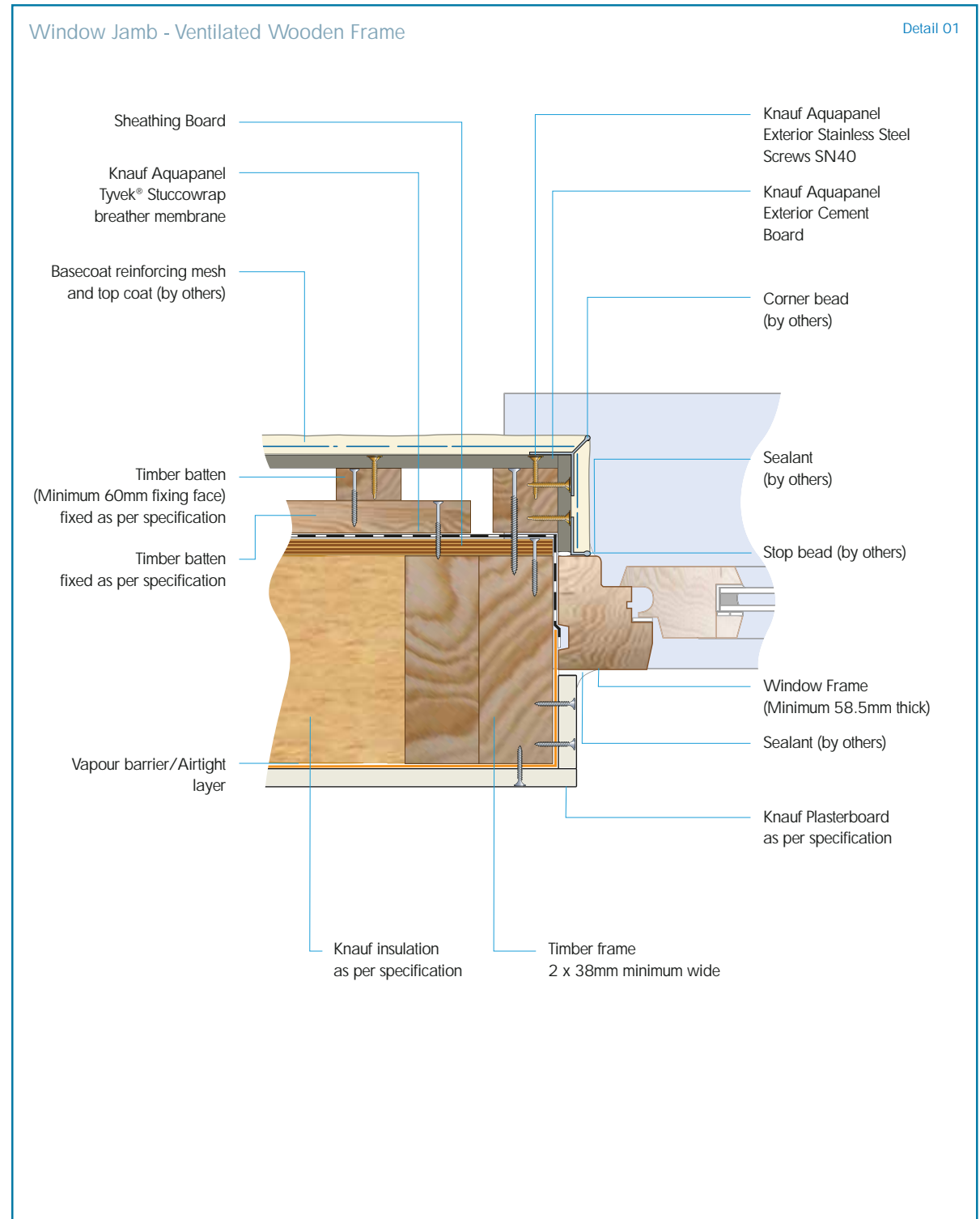
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Aquapanel Exterior

Application Details

These details represent some of the most common design situations relevant to the Knauf Aquapanel Exterior system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.



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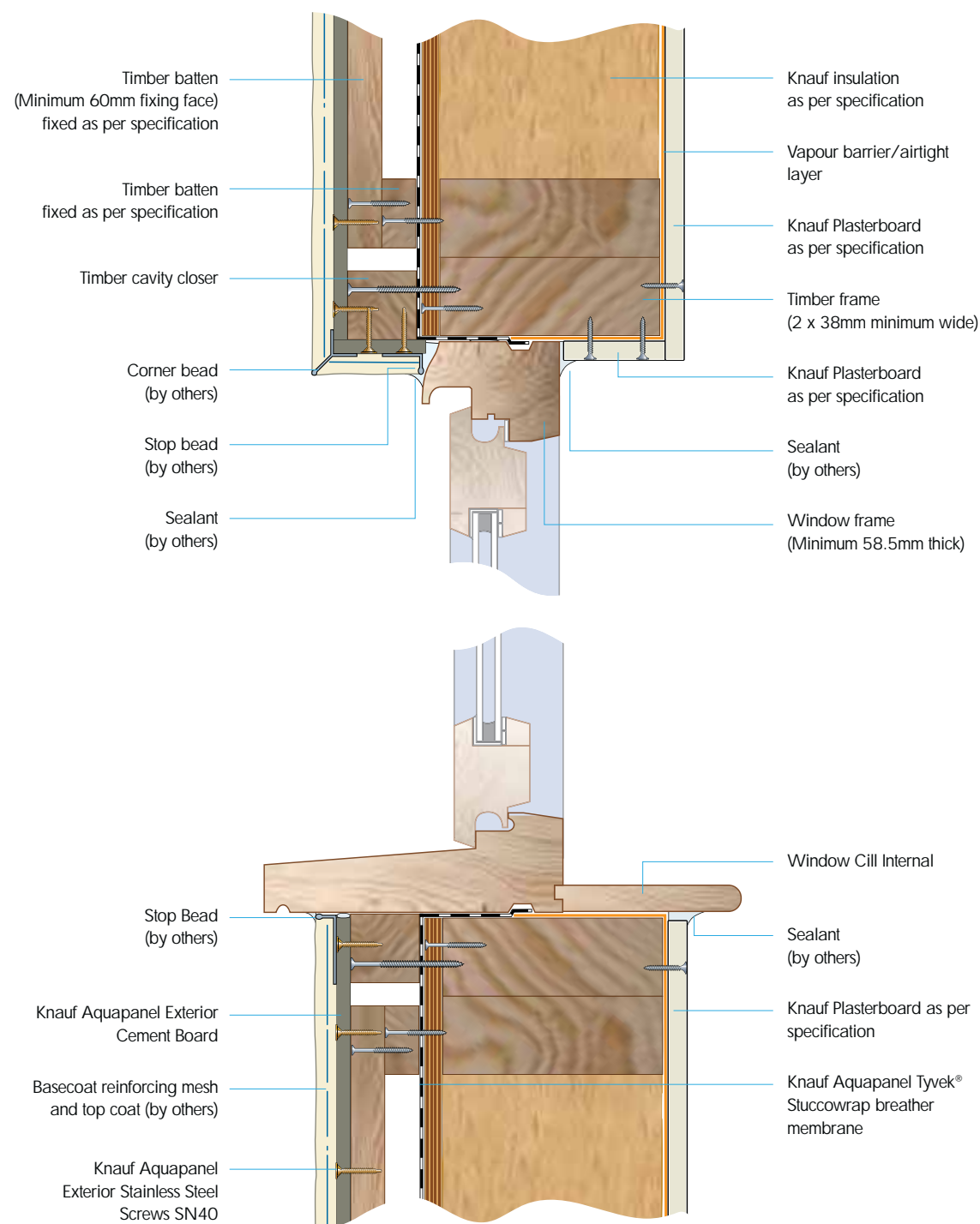
Where you see these icons in a detail, that detail is particularly relevant to that sector.

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Aquapanel Exterior

Window Reveal (Upper and Lower) - Ventilated Wooden Frame

Detail 02



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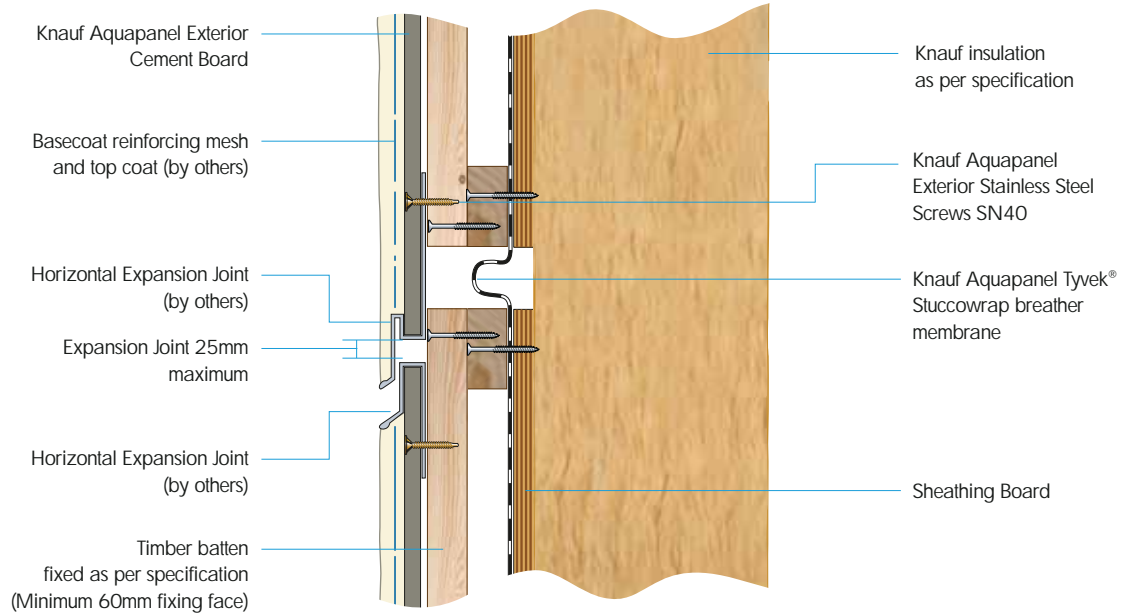
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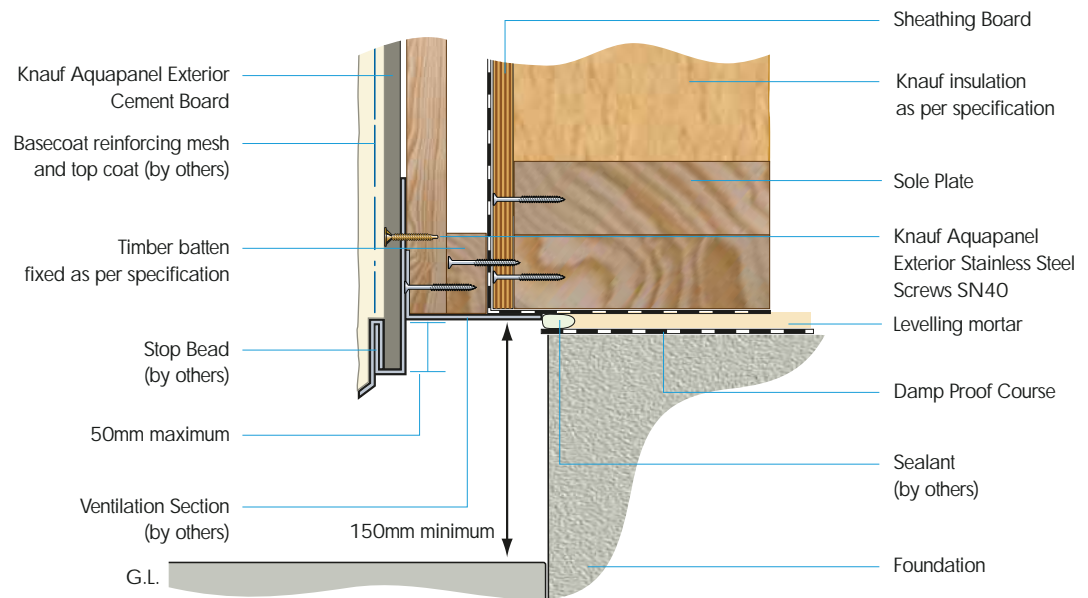
Horizontal Expansion Joint

Detail 03



Base Formation

Detail 04



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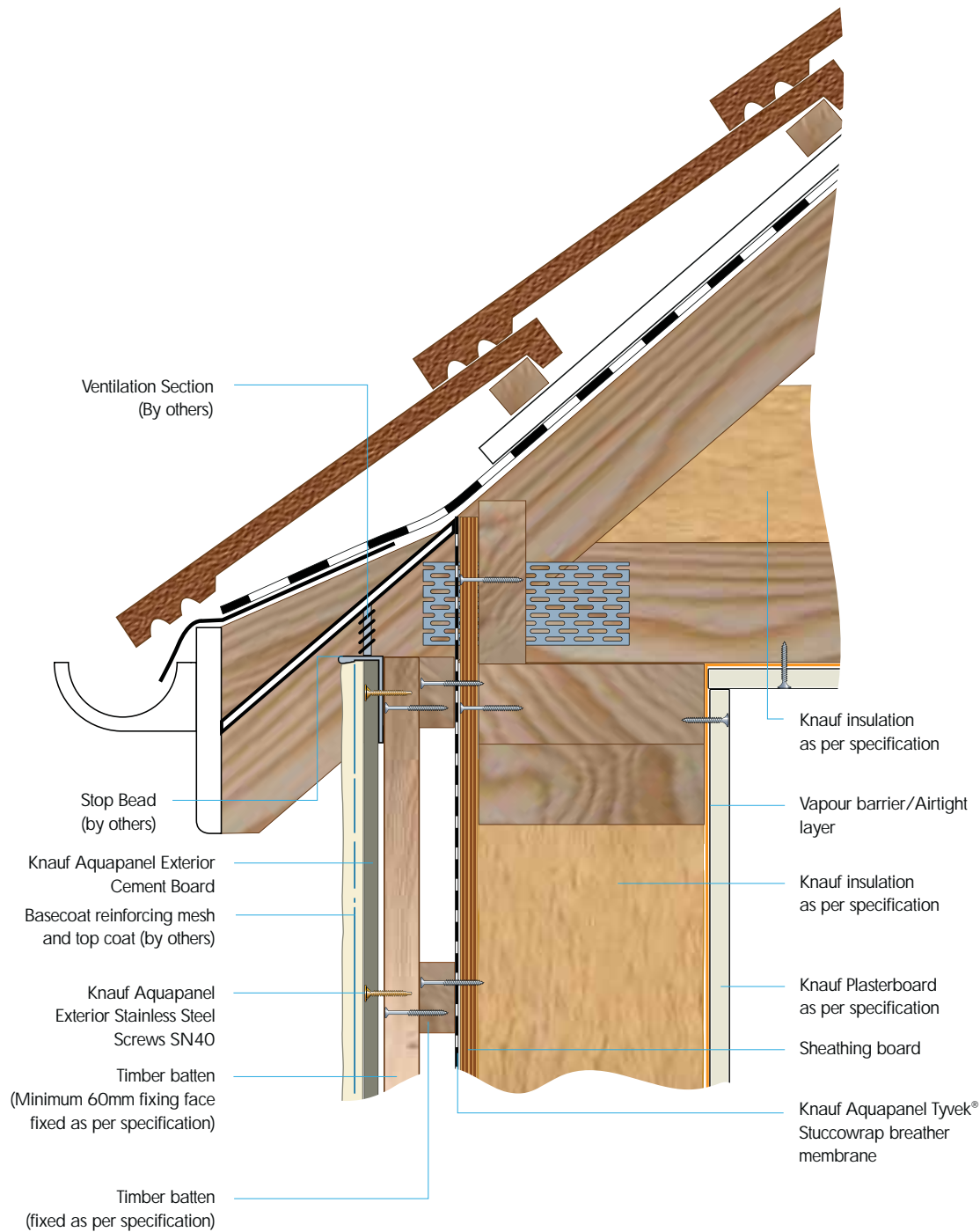
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Aquapanel Exterior

Eave Formation

Detail 05



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180 External Soffit Linings

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External Soffit Linings

Knauf Aquapanel Exterior cement boards solve the problem of external soffit linings. Designed to be used externally, they are freeze-thaw cycle tested and have been proven in tough European and Scandinavian climates.

Knauf Aquapanel cement board technology is revolutionising the way buildings are designed and constructed across Europe.

Developed by Knauf USG Systems, Aquapanel Exterior cement board gives architects and contractors a proven alternative to traditional masonry construction in exterior applications - where it offers significant performance advantages together with significantly faster installation speeds.

The Aquapanel cement board brand represents a range of extremely durable building materials providing solid substrates for wet areas with solutions for interior and exterior walls, linings, ceilings and floors.

Knauf Aquapanel Exterior Soffit Linings

Aquapanel Exterior cement board can be used in any exposed environment to create a seamless exterior ceiling, concealing unsightly soffits and services. Installed in the same manner as plasterboard, Knauf Aquapanel Exterior does not require any specialist skills from the contractor.

Extremely strong and freeze-thaw resistant, Aquapanel Exterior is an aggregated Portland Cement building panel with polymer coated glass fibre mesh embedded in both surfaces. Developed for use in exposed exterior situations as a ceiling and wall panel, Knauf Aquapanel Exterior is a proven, quality alternative to traditional building materials.

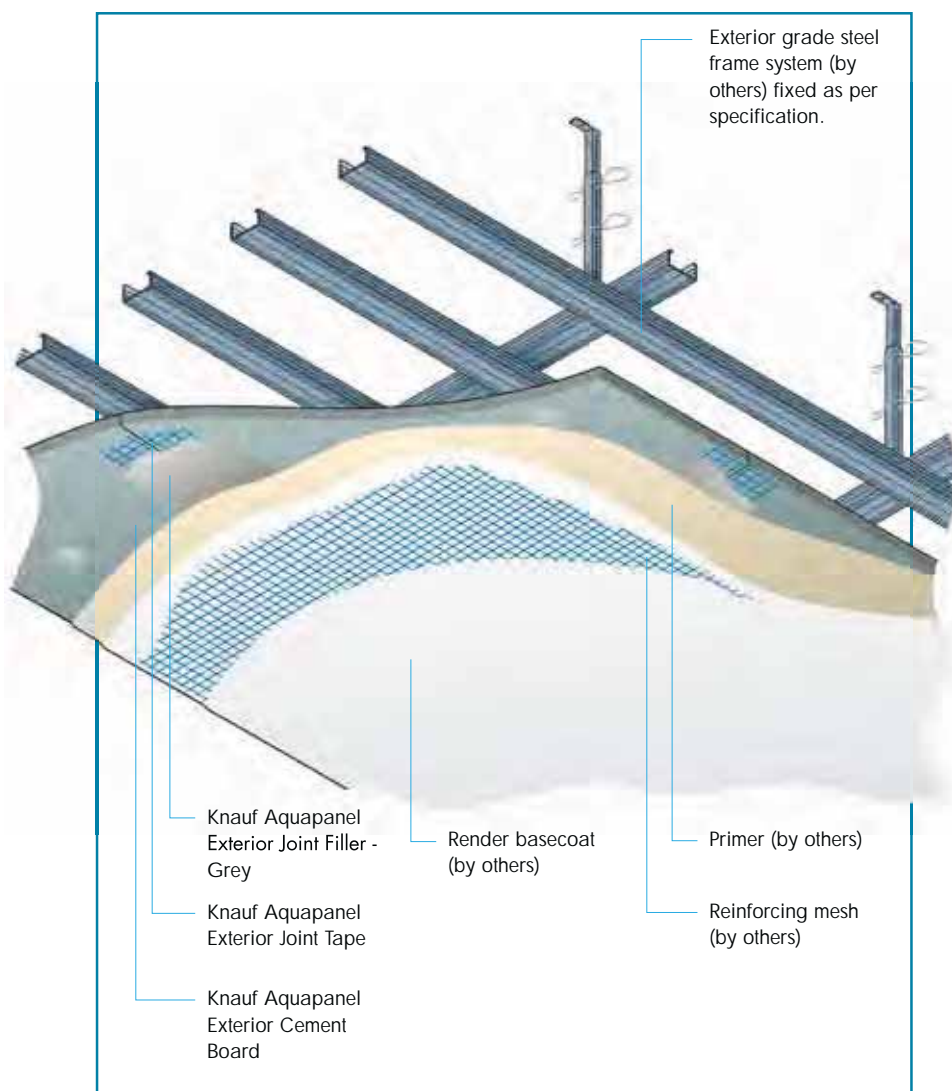
As a completely dry solution, Knauf Aquapanel Exterior cement board is fast to install, being mechanically fixed to exterior grade steelwork, quickly providing a smooth finish to receive an exterior paint as required.

Design Freedom

Aquapanel Exterior doesn't just provide an internal ceiling look to the outside of a building, it can also be curved and shaped to form aesthetic external soffit features. Aquapanel Exterior is particularly well suited for applications where an architect wants to create the effect of a ceiling 'flowing through' a glazed external wall.



Typical Knauf External Soffit design detail:



Proven in harsh climates

Knauf Aquapanel Exterior cement boards are inherently resistant to water, so there is no swelling or loss of stability even when wet. They are resistant to weathering, mould and changes of temperature and have a proven freeze-thaw cycle. They have excellent impact resistance, are safe and hygienic. You can specify Aquapanel Exterior comfortable in the knowledge that it has been successfully installed externally throughout Europe and Scandinavia, from Norway to Greece.

We offer a full range of accessory products and finishes for Aquapanel Exterior to ensure your design vision can be achieved.

Strength and versatility

Knauf Aquapanel Exterior is the perfect product to create strong, aesthetically pleasing ceilings to exposed balconies, canopies or multi-storey car parks. Aquapanel Exterior is suited to any building environment from residential to commercial and institutional.

Once installed, with joints and screwheads filled, Aquapanel Exterior can be left for up to six months before finishing, and easily resists wind tunnel effects in open buildings such as car parks.

Aquapanel Exterior can be quickly cut to shape using the score and snap technique with no special tools or techniques needed. Compared to traditional exterior systems, Knauf Aquapanel Exterior reduces working time and installation costs.



Aquapanel Exterior Brochure

A comprehensive Aquapanel Exterior brochure is available free from our literature line - call 08700 613700 for your copy, or you can download a copy from our website: www.knaufdrywall.co.uk

Inside you will find installation and performance details for our range of Aquapanel Exterior solutions.

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Encasement

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Knauf Drywall column and beam encasements are simple and easy to install, typically using the same components used in the partitions and linings on the rest of the project to simplify logistics and provide consistency to finishes.

The Knauf Encasement System can provide up to 2 hours fire protection to steel columns and beams. High performance Knauf Fireshield plasterboard and Knauf metal components ensure that installation is quick and easy.

Encasement

Encasement System

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- Protects structural steelwork for up to 2 hours
- Fast and economical to install
- Simplifies the package, order of work and decoration throughout your project

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Knauf Encasement

The Knauf Encasement system uses fast drywall techniques and our proven Knauf Fireshield plasterboard to provide up to 2 hours fire protection to structural steel columns and beams.

Framing



Knauf 'U' Channel Perimeter Support.

Fixing Clip



Knauf Fixing Clip.

Framing

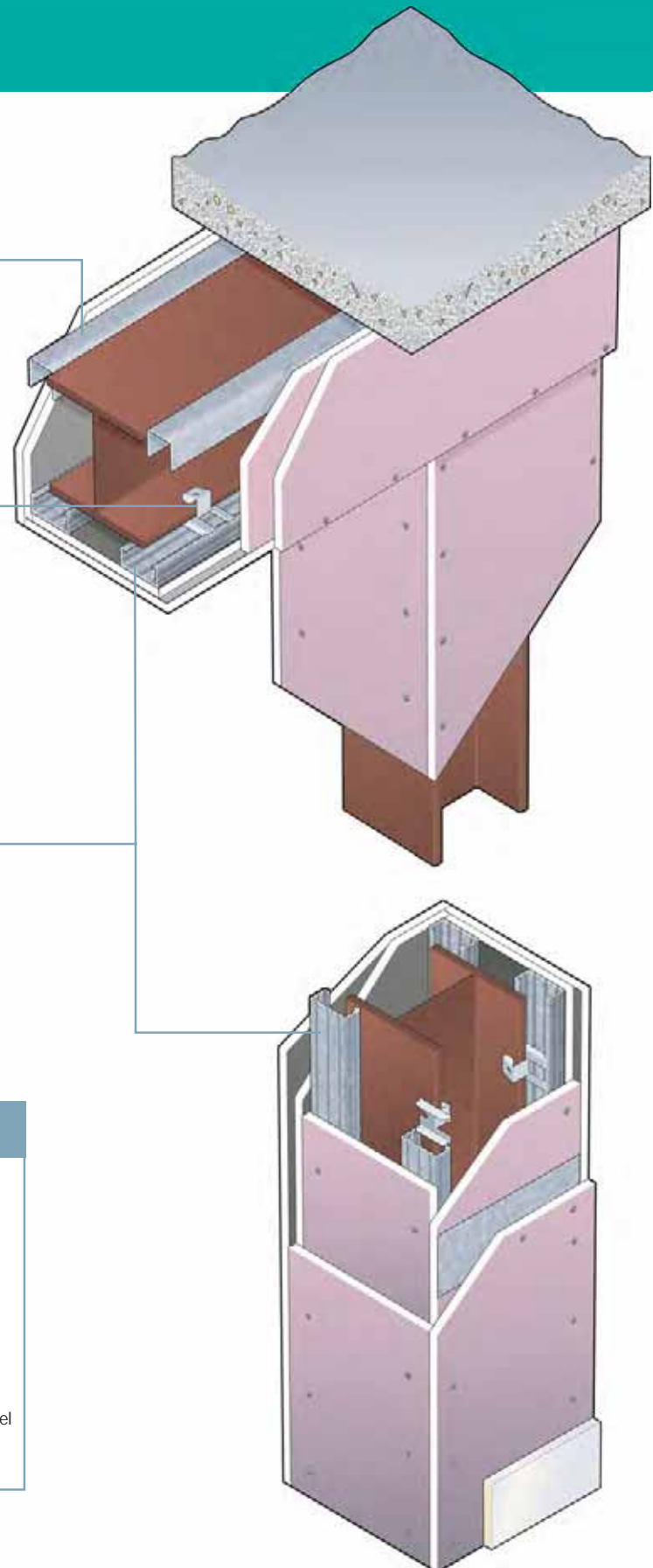


Knauf 'C' Channel.

Fireshield



Knauf Fireshield and Knauf Impact Panel offers superior fire protection in encasement systems.



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Encasement

Specifying the Knauf Encasement system not only gives you peace of mind that the structural steel is adequately protected, it also simplifies the package, order of work, and decoration throughout your project.

Key Features:

- Protects structural steelwork for up to 2 hours
- Fast and economical to install
- Maintains the use of Knauf Plasterboard throughout the building ensuring easy and consistent decoration

Fixings



Knauf Wafer Head Screws are black phosphated self-drilling and self-tapping screws with low profile heads.



Knauf Drywall Screws are self-drilling and self-tapping and designed to work perfectly with Knauf Plasterboards.

Other Components



Knauf Intumescent and Acoustic Mastic seals gaps, minimises airborne sound transmission.



Knauf Corner Flex Tape to provide protection to external corners of encasements.

Finishing



Our complete range of finishing products includes hand and machine applied jointing, plaster and ready mix solutions.

See our full guide on page 194.

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Knauf Encasement

Fire Protection Values

Building Regulations stipulate the period of fire resistance required for any element of building structure. Beams and columns require at least the same standard of fire protection as that required by any element they support.

The temperature rise of structural steelwork under fire test conditions provides a method of computing fire protection thicknesses based on accepted empirical formulae. The rate of increase in temperature of a steel cross section is determined by the ratio of the heated surface area (A) to the volume (V). This ratio (A/V) has units of m^{-1} and is known as the section factor.

The section factor is a measure of the rate at which a steel element will increase in temperature. The higher the value of the section factor, the faster the element will heat up and therefore the thicker fire protection required to satisfy a stipulated fire protection period.

Section factors for three and four-sided rectangular encasements are given in the adjoining tables, tabulated against universal columns and beams.

The data tabulated on the following page is cross-related to these tables to establish the board thickness required for different fire ratings.

Section factors for Universal Columns

Section Size (mm)	Mass per Metre (kg)	3 Sides A/V (Hp/A) (m^{-1})	4 Sides A/V (Hp/A) (m^{-1})
356 x 406	634	15	20
	551	20	25
	467	20	30
	393	25	35
	340	30	35
	287	30	45
	235	40	50
356 x 368	202	45	60
	177	50	65
	153	55	75
	129	65	90
305 x 305	283	30	40
	240	35	45
	198	40	50
	158	50	65
	137	55	70
	97	60	85
254 x 254	167	40	50
	132	50	65
	107	60	75
	89	70	90
	73	80	110
203 x 203	86	60	80
	71	70	95
	60	80	110
	52	95	125
	46	105	140
152 x 152	37	100	135
	30	120	160
	23	155	210

Section factors for Universal Beams

Section Size (mm)	Mass per Metre (kg)	3 Sides A/V (Hp/A) (m^{-1})	4 Sides A/V (Hp/A) (m^{-1})
914 x 419	388	45	55
	343	50	60
914 x 305	289	60	65
	253	65	75
	224	75	85
	201	80	95
838 x 292	226	70	80
	194	80	90
	176	90	100
762 x 267	197	70	85
	173	80	95
	147	95	110
686 x 254	170	75	90
	152	85	95
	140	90	105
	125	100	115
610 x 305	238	50	60
	179	70	80
	149	80	95
610 x 229	140	80	95
	125	90	105
	113	100	115
	101	110	130
533 x 210	122	85	95
	109	95	110
	101	100	115
	92	110	125
	82	120	140

Section factors for Universal Beams

Section Size (mm)	Mass per Metre (kg)	3 Sides A/V (Hp/A) (m ⁻¹)	4 Sides A/V (Hp/A) (m ⁻¹)
457 x 191	98	90	105
	89	100	115
	82	105	125
	74	115	135
	67	130	150
457 x 152	82	105	120
	74	115	130
	67	125	145
	60	140	160
	52	160	180
406 x 178	74	105	125
	67	115	140
	60	130	155
	54	145	170
406 x 140	46	160	185
	39	190	215
356 x 171	67	105	125
	57	120	145
	51	135	160
	45	150	180
356 x 127	39	165	195
	33	195	225
305 x 165	54	115	140
	46	135	160
	40	150	185
305 x 127	48	120	145
	42	140	160
	37	155	180
305 x 102	33	175	200
	28	200	230
	25	225	255
254 x 146	43	120	150
	37	140	170
	31	165	200
254 x 102	28	175	200
	25	190	225
	22	220	255
203 x 133	30	145	180
	25	170	210
203 x 102	23	175	205

Note: Tables from 4th edition Yellow Book, Structural Steel in Building.

Performance information

Establishing Board Thickness

To establish the thickness of Knauf Fireshield required for steel column and beam encasements, proceed as follows:

- Refer to the tables on the previous page. Locate the appropriate size of beam or column on the table and read off its Section Factor depending on whether 3 or 4 sided protection is required.
- Establish the period of fire resistance required.
- Refer to the adjoining table to determine the thickness of Knauf Fireshield required.
- For castellated steel beams refer to ASFP Publication 'Fire Protection for Structural Steel in Buildings'.

Example:

Requirement:

One hour fire protection to 457 x 191mm x 98 Kg/m steel beam with three-sided encasement.

Solution:

Section Factor A/V (Hp/A) = 90m⁻¹ (from table on left). Use single layer of 12.5mm Fireshield or Fire Moistureshield.

Knauf Fireshield Thickness Table

	0.5 hrs	1 hrs	1.5 hrs	2 hrs
260	260	260	37.5	260
240			243	
220		25	30	
200			184	
180			27.5	171
160			142	37.5
140	12.5	141		
120		15		
100		94	25	30
80				27.5
60		12.5	15	25
40			40	15
20			12.5	12.5

Table showing required board thicknesses for universal steel beams and columns protected with Knauf Fireshield or Knauf Impact Panel. Tested in accordance with BS 476, Part 21: 1987.

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Knauf Encasement

Installation Procedures

The Knauf Encasement system is designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

General

The Knauf Encasement system must be installed in full accordance with Knauf Drywall's recommendations.

Column Encasement

Four Sided Column Encasement

1,2

Cut four lengths of Knauf 'C' Channel to the full height of the column. Attach the Knauf 'C' Channels to the steel column flanges with Knauf Fixing Clips at maximum 1000mm centres.

Cut two boards to suit column size, allowing for 'C' Channel thickness.

3

Fix the boards to the Knauf 'C' Channels with Knauf Drywall Screws at 200mm centres. Note the screws must be at least 10mm longer than the total board thickness.

Partial Column Encasement

Assuming a typical three-sided encasement where one of the column flanges straddles a wall, follow the same procedure as outlined for four-sided encasements with the following difference:

Fix Knauf 'U' Channel - Perimeter Support channels in continuous lengths, to either the abutting wall face or the inner flange of the column. Use appropriate fixings at 600mm centres.

Beam Encasement

Assuming a typical three-sided encasement where a beam is exposed directly below a level soffit, fix Knauf 'U' Channel - Perimeter Support channels to either the adjoining soffit or the top flange of the beam. Install continuous lengths of Knauf 'U' Channel - Perimeter Support channel using appropriate fixings at 600mm centres.

Fix two more continuous lengths of Knauf 'C' Channel with Knauf Fixing Clips at maximum 750mm centres to the bottom flange of the beam.

Cut two boards to suit column size, allowing for 'C' Channel thickness.

Fix the boards to the Knauf 'C' Channels with Knauf Drywall Screws at 200mm centres. Note the screws must be at least 10mm longer than the total board thickness.

Double Layer Application

Install the first layer as described for either full or partial encasement.

Secure the second layer to the metal with fixings spaced as for the first layer but avoid coinciding fixing positions.

The board joints must be staggered as with the first layer between adjoining boards and also between the two layers.

Treatment of Board Joints

4,5,6

All joints in outer board layers require additional support, either from a length of Knauf 'C' Channel fixed between the main 'C' Channel supports in the case of single layer systems, or via Knauf Flat Fixing Plate positioned between board layers when a double layer encasement is used.



Installing Knauf Fixing Clips.



Pushing Knauf 'C' Channel into the Knauf Fixing Clips.



Fixing Knauf Fireshield onto the Knauf 'C' Channels.



Fixing Knauf Fireshield to Knauf 'C' Channels for horizontal joints.



Fixing Knauf Flat Fixing Plate between layers.



Fixing outer layer of Knauf Fireshield.



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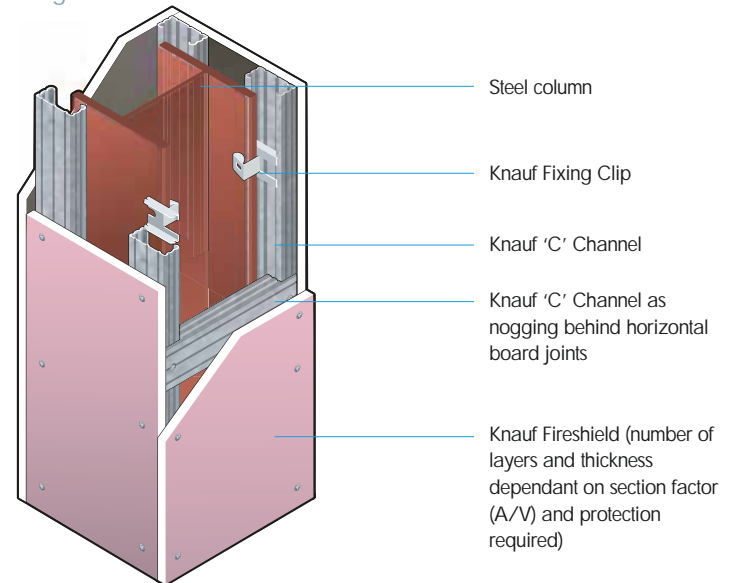
Knauf Encasement

Application Details

These details represent some of the most common design situations relevant to the Knauf Encasement system. Knauf Drywall Technical Services can advise on any specific detail you are trying to achieve.

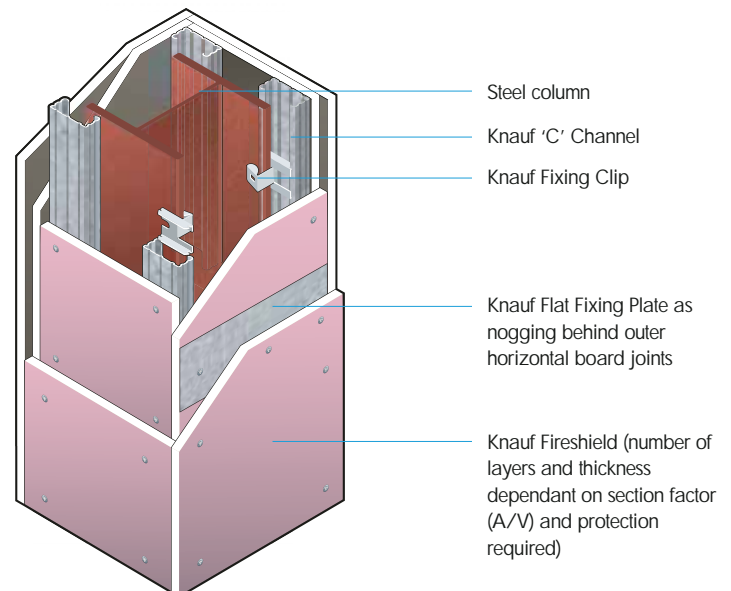
Four Sided Encasement - Single Layer Lining

Detail 01



Four Sided Encasement - Double Layer Lining

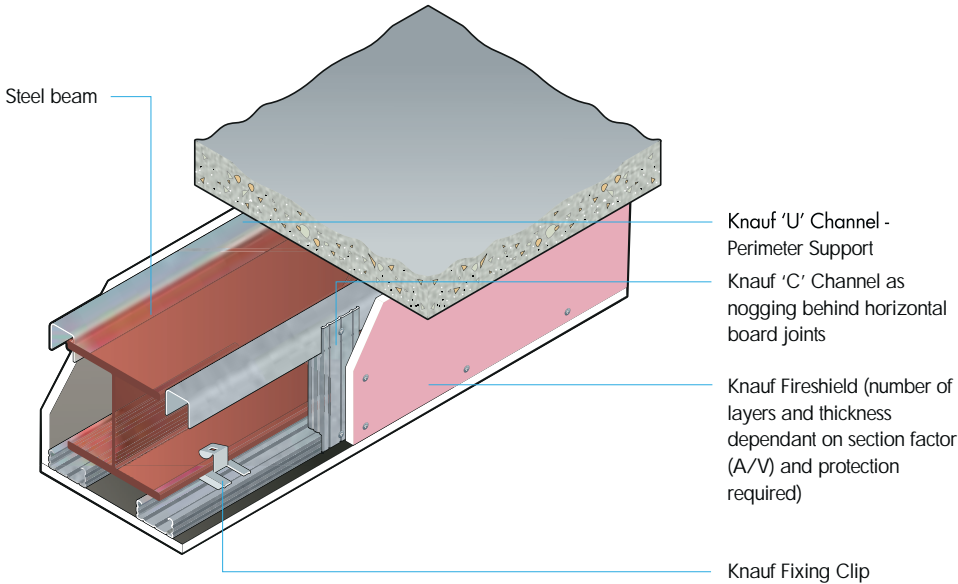
Detail 02



Knauf Encasement

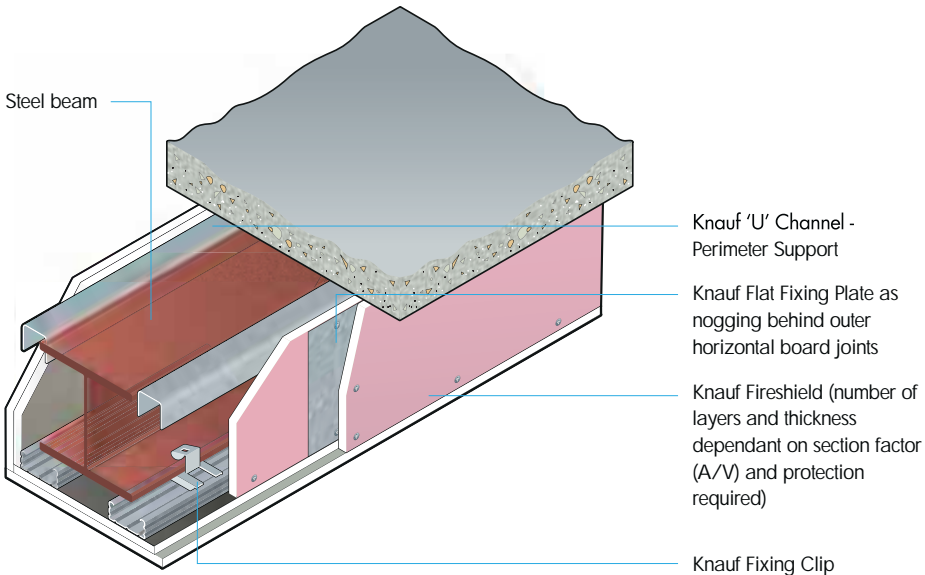
Three Sided Encasement - Single Layer Lining

Detail 03



Three Sided Encasement - Double Layer Lining

Detail 04



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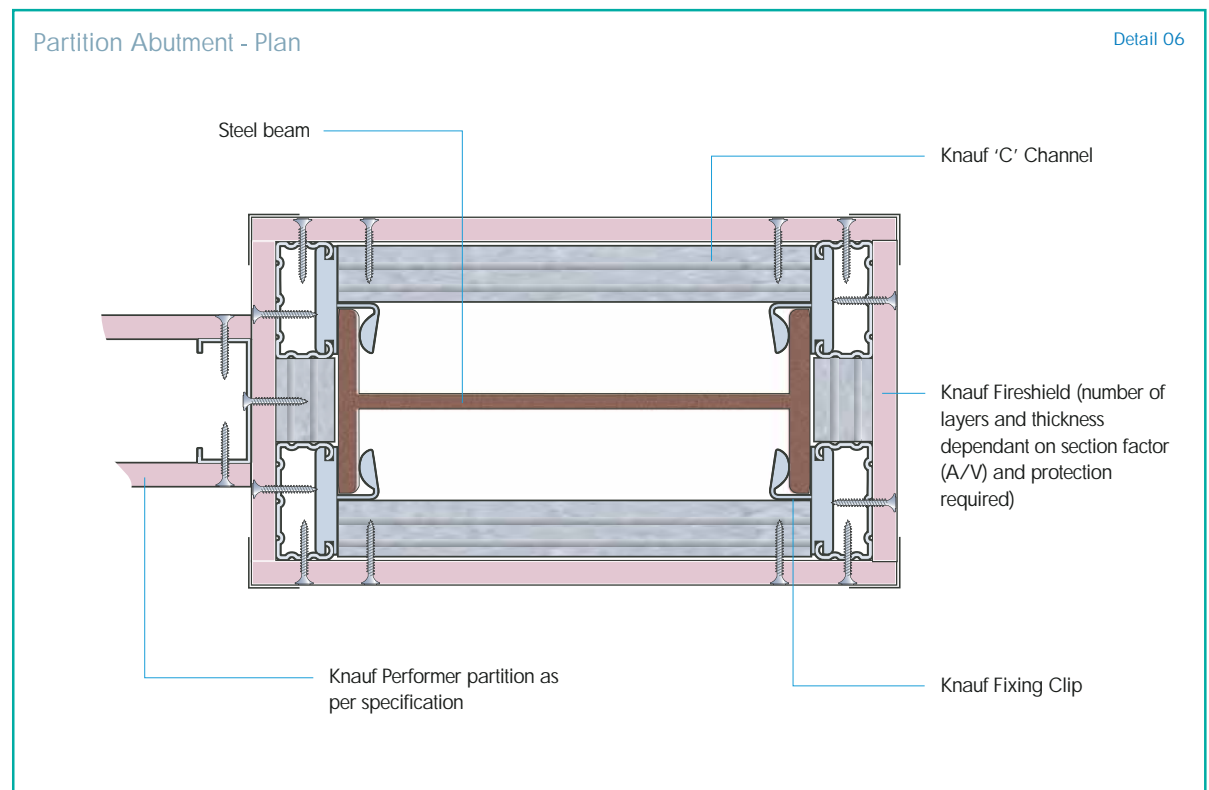
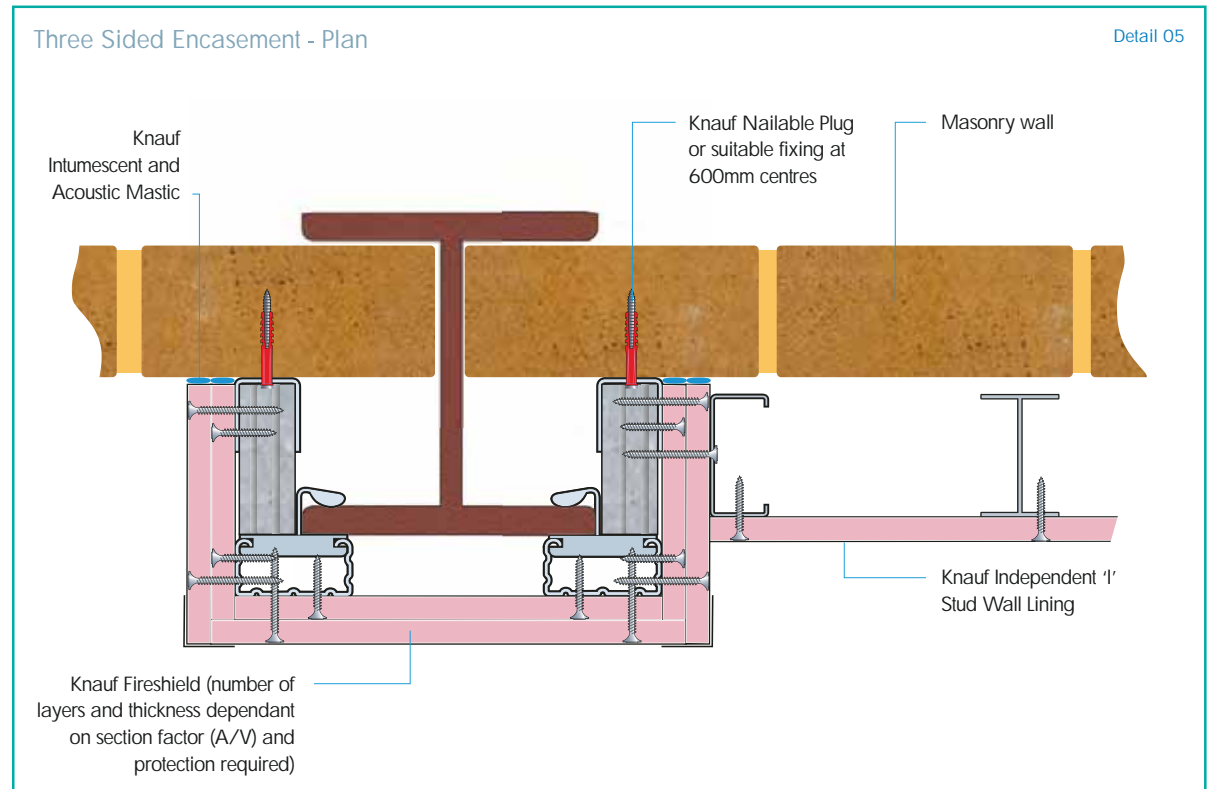
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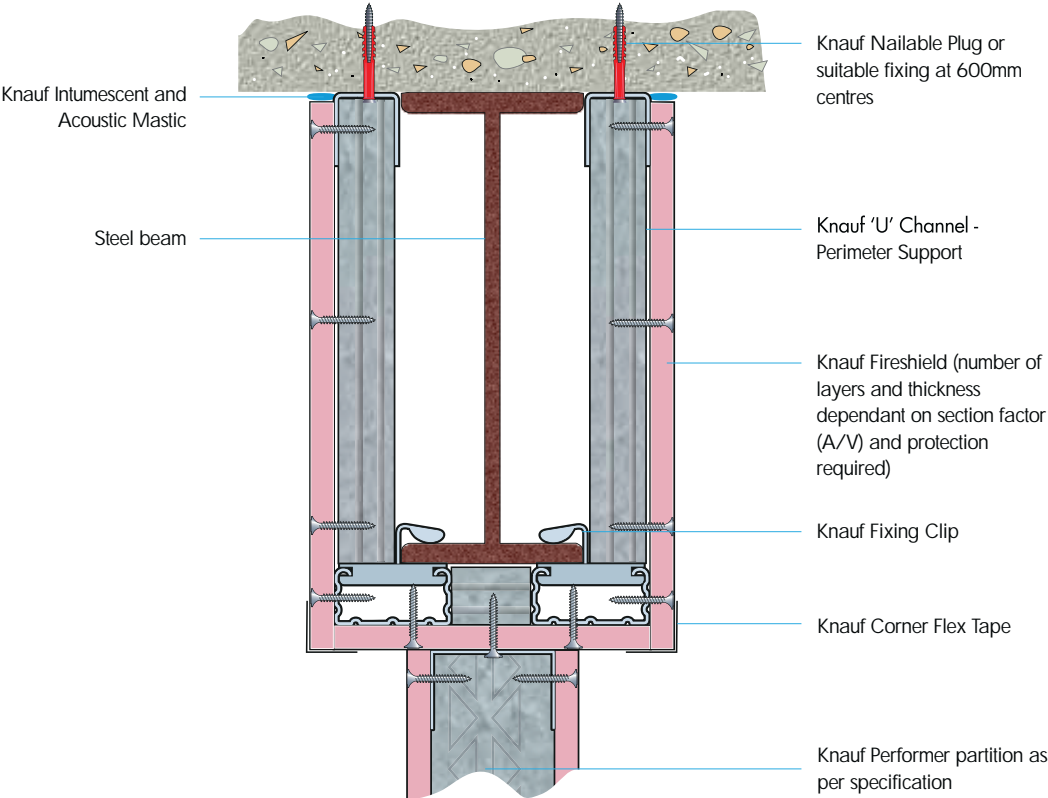
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Knauf Encasement

Partition Abutment - Elevation

Detail 07



Note: Consideration must be given for a deflection head to partition. Where this is required contact Knauf Drywall Technical Services.

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The visual quality of your finished wall or ceiling is dependent on the quality of workmanship and quality of the materials used.

Knauf Drywall lead the way in modern, highly developed finishing materials that provide the best possible final surface whilst making life as easy as possible for the trades applying them.

And our solutions are significantly faster on-site than traditional materials.

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Spec Sheet

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Taping and Jointing

Knauf Drywall's superb range of jointing materials lead the market in ease of application, easy sanding, joint strength and quality of finish.

Jointing partitions for speed of application

Knauf Drywall jointing materials and tapes are of the highest quality to ensure the best possible finish with the minimum risk of cracking.

For the fastest possible application time on vertical wall joints where no movement is expected, Knauf Fibre Tape allows the filling and bedding processes to be completed in a single application. Always use tapered edge Knauf Plasterboards when specifying a tape and jointed finish.

Application method

1 Apply the self adhesive Knauf Fibre Tape to the length of the plasterboard joint.

2 Apply a liberal coat of Knauf Joint Filler over the tape, ensuring that the material is pushed through the tape to completely fill the joint, to a width of approximately 175mm. Smooth the Knauf Joint Filler and allow it to set; this will take approximately two hours.

Please note – we do not recommend the use of joint cements for this process as there is a significant chance of cracking.

3 Once the Knauf Joint Filler has fully set, apply a coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand over the entire layer to a width of approximately 250mm and leave to dry; usually overnight.

4 Once dry, apply the final coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand to a width of approximately 300mm and leave to dry. Sand to a seamless finish using 120/150 grade sand paper.

Prior to final decoration, the entire plasterboard surface should be coated with Knauf Wallboard Primer to ensure an even suction and subsequent even paint texture, across the whole surface.

Please note - If a stronger joint is required, for example in more public areas, then Knauf Paper Tape should be used. If significant movement is expected, then the installation of a Knauf Movement Control Joint should be considered.



Apply Knauf Joint Filler over the tape.



Applying first coat of Knauf Joint Cement Easy Sand.



Apply self adhesive Knauf Fibre Tape to joint.



Sand to a seamless finish.

Jointing partitions for the strongest joint/jointing ceilings

Knauf Joint Tape is our recommended solution for both vertical and horizontal applications. The physical make-up of Knauf Joint Tape inherently provides a greater resistance to cracking than fibre tapes and the application method ensures the correct filling of the joints, which is essential for strength.

In public areas and on ceilings, which always experience a degree of movement, Knauf Joint Tape should always be specified. If significant movement is expected, then the installation of a Knauf Movement Control Joint should be considered.

Always use tapered edge Knauf Plasterboards when specifying a tape and jointed finish. Knauf Drywall's range of high quality jointing materials will ensure the best possible finish can be achieved.

Application method

1 Fill the joint completely with either Knauf Joint Filler, Knauf Joint Cement Easy Sand, or Knauf Joint Cement Lite Easy Sand.

2,3 Bed the Knauf Joint Tape in the material and cover to a width of approximately 175mm. If using Knauf Joint Filler, allow it to set; this will take approximately two hours. If using a Knauf joint cement, allow it to dry; this will nominally take 24 hours.

4 Apply a coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand over the entire layer to a width of approximately 250mm and leave to dry; usually overnight.

5 Once dry, apply the final coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand to a width of approximately 300mm and leave to dry. Sand to a seamless finish using 120/150 grade sand paper.

Prior to final decoration, the entire plasterboard surface should be coated with Knauf Wallboard Primer to ensure an even suction, and subsequent even paint texture, across the whole surface.



Applying Knauf Joint Cement Easy Sand.



Bedding Knauf Joint Tape.



Applying Knauf Joint Cement Easy Sand over the tape.



Applying the first coat of Knauf Joint Cement Easy Sand.



Sand to a seamless finish.



Knauf Drywall finishing products

Use Knauf Drywall jointing materials for effortless sanding and a seamless finish.



Knauf Joint Cement Easy Sand

Knauf Joint Cement Easy Sand is a lightweight air-drying compound for bedding tapes and finishing joints.



Knauf Joint Cement Lite Easy Sand

Knauf Joint Cement Lite Easy Sand is a pre-mixed light joint cement for bedding tapes and finishing joints with superior characteristics for hand or machine application.



Knauf Joint Filler

Knauf Joint Filler is a fast setting gypsum compound, ideal for bedding joints by hand application.



See our full range of finishing products on pages 234-235.

Generate specifications at:

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Taping and Jointing

Internal and external corners

Jointing internal corners in partitions

Internal corners are more protected than external corners and generally take fewer knocks. They also normally require less feathering out to achieve an acceptably flat visual surface.

Knauf Joint Tape has an indented centre line that makes it easy to fold for use with internal corners. Knauf Drywall's range of joint cements are often preferred for internal corners for their easy workability.

Application method

1 Fill the joint completely with either Knauf Joint Filler, Knauf Joint Cement Easy Sand, or Knauf Joint Cement Lite Easy Sand.

2,3 Bend the Knauf Joint Tape along the centre line to suit the internal corner, then bed into the material and cover to a width of approximately 50mm each side of the joint. If using Knauf Joint Filler, allow it to set; this will take approximately two hours. If using a Knauf joint cement allow it to dry; this will nominally take 24 hours.

4 Apply a finish coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand over the entire layer to a width of approximately 75mm each side of the joint and leave to dry; usually overnight.

5 Once dry, sand to a seamless finish using 120/150 grade sand paper.

Prior to final decoration, the entire plasterboard surface should be coated with Knauf Wallboard Primer to ensure an even suction, and subsequent even paint texture, across the whole surface.



Ensure the joint is completely filled.



Bedding Knauf Joint Tape.



Cover to a width of 50mm each side of the joint.



Apply Knauf Joint Cement Easy Sand finish coat to 75mm each side.



Sand to a seamless finish.



Applying Knauf Joint Filler to either side of the corner.



Ensure all holes are completely filled.

Jointing external corners in partitions

External corners are more likely to take knocks than internal corners and must be carefully jointed to ensure longevity. Knauf Corner Flex Tape is designed to protect the corner of the partition when used with Knauf Joint Filler and has been proven to resist damage more effectively than traditional metal corner joint sections.

Application method

1,2 Apply a liberal coating of Knauf Joint Filler to both sides of the corner along the length of the joint. Push the Knauf Corner Flex Tape onto the corner, over the Knauf Joint Filler, ensuring that all the holes in the Knauf Corner Flex Tape are completely filled.

3 Apply a first layer of Knauf Joint Filler over the edges of the Knauf Corner Flex Tape and feather out to approximately 175mm each side of the corner. Allow to set; this will take approximately two hours.

4 Apply a second layer of Knauf Joint Filler over the first layer, again feathering out to approximately 175mm each side of the corner. Allow to set; this will take approximately two hours.

5,6 Once fully set, apply a finish coat of Knauf Joint Cement Easy Sand or Knauf Joint Cement Lite Easy Sand feathered out to approximately 250mm each side of the corner and leave to dry. Sand to a seamless finish using 120/150 grade sand paper.

Prior to final decoration, the entire plasterboard surface should be coated with Knauf Wallboard Primer to ensure an even suction, and subsequent even paint texture, across the whole surface.



Applying the first layer of Knauf Joint Filler.



Apply second coat to 175mm each side of the corner.



Applying the finish coat of Knauf Joint Cement Easy Sand.



Sand to a seamless finish.



Knauf Drywall finishing products

Use Knauf Drywall jointing materials for effortless sanding and a seamless finish.



Knauf Joint Cement Easy Sand

Knauf Joint Cement Easy Sand is a lightweight air-drying compound for bedding tapes and finishing joints.



Knauf Joint Cement Lite Easy Sand

Knauf Joint Cement Lite Easy Sand is a pre-mixed light joint cement for bedding tapes and finishing joints with superior characteristics for hand or machine application.



Knauf Joint Filler

Knauf Joint Filler is a fast setting gypsum compound, ideal for bedding joints by hand application.



See our full range of finishing products on pages 234-235.

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Spray Plastering

Knauf Drywall's innovative range of spray applied plasters bring enormous on-site productivity gains and deliver a first class finish.

Knauf MP75 Projection Plaster – one coat over masonry

Knauf MP75 Projection Plaster is Europe's market leader, having been proven on projects of all sizes for over thirty years. Back to back trials have consistently shown Knauf MP75 to be applied and finished three times faster than traditional hand applied systems whilst providing the best finish in the business.

Specifying Knauf MP75 Projection Plaster for your projects improves health and safety on-site, ensures consistency and provides a superb finished surface. Perhaps most importantly, it massively reduces the time impact of what is traditionally a slow wet trade.

Application method

Before starting to spray Knauf MP75, make sure all beads are cut and bedded in using Knauf MP75. Ensure that all wall areas are clean and dry, and add pre-treatment if required.

Spray Knauf MP75 in overlapping bands at the desired thickness (usually 11-13mm and up to 20mm) and then use an aluminium feather edge to rule the plaster flat.

Once flat, leave Knauf MP75 for approximately 75 minutes to allow for the initial set to take place.

The initial set time may vary depending on the level of suction from the background.

After the initial set, use a small aluminium feather edge to apply a second rule and to remove any imperfections from the surface.

Now leave the plaster for approximately 20 minutes more or use the "Touch Test" – touch the plaster surface to check it does not stick to your fingers and resists finger print impressions.

Using a spatula, open the surface to allow air to enter the plaster to help with the drying process. This action is known as "ripping" the surface and is easy to do – simply hold the spatula at 90° to the surface.

Leave for another 20 minutes or use the "Touch Test".

Using water and a sponge float, bring the fats of the plaster to the surface.

Leave for a further 10-20 minutes or use the "Touch Test" again.

Using a quality steel trowel, push the plaster fats back into the plaster to give that all important hard and smooth finish.

Apply the first trowel.

Low suction backgrounds – no water is required.

High suction backgrounds – add water using a paint brush to flick water onto the surface.

Leave for 10-20 minutes or use the "Touch Test" before continuing.

Apply a second trowel exactly as per the first trowel.

When the MP75 surface has changed colour from off-white to dark grey, you can apply the final hard trowel.

The final hard trowel is very important as it gives Knauf MP75 its smooth and hard surface finish.

It should take between 3 to 3½ hours to achieve the perfect Knauf MP75 finish, dependent on the background and ambient temperature.

Ventilation is very important. As soon as spraying is complete, open all windows and doors to allow a steady and continuous flow of air to dry Knauf MP75.

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Start in the corner of the room.



Spray Knauf MP75 in overlapping bands.



Rule Knauf MP75 flat.



Applying the second rule.



Use a spatula to 'rip' the surface.



Flicking the water over the surface prior to using the sponge float.



Using a sponge float to bring the fats to surface.



Trowelling to the final finish.



Machine guide

Knauf MP75 Projection Plaster can be spray applied through a variety of mixing pump machines such as the Knauf PFT G5 and Knauf PFT Monojet.



Knauf Drywall MP75

For a superb finish use Knauf Drywall MP75. Knauf MP75 is a fast-drying projection plaster specially formulated for one-coat machine application on most interior walling surfaces.



See our full range of finishing products on pages 246-249.

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Spray Plastering

Readymix spray plasters

Knauf Readymix Spray Plasters – direct over concrete, plasterboard, etc.

Knauf Drywall's range of readymix plasters represent a major step forward in the speed and ease of application of commercial plasters.

Delivered ready-mixed for use straight from the bag, Knauf Readymix Spray Plasters minimise the need for water on-site and produce virtually no wastage.

The speed and accuracy of the spray system is heightened further when finishing ceilings as the work can be completed from floor level without any scaffolding, steps or hop-ups.

The natural flexibility of the products make them highly resistant to cracking, chipping or flaking, and their high adhesive properties mean they can be applied directly over smooth-faced concrete and a range of other surfaces without any need for bonding agents or primers.

Knauf Readymix Spray Plasters are simply cleverer than the average plaster – the skill is in the product. The result is a superb finish, quickly, easily and safely achieved on-site for a lower overall installed cost.

Over plasterboard and composite boards

The application over plasterboard and composite boards is extremely simple.

Preparation

1 Tape and joint the boards. Secure angle beads to window reveals and external corners.

Application method

2,3 Apply the first coat of Knauf Deco, Deco Plus or Airless to the walls and ceilings.

4 Level flat with a spatula. Use a corner trowel on internal angles. Allow to dry; this typically takes 12-24 hours.

5 Apply the second coat of Knauf Deco, Deco Plus or Airless and repeat the process of the first coat applying more pressure to flatten the surface. Allow to dry; this typically takes 12-24 hours.

6 Sand the wall with a drywall sander ready for decoration.

Over concrete surfaces

Concrete is one of the surfaces best-suited for Knauf Readymix Spray Plasters to be applied to. Material consumption is just 1.5 kg/mm/m² for the first coat and 0.5-1kg/mm/m² for the second.

Preparation

Ensure all release oils are cleaned from the surface of the concrete, and prime background if required.

Clean the surfaces of dirt and dust. Fill the V joints and secure beads using Knauf Joint Filler and strike flush. Repair and fill any damaged areas/large holes etc.

Application method

Empty the Knauf Readymix Plaster being used into the spray hopper of the machine.

Apply the first coat of Knauf Plano onto uneven surfaces ensuring an even coverage, or, on smooth surfaces, use Knauf Deco or Knauf Deco Plus.

Level the material with a spatula to ensure a flat surface, ventilate the area and allow to dry; this typically takes between 12-24 hours.

Check the surface for high spots and sand down if necessary with 120 grade sand paper.

Apply the second coat of Knauf Deco or Deco Plus ensuring an even coverage on the surface. Level the material with a spatula taking extra care to remove any trowel lines. Slightly more pressure should be applied to the spatula leaving a flat smooth surface.

Ventilate and allow to dry. This typically takes between 12-24 hours.

Sand the wall with a drywall sander ready for decoration.

Over thin-joint aircrete blocks and wall panel systems

A three coat application is recommended for Thin Joint Block and Panel Walls, with a base coat of Knauf Plano to be applied directly to the blocks up to a depth of 2-3mm, with mesh bedded into this first coat and levelled flat.

It is essential that the wall has been built true and straight to then make the most of the time-saving benefits of Knauf Readymix Spray Plasters.

Preparation

Fill all chases with mortar and secure angle beads, stop beads and expansion beads, and assess background.

Application method

Apply the first coat of Knauf Plano to the surface of the wall and level with a straight edge or spatula. Allow to dry; this typically takes 12-24 hours.

Apply a second coat of Knauf Plano if the blocks are stepping out excessively. If not, apply a coat of Knauf Deco and level using a spatula.

Apply the third and final coat of Knauf Deco and repeat the process. Allow to dry.

Check the surface of the walls and ceilings and sand away any high spots etc. with 120 grade sand paper. A drywall sander, with vacuum attached, is ideal for reducing dust.

Allow 24 hours before commencing decoration.

Note: Knauf Readymix Projection Plasters are a water based polymer bound material which, similar to an emulsion paint, needs a minimum temperature of +5°C in order to obtain its full binding power and hardness. Please check air and concrete surface temperature prior to commencing application.

Knauf Readymix Projection Plasters can be applied to damp concrete providing the moisture content is not above 20%.



Machine guide

Knauf Plano and Deco are designed to be used with the same rotary screw worm pump machines that are common in the painting industry.

Knauf Airless is designed to be used with an airless high pressure piston pump such as the Knauf PFT Samba XL.



Filling the joints.



Applying the first coat of Knauf Airless.



Knauf Airless is easily applied to ceilings working from floor level.



Levelling Knauf Airless flat using a spatula.



Applying the second coat of Knauf Airless.



Sanding quickly achieves the final finish.

Knauf Drywall Readymix plasters

Knauf Readymix Plasters are a rapid, cost-effective alternative to traditional plaster for finishing walls and ceilings. They are purpose designed for machine application on fast-track building projects.

Knauf Deco

Knauf Deco is normally used as a 1mm top coat over Knauf Plano or as a finish coat directly onto smooth backgrounds.



Knauf Deco Plus

Knauf Deco Plus can be used on the same backgrounds as Knauf Deco but offers additional water resistance making it ideal for use in areas of high humidity.



Knauf Plano

Knauf Plano is a filler and levelling compound for use over thin joint block systems, uneven insitu concrete and to fill cracks and holes on refurbishment projects.



Knauf Airless

Knauf Airless can be used in the same areas as Knauf Deco and Knauf Deco Plus but applied with an airless high pressure piston pump machine.



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Spray Plastering

Spray applied finish plaster



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Knauf MPFinish Spray Plaster – finishing over plasterboard

Knauf MPFinish is a superb, high quality finish plaster specifically designed for fast spray application.

Back to back trials have proven Knauf MPFinish to significantly increase productivity over traditional hand applied plasters, with exceptional coverage figures of 16-18m² per bag.

On smaller projects where the best possible finish is required without the need for spray application, Knauf MPFinish can still be hand applied.

Specifying Knauf MPFinish for your projects improves health and safety on-site, ensures consistency and provides a superb finished surface. Perhaps most importantly, it substantially reduces the time impact of what is traditionally a slow wet trade.

Application method

1 Ensure all joints, corners etc. have been filled and Knauf Joint Tape bedded in correctly with Knauf Joint Filler, and the material allowed to dry, before starting to apply Knauf MPFinish.

2 Before you start spraying it is important to ensure that the correct consistency has been achieved. You are aiming for a fairly wet mix. If the spray gun is clogging the mix is too dry.

3,4 Spray Knauf MPFinish evenly at the required thickness (typically 2-3mm) in overlapping bands, trowelling the material flat as it is applied. It can come as a surprise how quickly the material is applied – you should plan for approximately 1m² to be applied every 11 seconds.

Leave the plaster to 'pick up'. This is the initial setting stage and typically takes 45-50 minutes depending on the background.

5 As the plaster picks up, trowel the surface. **It is very important that this first trowel is a dry one** – in other words do not apply any water to the surface at this stage. Knauf MPFinish does not require it.

6 After about 30 minutes, depending on the background, apply the second trowel. Water can be applied to the surface at this stage if required.

After a further 20-30 minutes apply the final trowel to achieve an exceptionally smooth finished surface.

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1 Filling the joints.



2 You should aim for a fairly wet mix.



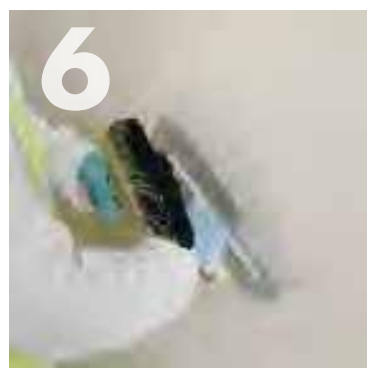
3 Spray Knauf MPFinish in overlapping bands.



4 Trowel Knauf MPFinish flat as it is applied.



5 Apply the first dry trowel once the plaster has picked up.



6 Water can be applied to the second trowel if required.

Machine guide

Knauf MPFinish can be spray applied through a variety of mixing pump machines, including the Knauf PFT Ritmo Powercoat which was designed to work with Knauf MPFinish.



Knauf MPFinish

Knauf MPFinish makes the spray application of finish plasters possible. Knauf purpose designed MPFinish in conjunction with leading spray machine manufacturers, who have brought out new machines to suit its characteristics. MPFinish mixes and sprays perfectly, without causing wear to the machine.

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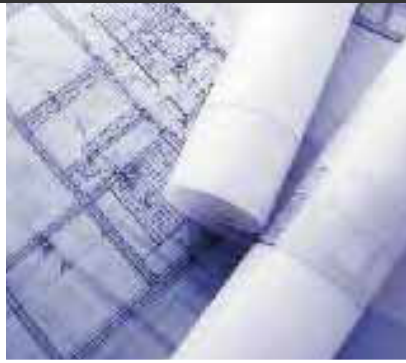
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We know that small changes to the project specification can have a major effect on project efficiencies and the effectiveness of the finished building.

These pages highlight some of the simple changes that can achieve the greatest effects, from reducing wastage to reducing ongoing costs. They also introduce a free online tool to help you, and explain our health and safety policy and guidance.

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[Download Spec Sheet](#)



System Specification

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Specification Considerations

The following pages highlight some key areas to consider when designing with Knauf Drywall systems.



Metal studs – speed, accuracy and economy

The specification of metal studs gives particular advantages over timber:

- Reduced waste.
- Increased speed and ease of installation.
- Higher accuracy, no movement or twisting due to shrinkage.
- Reduced customer care issues.



There is also a greatly reduced chance of use by other trades for non-associated tasks. In the case of internal partitions, the use of Knauf Acoustic 'C' Stud can obviate the need for an insulation quilt. Always ensure that Knauf Drywall metal studs are used within Knauf Drywall partition systems to ensure the validity of all performance ratings and the warranty.



Paper tape

Always specify the use of Knauf Joint Tape for jointing plasterboards in ceiling applications. The use of paper tape significantly reduces the chances of cracking due to movement of the background.

Reducing wastage

Wastage of plasterboard on sites can be reduced by ensuring that the correct board length is chosen to suit the storey heights. Often, over-length boards are specified which then have to be cut-down, increasing working time and waste.

For further information on Gypsum Waste Management, please see our guide on page 298.

Resilient bar for ceilings

The specification of Knauf Resilient Bar on ceiling systems brings three advantages:

- Sound reduction is increased.
- Bars can be spaced to remove the need for noggings on 12.5mm board, regardless of joist centres.
- Instances of cracking/nail popping are much reduced as the system will be more tolerant of background movement.



Recessed lights and other penetrations

When specifying recessed lighting and other penetrations through walls and ceilings, consider the effect on the system's performance with regards to fire and acoustic ratings. Always ensure the manufacturer of the penetration has taken these into account.

Ensuring effective adhesion for 'dot and dab'

When specifying a Direct Bonding plasterboard solution to fair faced in-situ concrete, it is necessary to take into account the releasing agent used, as well as the low-key, low-suction surface. The concrete should be allowed to fully dry, and all traces of releasing agent removed with a mild detergent. Knauf Betokontakt should be used to provide a key, before the wall can be lined using a Knauf Drywall Direct Bonding solution.

Achieving high finish levels

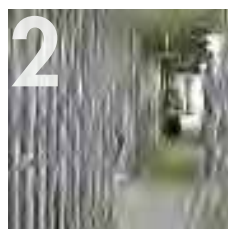
When deciding on which finish to apply to plasterboard, consideration should be given to the level of flatness that is required so that it suits the interior design and lighting conditions. For example, natural light at a shallow angle tends to highlight surface level differences, and features such as dado rails require a uniformly flat surface in order to be correctly mounted.

On a taped and jointed finish, the maximum increase of the crown of the joint allowed in BS 8212:1995 is 3 mm when measured using a 450 mm straight edge. A smaller maximum increase can be specified, but will be more time-consuming to achieve. The use of Knauf Tapered Edge plasterboards is recommended when taping and jointing. If a uniformly flat surface is required then a Knauf skim plaster finish should be specified.

Moisture resistant board such as Knauf Moistureshield, Knauf Fire Moistureshield and Knauf Sound Moistureshield, require a pre-treatment with Knauf Betokontakt where a Knauf skim plaster finish is desired.

If specifying a taped and jointed plasterboard finish, Knauf Wallboard Primer should be applied prior to the final finish (paint or wallpaper). The use of Wallboard Primer equalises suction across the surface and reduces the chance of the joints being seen through the finish. It also reduces moisture absorption and the risk of discolouration.

When checking the standard of jointing prior to completion, the use of lighting similar to that expected when occupied will provide the most accurate check, and subsequently reduce the possibility of customer care issues relating to the finished surface.



Fixing sequence

The British Standard Code of Practice for plasterboard partitions and dry linings (BS 8000: Part 8: 1994) recommends the following sequence of work:

- 1 Fix ceiling linings first
- 2 then partitions,
- 3 followed by wall linings.

Whenever it is practical to do so, apply wall linings in sequence working away from doors and windows and towards internal angles. As far as possible, locate paper bound board edges at salient corners.

Please note that where a parge coat is specified to a masonry separating wall, then the parge coat should be applied first, before the ceiling lining, and should cover all exposed masonry.



See also: Regulations and legislation on page 302.

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Specification Considerations



For hospitals and non-residential buildings

Service accommodation and partially boarded partitions

It is often necessary to accommodate a large number of services above ceiling level. On occasion, this means the plasterboard extends only to a height above suspended ceiling level leaving a gap for the services to run through. In these situations, no fire or acoustic performance can be guaranteed and it is necessary to consider the effect on the overall strength and, therefore, maximum design height of the partition.



The partition must also be capped off with plasterboard in order to prevent fibre migration if insulation has been specified in the void.

Generally, it is recommended that no more than 25% of the total height is left unboarded without diagonal bracing being installed above a suspended ceiling. The bracing can be made from Knauf 'C' Stud or Knauf 'U' Channel and should be attached so that it forms a 45° brace between stud and soffit. These should be installed on every other stud and on alternate sides of the wall.



For schools

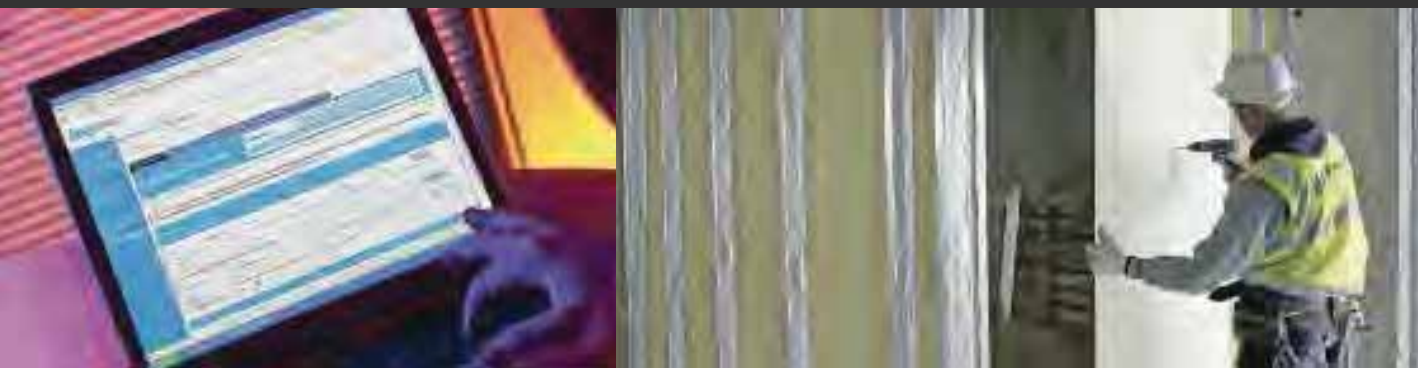
Deflection heads to exposed soffits

Where suspended ceilings, either drywall or lay-in grid, are absent from the scheme design of a school, consider the upgrading of the deflection head detail to reduce the level of acoustic loss local to the head of the partition.

Music rooms/lecture theatres

Music rooms and lecture theatres require specific consideration from the project acoustician, and can differ in requirement depending on the type/nature of the project, and the client requirements. Both can require very specific detailing for sound reduction and sound absorption control. These requirements need to be considered early in the design stage. Knauf Drywall offer an extensive range of solutions for sound absorption, including Apertura ceiling and wall linings as well as high acoustic performance Knauf Isolator partitions. Please contact Knauf Technical Services for further details.





Partition Specifier

Save hours with our online tool that chooses the best partitions for your needs and then writes a full NBS format specification for you.



Use our Partition Specifier to:

- Meet performance criteria
- Produce instant NBS format specification documents for your project
- Create bespoke Technical Manuals for your project in seconds
- Generate a complete Procurement Schedule for your project
- Specify multiple partitions for your complete project
- Save and amend them at any time
- Use our Specifier Wizard search to find matching standard or specialist partitions

Registration is free, simple and it only takes a minute. You can even try it out before you register to assure yourself that it will make design and specification a smoother faster process for you.

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When to Upgrade

Upgrading to a higher specification Knauf Drywall product or system can bring major benefits to the client, and often reduces the project costs in both the long and short term.

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> To reduce ongoing fuel costs

While the energy markets remain volatile it is clear that the overall trend is for the cost of energy to increase into the future. Installing products that reduce ongoing running costs is simply common sense, providing those products allow for a reasonable pay-back time.



Knauf Brio dry floor screed is almost thermally transparent, making it the most efficient system to install over underfloor heating systems.



Pipe temperatures can be reduced by as much as 6°C for the same room temperature, drastically reducing energy consumption.



Knauf Insulating Laminates combine the wall lining function of plasterboard with high efficiency insulation material, reducing heating bills and providing an instant upgrade in refurbishments.

> To reduce maintenance costs

In tough environments, such as schools and high traffic public areas, upgrading to one of our high robustness products will bring a major benefit in reduced maintenance costs; particularly important in long-term PFI/PPP contracts which run for 25 years or more.



Knauf Toughpanel and Knauf Impact Panel are ideal upgrades for high traffic public areas and other environments that are subject to knocks and bangs.

Knauf Aquapanel cement board is a dedicated tile backer that will not degrade no matter how wet it gets, protecting tiles and ensuring a damaged tile or grout only results in a quick localised repair.

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> To reduce environmental impact

Reducing the environmental cost of construction is now a key concern for a range of clients including local government and more legislation is being introduced to further encourage best practice. Our plasterboard and metal systems are A-Rated in the Green Guide and we also offer a range of products that are even better for the environment.



Knauf Futurepanel is a totally carbon neutral plasterboard with recycled content, with a mass of 10kg/m² to suit housing regulations.



Knauf Safeboard x-ray plasterboard removes the need for environmentally impactful lead in x-ray departments.

Knauf High Performance Plasterboards can often reduce the number of layers required to reach a given system performance, reducing the amount of construction material required, and waste created, for a project.



Knauf Brio dry screed boards and Knauf Insulating Laminates reduce the ongoing energy usage of a building by improving its efficiency, reducing the carbon footprint of the building into the future.



> To create a better environment for the occupants

The purpose of a building is to provide an environment for its occupants. In the majority of cases the designers will want to provide the best environment possible within budget. Simple upgrades at the design stage can make a huge difference to the look, feel and effectiveness of the interiors without a huge difference to costs.

Knauf Projection and Readymix Plasters are quickly spray applied to provide the best finish in the business. Exceptional coverage and speed comparable to dry installation keeps the installed cost low whilst giving the client a beautiful, flat durable surface.

Knauf Apertura Cleaneo aesthetic perforated and patterned plasterboards can bring a room to life, allowing complete design freedom whilst effectively controlling reverberation within the room. With Apertura a designer can simply turn a plain room design into something really special.

Knauf Soundshield forms the basis of our highest performing sound reducing partitions and ceilings and is a very cost effective upgrade to standard Wallboard. Greater privacy for occupants reduces stress for occupants.

> To reduce overall project costs

Many of our innovative products are significantly faster to install and use fewer materials than traditional methods, more than offsetting the unit price of the product itself and resulting in a lower installed cost, as well as a higher performing system.

Knauf Brio dry screed boards and Knauf Readymix Spray Plasters are much faster to install than traditional solutions and require a less skilled labour force. Less time is spent on-site, the project is completed faster and the overall package cost can be reduced.

Knauf High Performance Plasterboards are as easy to install as standard Knauf Wallboard and their increased performance can often reduce the number layers of board required on each system. This reduces labour, time on-site and increases lettable area, all more than offsetting the small increase in product cost.

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Health and Safety



Knauf Drywall take great care to ensure that our customers understand how to use our products in a safe, efficient and environmentally acceptable manner.

Our Project Specification team make safety a paramount consideration when recommending materials for use. In addition to providing full product safety information, our teams of technical instructors are available to work with customers on site, to ensure a clear understanding of our product applications.

Health and Safety Policy

Knauf Drywall is committed to ensuring the health, safety and welfare of its employees and other persons who may be affected by our activities. We will strive at all times to meet our statutory duties. To this end, the company accepts an obligation as far as is reasonably achievable to:

- ✓ Provide a safe place of work, with safe plant, equipment and appliances, incorporating safe methods/systems of working.
- ✓ Provide employees with appropriate and sufficient information, instruction, training and supervision as is necessary to enable the safe performance of work activities.
- ✓ Provide protective clothing and equipment in instances in which hazards cannot be realistically eliminated completely.
- ✓ Provide adequate facilities and arrangements to enable employees and their representatives to raise issues of health and safety for consultation.
- ✓ Provide appropriate first aid and emergency facilities.
- ✓ Provide details of the organisation and arrangements for Health and Safety in separate documents.
- ✓ Ensure that this policy is subject to annual review to monitor the effectiveness of Health and Safety arrangements and, if necessary, revised in the light of legislative or organisational changes.
- ✓ Investigate accidents or dangerous occurrences which may take place, to identify the probable causes and learn from them to avoid possible repetition.

Health, safety and environmental guidance

Knauf Drywall is committed to supplying safe products and systems to our customers and accepts its responsibilities under Section 6 of the Health and Safety at Work Act 1974. There is a wide range of legislation and codes of practice, which regulate the way our products are used.

The Health and Safety Executive (HSE) (www.hse.gov.uk) and The Environment Agency (EA) (www.environment-agency.gov.uk) have excellent websites, which offer extensive guidance from manual handling to waste recycling.

Particular pieces of legislation to which customers should refer include:

- The Health and Safety at Work Act 1974
- The Construction (Design and Management) Regulations 2007
- The Management of Health and Safety at Work Regulations 1999
- Control of Substances Hazardous to Health Regulations 2002
- Work at Height Regulations 2005



Risk assessments

Customers must ensure that they properly assess the hazards and introduce suitable controls before carrying out any work. A step by step guide to risk assessment can be found on the HSE website.

When carrying out a risk assessment for any construction or related activity, customers should be mindful of:

- Manual handling – move boards and bags with care to avoid strain, using sufficient labour or mechanical aids where necessary.
- Personal protective equipment – overalls, gloves, head, eye and toe protection should be available and used where necessary.
- Power tools for cutting, grinding and sanding etc., – should only be used by trained and competent people.
- Safe access – boards are not load bearing and must not be used as platforms
- Ventilation – should be adequate when mixing materials. Work materials to keep sanding and dust generation to a minimum.

Product safety information

Material Safety Data Sheets, which include all information required by the Control of Substances Hazardous to Health Regulations 2002 and the EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) chemicals regulations are available from our website: www.knaufdrywall.co.uk/themanual

Knauf plasterboards are not classified as hazardous under CHIP2 Regulations 1994.

Storage

Knauf Plasterboards are supplied on timber bearers. Packs should be lifted with a fork lift truck and stacked not more than one-high on a flat surface to maintain stability. They should be stored in a clean, dry environment.

Workability

Knauf Drywall boards and metal components are not only easy to handle, they are extremely workable and can be easily cut and sawn with ordinary hand tools. The light weight of Knauf Drywall products, combined with their easy workability, ensures significant productivity gains.

Accuracy of guidance

Knauf Drywall has made every effort to ensure that information provided in this manual and other product literature, is relevant at the time of printing. Users are advised to ensure that this guidance is up to date when planning to use our products and systems.

Generate specifications at:

www.knaufdrywall.co.uk

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Our Products

The Knauf Drywall name is synonymous with product quality and innovation.

Our range of lining boards, metal sections, accessories and finishes are designed, tested and warranted to work together perfectly, helping you build a better space.



216 Products

[Download Spec Sheet](#)

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High Performance Boards

Insulating Laminates

Drywall Accessories

Jointing Products
Accessories
Fixings

Plasters

Plasters
Readymix Plasters

Metal Sections

C-Stud, I-Stud and U-Channels
Ceiling and Wall Lining
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Plasterboards

218 Plasterboards



- High performance plasterboards
- Manufactured to EN 520, with ISO 9001 and ISO 14001 assurance
- High recycled content across the range
- Light and easy to use
- Simple and fast to install
- Products designed to work seamlessly with Knauf finishes, metal components and accessories to provide warranted system performance



The right board for every application.

Manufactured from the highest quality gypsum, our plasterboards are strong, light and easy to use.

Special additives are used to provide an unrivalled range of boards: X-Ray, carbon neutral, acoustic, impact, fire-resisting, moisture-resisting and many combinations of these properties. Simply and rapidly installed and finished, our range covers everything to perfectly complete your partition or lining to suit its environment.

Excellent performance

With our comprehensive range of plasterboards, the designer can achieve anything from simple space division to separating walls, to lift shaft protection. Variables of strength, sound, fire resistance and moisture resistance extend the design possibilities and ensure that all legislative requirements can be met using the minimum number of components, cutting labour time and material cost.

Fire performance

Gypsum is non-combustible. So, by definition, any of the Knauf plasterboard range is acknowledged to contribute to the fire resistance of the structure in which it is used.

Knauf plasterboards are designated as Class O materials under the Building Regulations 2006, Approved Document B and are tested to EN520. Please refer to our system performance pages 332-338 for specific system fire ratings.

Recycled content

Knauf Plasterboards are manufactured in accordance with ISO 14001 and use 100% recycled paper liners. We aim to use the most sustainable gypsum sources possible and our boards are 100% recyclable.

Acoustic performance

All Knauf plasterboards offer excellent sound reduction qualities, whether used in drywall systems for ceilings, wall linings, partitions or separating walls.

Plasterboard, as a single element, is not normally given a sound reduction figure. Please refer to our system performance on pages 332-338 for more information.

Vapour performance

Vapour check plasterboards have been tested in accordance with BS EN ISO 12572: 2001.

Easy to store, handle and work with

Knauf plasterboards use high quality gypsum and paper to ensure they are strong and easy to handle despite their light weight.

Many of our plasterboards are available in 900mm widths to further ease manual handling.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

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Standard Boards

Knauf Drywall offer a full range of plasterboards to meet all drylining requirements, including high performance boards for greater fire, moisture, vapour, sound and impact results. Use in conjunction with Knauf Drywall jointing compounds, plasters fixings, plasterboard adhesive and metal systems.

Knauf Wallboard

Knauf Wallboard is plasterboard with an ivory paper face ideally suited to receive a plaster finish or for direct decoration.

Square Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
9.5	900	1800	312 02 418	100	162.0	1.01
	1200	2400	312 02 224	92	265.0	1.65
12.5	900	1800	313 02 518	80	129.6	1.06
		2400	313 02 524	80	172.8	1.41
	1200	2400	313 02 224	72	207.4	1.69
		2700	313 02 267	60	194.4	1.58
3000		313 02 230	60	216.0	1.76	
15.0	900	2400	314 02 424	60	129.6	1.33
	1200	2400	314 02 224	60	172.8	1.77

Tapered Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
9.5	1200	2400	312 01 224	92	265.0	1.65
12.5	900	1800	313 01 518	80	129.6	1.06
		2400	313 01 524	80	172.8	1.41
	1200	2400	313 01 224	72	207.4	1.69
		2500	313 01 225	72	216.0	1.76
2700		313 01 267	60	194.4	1.58	
15.0	900	1800	314 01 418	60	97.2	1.00
		2400	314 01 424	60	129.6	1.33
	1200	2400	314 01 224	60	172.8	1.77
		2500	314 01 250	48	144.0	1.47
		2700	314 01 327	48	155.5	1.60
		3000	314 01 300	48	172.8	1.77

Compliance: EN 520, Type A.

Board weight:

9.5mm = 6.2kg/m²

12.5mm = 8.3kg/m²

15mm = 10.2kg/m²

Standard Boards

Knauf Baseboard

Knauf Baseboard is a handy sized plasterboard suitable for use as a base for plastering.

Square Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
9.5	900	1220	302 02 454	96	105.4	0.64

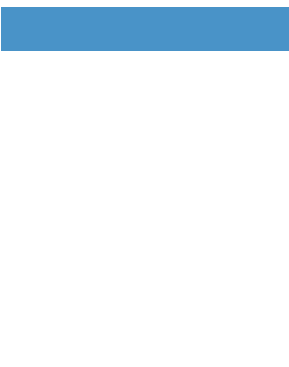
Compliance: EN 520, Type P.

Board weight:
9.5mm = 6.1kg/m²

Knauf Plank

Knauf Plank is a 19mm thick plasterboard for use as a key component in many partition and floor systems, where it acts as an acoustic mass layer.

Square Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
19.0	600	2400	318 02 240	88	126.72	1.77

Compliance: EN 520, Type A.

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
19.0	600	2400	318 01 240	88	126.72	1.77

Compliance: EN 520, Type A.

Board weight:
19mm = 14kg/m²

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Standard Boards

Knauf Vapourshield™

Knauf Vapourshield has a metallised polyester foil laminated on the grey paper face, creating an effective vapour barrier.

Square Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1800	493 22 418	80	129.6	1.06
		1200	493 22 223□	72	207.4	1.69

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	493 12 223	□72	207.4	1.69
		2700	493 12 225	60	194.4	1.61
		3000	493 12 227	□60	216.0	1.76
15.0	1200	2400	494 12 223	□60	172.8	1.77

Compliance: EN 14190 and the wallboard itself complies fully to EN 520 and is categorised as Type A. Vapour Check Performance: 12.5mm Vapourshield 78.5 MNs/g.

Board weight:
12.5mm = 8.3kg/m² 15mm = 10.2kg/m²

Knauf Futurepanel™

Knauf Futurepanel is a carbon neutral plasterboard and contains a high proportion of recycled and reclaimed gypsum. It has an ivory face ideally suited to receive a plaster finish or for direct decoration and has green paper on the back of the board making it easily identifiable. It has a mass of 10kg/m² making it suitable for use in housing for Part E.

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	393 01 224	60	172.8	1.73
		2500	393 01 250	60	180.0	1.80
		2700	393 01 270	60	194.4	1.94

Compliance: EN 520, Type A.

Board weight:
12.5mm = 10kg/m²

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High Performance Boards

Knauf High Performance Boards offer the convenience of plasterboard with significantly higher performance in key areas, from moisture performance in kitchens and bathrooms to fire and impact ratings in commercial projects. Knauf Drywall High Performance Boards are the solution for elements of fire, moisture, vapour, sound and impact performance.

Knauf Soundshield™

Knauf Soundshield is designed for use in areas where sound reduction is of particular importance. Its high mass and tuned core help absorb sound energy, giving enhanced acoustic performance to Knauf Drywall systems.

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	313 11 240	56	161.2	1.95
		2700	313 11 327	48	155.5	1.88
		3000	313 11 312	42	151.2	1.82
15.0	900	2400	314 11 424	60	129.6	1.79
	1200	2400	314 11 240	48	138.2	1.92
		2700	314 11 227	42	136.1	1.87
		3000	314 11 233	36	129.6	1.80

Compliance: EN 520, Types A and D.


Board weight:

12.5mm = 11.5kg/m² 15mm = 12.8kg/m²

Knauf Impact Panel™

Knauf Impact Panel is an impact resistant plasterboard offering toughness, durability and excellent load carrying capacity.

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	313 51 292	60	172.8	1.86
		3000	313 51 300	48	172.8	1.84
15.0	1200	3000	314 51 300	42	151.2	1.95

Compliance: EN 520, Types A, D, F, I and R.

Board weight:

12.5mm = 10.8kg/m² 15mm = 12.8kg/m²

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High Performance Boards

Knauf Moistureshield™

Knauf Moistureshield is a high performance plasterboard for use in internal areas of high humidity and temporary external exposure.

Square Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	363 02 224	60	172.8	1.74



Tapered Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	363 01 224	60	172.8	1.74
		2700	363 01 267	60	194.4	1.95
		3000	363 01 315	54	194.4	1.95
15.0*	1200	2400	384 11 224	48	138.2	1.92
		3000	384 11 230	36	129.6	1.80



Compliance: EN 520, Types A, H1 and H2.
15mm Moistureshield supplied as Sound Moistureshield

Board weight:
12.5mm = 10kg/m² 15mm = 12.8kg/m²

Knauf Sound Moistureshield™

Knauf Sound Moistureshield offers both enhanced acoustic performance and moisture resistant qualities.

Tapered Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	2400	383 11 224	56	161.3	1.94
		3000	383 11 315	40	144.0	1.73
15.0	1200	2400	384 11 224	48	138.2	1.92
		3000	384 11 230	36	129.6	1.80



Compliance: EN 520, Types A, D and H1.

Board weight:
12.5mm = 11.5kg/m² 15mm = 12.8kg/m²

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High Performance Boards

Knauf Fireshield™

Knauf Fireshield offers superior fire protection.

Square Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1800	323 02 518	80	129.6	1.30
	1200	2400	323 02 224	60	172.8	1.73

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1800	323 01 518	80	129.6	1.30
	1200	2400	323 01 224	60	172.8	1.73
		2700	323 01 267	60	194.4	1.94
15.0	1200	2400	324 01 324	48	138.2	1.66
		2700	324 01 327	48	155.5	1.87
		3000	324 01 223	42	151.2	1.82

Compliance: EN 520, Types A and F.

Board weight:

12.5mm = 10kg/m² 15mm = 12kg/m²

Knauf Fire Moistureshield™

Knauf Fire Moistureshield offers both superior fire protection and moisture resistant qualities.

Tapered Edge



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	1200	3000	373 01 300	48	172.8	1.73
15.0	1200	3000	374 01 330	36	129.6	1.56

Compliance: EN 520, Types A, F and H1.

Board weight:

12.5mm = 10kg/m² 15mm = 12kg/m²

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High Performance Boards

Knauf Core Board™

Knauf Core Board is designed to be used in conjunction with the Knauf Shaftwall systems. It has both fire and moisture resistant qualities.


Square Edge

	Dimensions (mm)			Article No	Pallet Details		
	Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
	19.0	600	3000	356 30 630	32	57.6	0.94
Compliance: EN 520, Types A, D, F, H1, I and R.							
Board weight: 19mm = 16.3kg/m ²							

Knauf Safeboard™

Knauf Safeboard is an X-ray resistant plasterboard with barium sulphate in its core. It effectively and significantly reduces the amount of lead needed within X-ray shielding partitions, in many cases removing the need for lead altogether.

Round Edge

	Dimensions (mm)			Article No	Pallet Details		
	Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
	12.5	625	2400	001 54 735	Price on request		
For details on pricing and ordering Knauf Safeboard, please contact Knauf Drywall Customer Services.							

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Insulating Laminates



228 Insulating Laminates

- **Excellent thermal properties**
- **Combines high quality Knauf plasterboard with high efficiency solid insulation**
- **Maximise available room space**
- **Direct bonding means installation is quick and simple**
- **Ideal for new-build, refurbishments and upgrading existing stock**
- **Perfect for room-in-roof conversions**
- **Can be used in single or double leaf construction**
- **Help meet Building Regulation and Code for Sustainable Homes requirements**

Upgrade external walls' thermal performance instantly.

Knauf Insulating Laminates are the perfect solution for raising the thermal performance of a masonry wall quickly and simply. Our use of the most efficient materials gives the slimmest possible systems, keeping costs down and maximising room space.

They are also the perfect solution for room-in-roof, new build or conversions offering easy installation and rapid pay back periods.

Complying with Part L

Meeting Part L is a requirement for all new dwelling and non-dwelling constructions and a great many refurbishment projects. Our insulating laminates reduce energy expenditure and help meet the Building Regulation requirements, whilst maximising internal usable space.

Additional performance requirements, such as vapour resistance can be easily achieved.

The Code for Sustainable Homes

The Code for Sustainable Homes is a standard for the key elements of design and construction which affect the sustainability of a new home.

It will become the single national standard for sustainable homes, used by home designers and builders as a guide to development, and by home buyers to assist in their choice of home.

It is the basis and key driver for future developments of the Building Regulations and progressively introduces a star rating system from 2006-16 with incrementally tighter criteria required to reach each level of the Code's requirements. For more information, see pages 302-323.

Excellent performance

Thermal performance

The Knauf range of Insulating Laminates incorporates a variety of different types and thicknesses of insulation to ensure the required U-Value is reached for the minimum impact on room space.

Our most effective Insulating Laminate provides an additional thermal resistance of $R=3.00 \text{ m}^2\text{K}/\text{W}$ on its own.

Fire performance

Gypsum is non-combustible. So, by definition, any of the Knauf plasterboard range is acknowledged to contribute to the fire resistance of the structure in which it is used.

Vapour performance

Knauf Vapourcheck Laminates have been tested to BS EN ISO 12572: 2001.

Easy to store, handle and work with

Knauf Insulating Laminates use high quality, lightweight plasterboard and insulation to ensure they are strong and easy to cut and handle.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on pages 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

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Insulating Laminates

Knauf Insulating Laminates provide an efficient way to achieve instant energy savings, whilst maximising room space. All Knauf Insulating Laminates offer simple solutions to meet the requirements of the Building Regulations for walls as well as room in roof situations for new build and refurbishment projects. Knauf Insulating Laminates reduce CO₂ emissions as well as reduce energy expenditure offering short payback periods. Knauf Insulating Laminates are supplied with a tapered edge for direct decoration or plaster finish and can be installed using either Knauf Plasterboard Adhesive or mechanical fixings.

Knauf Thermal Laminate

Knauf Thermal Laminate offers good levels of thermal insulation by combining 9.5mm Knauf Wallboard with high quality polystyrene which is both CFC and HCFC free. This product is ideal for use in both refurbishment and new build.

Tapered Edge



Thermal conductivity:
Wallboard k = 0.19W/mK,
EPS k = 0.038W/mK

Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
22	1200	2400	471 18 024	46	132.5	0.87
30	1200	2400	471 14 224	32	92.2	0.64
40	1200	2400	471 14 624	25	72.0	0.50

Thickness (mm)	Thermal Resistance (m ² K/W)	Vapour Performance MNs/g	Board Weight Kg/m ²
22	0.37	N/A	6.3
30	0.58	N/A	6.4
40	0.85	N/A	6.5

Knauf Thermal Laminate Vapour Check

Knauf Thermal Laminate Vapour Check offers good levels of thermal insulation by combining 9.5mm Knauf Vapourshield plasterboard with high quality polystyrene which is both CFC and HCFC free. This product is ideal for use in both refurbishment and new build. An effective vapour check layer is incorporated within the board.

Square Edge



Thermal conductivity:
Wallboard k = 0.19W/mK,
EPS k = 0.038W/mK

Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
22	1200	2400	471 38 102	46	132.5	0.87
30	1200	2400	470 64 324	32	92.2	0.64
40	1200	2400	470 64 524	25	72.0	0.50

Thickness (mm)	Thermal Resistance (m ² K/W)	Vapour Performance MNs/g	Board Weight Kg/m ²
22	0.37	78	6.3
30	0.58	78	6.4
40	0.85	78	6.5

Insulating Laminates

Knauf Thermal Laminate Plus

CFC and HCFC free extruded polystyrene bonded to 9.5mm Knauf Wallboard offers an enhanced thermal performance at a reduced thickness with the additional advantage of providing a good vapour resistance. Ideal for use in refurbishment, new build and warm roof situations where an enhanced level of thermal insulation is required.

Tapered Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
27	1200	2400	471 28 224	36	103.7	0.71
35	1200	2400	471 24 424	28	80.6	0.58
40	1200	2400	471 20 524	25	72.0	0.53
45	1200	2400	471 24 724	22	63.4	0.47
55	1200	2400	470 30 724	16	46.1	0.36



Thermal conductivity:
Wallboard k = 0.19W/mK,
Extruded Polystyrene k = 0.030W/mK

Thickness (mm)	Thermal Resistance (m ² K/W)	Vapour Performance MNs/g	Board Weight Kg/m ²
27	0.63	9.0	6.8
35	0.90	12.8	7.1
40	1.05	15.3	7.3
45	1.20	17.8	7.4
55	1.55	22.5	7.6

Knauf PIR Laminate

PIR insulation is CFC and HCFC free, when bonded to 9.5mm Knauf Wallboard it offers the highest thermal performance, reducing the thickness required. This cost effective solution, ideal for use in refurbishment, new build and room in roof situations where an enhanced level of thermal insulation is required.

Tapered Edge

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
35	1200	2400	471 35 240	26	74.9	0.52
50	1200	2400	471 50 240	20	63.4	0.47
65	1200	2400	471 65 240	17	49.0	0.38
75	1200	2400	471 75 240	14	40.3	0.33



Thermal conductivity:
Wallboard k = 0.19W/mK
PIR = 0.022 W/mK

Thickness (mm)	Thermal Resistance (m ² K/W)	Vapour Performance MNs/g	Board Weight Kg/m ²
35	1.19	150	6.9
50	1.87	150	7.4
65	2.55	150	7.8
75	3.00	150	8.1

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Drywall Accessories

232 Drywall Accessories



- Bagged and Readymix easy-sand jointing makes completing a job easy
- Our Putty Pads can maintain fire ratings up to 2 hours and sound reductions up to 60dB (Rw)
- Our rapid-set Parge Coat maintains masonry acoustic performance and upgrades airtightness
- Products ready-to-go from the tub
- Performance tested adhesives and fixings designed to work perfectly with Knauf metal components
- Fixings that bite first time saving labour on-site



Integrated and tested systems that work and perform together.

Where system performance is concerned, the details matter.

High quality jointing products ensure a seamless finish and minimise cracking. Sealants and mastics maintain fire and acoustic performance. Fixings ultimately hold the entire construction together – under impact, under fire attack.

We provide everything needed for framing, fixing, lining, jointing, taping, plastering and finishing – all tested together, and designed to make the project simpler and better.

Knauf Accessories are high quality items, purpose-designed to work seamlessly with our other products to ensure the best results in terms of design, performance and installation.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual and are also available from Knauf Drywall Technical Services on 01795 416259.

Warranted systems

All Knauf Systems in this brochure are covered by our comprehensive Knauf Drywall Performance Warranty, giving you the assurance that the systems you specify and install will perform to specification.

Our systems have been developed as complete drywall constructions to ensure consistent and effective performance on-site.

Knauf products are tested as component parts of these systems to recognised standards: for correct warranted performance only genuine Knauf components should be used. See pages 328-329 for more information on the Knauf System Warranty.

Taping and jointing

A comprehensive guide to taping and jointing correctly can be found on pages 196-199.

Fixings

Knauf Drywall offers a complete range of drywall fixings – all specifically designed to work perfectly with our boards and systems.

These fixings bite first time, get the job done quicker, last longer and are an integral part of the performance testing of our systems. Our collated screws are the fastest way to complete a drywall partition or ceiling.

Ancillary components

Everything required for sealing, bonding, priming and adhering, as well as a range of metal accessories providing movement control, robust edging, extra rigidity and extra support or fixing capacity.

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Jointing Products

Our range of Jointing Products have been developed to give you the best possible results when bedding tapes and beads and finishing joints. Whether by hand or machine application, Knauf Jointing Products give you the smoothest finish with the minimum effort.

Knauf Joint Filler

A fast setting gypsum compound for bedding joints by hand application.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
20	715 02 001	42	0.84

Shelf life: 4 months. Compliance: EN 13963, Type 1B. Estimating Guide: To bed and fill to shoulders: 110m² per bag. Available in part pallet quantities.

Knauf Multifill

A fast setting multi-purpose gypsum based compound for bedding tapes and beads and for finishing. For hand application.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
10	753 09 001	90	0.90

Shelf life: 4 months. Compliance: EN 13963, Type 3B. Estimating Guide: To bed, fill and finish: 45m² per bag. Available in part pallet quantities.

Knauf Joint Cement Easy Sand

A lightweight air-drying compound for bedding tapes and finishing joints by hand or machine application. Knauf Joint Cement Easy Sand produces an exceptional finish with minimal sanding effort.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
20	739 08 002	42	0.84

Shelf life: 4 months. Compliance: EN 13963, Type 3A. Estimating Guide: For two coats of finish: 80m² per bag. Available in part pallet quantities.

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Generate specifications at:
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Jointing Products

Knauf Joint Cement Lite Easy Sand

A pre-mixed lightweight air-drying compound for bedding tapes and finishing joints with superior sanding characteristics. For hand or machine application.



Tub Size	Article No	Pallet	
Litres		Tubs	Tonnes (Approx.)
17	725 08 017	33	0.62

Shelf life: 9 months. Compliance: EN 13963, Type 2A. Estimating Guide: 40m² per tub.

Knauf Safeboard™ Joint Filler

A joint filler for use with Knauf Safeboard X-ray shielding plasterboard.



Tub Size	Article No	Pallet Details
Kg		Tubs
5	001 33 092	–

For details on ordering Knauf Safeboard Joint Filler, please contact Knauf Drywall Customer Services.

Knauf Joint Tape

Perforated white tape for reinforcing joints by hand or machine application. Knauf Joint Tape is recommended on ceilings and to create the strongest joints. A centerline facilitates the jointing of internal corners.



Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls	Kg (Approx.)
150	51	951 03 000	10	12

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Jointing Products / Accessories

Knauf Fibre Tape

Multi-purpose self-adhesive tape for reinforcing joints and patch repairs to plasterboard.



Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls	Kg (Approx.)
153	50	951 59 200	12	7

Knauf Corner Flex Tape

Fibre composite tape for providing protection to external corners of drylined partitions.



Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls	Kg (Approx.)
30	62	950 52 500	12	16

Knauf Drywall Angle Bead

Galvanised steel corner protection for external corners of drywall partitions.



Dimensions (mm)		Article No	Pack Details	
Size	Length		Lengths per	Pack Kg (Approx.)
25x25	2400	950 31 240	50	20
25x25	3000	950 31 300	50	24

[Product Data](#)

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Accessories

Knauf Drywall Edge Bead

Galvanised steel edge trim for drywall applications used to protect exposed plasterboard edges whilst forming a defined edge to the plasterboard.



Dimensions (mm)		Article No	Pack Details	
Size	Length		Lengths per Pack	Kg (Approx.)
12.5	3000	922 15 300	50	25
15.0	3000	922 16 300	50	27

Knauf Drywall Movement Control Joint

Aluminium section used to bridge gaps left for expansion and contraction in drywall partitions. Please note it is not suitable as a central joint for internal plastering.



Dimensions (mm)		Article No	Pack Details	
Size	Length		Lengths per Pack	Kg (Approx.)
60	3048	950 39 304	10	4

Knauf Metal Furring Channel

Galvanised steel section installed using Knauf Plasterboard Adhesive as a metal wall lining furring.



Dimensions (mm)				Article No	Pack Details	
Gauge	Length	Width	Height		Lengths per Pack	Kg (Approx.)
0.55	2400	50	9.5	907 80 240	10	25

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Accessories

Knauf Sealant

An all purpose water-based acrylic gun applied acoustic sealant for use with Knauf Drywall systems.

Cartridge Size	Article No	Pack Details	
Litres		Cartridges per Pack	
0.90	920 03 001	□	6



Shelf life: 12 months.
Estimating Guide: For a 10mm bead, 30-40 linear metres per cartridge.

Knauf Sealant Gun

Gun applicator with up to 1 litre capacity for Knauf Sealant.

Cartridge Size	Article No
Litres	
0.90 - 1.0	992 02 000



Knauf Intumescent and Acoustic Mastic

Knauf Intumescent and Acoustic Mastic is a rapid curing, water based acrylic expanding fire resistant mastic. It can be used for sealing individual or grouped services or for linear joint sealing.

Cartridge Size	Article No	Pack Details	
ml		Cartridges per Pack	Kg (Approx.)
310	732 03 000	12	6.8



Note: Check compatibility with pipe manufacturer prior to use. Shelf life: 18 months.
Compliance: Tested to BS EN 1366-3:2004 in accordance with BS EN 1363-1 and has been assessed fully in accordance with BS 476: Part 20.

Knauf Sealant Foil

An all purpose water-based acrylic, gun applied acoustic sealant for use with Knauf Drywall systems.

Foil size	Article No	Pack Details	
ml		Foil's per Pack	
600	920 03 002	□	12



Shelf life: 12 months.
Estimating Guide: For a 10mm bead, 20-26 linear metres per cartridge.

Accessories

Knauf Intumescent and Acoustic Mastic Foil

Knauf Intumescent and Acoustic Mastic is a rapid curing water based acrylic, expanding fire resistant mastic. It can be used for sealing individual or grouped services for linear joint sealing.



Foil size	Article No	Pack Details
ml		Foils per Pack
600	732 03 002	12

Knauf Foil Applicator

Gun Applicator for applying Knauf Sealant, Knauf Intumescent and Mastic Foils



Foil size	Article No
ml	
600	992 02 002

Note: Check compatibility with pipe manufacturer prior to use. Shelf life: 18 months. Compliance: Tested to BS EN 1366-3: 2004 in accordance with BS EN 1363-1 and has been assess fully in accordance with BS 476: Part 20

Knauf Putty Pads

Sheets of intumescent, mouldable putty designed for use inside and outside plastic electrical sockets. Will maintain a fire rating of up to 2 hours and an acoustic rating of up to 60dB(Rw).



Dimensions (mm)		Article No	Pack Details	
Size	Thickness		Pads per Box	Kg (Approx.)
180 x130	3.5	736 25 300	20	2.7
230 x 230	3.5	736 25 301	20	5.9

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Accessories

Knauf Plasterboard Adhesive (Bonding Compound)

A multi-purpose gypsum-based adhesive for use with Knauf Metal Furring Channel and for direct bonding of Knauf Plasterboards and Insulating Laminates. Should not be used for moisture resistant or vapourcheck boards. For extremes in background suction, refer to Knauf High Suction Plaster Primer and Knauf Betokontakt.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	705 02 000	60	1.50

Shelf life: 4 months. Compliance: EN 14496. Estimating Guide: 4.6m² per bag (Dot and Dab).

Knauf Gypsum Parge Coat

A gypsum-based compound specifically designed to seal masonry walls prior to direct bonding with Knauf Plasterboards offering improved acoustic and airtightness performance. To be applied in a continuous layer to the entire wall surface, ensuring all gaps are filled, especially at junctions and corners. Sets in 1½ to 2hrs. Approved for use with Robust Details E-WM-3 and E-WM-5.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	705 05 000	60	1.50

Shelf life: 4 months. Compliance: EN 13279-1/2. Acoustic plaster C3.
Estimating Guide: Approximately 4.25m² per bag, at a minimum thickness of 6mm.

Knauf Wallboard Primer

Knauf Wallboard Primer is a surface treatment that equalizes suction across joints prior to decoration. Applied with a brush or roller.



Tub Size	Article No	Pallet Details	
		Tubs	Tonnes (Approx.)
Litres			
12	727 05 000	36	0.54

Shelf life: 9 months. Estimating Guide: Approximately 133m² per tub (one coat). Available in part pallet quantities.

Accessories

Knauf Cove

Decorative plaster moulding with a paper face for direct application of paint finishes.



Dimensions (mm)		Article No	Pallet Details		
Width	Length		Pks per Pallet	Lengths per Pk	Tonnes (Approx.)
127	3000	800 73 102	40	5	0.56
127	3600	805 03 601	50	5	0.84
90	3000	802 93 002	39	7	1.06

Orders must be placed for whole packs.

Knauf Cove Adhesive

Gypsum-based adhesive to affix Knauf Cove. One bag is sufficient to fix 18-24 linear metres of cove.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
5	728 04 001	180	0.90

Shelf life: 4 months. Compliance: EN 14496.

Knauf Cove Mitres

Reusable plastic tool to achieve accurate mitred corners.



Width	Article No	Items per Pack	
mm			
90	802 00 090	20	
127	802 00 127	20	

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Fixings

Knauf Drywall Screws - Self Tapping

Black phosphated self drilling and self tapping screws with countersunk Phillips heads for fixing plasterboard to metal and timber framing. Ideal for use with light gauge metal up to 0.7mm thick. Each box includes one screwdriver tip.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
25	3.5	933 04 250	1000	1.5
32	3.5	933 04 320	1000	1.8
38	3.5	933 04 380	1000	2.1
42	3.5	933 04 450	1000	2.5
50	3.9	933 04 500	500	1.8
60	4.2	933 04 600	500	2.0
75	4.2	933 04 750	500	3.0

Estimating Guide: 10 screws per layer per m² of partition (based on 600mm centres).
Tested to DIN 18182, 50021 and 50942.

Knauf Collated Drywall Screws – Self Tapping

Strips of 50 collated black phosphated, self tapping screws with countersunk Phillips heads for fixing plasterboards to metal and timber framing. For use with light gauge metal up to 0.7mm thick.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Screws per Pack	Kg (Approx.)
25	3.5	933 04 025	1000	1.9
35	3.5	933 04 032	1000	2.0
45	3.5	933 04 042	1000	2.7

Estimating Guide: 10 screws per layer per m² of partition (based on 600mm centres).

Knauf Drywall Screws – Jackpoint Self Drilling

Black phosphated screws with drill bit tips for heavier gauge metal profiles from 0.7mm to 1.2mm thick. Each box includes one screwdriver tip.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
25	3.5	933 07 250	1000	1.6
35	3.5	933 07 350	1000	2.1
42	3.5	933 07 410	1000	2.4
55	3.5	933 07 550	1000	3.7

Estimating Guide: 10 screws per layer per m² of partition (based on 600mm centres).
Tested to DIN 18182, 50021 and 50942.

Fixings

Knauf Drywall Wood Screws

Black phosphated self tapping coarse threaded screws with countersunk Phillips heads, designed specifically for fixing plasterboard to timber framing. Each box contains one screwdriver tip.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
38	3.5	933 05 380	□1000	2.1
42	3.5	933 05 420	□1000	2.5

Estimating Guide: 10 screws per layer per m² of partition (based on 600mm centres).

Knauf Wafer Head Screws – Self Tapping

Black phosphated self tapping screw with low profile head for metal to metal fixing. Suitable for use with light gauge metal up to 0.7mm thick.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
14	4.2	933 77 140	□1000	1.4

Knauf Wafer Head Screws – Jackpoint Self Drilling

Zinc coated with self drilling tips with low profile head for metal to metal fixing. Suitable for use with heavier gauge metal above 0.7mm thick.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
14	4.2	933 77 130	□1000	1.4

Knauf Nailable Plugs

A composite fixing for solid backgrounds incorporating a ring shank nail and a nylon plug. Suitable for secondary fixing of Knauf Insulating Laminates and for fixing Knauf 'U' Channel, timber studs and bearers to masonry.



Dimensions (mm)		Article No	Pack Details	
Length	Diameter		Items per Pack	Kg (Approx.)
35	6	934 37 350	100	0.50
80	8	934 38 800	50	0.70
100	8	934 38 000	50	0.90

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PROFESSIONAL
PROJECTION PLASTER

- Ultra-fast projection plaster ranges
- Ready mix plasters remove water from site
- Consistency of performance
- Solutions for smooth-faced concrete
- Superb white finish
- Simple and fast to install
- Dry construction timescales, plaster quality
- Improved health and safety on-site, no mess
- Europe's market leader



The highest quality finish, achieved in a third of the time of traditional hand applied plasters.

Our plasters are different – and better – by design. They are simple to apply, are brilliantly workable and produce an unequalled finish.

The world of plastering has moved on with Knauf leading the way in modern, machine applied quality finishes that transform the feel of a room. On-site timescales are significantly reduced and health and safety improved with no mess, fewer movements and, with our Readymix range, no water.



Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

Plastering

A comprehensive guide to using our range of projection and readymix plasters can be found on pages 200-205.

Over masonry backgrounds

For a superb finish use Knauf MP75. Knauf MP75 is a fast-drying projection plaster specially formulated for one-coat machine application on most interior walling surfaces.

Over plasterboard

Knauf MPFinish makes the spray application of finish plasters possible. Knauf purpose designed MPFinish in conjunction with leading spray machine manufacturers, who have brought out new machines to suit its characteristics. MPFinish mixes and sprays perfectly, without causing wear to the machine.

Readymix plasters

Knauf Readymix Plasters are a rapid, cost-effective alternative to traditional plaster for finishing walls and ceilings. They are purpose designed for machine application on fast-track building projects.

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Plasters

Our plasters have been specifically developed to take advantage of the latest spray and hand application techniques. The highest quality gypsum is used to combine a superb finish with incredible coverage.

Knauf MPFinish

Knauf MPFinish is a fast, spray-applied finishing plaster applied at a 2-3mm thickness. Suitable for use directly over plasterboard or where backing plasters or fully cured sand and cement undercoats are provided. MPFinish hugely increases productivity compared to hand applied finishing plasters and offers coverage of up to 18m² per 25kg bag. MPFinish is extremely tough and durable, drying in 2 - 2¹/₂ hours to a smooth white surface to receive a normal decorative finish. Knauf MPFinish is also suitable to be hand applied.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	788 02 008	□60	1.50

Shelf life: 4 months. Compliance: BS EN 13279-1: Gypsum Building Plaster, designation B1/20/2 and Gypsum Plaster for Plasterwork with Enhanced Surface Hardness, designation B70/20/2.
Estimating Guide: 16-18m² per 25kg bag.

Knauf MP75 Projection Plaster

Knauf MP75 is a machine applied one coat plaster that can be applied up to 20mm thickness in one application. Suitable for use directly onto blockwork, uneven in-situ concrete or thin joint blockwork, MP75 has a drying time of 3-4 hours and provides a tough and durable smooth white surface ready to receive a normal decorative finish. Being machine applied, Knauf MP75 offers excellent productivity and is up to 3 times faster than traditional plastering methods.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	140 03 300	□48	1.20

Shelf life: 3 months. Compliance: BS EN 13279-1 Lightweight Gypsum Building Plaster, designation B4/50/2.
Estimating Guide: 2.5m² per 25kg bag.

Plasters

Knauf Universal Plaster

Knauf Universal Plaster is a hand applied one coat plaster, and a tough, economical backing plaster. Can be applied up to 20mm thick in one application. Provides a white surface to receive direct decoration.

Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	159 02 002	50	1.25

Shelf life: 4 months. Compliance: BS EN 13279-1: Lightweight Gypsum Building Plaster, designation B1/20/02.
Estimating Guide: 2.25m² per 25kg bag.



Knauf Universal Board Finish

A high performance finishing plaster specifically designed for hand application onto the coloured face of tape and jointed plasterboard. Knauf Universal Board Finish has a drying time of 2-3 hours, providing a matt white surface suitable to receive a normal decorative finish.

Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	729 02 000	60	1.50

Shelf life: 4 months. Compliance: BS EN 13279-1: Gypsum Building Plaster, designation B1/20/02 and Gypsum Plaster for Plasterwork with Enhanced Surface Hardness, designation B7/20/2.
Estimating Guide: 14m² per 25kg bag.



Knauf Patchwall 45 Plaster

Knauf Patchwall 45 is designed as a hand applied one coat patching plaster up to 20mm thickness in one application. Ideal for use repairing damaged areas within an existing plastered finish. Patchwall 45 has a drying time of just 45 minutes, leaving a white surface ready to receive direct decoration.

Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
10	755 03 001	100	1.0
10	755 03 002	1	0.01

Shelf life: 4 months. Compliance: BS EN 13279-1 Lightweight Gypsum Building Plaster, designation B4/20/2.
Estimating Guide: 0.8m² per 10kg bag.



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Readymix Plasters

Knauf Readymix Plasters are a highly efficient direct alternative to traditional plaster for finishing walls and ceilings. Being less prone to chips and cracks they offer an excellent quality finish and are purpose designed for machine application. Supplied pre-mixed to the correct consistency for spray application, no direct water supply is required on site. Wastage is just 1%.

Knauf Plano

Used as a backing coat to fill or level holes or undulations on thin joint blockwork or uneven in-situ concrete, this product can be applied up to 3-4mm thick in one application. Knauf Plano is applied using a rotary screw worm pump machine.

Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	140 04 400	40	1.0



Shelf life: 9 Months.
Estimating Guide: up to 9.5m² per 25kg bag at 1.5mm thickness.

Knauf Deco

Used as a finishing coat for Knauf Plano or as a direct finish coat onto smooth backgrounds such as taped and jointed plasterboard, precast panels, Aircrete panels or refurbishment over previously decorated surfaces this product is applied 1-2mm thick with a drying time of 24-48 hours prior to decorating. Knauf Deco is applied using a rotary screw worm pump machine.

Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	140 05 500	40	1.0



Shelf life: 9 Months.
Estimating Guide: up to 18m² per 25kg bag at 1mm thickness.

Knauf Deco Plus

Used on the same backgrounds as Knauf Deco this product offers additional water resistance and fungicidal protection as well as greater impact resistance making it ideal for use in areas of high humidity or in high traffic areas. Knauf Deco Plus is applied 1-2mm thick with a drying time of 24-48 hours prior to decorating. Knauf Deco Plus is applied using a rotary screw worm pump machine.

Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	140 07 700	40	1.0



Shelf life: 9 Months.
Estimating Guide: up to 18m² per 25kg bag at 1mm thickness.

Readymix Plasters

Knauf Airless

Used in the same areas as Knauf Deco and Deco Plus this product is ideal for use over Knauf Plasterboard with a two coat application onto taped and jointed drylining systems. Knauf Airless is applied 1-2mm thick with a drying time of 24-48 hours prior to decorating. Knauf Airless is applied using an airless high pressure piston pump machine.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	140 06 600	40	1.0

Shelf life: 9 Months.
Estimating Guide: up to 20m² per 25kg bag at 1mm thickness.

Plaster Accessories

Our Plaster Accessories have been developed to perfectly complement our high quality plaster range.

Knauf High Suction Plaster Primer

Knauf High Suction Plaster Primer is a polymer based product designed to pretreat backgrounds with high suction. The primer can be applied with a brush, roller or by spraying.



Bucket Size	Article No	Pallet Details	
		Buckets	Tonnes (Approx.)
Kg			
15	721 05 000	24	0.36

Shelf life: 6 months. Estimating Guide: Up to 150m² per bucket (based on 1:1 dilution). Available in part pallet quantities.

Knauf Betokontakt

Knauf Betokontakt is a polymer based product designed to provide a mechanical key to backgrounds which are smooth or have limited suction. Can be applied with a brush, roller or by spraying.



Bucket Size	Article No	Pallet Details	
		Buckets	Tonnes (Approx.)
Kg			
20	722 08 000	24	0.48

Shelf life: 6 months. Estimating Guide: Up to 70m² per bucket. No need to dilute. Available in part pallet quantities.

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Metal Sections



- **Designed to work with Knauf boards and accessories to give tested, warranted system performances**
- **High quality stud, track and channels**
- **Strong, light and easy to use**
- **Simple and fast to install**
- **Unique 'C-T' Stud simplifies shaftwall construction**



Integrated and tested systems that work and perform together.

Knauf precision-engineered metal sections and components are designed to integrate and perform together with our boards and accessories to create complete, tested, warranted systems.

The way different components react with one another in fire and acoustic situations is complex and subtle. We test our components together as completed systems and understand them inside out so you can trust our performance figures.

The extent of the range provides the designer with configuration and performance options that meet the criteria of the most demanding of projects. This versatility is complemented by the speed and simplicity of the installation process.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

Stud and track

Our range of metal stud and track profiles are designed to offer fast, 'twist to fit' installation.

Knauf metal sections are lightweight and easy to carry, easily complying with health and safety requirements. Once installed, they have built in service cut outs and increase partition strength and accuracy.

Ceiling profiles

When working overhead, lightweight, easy to use metal components are a significant benefit. Knauf Ceiling Systems meet the performance requirements of many different types of building and of locations within the building.

Void depth can be simply adjusted. Speed of installation is combined with ease of levelling and alignment.

Knauf Ceiling Systems are versatile – different shapes can be created and a variety of features incorporated such as bulkheads, lighting coffers etc.

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'C' Studs

Knauf 'C' Studs are high quality, high performance, tested steel sections. Knauf 'C' Studs are available in a number of different widths, lengths and gauges to suit our range of system solutions.

Knauf 'C' Studs

Galvanised lightweight steel section for use in non-load bearing Knauf partition systems.




	Dimensions (mm)			Article No	Pack Details	
	Gauge	Size/Web	Length		Flange	Lengths per Pack
0.55	50	2400	35	900 13 240	10	14
		2500	35	900 13 250	10	15
		2700	35	900 13 270	10	15
		3000	35	900 13 300	10	17
		3600	35	900 13 360	10	21
60	3000	35	901 43 300	10	18	
		35	901 43 360	10	22	
70	2400	35	900 68 240	10	16	
		35	900 68 270	10	18	
		35	900 68 300	10	20	
		35	900 68 360	10	24	
		35	900 68 420	10	28	
92	3600	35	900 92 360	10	26	
		35	900 92 420	10	31	
146	2700	35	900 33 270	10	27	
		35	900 33 300	10	30	
		35	900 33 360	10	35	
		35	900 33 420	10	41	
0.70	70	3600	35	901 46 360	10	30
		4200	35	901 46 420	10	35
92	3600	35	901 47 360	10	34	
		35	901 47 420	10	40	
146	4200	35	901 49 420	10	53	

Estimating Guide: 1.67 linear metres per m² partition (based on 600mm centres). Compliance: EN 14195

'C' Studs

Knauf Acoustic 'C' Studs

Galvanised lightweight steel section for use in non-load bearing Knauf partition systems, specifically designed to improve the acoustic performance of the resulting partition.



Dimensions (mm)				Article No	Pack Details	
Gauge	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.60	50	2400	50	902 13 240	10	15
		2700	50	902 13 270	10	16
		3000	50	902 13 300	10	17
70	50	2400	50	902 68 240	10	18
		3000	50	902 68 300	10	22
		3600	50	902 68 360	10	26
		4200	50	902 68 420	10	30


Estimating Guide: 1.67 metres per m² (based on 600mm centres). Compliance: EN 14195.

'U' Channels

High quality Knauf 'U' Channels are available in a number of widths to suit our range of system solutions.

Knauf 'U' Channel

Galvanised steel section for use as the standard head and floor track for Knauf partitions and wall linings.



Dimensions (mm)				Article No	Pack Details	
Gauge	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.55	52	3000	25	905 40 300	10	13
	62	3000	25	906 17 300	10	14
	72	3000	25	905 81 300	10	16
	94	3000	25	905 61 300	10	18
	148	3000	25	905 42 300	10	25

Estimating Guide: 2 linear metres per metre run of partition, head and floor track. Compliance: EN 14195.

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'U' Channels

Knauf Deep Flange 'U' Channel - 50mm Deep Flange

Galvanised steel section for use as an optional head track where increased deflection is expected for use in Knauf partition and Knauf Shaftwall systems.

Gauge	Dimensions (mm)			Article No	Pack Details	
	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.60	52	3000	50	905 20 300	10	25
	72	3000	50	907 20 300	10	27



Estimating Guide: 1 linear metre per metre run of partition, head track only. Compliance: EN 14195.

Knauf Deep Flange 'U' Channel - 70mm Deep Flange

Galvanised steel section for use as an optional head track where increased deflection is expected for use in Knauf partition and Knauf Shaftwall systems.

Gauge	Dimensions (mm)			Article No	Pack Details	
	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.70	52	3000	70	902 80 300	10	32
	62	3000	70	902 81 300	10	33
	72	3000	70	902 82 300	10	35
	94	3000	70	902 83 300	10	39
	148	3000	70	902 85 300	10	47



Estimating Guide: 1 linear metre per metre run of partition, head track only. Compliance: EN 14195.

Knauf 'U' Channel - Perimeter Support

Galvanised steel section for use as standard head and floor track for Knauf Wall Liner System and as perimeter channel for Knauf C-Form ceiling systems.

Gauge	Dimensions (mm)			Article No	Pack Details	
	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.55	20	3000	20/30	905 74 300	□10	9



Estimating Guide: 2 linear metres per metre run of wall liner, 1 linear metre per linear metre of perimeter for ceiling systems. Compliance: EN 14195.

'I' Studs & Staggered Stud

Knauf 'I' Studs

High quality galvanised lightweight steel sections for use in non-load bearing Knauf partition and wall lining systems allowing increased partition heights to be designed for, whilst providing improved robustness and impact resistance.



Dimensions (mm)				Article No	Pack Details	
Gauge	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.55	50	2700	40	902 01 270	10	21
		3000	40	902 01 300	10	23
	60	3600	40	902 02 360	10	34
		4200	40	902 02 420	10	40
0.70	70	3600	40	902 03 360	10	39
		4200	40	902 03 420	10	46
0.90	92	5000	40	902 04 500	10	77
		6000	40	902 04 600	10	93
	146	6000	40	902 05 600	10	116

Estimating Guide: 1.67 linear metres per m² partition (based on 600mm centres). Compliance: EN 14195.

Knauf Staggered Stud Clip

Spacer used to locate Knauf 'I' Studs in Knauf Silent Spacesaver partition systems.



Dimensions (mm)					Article No	Pack Details	
Gauge	To Suit Stud Size	Length	Width	Depth		Items per Pack	Kg (Approx.)
0.55	60	38	10	30	938 25 000	100	1.3
0.90	92	38	54	30	937 25 000	100	2.5

Estimating Guide: 3.3 clips per linear metre of partition (based on 300mm staggered centres). Compliance: EN 14195.

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'MW' Stud & Channel

Knauf 'MW' Stud

Galvanised lightweight steel section for use in non-load bearing Knauf partition systems where increased acoustic performance is required.

Dimensions (mm)				Article No	Pack Details	
Gauge	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.60	100	3000	50	000 03 272	8	23



Estimating Guide: 1.67 linear metres per m² partition (based on 600mm centres). Compliance: EN 14195.

Knauf 'MW' Channel

Galvanised steel section for use as the standard head and floor track for Knauf 'MW' Stud partitions.

Dimensions (mm)				Article No	Pack Details	
Gauge	Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
0.60	102	2000	40	000 08 447	8	14



Estimating Guide: 2 linear metres per metre run of partition, head and floor track. Compliance: EN 14195.

Ceiling & Wall Lining

Knauf 'C' Channel

Galvanised lightweight steel section for use in Knauf Wall Lining systems and Knauf C-Form ceiling systems.



Dimensions (mm)			Article No	Pack Details	
Size/Web	Length	Flange		Lengths per Pack	Kg (Approx.)
47	2400	17	900 75 240	10	11
	2700	17	900 75 270	10	12
	3000	17	900 75 300	10	13
	4000	17	900 75 400	10	18

Estimating Guide: 1.67 linear metres per m² of wall lining (based on 600mm centres). Compliance: EN 14195.

Knauf Channel Intersection Connector

Locates primary and secondary channels in the Knauf C-Form ceiling system.



Dimensions (mm)		Article No	Pack Details	
a	b		Items per Pack	Kg (Approx.)
36	49	916 74 200	100	2

Estimating Guide: 1.1 Connectors per m² of C-Form ceiling.

Knauf 'C' Channel Connector

Used to join two sections of Knauf 'C' Channel in Knauf C-Form ceiling systems.



Dimensions (mm)			Article No	Pack Details	
Web	Flange	Width		Items per Pack	Kg (Approx.)
45	15	98	916 73 200	100	3

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Ceiling & Wall Lining

Knauf Universal Bracket

Supplied flat, the Knauf Universal Bracket locates the Knauf 'C' Channel to the background support. Can be separated to form 2 single channel hangers.

Dimensions (mm)		Article No	Pack Details	
Web	Flange		Items per Pack	Kg (Approx.)
46	127	914 34 200	100	7



Estimating Guide: Fix at 900mm vertical centres for wall lining.
0.7 Hangers per m² of ceiling: C-Form.

Knauf Soffit Cleat

Cleat to connect ceiling system to the structural soffit of the building. Pre-drilled to take the required fixings.

Dimensions (mm)	Article No	Pack Details	
		Items per Pack	Kg (Approx.)
25 x 25	936 23 000	100	2



Knauf Strap Hanger

Suspension strap to support Knauf C-Form and Knauf MF Ceiling systems, this product connects to the soffit cleat and can be simply cut to the length required for ease of installation.

Dimensions			Article No	Weight
Gauge (mm)	Length (mm)	Width (mm)		Kg (Approx.)
0.55	25000	25	906 65 000	3.7

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Ceiling & Wall Lining

Knauf MF Connecting Clip

Secures the Knauf MF Ceiling Channel to the Knauf MF Primary Support Channel.

Dimensions (mm)		Article No	Pack Details	
Gauge			Items per Pack	Kg (Approx.)
2.65		916 68 000	200	2



Knauf MF Ceiling Channel

Galvanised steel main channel section for the Knauf MF Ceiling System to which the Knauf Plasterboard is fixed - always fix the board using Knauf Drywall Screws.

Dimensions (mm)				Article No	Pack Details	
Gauge	Length	Depth	Width		Lengths per Pack	Kg (Approx.)
0.55	3600	26	80	907 83 360	50	97



Estimating Guide: 1.67 linear metres per m² of ceiling (based on 600mm centres with 15mm plasterboard).

Knauf MF Perimeter Channel

Galvanised steel section to be used around the perimeter of Knauf MF Ceiling Systems.

Dimensions (mm)					Article No	Pack Details	
Gauge	Length	Upper Depth	Lower Depth	Width		Lengths per Pack	Kg (Approx.)
0.5	3600	20	30	27	906 63 300	20	22



Estimating Guide: 1 linear metre per linear metre of perimeter for ceiling systems.

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Ceiling & Wall Lining

Knauf 'MF' Primary Support Channel

Galvanised steel section to be used as the main cross section and hanger support section of the Knauf MF Ceiling System.

Gauge	Dimensions (mm)			Article No	Pack Details	
	Length	Depth	Width		Lengths per Pack	Kg (Approx.)
0.8	3600	15	45	906 64 360	20	34



Estimating Guide: 0.83 linear metres per m² of ceiling (for single or double layered systems).

Knauf 'MF' Nut and Bolt

Nut and bolt for fixing strap hanger to the soffit cleat.

Diameter	Dimensions (mm)	Article No	Pack Details	
	Items per Pack		Kg (Approx.)	
6		916 46 000	200	3



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Shaftwall System

Knauf Shaftwall Systems offer economic solutions to provide non-load bearing lift or stair enclosures, utilising a lightweight framework built from one side. For plasterboards used in this system see pages 225-226 for Knauf Fireshield and Knauf Core Board.

Knauf 'C-T' Stud


Unique galvanised steel section used in the Knauf Shaftwall system to allow quick and safe construction from one side with the minimum number of components.

	Dimensions (mm)			Article No	Pack Details		
	Gauge	Length	Depth		Width	Lengths per Pack	Kg (Approx.)
	0.92	60	3000	38.5	900 97 300	10	42
			4500	38.5	900 97 450	10	63
	92	4500	38.5	901 48 450	10	73	
			5500	38.5	901 48 550	10	89
146	5500	38.5	901 49 550	10	110		
		6500	38.5	901 49 650	10	130	

Estimating Guide: 1.67 linear metres per m² of Shaftwall (based on 600mm centres).
Compliance: EN 14195.

Knauf 'J' Channel


High quality galvanised steel section used as head and floor track and perimeter framing section of the Knauf Shaftwall system.

	Dimensions (mm)			Article No	Pack Details		
	Gauge	Length	Depth		Width	Lengths per Pack	Kg (Approx.)
	0.92	62	3000	25/70	903 74 400	10	32
			4500	25/70	903 67 450	10	49
	94	4500	25/70	903 65 450	10	59	
			5500	25/70	903 65 550	10	72
148	5500	25/70	903 66 550	10	93		
		6500	25/70	903 66 650	10	110	

Estimating Guide: 2 linear metres per metre run of Shaftwall, head and floor track. Compliance: EN 14195.

Knauf Core Board Channel

High quality galvanised steel section used to provide fixing for horizontal Knauf Core Board joints to ensure fire protection of the Knauf Shaftwall system.

	Dimensions (mm)			Article No	Pack Details		
	Gauge	Length	Depth		Width	Lengths per Pack	Kg (Approx.)
	0.55	20	3600	10/20	905 73 600	10	8.0

Estimating Guide: 1 linear metres per metre run of Shaftwall. Compliance: EN 14195.

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Resilient Accessories


Knauf Resilient Isolation Strip

A purpose made self-adhesive strip which isolates the floor deck from the top of the timber joist in acoustic floor systems allowing improved acoustic performance.

	Dimensions (mm)			Article No	Pack Details	
	Gauge	Size	Length		Rolls per Pack	Kg (Approx.)
	12	50	5000	921 37 025	9	6

Knauf Resilient Bar


Robust Detail compliant resilient metal section which is fixed to floors and partitions to reduce direct sound transmission. Knauf Resilient Bar can be used in any Robust Detail where it states that a resilient bar must be used.

	Dimensions (mm)			Article No	Pack Details	
	Gauge	Size	Length		Lengths per Pack	Kg (Approx.)
	0.55	50	3000	906 77 300	10	11

Metal Accessories

Knauf Flat Fixing Plate

Lightweight galvanised steel fixing plate for use within partitions, wall linings and ceilings. Used as a part of a deflection head as well as to improve rigidity or for horizontal board joints where required.

	Dimensions (mm)			Article No	Pack Details	
	Gauge	Size	Length		Lengths per Pack	Kg (Approx.)
	0.7	70	2400	917 80 242	10	12

Compliance: EN 14195.

Metal Accessories

Knauf Fixing Channel

Lightweight galvanised steel fixing plate with flanges for additional rigidity over the flat fixing plate, for use with partitions and wall linings.



Dimensions (mm)				Article No	Pack Details	
Gauge	Size	Length	Flange		Lengths per Pack	Kg (Approx.)
0.7	96	2400	9.5	917 65 240	10	16

Compliance: EN 14195.

Knauf Angle Sections

Galvanised mild steel angles for use with partitions, column and beam encasements and suspended ceilings.



Dimensions (mm)				Article No	Pack Details	
Gauge	Size	Length	Angle (°)		Lengths per Pack	Kg (Approx.)
0.7	25x25	3000	90	902 95 300	10	11
	25x50	3000	90	902 96 300	10	16

Compliance: EN 14195.

Knauf Fixing Clip

Part of the Knauf Encasement System.



Dimensions (mm)		Article No	Pack Details	
Length	Height		Items per Pack	Kg (Approx.)
45	28	936 25 200	50	2

Estimating Guide: 4 clips per linear metre of column. 2 clips per linear metre of beam.

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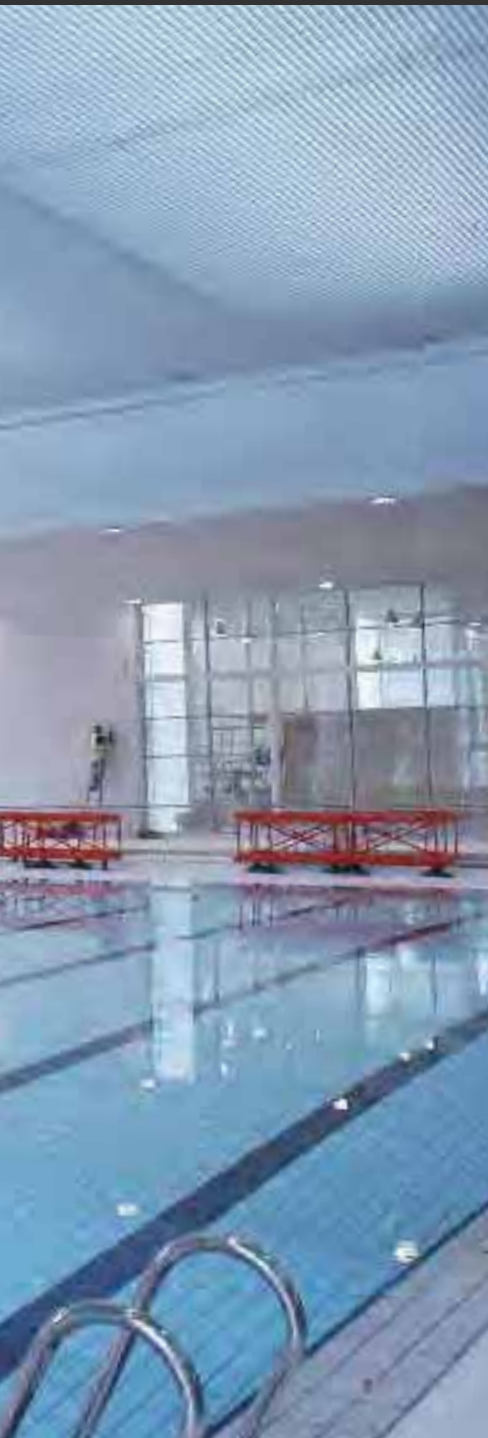
Tile Backing



- Will not deteriorate in water
- Supports up to 50kg/m² of tiles
- Floor and wall options
- Resistant to mould and mildew
- Simple score and snap cutting
- Strong Portland cement construction
- Ready keyed for tiling
- Non-combustible

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264 Tile Backing



Resist water, impact, mould and still achieve decorative excellence.

Our tough, impact-resistant range of Aquapanel tile backing boards will not deteriorate in water. They are dimensionally stable and resistant to mould and mildew.

Knauf Aquapanel Interior is installed using our metal components to build wet area Knauf Performer partitions quickly and easily.

Knauf Aquapanel Floor Tile Underlay features the same strong Portland cement construction in a slim 6mm thick panel to keep floor depths to a minimum.



Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

Note: When used in a swimming pool environment all metal components need to be pre-coated galvanised profiles and manufactured to comply with EN13964; products with a continuously hot-dip metal coating Z100 - an additional 20 micron organic coating per face.

Aquapanel Interior

Aquapanel Interior offers all the cost and time saving advantages of drywall installation:

- Quick and easy score and snap cutting
- No pre-drilling using self-piercing and self tapping Aquapanel screws
- No risk of nail popping or tile cracking with Aquapanel screws
- Surface ready keyed for tiling
- Metal or timber studs can be used
- Curves are easily created

Aquapanel Interior is installed using the same techniques and tools required for plasterboard and requires no specialist equipment. It interfaces seamlessly with other Knauf Drywall systems.

Aquapanel Floor Tile Underlay

Professionals have been installing Aquapanel Interior in wet areas for many years, knowing it is the most effective way to stop the causes of tile failure. Now Aquapanel technology is available in a thin tile underlay for floors.

Traditional plywood methods of tile backing can warp and cause tile failure. Aquapanel Floor Tile Underlay is completely unaffected by water, virtually eliminating these problems.

At only 6mm thick, room height is not compromised. Aquapanel Floor Tile Underlay boards and components are non-organic, so there is no chance of mould or fungus growth. You can use Aquapanel with the confidence that you're using the most suitable product for the job.

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Aquapanel Interior

Aquapanel Interior is a glass fibre reinforced cement board designed to be used as a high performance tile backing board. It will not deteriorate in water and offers very high impact resistance. It is also ideal as a general building board. Refer to the Knauf Drywall Aquapanel Interior brochure for Aquapanel Interior installation guidelines for commercial applications or contact Knauf Drywall Technical Services for more information.

Knauf Aquapanel Interior Cement Board

Knauf Aquapanel Interior is a tough, impact resistant glass fibre reinforced cement tile backer for use in wet and humid areas.

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1200	670 60 626	50	54.0	0.81
	900	2400	670 60 627	25	54.0	0.81



Note: 2400mm long board is recommended for use in commercial applications.

Knauf Aquapanel Interior Screws

Ceramic coated screws for fixing Aquapanel Interior to timber studs.

Length	Dimensions (mm)		Article No	Carton Details	
		Diameter		Items per Carton	Kg (Approx.)
40		4.2	933 83 410	1000	3.3



Knauf Aquapanel Maxi Screws (SN)

Corrosion protected screws for fixing Aquapanel Interior 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.

Length	Dimensions (mm)		Article No	Carton Details	
		Diameter		Items per Carton	Kg (Approx.)
25		4.2	000 87 319	□1000	1.8
39		4.2	000 53 500	500	2.0
55		4.2	000 95 644	250	2.0



Aquapanel Interior

Knauf Aquapanel Thermal

Knauf Thermal offers the benefits of Aquapanel Interior along with increased thermal insulation properties that are provided by its Polyfoam core. It is ideal for use with undertile heating systems over an existing timer or solid floor.



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
10.0	600	1200	670 60 110	50	36.0	0.13

Knauf Aquapanel Thermal Fixings

Ceramic coated screws and washers for fixing Aquapanel Thermal to concrete and timber subfloors.



Dimensions (mm)		Article No	Carton Details	
Length	Diameter		Items per Carton	Kg (Approx.)
32	8	933 82 100	200	2.5

Knauf Aquapanel Interior Joint Adhesive

Gun-applied PU adhesive used for jointing Aquapanel Interior Cement Boards, as part of Aquapanel Interior systems.



Cartridge Size	Article No	Pack Details	
ml		Items per Pack	Kg (Approx.)
310	670 60 632	□20	0.5

Shelf life: 12 months. Estimating Guide: 1 Cartridge is sufficient to joint approximately 6m² of wall.

Knauf Aquapanel Interior Joint Tape

Alkaline resistant joint tape for use in non-commercial applications where Aquapanel Interior is to be jointed using tile adhesive.



Roll Size	Article No	Carton Details	
m		Rolls per Carton	Kg (Approx.)
20	951 60 008	□12	1.65

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Aquapanel Interior

Knauf Aquapanel Floor Tile Underlay

Now Aquapanel technology is available in a thin tile underlay for floors. Aquapanel Floor Tile Underlay is made from tough Portland cement and has a coated fibre mesh embedded in the core. At only 6mm thick, room height is not compromised. Will not rot or warp.



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
6	900	1200	001 11 764	100	108	0.92

Knauf Aquapanel Interior Primer

Pre-mixed synthetic dispersion for priming Aquapanel Interior after jointing and filling.



Tub Size	Article No	Pallet Details	
Kg		Tubs	Tonnes (Approx.)
15	000 49 279	24	0.36

Shelf life: 12 months. Estimating Guide: Coverage 40-60g/m², 1:2 dilution ratio with water.

Knauf Aquapanel Interior Joint Filler & Skim Coat - White

Cement-bound material for skim coating Aquapanel Interior in non-tiled areas. Aquapanel Exterior Reinforcing Mesh must be embedded.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
20	000 31 095	48	1.0

Shelf life: 12 months. Estimating Guide: 3.5Kg/m² for full surface skim.

Knauf Aquapanel Interior Skim

Ready-mixed water resistant skim coat for use over Aquapanel Interior to create a smooth and level finished surface, ready for painting



Tub Size	Article No	Pallet Details	
Kg		Tubs	Tonnes (Approx.)
25	670 60 634	40	0.8

Shelf life: 12 months. Estimating Guide: 3.5Kg/m² for full surface skim.

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270 Perforated and Patterned Boards



- Class C and D sound absorption performance
- Seamless jointing technology
- Total creative flexibility allowing unique effects to be achieved
- Different fleece colours
- Systems for ceilings and walls
- Manufactured from non-combustible gypsum



Controlled acoustics, purified air, superb aesthetics.

Knauf Apertura combines the sound absorption performance and attractive design of perforated gypsum board with a unique seamless finish.

Seventeen different styles, two fleece colours and the Uniflott tapeless jointing system offer the designer complete creative freedom and a quality of finish that simply cannot be achieved with tiles.

Acoustic solutions

Every Knauf Apertura ceiling provides a Part E Class D sound absorption performance with a void depth of just 60mm. A Class C performance can be achieved with many of the designs. Retail centres, office complexes, hospitals, schools, showrooms and galleries are typical examples of projects in which Knauf Apertura has been used to provide a striking design feature with superior sound absorption to create a high quality, enhanced functioning environment.

Sound absorption in schools

Accurate, effective sound absorption is especially crucial to the effectiveness of the learning environment. Knauf Apertura perforated and patterned sound absorption boards provide effective control over reverberation whilst offering stunning, seamless-jointed aesthetics.

Unique, seamless finish

Knauf Apertura boards are jointed using the tapeless Knauf Uniflott system. This unique system provides a highly desirable seamless finish which is both quick and easy to achieve, allowing the finished pattern to flow uninterrupted throughout the room.

Knauf Apertura uses a combination of four precision-cut edges and the high strength Knauf Uniflott tapeless jointing system to provide the stunning seamless finish that is a signature of this system.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

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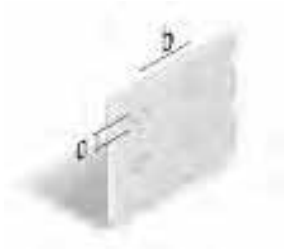
Apertura Plasterboards

Knauf Apertura Plasterboards now combine aesthetic appearance, high sound absorption properties to reduce sound reverberation and the technology to reduce air pollution.

Knauf Apertura Circular Perforated Plasterboards

The Knauf Apertura Circular Perforated Plasterboard range offers seven sizes of circular straight line perforation, five with one perforation size and two with two perforation sizes. They are supplied backed with an acoustic fleece in either black or white. Each board has four sharp-cut edges to enable a unique seamless finish when jointed with Knauf Uniflott. An installation kit is available to ensure that the perforations are accurately lined up.

One Size of Perforation




Dimensions (mm)					Article No	Fleece	Weight
(a)	(b)	Thickness	Width	Length			
6	18	12.5	1188	1998	000 71 236	White	10.7
Circular Perforated 6/18							
6	18	12.5	1188	1998	000 71 235	Black	10.7
Circular Perforated 6/18							
8	18	12.5	1188	1998	000 71 248	White	9.9
Circular Perforated 8/18							
8	18	12.5	1188	1998	000 71 246	Black	9.9
Circular Perforated 8/18							
10	23	12.5	1196	2001	000 71 275	White	9.9
Circular Perforated 10/23							
10	23	12.5	1196	2001	000 71 272	Black	9.9
Circular Perforated 10/23							
12	25	12.5	1200	2000	000 71 306	White	9.6
Circular Perforated 12/25							
12	25	12.5	1200	2000	000 71 304	Black	9.6
Circular Perforated 12/25							
15	30	12.5	1200	1980	000 71 373	White	9.3
Circular Perforated 15/30							
15	30	12.5	1200	1980	000 71 368	Black	9.3
Circular Perforated 15/30							

Area of Perforation:

6/18 = 8.7% 8/18 = 15.5% 10/23 = 14.8% 12/25 = 18.1% 15/30 = 19.6%

Knauf Apertura

Two Sizes of Perforation




Dimensions (mm)						Article No	Fleece	Weight
(a)	(b)	(c)	Thickness	Width	Length			
8	12	50	12.5	1200	2000	000 71 387	White	10.2
Circular Perforated 8/12/50								
8	12	50	12.5	1200	2000	000 71 385	Black	10.2
Circular Perforated 8/12/50								
12	20	66	12.5	1188	1980	000 71 396	White	9.4
Circular Perforated 12/20/66								
12	20	66	12.5	1188	1980	000 71 394	Black	9.4
Circular Perforated 12/20/66								

Area of Perforation: 8/12/50 = 13.1% 12/20/66 = 19.6%.

Knauf Apertura Square Perforated Plasterboards

The Knauf Apertura Square Perforated Plasterboard range offers two sizes of square straight line perforation. They are supplied backed with an acoustic fleece in either black or white. Each board has four sharp-cut edges to enable a unique seamless finish to be achieved when jointed with Knauf Uniflott.

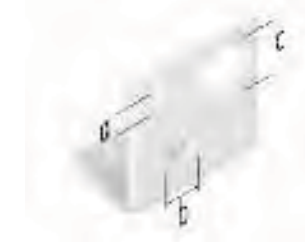


Dimensions (mm)					Article No	Fleece	Weight
(a)	(b)	Thickness	Width	Length			
8	18	12.5	1188	1998	000 71 258	White	9.4
Square Perforated 8/18							
8	18	12.5	1188	1998	000 71 257	Black	9.4
Square Perforated 8/18							
12	25	12.5	1200	2000	000 71 326	White	9.2
Square Perforated 12/25							
12	25	12.5	1200	2000	000 71 322	Black	9.2
Square Perforated 12/25							

Area of Perforation: 8/18 = 19.8% 12/25 = 23%.

Knauf Apertura Random Circular Perforated Plasterboards

The Knauf Apertura Random Circular Perforated Plasterboard range offers two types of random circular perforation. Each board has circular perforations of three different sizes in a random pattern. They are supplied backed with an acoustic fleece in either black or white. Each board has four sharp-cut edges to enable a unique seamless finish to be achieved when jointed with Knauf Uniflott. An installation kit is available to ensure that the perforations are accurately lined up.



Dimensions (mm)						Article No	Fleece	Weight
(a)	(b)	(c)	Thickness	Width	Length			
8	15	20	12.5	1200	1875	000 71 404	White	10.5
Apertura - Random 8/15/20								
8	15	20	12.5	1200	1875	000 71 405	Black	10.5
Apertura - Random 8/15/20								
12	20	35	12.5	1200	1875	000 71 417	White	10.5
Apertura - Random 12/20/35								
12	20	35	12.5	1200	1875	000 71 416	Black	10.5
Apertura - Random 12/20/35								

Area of Perforation: 8/15/20 = 9.9% 12/20/35 = 9.8%.

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Knauf Apertura

Knauf Apertura Slot Patterned Plasterboards

The Knauf Apertura Slot Patterned Plasterboard range offers three types of slot pattern. They are supplied backed with an acoustic fleece in either black or white. Each board has half-round edges and should be jointed with Knauf Uniflott.




	Dimensions (mm)			Article No	Fleece	Weight
	Thickness	Width	Length			
Slot Pattern B4	12.5	1200	2400	000 26 240	White	9.6
Slot Pattern B4	12.5	1200	2400	000 26 241	Black	9.6
Slot Pattern B5	12.5	1200	2400	000 26 242	White	9.6
Slot Pattern B5	12.5	1200	2400	000 26 243	Black	9.6
Slot Pattern B6	12.5	1200	2400	000 26 244	White	9.6
Slot Pattern B6	12.5	1200	2400	000 26 245	Black	9.6

Area of Perforation: B4 = 13.7% B5 = 10.9% B6 = 15.7%.

Knauf Apertura Square Patterned Plasterboards

The Knauf Apertura Square Patterned Plasterboard range offers three types of square pattern. They are supplied backed with an acoustic fleece in either black or white. Each board has four sharp-cuts edges to enable a unique seamless finish to be achieved when jointed with Knauf Uniflott.




	Dimensions (mm)			Article No	Fleece	Weight
	Thickness	Width	Length			
Square Pattern B4	12.5	1200	2400	000 27 240	White	9.6
Square Pattern B4	12.5	1200	2400	000 27 241	Black	9.6
Square Pattern B5	12.5	1200	2400	000 27 242	White	9.6
Square Pattern B6	12.5	1200	2400	000 27 244	White	9.6
Square Pattern B6	12.5	1200	2400	000 27 245	Black	9.6

Area of Perforation: B4 = 17.7% B5 = 13.0% B6 = 18.9%.

Apertura Metal Components


Knauf Apertura 'U' Mounting Bracket

Locates Knauf Apertura 'C' Channel to background support. Supplied with 35mm self tapping fixing screws.

Image	Dimensions (mm)				Article No	Pack Details	
	Size	Length	Web	Flange	Items per Pack	Kg (Approx.)	
	62	62	30	125	914 34 100	100	7


Knauf Apertura 'C' Channel

Galvanised lightweight steel section for use as a primary and secondary support channel for Knauf Apertura Ceiling and Wall Lining systems.

Image	Dimensions (mm)			Article No	Pack Details	
	Size/Web	Length	Flange	Items per Pack	Kg (Approx.)	
	60	3000	27	900 73 300	10	21


Knauf Apertura 'U' Channel

Galvanised steel section for use with the Knauf Apertura Ceiling and Wall Lining systems.

Image	Dimensions (mm)				Article No	Pack Details	
	Size	Length	Web	Flange	Items per Pack	Kg (Approx.)	
	0.55	30	3000	30	905 03 300	10	11

Knauf Apertura Channel Hanger

Locates into the primary support channel in the Knauf Apertura Ceiling system.

Image	Dimensions (mm)			Article No	Pack Details	
	Size	Length	Width	Items per Pack	Kg (Approx.)	
	60	85.5	58	914 73 000	100	4

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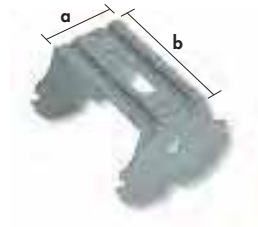
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Apertura Metal Components

Knauf Apertura Channel Intersection Connector

Locates primary and secondary channels in the Knauf Apertura Ceiling system.



Dimensions (mm)		Article No	Pack Details	
a	b		Items per Pack	Kg (Approx.)
47	62	916 74 000	100	5

Knauf Apertura 'C' Channel Connector

Used to extend Knauf Apertura 'C' Channel.



Size	Dimensions (mm)			Article No	Pack Details	
	Length	Web	Flange		Items per Pack	Kg (Approx.)
60	80	58.5	25	916 73 000	100	10

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Apertura Jointing & Accessories

Knauf Apertura Installation Kit

Consists of two Assembly Aids to help with setting of perforation spacing for circular perforated boards and tubing, nozzles and pistons for application of Knauf Uniflott.



To Fit Perforation	Article No
Circular 6/18	000 83 280
Circular 8/18	000 83 281
Circular 10/23	000 83 282
Circular 12/25	000 83 283
Circular 15/30	000 83 284
Circular 8/12/50	000 83 285
Circular 12/20/66	000 83 286

Knauf Uniflott

Knauf Uniflott is a specially formulated joint compound for use with Knauf Apertura Plasterboards to create a seamless finish.



Bag Size	Article No	Pallet Details	
		Bags	Tonnes (Approx.)
Kg			
25	200 00 009	42	1.05

Shelf life: 6 months. Estimating Guide: 1 bag will finish approximately 21m² of board.

Knauf Uniflott Applicator Kit

Gun applicator for applying Knauf Uniflott.



Article No		Pack Details
		Items per Pack
000 04 716	□	1

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Brio Dry Floor Screed



278 Brio Dry Floor Screed

- Perfect for underfloor heating with high thermal conductivity maximising heating efficiency
- Rapid, dry application can be trafficked immediately
- Site-proven, robust and impact resistant
- Slim profile – Brio starts at just 18mm thick
- Huge weight saving compared to wet screed; this can have a major impact on structural requirements for towers
- Non-combustible
- Brio WF incorporates a layer of sound absorbing wood fibre
- Easy to install and transport, and no special skills required to install



Fast, thermally efficient dry floor screeds.

Knauf Brio is a high quality, interlocking dry floor screed system using modern gypsum fibreboard technology. Installed and ready for traffic in a fraction of the time of traditional wet screeds, Knauf Brio is exceptionally lightweight whilst still providing a tough, impact resistant surface.

Thermally transparent, Brio is ideal for use over underfloor heating systems. Wood fibre backed Knauf Brio WF provides excellent impact sound reduction in new build and refurbishment projects.

Perfect for underfloor heating and cooling

Knauf Brio dry screed boards are almost thermally transparent, making them incredibly efficient when used with underfloor heating systems.

Changes in temperature are realised almost immediately as you do not have to wait for a large mass of cement to warm up. Brio makes it easy to maintain a comfortable environment.

Brio's exceptional thermal transmission properties mean it can even facilitate the use of underfloor cooling systems, eliminating the need for dry, draughty, noisy air conditioning.

Ideal for refurbishment

Brio's light weight means little extra load on the existing structure, and a maximum thickness of just 23mm means you can install a high efficiency underfloor heating system for a total loss in room height of less than 50mm.

Knauf Brio dry screed boards

Knauf Brio is a gypsum fibreboard dry screed with four precision engineered lapped edges to ensure boards butt to each other perfectly.



Knauf Brio WF dry screed boards

Knauf Brio WF is a gypsum fibreboard dry screed with four precision engineered lapped edges, incorporating a wood fibre resilient layer to effectively reduce impact sound transmission from footfall.

Knauf Brio accessories

We provide a comprehensive range of accessories for Brio, from joint adhesive to levellers, to ensure your project is a complete success.

Health and Safety

For information on our Health and Safety Policy and related guidance please refer to our Health and Safety section on page 214.

Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

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Brio Dry Floor Screed

Brio Dry Floor Screed System

Knauf Brio is a high quality, interlocking dry floor screed system using gypsum fibreboard technology. Installed and ready for traffic in a fraction of the time of traditional wet screeds, Brio is exceptionally light whilst still providing a tough impact resistant surface. Thermally transparent, Brio is ideal for underfloor heating systems, and wood fibre backed Knauf Brio WF provides excellent impact sound reduction.


Knauf Brio Dry Screed Boards

Knauf Brio is a gypsum fibreboard dry screed with four precision engineered lapped edges to ensure boards butt to each other perfectly. Brio boards are ideal for use over underfloor heating systems where their high thermal conductivity allows a quick transfer of heat into the room.

	Dimensions (mm)			Article No	Pallet Details		
	Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
	18	600	1200	000 82 667	70	50.4	1.15
Brio 18							
	23	600	1200	000 82 670	50	36.0	1.05
Brio 23							

Knauf Brio WF Dry Screed Boards

Knauf Brio WF is a gypsum fibreboard dry screed with four precision engineered lapped edges, incorporating a wood fibre resilient layer to effectively reduce impact sound transmission from footfall.

	Dimensions (mm)			Article No	Pallet Details		
	Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
	28	600	1200	000 82 669	50	36.0	0.88
Brio 18WF							
	33	600	1200	000 82 671	40	28.8	0.90
Brio 23WF							

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Brio Dry Floor Screed

Knauf Brio Screws

Knauf Brio Screws are used to firmly hold Knauf Brio or Knauf Brio WF boards together to ensure the adhesive bonds effectively. Always use the correct length to avoid damage to the underfloor and pipes.



Dimensions (mm)		Article No	Carton Details	
Length	Diameter		Items per Carton	Kg (Approx.)
17	4.2	000 67 067	500	0.7
Brio 18 Screws				
22	4.2	000 67 068	500	0.9
Brio 23 Screws				

Knauf Brio Joint Adhesive

Adhesive with dual applicator to bond Knauf Brio, Knauf Brio WF and Brio Dec boards together.



Bottle Size	Article No	Pack Details	
Kg		Items per Pack	Kg (Approx.)
0.8	000 88 533	12	9.6

Estimating Guide: For Brio and Brio WF 20m², for Brio Dec 40m² per bottle.

Knauf Brio Edge Strip

Knauf Brio Edge Strip is a mineral wool perimeter strip for use as part of the Knauf Brio Dry Floor Screed System.



Dimensions (mm)			Article No	Pack Details	
Length	Height	Width		Lengths per Pack	Kg (Approx.)
1200	100	10	001 08 502	100	16.9

Estimating Guide: 0.8m/m² of floor.

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Aquapanel External Linings

282 Aquapanel External Linings



- Fast closure of exterior walls
- Taped and jointed walls can be left unfinished for up to 6 months
- Easy to cut and fix – simply score and snap
- Non-organic, robust and stable substrate
- Easily curved down to 1 metre radius
- Lighter and faster than traditional brick and block construction of facades



Fast, simple, economical closure of external walls and ceiling soffits.

Knauf Aquapanel Exterior provides a solid, dry base that can withstand the extreme weathering effects of wind, rain and snow.

It is an ideal substrate for Aquapanel Plasters and other render finishes. Aquapanel Exterior can be used for exterior walls in ventilated systems, directly-applied water managed systems, exterior ceilings and soffits.



Health and Safety

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Material Safety Data Sheets for Knauf Drywall products can be downloaded from our website:

www.knaufdrywall.co.uk/themanual

and are also available from Knauf Drywall Technical Services on 01795 416259.

Exterior cladding

Knauf Aquapanel Exterior Cement Board is ideal for use on timber frame, timber battens and metal framed structures. It is mechanically fixed to the timber/steel framework and the system build up is then suitable to receive a render, paint or further external cladding finish (slip bricks, tiles, etc).

Aquapanel Exterior provides a fast, high quality and extremely economical alternative to traditional methods of construction.

Exterior ceilings and soffits

Knauf Aquapanel Exterior Cement Board makes creating seamless exterior ceilings and soffits simple. It is mechanically fixed to exterior grade steel work and provides a smooth finish for further decoration.

Aquapanel Exterior provides an internal ceiling look to the outside of a building in a fast, high quality and extremely economical manner and its simplicity allows internal ceiling contractors to carry out identical practice for external work.

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Aquapanel Exterior

Knauf Aquapanel Exterior Boards and Accessories

Aquapanel Exterior cement board technology sets new standards for the design and construction of buildings across Europe.

Aquapanel Exterior Systems offer a high quality and economical alternative to traditional methods of construction, such as brick and block. It provides a solid, dry base that can withstand the extreme weathering effects of wind, rain and snow. It is an ideal substrate for Aquapanel Plaster and other render finishes (subject to approval). It can be used for exterior walls in ventilated systems, water managed (directly-applied) systems, exterior ceilings and soffits.

Knauf Aquapanel Exterior Cement Board

Knauf Aquapanel Exterior is a tough cement board for exterior use with a Portland cement and aggregate core and coated glass fibre mesh embedded in the back and front surfaces. Ends are square cut and edges are reinforced and finished smoothly.

Thickness	Dimensions (mm)		Article No	Pallet Details		
	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1200	670 60 620	50	54	0.87
		2400	670 60 629	25	54	0.87



Knauf Aquapanel Maxi Screws (SN)

Corrosion protected screws for fixing Aquapanel Cement Board to light gauge steel profiles (up to 0.7mm) as part of Aquapanel Interior and Exterior Systems. They have a needle point and countersunk heads.

Dimensions (mm)		Article No	Carton Details	
Length	Diameter		Items per Carton	Kg (Approx.)
25	4.2	000 87 319	1000	1.8
39	4.2	000 53 500	500	2
55	4.2	000 95 644	250	2

[Product Data](#)

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Aquapanel Exterior

Knauf Aquapanel Exterior Maxi Screws (SB)

Aquapanel Exterior Maxi Screws have been specially developed for fixing Aquapanel Exterior onto heavy gauge steel profiles (0.8mm - 2.0mm) as part of the Aquapanel Exterior system. They have a drill point and countersunk heads.



Dimensions (mm)		Article No	Carton Details	
Length	Diameter		Items per Carton	Kg (Approx.)
25	4.2	000 94 730	250	1.5

Knauf Aquapanel Exterior Stainless Steel Screws (SN)

40mm stainless steel screws specially developed for fixing Aquapanel Exterior to timber substructures.



Dimensions (mm)		Article No	Carton Details	
Length	Diameter		Items per Carton	Kg (Approx.)
40	4	000 87 197	250	0.7

Knauf Aquapanel Exterior Joint Filler - Grey

Aquapanel Exterior Joint Filler - Grey is a cement-based material for filling joints and embedding Aquapanel Exterior Joint Tapes and Aquapanel Exterior Reinforcing Mesh as part of the Aquapanel Exterior System.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
20	001 31 094	48	1.0

Estimating Guide: 1 bag will cover approximately 28m².

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Aquapanel Exterior

Knauf Aquapanel Exterior Joint Tape

Aquapanel Exterior Joint Tape is a 100mm wide, glass fibre tape with an alkaline-resistant coating. It is embedded into Aquapanel Exterior Joint Filler to reinforce exterior joints as part of the Aquapanel Exterior System.

Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	100	000 49 373	12	4



Estimating Guide: 2.1m²/m².

Knauf Aquapanel Exterior Reinforcing Tape

Aquapanel Exterior Reinforcing Tape is a 330mm wide meshed glass fabric. It is embedded in Aquapanel Exterior Joint Filler to reinforce exterior joints where paint or alternative finishes are to be applied on top of the Aquapanel Exterior Basecoat, as part of the Aquapanel Exterior System.

Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	330	000 59 051	12	10



Estimating Guide: 2.1m²/m².

Knauf Aquapanel Exterior Reinforcing Mesh

Aquapanel Exterior Reinforcing Mesh is a 1m wide, alkaline-resistant glass fabric mesh designed for complete cover reinforcement of Aquapanel Exterior Basecoat as part of the Aquapanel Exterior System.

Roll Size (m)		Article No	Pallet Details	
Length	Width		Rolls per Pallet	Kg (Approx.)
50	1	000 58 546	25	375



Estimating Guide: 1.1m²/m².

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Aquapanel Exterior

Knauf Aquapanel Exterior Tyvek® StuccoWrap™

Aquapanel Exterior Tyvek® StuccoWrap™ is a special climatic membrane to be used as a water barrier from the outside to the inside, and allows vapour diffusion from the inside to the outside. It is used in water managed (directly applied) systems, installed as a water-carrying layer directly behind the board as part of the Aquapanel Exterior System.



Roll Size (m)		Article No	Pallet Details	
Length	Width		Rolls per Pallet	Tonnes (Approx.)
75	1.5	000 58 548	16	0.8

Estimating Guide: 1.1m²/m².

Knauf Aquapanel Exterior Basecoat - Grey

Aquapanel Exterior Basecoat - Grey is a Portland cement-based, synthetic resin-enhanced basecoat to serve as a complete basecoat on Aquapanel Exterior Cement Board. The drying time is 1 day per mm of thickness i.e 5 days for 5mm thickness.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	000 49 157	42	1.05

Estimating Guide: One bag will cover approximately 3.2m², at a minimum thickness of 5mm.

Knauf Aquapanel Exterior Basecoat - White

Aquapanel Exterior Basecoat - White is a cement-based synthetic resin-enhanced material which serves as a complete basecoat as part of the Aquapanel Exterior System. The drying time is only 24 hours. It dries to a white colour with a smooth surface, ideal underneath light coloured finishes.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	001 02 812	42	1.05

Estimating Guide: One bag will cover approximately 4m², at a minimum thickness of 5mm.

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Aquapanel Exterior

Knauf Aquapanel Exterior Primer

Aquapanel Exterior Primer is a pre-mixed, white coloured, water-based emulsion for priming basecoated substrates where Aquapanel Exterior finishes are used as part of the Aquapanel Exterior System.

Tub Size	Article No	Pallet Details	
Kg		Tubs	Tonnes (Approx.)
15	000 49 299	24	0.36



Estimating Guide: One tub will cover approximately 100m².

Knauf Aquapanel Exterior Silicon Synthetic Resin Plaster

Aquapanel Exterior Silicon Synthetic Resin Plaster is a white, ready to use, finishing plaster, with a maximum grain size of 2mm for applying on Aquapanel Exterior Basecoat and Aquapanel Exterior Primer. It is water-repellent and allows diffusion with $sd > 0.1m$.

Tub Size	Article No	Pallet Details	
Kg		Tubs	Tonnes (Approx.)
25	000 49 320	24	0.6



Estimating Guide: One tub will cover 8m².

Knauf Aquapanel Exterior Dispersion Plaster

Aquapanel Exterior Dispersion Plaster is a white, ready to use, finishing plaster, with a maximum grain size of 2mm for applying on Aquapanel Exterior Basecoat and Aquapanel Exterior Primer. It is water-repellent and allows diffusion with $sd > 0.1m$.

Tub Size	Article No	Pallet Details	
Kg		Tubs	Tonnes (Approx.)
25	000 87 268	24	0.6



Estimating Guide: One tub will cover 8m².

Product
Data

288 Aquapanel External Linings

Generate specifications at:
www.knaufdrywall.co.uk

Aquapanel Exterior

Knauf Aquapanel Exterior Mineral Finish Plaster - White

Aquapanel Exterior Mineral Finish Plaster - White is a decorative plaster with a maximum grain size of 2mm, for application on top of Aquapanel Exterior Basecoat either as a smooth floating finishing render or freely structured using different tools and designs. It is also available in 212 colour shades, subject to a premium and a minimum order quantity - please contact Knauf Drywall for details.



Bag Size	Article No	Pallet Details	
Kg		Bags	Tonnes (Approx.)
30	001 00 286	36	1.08

Estimating Guide: One bag will cover approximately 10m² at 2mm thickness.

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Knauf Drywall and You

We believe that working with you in partnership is the best way to help produce a superb finished result that your client will be proud of.

These pages provide some insight into our expertise, our service ethos and some of the many ways that we can work with you to help you achieve your aims.

290 Knauf Drywall and You

[Download Spec Sheet](#)





Knauf Drywall **and You**

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Training

Comprehensive training on drywall and plastering systems

Knauf Drywall dedicated training centres

We have purpose-built, fully equipped training centres based in Sittingbourne and Immingham. The premises are set up in accordance with CITB requirements for the provision of both short duration and NVQ qualified training in the construction of plasterboard systems.

Wide-ranging courses

From these centres, a variety of courses are run providing practical training on the design and construction of plasterboard systems. These include partitions, wall linings, suspended ceilings, fire protection and shaftwall. Training is also provided on taping and jointing and plastering (both hand and machine applied in both cases). All tools and equipment are supplied to trainees during their time on the course.

Experience and expertise

Our training centres are staffed by experienced instructors, all of whom have a wealth of expertise in the construction industry and specialise in either plastering or drywall work.

Find out more at: www.knaufdrywall.co.uk/training

Knauf Drywall Training: 01795 416122





Typical course content

Drylining Systems Stage One Knauf Training Module KET 01

Duration: 2 days

This course covers the skills and knowledge required to carry out drylining using gypsum plasterboards to industry standards, covering the direct bonding and metal furring methods of drylining, and is designed for tradespersons of varying abilities who require specific training in drylining using these methods.

Trainees will receive instruction in the interpretation of drawings and specifications, the selection of appropriate systems and materials and concentrating on the setting out and installation of these systems. The course will also include instruction in Health and Safety matters, and reference to all relevant British Standards and Codes of Practice.

Training objectives

On completion of the training the trainee will:

- Have a good working knowledge of health and safety requirements for drylining, including correct personal protective clothing where applicable.

- Be able to interpret drawings and specifications to identify material requirements for a given task.
- Select and prepare appropriate materials for a given task, and prepare backgrounds to receive finishes as required.
- Install components and materials to form drylinings to industry standards for accuracy and finish.

Instructors' qualification

Knauf Drywall Technical Instructors are all time-served tradespersons in drylining, plastering and associated trades, and have received full training on top of extensive experience in our industry.

All Knauf Drywall Technical Instructors are approved NVQ assessors for Drylining and Plastering, and the Knauf Drywall Training Centre is accredited as suitable for the delivery of training and assessment to NVQ standards.

Achievement measurement

Trainees will be assessed during the course as the instructors observe and discuss their progress and offer advice. An attendance certificate will be issued to all those who successfully complete the course.

CITB Ref: ZZDR / 12937

Course details

Courses covering the following areas are available:

- ✓ Drylining Systems Stage One
- ✓ Metal Stud Partitions
- ✓ Specialist Partitions
- ✓ Shaftwall Partitions
- ✓ Suspended Ceilings
- ✓ Fire Protection of Structural Steel
- ✓ Taping and Jointing (Hand Applied)
- ✓ Basic Plastering Skills
- ✓ Drywall for Site Managers
- ✓ Drylining Systems Stage Two

Contact Knauf Drywall Technical Services: 01795 416259

Generate specifications at:

www.knaufdrywall.co.uk

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Environment

We at Knauf Drywall are completely committed to a high standard of environmental responsibility, including manufacturing to ISO 14001.





Environmental issues and sustainable building are at the forefront of everyone's minds – manufacturer, architect, contractor, building owner and building user.

If you're working for a Local Authority you'll know that they have specific environmental requirements, and many of your direct customers are probably just as environmentally demanding too... and rightly so.



The product

Our plasterboard is manufactured from the most sustainable sources of gypsum available and we only use 100% recycled paper liners.

Knauf plasterboard is durable, does not naturally deteriorate and is also simple to recycle, something we can help with.

The same is true of our metal systems – built to last and entirely recyclable when required.

We work with contractors to reduce on-site waste and increase their recycling capacity.

And in Futurepanel, we have produced the industry's first carbon neutral plasterboard.



The buildings our product goes into

Not only do your buildings use recyclable, environmentally low impact Knauf plasterboards in their construction, but our insulating products add to their environmental efficiency, reduce CO₂ emissions and help meet the Building Regulations.

We're not only talking about new build; the same applies to the refurbishment of existing housing stock, schools, commercial or industrial premises – plasterboard constructions using our products achieve 'A' ratings in both 'Green Guides'.



How we make it

Our factories are modern, ultra-efficient and use sophisticated heat recovery systems to minimise energy wastage. We are continuing to investigate and invest in alternative energy sources to reduce our impact on the environment further.

Our sites are responsibly run under the ISO 14001 accreditation scheme for environmental management.

So, whether you're using carbon neutral Futurepanel, a plain ivory Wallboard, a pink Fireshield, a blue Soundshield or a mustard Impact Panel board, you and your customers can be comfortable that they're fundamentally well and truly green.

Further information

Website

www.knaufdrywall.co.uk/environment

Gypsum Waste Management

See page 298.

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Generate specifications at:

www.knaufdrywall.co.uk

Environment

These are just some of the ways that we are committed to reducing our impact on the environment, and the impact of the buildings we supply to.

Product range



Futurepanel – The Carbon Neutral Plasterboard

Knauf Drywall systems are A-rated in the Green Guide

Our Insulating Laminate range provides instant energy saving

Our plasterboard is easily recyclable

Aquapanel prevents tile failures and associated waste from damaged materials

Safeboard x-ray plasterboard removes the need for lead in x-ray departments

Brio dry screed boards reduce the ongoing energy usage of a building by improving the efficiency of underfloor heating systems

Our High Performance Plasterboards reduce the volume of material required for a site by reducing the number of layers required for a given performance

Design detailing



Our project team actively designs-out waste and optimises systems and logistics for contractors

The Knauf Eco Door Jamb detail is saving thousands of square metres of waste plasterboard on commercial projects

We are continuously working to reduce the amount of waste gypsum from sites and incorporate recycled gypsum in our products

Factory efficiency



Insulated with energy efficient lighting throughout

Heat exchangers from driers save approximately 10% of our plant's energy requirements

Sophisticated energy management software optimises our energy usage

We partner The Carbon Trust on future targets

We are assessing and trialling alternative energy supplies including combined heat and power (CHP) and wind

Our sites are ISO 14001 certified for environmental management



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Further information

Website

www.knaufdrywall.co.uk/environment

Aquapanel

See page 40.

Safeboard

See pages 46 and 227.

Insulating Laminates

See page 122.

Futurepanel

See page 222.

Brio Dry Floor Screed

See pages 278 and 280.

Gypsum Waste Management

See page 298.

Project and Specification Managers

See page 325.

Technical Services Team

See page 325.

Factory recycling



- Paper and cardboard is pulped back into production
- Waste plastics are remelted into damp proof courses
- Scrap timber is turned into chippings for gardens
- Scrap metal is recycled locally
- Used oil is collected for recycling
- Our overalls are managed by a single company to minimise water and energy usage

Transportation efficiency



- Our fleet uses the latest fuel efficient trucks
- We supply in full loads to maximise efficiency
- Our trucks are used to deliver other goods from the area of drop to ensure the maximum number of journeys are full, reducing wasted 'empty' journeys
- We are trialling alternative transport methods such as barges

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Gypsum Waste Management

Minimisation and recycling



Gypsum waste recycling

As part of our comprehensive service ethos we are committed to helping contractors with their recycling requirements wherever practical. We work closely with a number of specialist recycling partners who are able to provide a range of collection and recycling services to sites. These partners are selected for both their level of service and for their ability to recycle the site waste plasterboard into a contamination-free raw material that we can re-utilise into manufacturing new plasterboard.

European legislation is in place to prevent high sulphate wastes, such as gypsum, from being landfilled with other biodegradable material unless placed in a dedicated sulphate cell. In practice, this means that the majority of gypsum waste, such as plasterboard, is instead recycled, which we absolutely support. Plasterboard can nearly always be recycled and both the paper and gypsum re-used to manufacture new plasterboard; one of the reasons plasterboard systems have such a high 'Green Guide' rating.

Most specialist recycling contractors offer a range of bags, bins, skips and containers to ensure that an adequate waste holding capacity is provided as close as possible to the point of need. It is important to separate waste plasterboard from other site wastes to prevent contamination that could prevent the material being recycled and re-used.

The positioning of plasterboard waste receptacles and the types used are dependant on the size of the building project and the space available on site. These should be planned to minimise the physical handling of plasterboard waste.

Minimising waste by good design

Most drywall projects generate waste – there's a 10% waste factor on many building sites, and in some cases it's up to 25%. Few offcuts are suitable for use elsewhere on a particular building site, so most go to waste.

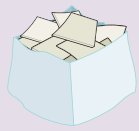
There are many good reasons for the inevitability of plasterboard waste and offcuts: doorways, windows, irregular room shapes and non-standard ceiling heights are typical examples.

We've looked carefully at various sources of plasterboard waste to explore how it can be reduced or avoided, and we can advise on detailing to reduce waste. For example, a floor-to-soffit height of 2,400mm means that most plasterboard products will fit precisely. Higher or lower soffits mean additional effort and potential waste. If a non-standard height is unavoidable, we can help with cut-to-length plasterboard solutions – provided they are ordered in plenty of time (minimum order quantities may apply).

Our Project Specification Managers and Technical Team are always available to discuss how you can maximise your design options in plasterboard – and minimise waste.

You can contact Knauf Drywall Technical Services on 01795 416259.

Typical collection systems used on sites



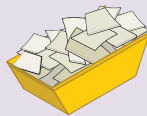
Bulk bags

1m³ bulk waste bags are used to collect plasterboard waste from house building sites. They can be placed anywhere within range of a lorry-mounted crane, for easy removal.



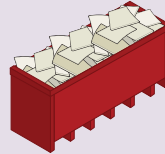
Wheelie bins (660 litre)

660 litre wheelie bins are used in large or high rise buildings and can be moved close to the installers for convenience. They are taken to a central point for loading into a mobile compaction unit.



Skips (6–14 yards)

5–11m³ skips are used on medium to large sites where centralised waste collection is a convenient solution.



Ro-Ro skips (35–40 yards)

27–31m³ roll-on, roll-off containers are used on major sites that generate large waste streams and where storage space is not at a premium.

What products can be recycled through this method?

- ✓ Knauf Wallboard, Knauf Plank, Knauf Baseboard, Knauf Coreboard
- ✓ Knauf Soundshield, Knauf Fireshield, Knauf Moistureshield, Knauf Impact Panel
- ✓ Knauf Sound Moistureshield, Knauf Fire Moistureshield
- ✓ Knauf Apertura, Knauf Cove

Further information

Website

www.knaufrecycle.co.uk

How plasterboard site waste is recycled



Construction

Plasterboard offcuts are inevitable during construction – but fortunately it's a fully recyclable waste stream.



Waste handling

Board offcuts are placed in dedicated receptacles and collected by a specialist recycling contractor.



Recycling station

The gypsum core of the waste plasterboard is separated from its paper facings – both are recycled.



Raw material

We use a high percentage of FGD gypsum – a recycled product with the same properties as natural gypsum.



Production line

The different gypsum types are expertly blended to produce our high quality plasterboard.

Generate specifications at:

www.knaufdrywall.co.uk

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Fire and Acoustic Principles

Fire in a construction can be inhibited or exacerbated by a number of factors relating to both the intrinsic properties of materials, how they react to one another and how, in a construction element, they behave together.

Reaction to fire

'Reaction to Fire' measures the contribution of a material to fire growth. Materials with good reaction to fire properties – those which contribute least to fire – will achieve the highest ratings in the European Reaction to Fire classification (Euroclasses). Non-combustible products and products with a high resistance to fire – such as Knauf Brio and Knauf Plasterboard – will achieve an A rating; more combustible materials achieve lower levels, classified from B to F.



Other factors relating to 'reaction to fire'

Smoke release: the propensity of the material to release smoke.

Burning droplets: the potential for the material to release burning droplets or particles.

Flashover: the propensity for a material to reach 'flashover', where combustion gases may exceed a certain temperature level and there is a rapid increase in smoke and heat release.

Surface spread of flame

Surface spread of flame can be assessed in vertical or horizontal planes and measures the rate of flame spread across a material's surface beyond the area of ignition. The surface spread of flame rate depends on the heat supplied externally and/or by the



flame of the burning material ahead of the burning zone, and on the ease of ignition. As the heat release rate from a material increases, the surface flame spread over the surface of a material increases as does the generation of combustion products.

Materials such as Knauf Plasterboard with good ratings for reaction to fire and surface spread of flame do not of themselves ensure good fire safety, unless they are incorporated correctly within buildings to achieve high levels of fire resistance; see below.

Fire resistance

Fire resistance measures the behaviour of an **element** of construction (and holes or gaps passing through it) when subjected to defined heating and pressure conditions which may be encountered in a fully developed fire. It is a property of composite constructions, or of structures rather than individual materials. The 'integrity' ratings for this property are measured in minutes of resistance before which the construction becomes structurally unsound and liable to collapse.

The 'fire-ratings' of a Knauf System, such as Knauf Performer, refer to Fire Resistance.

Other important factors

Thermal transmission: the fire resistance of a construction is of little help to the occupant of a building if the heat passing through that construction makes escape impossible. Thermal transmission generated by fire should be minimised; this is referred to in the fire tests as the 'Insulation' rating.

Compartmentation: The division of a building into discrete fire-tight zones can limit fire damage by containing a fire within or close to the zone of origin.

Sound Insulation (sound reduction), prevents sound being transmitted from one part of a building to another, for example by erecting a partition or wall.

Improving sound insulation is the main way in which the sound transmission between dwellings can be reduced. The air tightness of a construction is also critical.

Types of sound

Airborne sound

Typical airborne sources may include the human voice, musical instruments, home entertainment systems and noisy dogs.

The ability of an element of construction to resist the passage of airborne sound is largely determined by three factors:

- 1 The sound absorbency of any cavities in the construction
- 2 The structural isolation between the two outer surfaces
- 3 The mass and dampening behaviour of the elements of construction.

Impact sound

Typical impact sound sources include slamming doors, stamping on the floor and vibrating washing machines.

With impact sound, a relatively small impact can result in a loud sound being transmitted through the structure, often over long distances. Impact sound can be controlled by:

- Providing a resilient layer at the point of impact – such as a resilient isolation strip under the floorboards
- Structural isolation – such as adding a resilient layer between the floor deck and the floor structure.

Flanking sound

Flanking sound transmission usually refers to sound that travels through 'flanking' structural elements, such as the external wall that flanks a separating element between two dwellings.

Flanking sound can also include sound that travels along unintended airpaths, such as unsealed gaps in the structure and around service penetrations.

Flanking sound can be controlled by:

- 1 Sealing open airpaths
- 2 Forming a lining backed by a resilient layer to prevent sound energy entering the flanking element
- 3 Designing out 'weak areas' in adjoining and abutting elements.

Separating walls that meet the specifications in the Building Regulations can fail to meet the sound performance standard if the flanking junctions are poorly detailed. It is important to follow the guidance on the flanking details and not just the construction of the wall itself.

Noise and Part E

Unwanted noise has been identified as a key contributor to the degradation of quality of life in residential, social and working environments.

Many aspects of modern life contribute towards increasing levels of potential nuisance noise including the construction of housing at high densities, increasing use of home entertainment equipment throughout the home, and the 24-hour society.

So, protection against noise contributes towards the 'quality of life' within dwellings, and healthy, productive and attractive environments in offices, hospitals, schools and other non-domestic buildings.

In dwellings, Approved Document E of the Building Regulations is concerned with protecting residents from nuisance noise in attached dwellings and within the dwelling, and requires that separating walls and floors are built to provide specific levels of protection.

Schools, hospitals, libraries and many other types of buildings have very specific acoustic requirements (some of which are enshrined within HTM documentation [health] and BB93 [schools]) and specifications will often determine the acceptable noise levels within rooms by their purpose.

Optimising design and performance

Drylining systems offer the building designer a range of options to create internal spaces which both fulfil demands of building functionality and those of acoustic criteria.

With the capacity to achieve up to 74dB (Rw) sound reduction, systems such as Knauf Isolator (page 66) and Silent Spacesaver (page 54) may enable a school architect to configure 'noisy' and 'quiet' areas closer to one another – optimising design and maintaining acoustic performance.

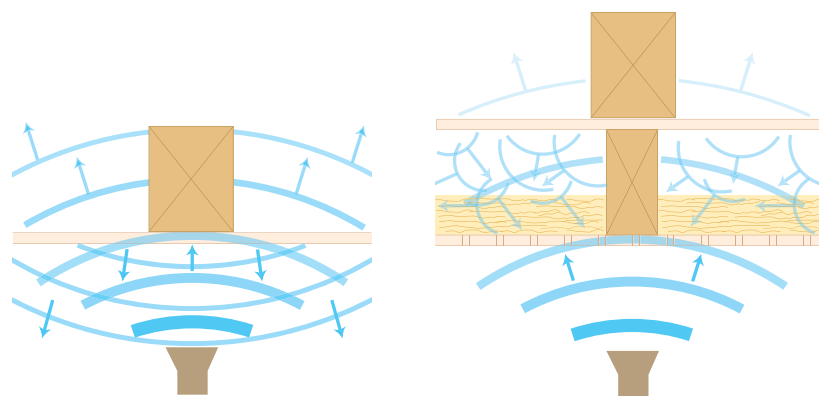
Achieving compliance

There are two ways to comply with Part E: first, by pre-completion testing which requires that 10% of built structures be tested to ensure acoustic performance is met; second by using a 'Robust Detail' – effectively, a pre-accredited form of construction that, if adhered to, guarantees performance levels compliant with Part E.

How Knauf Apertura systems absorb sound (reverberant) energy

Knauf Apertura Cleaneo perforated and patterned plasterboards are designed to absorb sound (reverberant) energy. The addition of mineral wool will further enhance sound absorption capacity.

The holes in Knauf Apertura allow noise to pass through but its path is disrupted, taking energy out on its return. This reduces echoes in a room. The clarity of speech or music can be tuned by the choice of pattern, using insulation and void depth.



Standard soffit with plasterboard

Soffit with Knauf Apertura ceiling

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Regulations and Legislation

The following pages cover the key regulations and standards governing and influencing construction using drywall systems



Scotland

Domestic and Non-domestic
Technical Handbooks



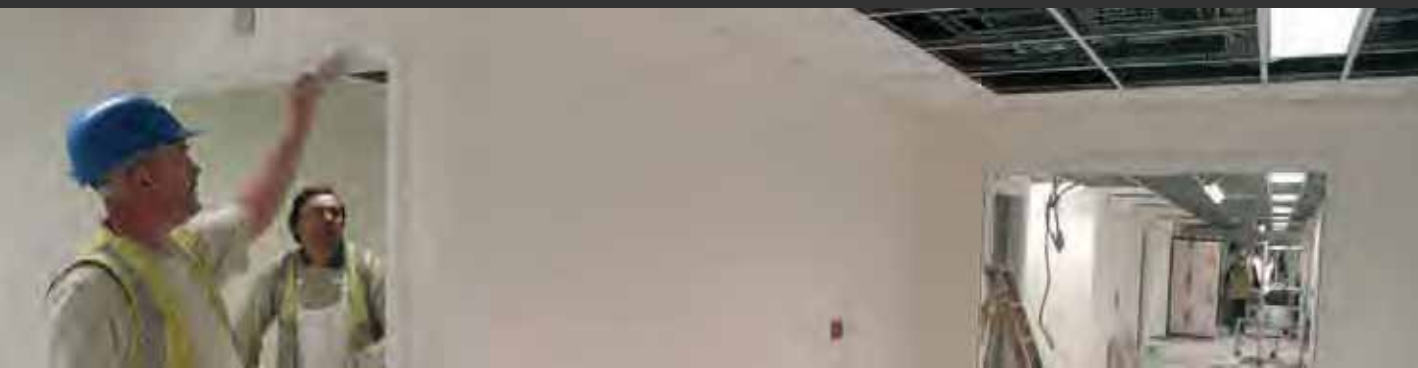
Ireland

Technical Guidance
Documents (commonly
known as TGDs)



England and Wales, Northern Ireland

Approved Documents
(England and Wales)
Technical Standards (NI)
The Code for Sustainable
Homes



Residential



Thermal



Approved Document L1A



Approved Document L1B



Code for Sustainable Homes

Acoustic



Approved Document E

Fire



Approved Document B (Dwellings)

Commercial



Thermal



Approved Document L2A



Approved Document L2B

Fire



Approved Document B

Education



Acoustic



Building Bulletin 93 (BB93) 'The Acoustic Design of Schools'

Fire



Approved Document B (Non-dwellings)

Building Bulletin 100 (BB100) 'Design for Fire Safety in Schools'

Healthcare



Acoustic



Health and Technical Memorandum 08 01 'Acoustics'

Fire



Approved Document B (Non-dwellings)

Health and Technical Memorandum 05 02 'Firecode fire safety in the NHS'

The following pages, 304-323, explore the key legislation and guidance relevant to the design and installation of drylining systems in residential and non-residential buildings, for new build, refurbishment or extension.

In the main, the legislative requirements are set out in the Building Regulations' Approved Documents (and the equivalents for Scotland, Northern Ireland and Ireland).

The overriding driver for thermal regulation is European legislation in the form of the Energy Performance Buildings Directive.

Other documents, such as Building Bulletins or Health and Technical Memoranda provide methodologies for achieving the statutory requirements and therefore provides ways of meeting the regulations.

For more information, please call Knauf Drywall Technical Services on 01795 416259.

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Residential Thermal

Knauf wall lining and dry lining systems can incorporate wide ranges of insulation types and thicknesses to minimise heat loss from buildings and thermal transmission from warm to cold areas.

Knauf Drywall systems will help:

- **Minimise heat loss**
- **Achieve high levels of thermal efficiency**
- **Maximise internal space**
- **Achieve Part L and Code for Sustainable Homes compliance**



Approved Document L1A

The Energy Performance of Buildings Directive requires a calculation method that adopts a 'whole building' approach to energy performance.

The 2006 version of SAP has been developed for Approved Document L1A to meet this requirement. The SAP worksheet and specification can be downloaded from www.bre.co.uk

In addition, there is greater emphasis on ensuring that the building construction meets the standards assumed at the design stage and that the heating and hot water systems are correctly commissioned.

Absolute criteria

The 2005 version of SAP calculates the dwelling's energy performance in terms of CO₂ emissions per m² per year for heating, hot water, ventilation and lighting.

The SAP calculation tool allows the designer a high degree of flexibility in deciding how to achieve the required energy target. However, the Approved Document does set certain limits.

These include:

- Limiting U-values
- A limit of 10 m³/(h.m²) @ 50 Pa for air permeability
- The use of an appliance with an efficiency not less than that recommended for its type in the Domestic Heating Compliance Guide

How to comply

Calculating CO₂ emissions for proposed building

The predicted rate of carbon dioxide emissions from the dwelling, the Dwelling Emission Rate (DER), should not be greater than the Target Emission Rate (TER).

How to comply: Using the Standard Assessment Procedure (SAP), the CO₂ emission rate is calculated for a notional dwelling of the same size and shape as the proposed dwelling using a fixed set of criteria for the fabric heat loss, building services and fuel choice.

The resulting 'notional' CO₂ emission rate is equivalent to a gas heated dwelling insulated to Part L standards for 2002.

The Target CO₂ Emission Rate (TER) is arrived at by reducing the notional CO₂ emission rate by 20% and making an allowance for any change in the main heating fuel, using the 'fuel factor' (Part L1A Table 1, page 16). The SAP calculation is repeated, but this time inserting the proposed U-values, building services, fuels and low or zero carbon energy sources for the proposed building. This produces the Dwelling Emission Rate (DER). If the DER of the proposed building is less than the TER, the first criteria has been achieved.



Design Partner Series

Our dedicated Housing brochure is available free, upon request.

Please telephone 08700 613700 to request a copy, or download from our website: www.knaufdrywall.co.uk

Generate specifications at:
www.knaufdrywall.co.uk



Other criteria

Design limits: The designer and constructor must show that the thermal performance of the building fabric and the heating, hot water and lighting systems are within the design limits in the Approved Document.

Limiting solar gains in summer: The designer and constructor must show that provision has been made to prevent high internal temperatures due to excessive solar gains.

Quality of construction and commissioning of building services: The designer and constructor must demonstrate that the quality of construction has been achieved by adopting Accredited Details and undertaking an air pressure test to confirm the specified design air permeability has been achieved. Provide a notice declaring that the building services have been inspected, tested and commissioned and are in accordance with the proposed building design.

Providing information: Provide operating and maintenance instructions to enable the building and its services to be operated in an energy efficient manner.



Approved Document L1B

The new edition of the Approved Document for existing dwellings keeps an elemental method of demonstrating compliance, although in some cases, there is an option to use the 2005 edition of the SAP calculation method. This will show that the overall energy performance of the whole extended or altered building is no worse than it would be if the elemental method were used.

There is also more emphasis than before on ensuring that the construction meets the thermal standards established at the design stage and that the heating and hot water systems are correctly commissioned.

The guidance is set out in relation to three main classes of building work:

- Extensions to existing dwellings, including conservatories
- Dwellings created as a result of a material change of use
- Thermal upgrading as part of material alterations

For each of these classes of work the Approved Document gives relevant energy efficiency standards for:

- New thermal elements
- Replacement thermal elements
- Renovated thermal elements
- Retained thermal elements
- Controlled fittings (glazed elements)
- Controlled services

Northern Ireland



Technical Standard F1

This document is designed to mirror the requirements of England and Wales, with minor changes to reflect the predominant fuel types used.

Scotland



Domestic Technical Handbook Section 6: Energy

The four criteria set out below describe the process the designer and builder must go through to show compliance.

SAP 2005 is used to calculate a Target Emission Rate (TER) for a 'notional dwelling' of exactly the same size and shape as the proposed dwelling and assuming a fixed package of measures.

1 Calculating the CO₂ emissions for the proposed building

The calculated rate of carbon dioxide emissions from the dwelling (the Dwelling Emission Rate DER) should not be greater than the Target Emission Rate (TER).

2 Design 'back stops'

Show that the thermal performance of the building fabric and the heating, hot water and lighting systems are within the design limits in the Technical Handbook.

3 Written information

Provide operating and maintenance instructions to enable the building and its services to be operated in an energy efficient manner.

4 Energy Performance Certificate

Every new dwelling should have an Energy Performance. The Technical Handbook lists all the information that should be included on the Certificate. It should be permanently affixed to the dwelling, in a prominent place.

Ireland



Technical Guidance Document L – Conservation of fuel and energy – dwellings

Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations.

The adoption of an approach different to the TGDs is not prohibited, provided that the approach meets the requirements of the Regulations.

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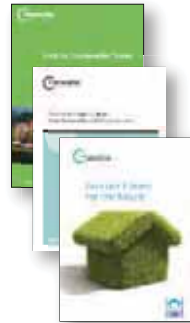
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Residential Thermal



The Code for Sustainable Homes

The Code for Sustainable Homes has been introduced to drive a step-change in sustainable home building practice. It is a standard for key elements of design and construction which affect the sustainability of a new home.

In England and Wales, it will become the single standard for sustainable homes, used by home designers and builders as a guide to development, and by home buyers to assist in their choice of home.

It forms the basis for future developments of the Building Regulations in relation to carbon emissions from energy use in homes, therefore offering greater regulatory certainty to developers. In this era of environmental awareness among consumers and increasing demand for a more sustainable product, it will offer a tool for developers to differentiate themselves.

The Code for Sustainable Homes will progressively introduce a star rating system from 2006-16. More stars denote better sustainability. Designers will be required to achieve increasingly stringent criteria to reach each level of the Code's requirements. The points system integrates energy and water usage as well as other key sustainability criteria.

Green Guide ratings

The Green Guide (2008) publishes (online) a wide range of construction specifications along with the relative environmental performance of these specs and the materials used within them.

The data is set out as an A+ to E ranking system, where A+ represents the best environmental performance/least environmental impact, and E the worst environmental performance/most environmental impact.

In the 'domestic/internal wall/framed partition' category, all constructions using Knauf plasterboard have an 'A+' or 'A' rating.

Full details can be found at: www.thegreenguide.org.uk

Knauf Drywall offer comprehensive guidance on the design of systems to achieve required Green Guide ratings.

Achieving higher Code ratings with Knauf Drywall

Knauf Drywall offer ranges of systems able to provide high levels of acoustic and thermal insulation. These contribute towards achieving the Code's reduced target emission rates and to its 'quality of life' requirements. Products such as our space-saving and thermally efficient laminates and Brio dry floor screed – thermally transparent to maximise under floor heating efficiency – can both maximise internal space creation requirements (habitability) and help meet specific Code levels for thermal efficiency.



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Achieving a sustainability rating: target standards[†]

Code level	Energy	Water
	Minimum % reduction in dwelling emission rate over target emission rate	Maximum potable water consumption in litres per day
1 (★)	10	120
2 (★★)	18	120
3 (★★★)	25	105
4 (★★★★)	44	105
5 (★★★★★)	100	80
6 (★★★★★★)	A zero carbon home	80

[†] This table is derived from Tables 2 and 3 (pages 12 and 13) of The Code for Sustainable Homes (2008 edition).

Generate specifications at:
www.knaufdrywall.co.uk



Residential Acoustic

Our range of residential partition systems are designed to meet the acoustic requirements of the regulations whilst being robust and easy and fast to install, using the minimum number of components.

- **Use Knauf Isolator partitions to create separating walls using dry construction techniques, see page 66**
- **Use Knauf Easybuild to economically construct internal residential partitions that meet all the relevant performance requirements, see page 48**



Approved Document E

Part E Regulations focus on four main areas:

- E1 Protection against sound from other parts of the building and adjoining buildings
- E2 Protection against sound within a dwelling house etc., including separating and internal walls and floors
- E3 Reverberation in the common internal parts of buildings containing flats or rooms for residential purposes
- E4 Acoustic conditions in schools

There are two routes to compliance (in England and Wales) as set out below.



Robust details

Robust Details are an alternative to constructions that require pre-completion sound testing in England and Wales.

- Pre-approved details achieving sound insulation standards higher than those required by Part E.
- For new build houses and new build apartments only.
- No pre-completion testing required.

The main benefit of using Robust Details is that there is no need to carry out pre-completion sound testing. This eliminates the risk and uncertainty of remedial action being required on completed separating walls and floors, which may lead to potential delays in completing the property.

The Robust Details are designed to achieve higher sound insulation standards than the minimum requirements in Part E. Each approved Robust Detail contains a checklist which must be completed on site. This is a quality control check to confirm that all the critical elements that affect sound performance have been built correctly.

Robust Details are administered by Robust Details Ltd. Every dwelling built using Robust Details needs to be registered with Robust Details Ltd and a plot registration fee paid. Further information on the Robust Details scheme is available on the Robust Details website at: www.robustdetails.com

All floating floor and ceiling treatments for separating floors, where stipulated, are to have a proven level of performance from laboratory tests before they can be used in a Robust Detail.

Pre-completion testing

Part E calls for sample pre-completion testing of separating walls and floors prior to handover. The testing is required to ensure that the level of performance specified in Part E is being achieved.

- For all new build, refurbishment, remedial and extension work in buildings with rooms for residential purposes.
- Minimum of 1 in 10 dwellings of same type to be tested.
- Details designed to meet or exceed Part E minima.

Pre-completion sound insulation tests should be carried out by independently accredited organisations.

A minimum of one in every ten dwellings of the same dwelling type are required to be tested prior to completion. Depending on the mix of dwelling types in a development, testing will usually be required on 10-30% of the units.

Tests should be conducted in completed but unfurnished rooms or available spaces in the case of properties sold before fitting out.

Existing buildings

Where dwellings are created by the material change of use of an existing dwelling, the only way to comply with the requirements of Part E1 2003 is to carry out pre-completion testing to prove the acoustic performance of the acoustic separating building elements. For this type of work slightly lower standards of performance are required than for new build.

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309 Regulations and Legislation

Northern Ireland



Technical Standards G and G1

There are 3 routes to compliance:

- 1 Constructions specified in Technical Standards G and G1
- 2 Performance testing to show compliance with standards
- 3 Repeat constructions: duplicate constructions that have been shown to comply elsewhere.

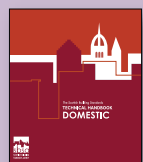
Performance standards[†]

	airborne sound insulation $D_{nT,w}$ dB*		impact sound insulation $L'_{nT,w}$ dB*	
	mean values	individual value	mean values	individual value
Separating walls	53	49	–	–
Separating floors	52	48	61	65

* As defined in BS EN ISO 717-1: 1997 and BS EN 717-2:1997

† Table derived from Technical Standard G, 1990

Scotland



Technical Handbook Section 5

There are 2 routes to compliance:

- 1 Constructions specified in Technical Handbook Section 5
- 2 Performance testing to show compliance with standards.

Performance standards[†]

	airborne sound insulation $D_{nT,w}$ dB*		impact sound insulation $L'_{nT,w}$ dB*	
	mean values	individual value	mean values	individual value
Walls	53	49	–	–
Floors	52	48	61	65

* As defined in BS EN ISO 717-1: 1997 and BS EN 717-2:1997

† Table derived from Technical Handbook – Domestic, 2009, section 5

Ireland



Technical Guidance Document E & Sound

Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. The adoption of an approach different to the TGD's under the 'Similar constructions' heading is not prohibited, provided that the approach meets the requirements of the Regulations.

Performance standards for separating walls, floors and stairs with separating function (England and Wales)[†]

	Airborne sound insulation $D_{nT,w} + C_{tr}$ dB (min. values)	Impact sound insulation $L'_{nT,w}$ dB (max. values)
	Purpose built dwelling-houses and flats	
Walls	45*	–
Separating floors and stairs	45	62
Dwelling-houses and flats formed by material change of use		
Walls	43	–
Floors and stairs	43	64

* The values for 'Rooms for residential purposes' are identical to those above except for this figure, which is 43.

Please note that the above England and Wales figures include C_{tr} , hence the difference in values compared with Scotland and Northern Ireland

† Table derived from Part E 2003 (with 2004 amendments), Table 0.1a, page 12.

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Residential Fire

Building systems incorporating plasterboard can help meet the requirements of Part B of the Building Regulations by providing surfaces that minimise fire spread, by the creation of compartments that limit the progress of smoke and flames, and by helping to maintain the structural integrity of the structure as a whole.

Knauf Drywall systems offer:

- **Fire resistance up to 120 minutes**
- **Wide range of compartmentation options**
- **Peace of mind with comprehensive full-system testing**



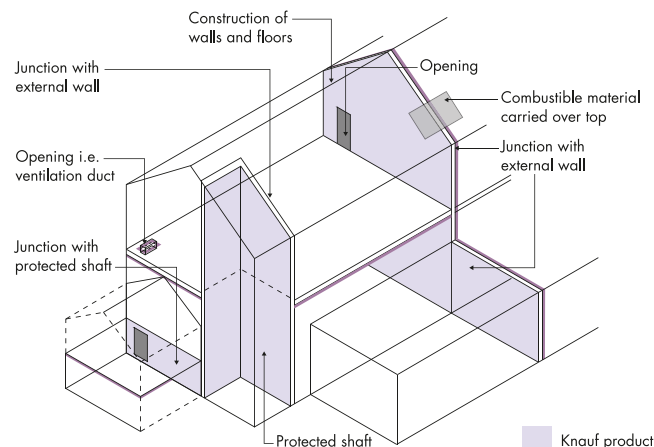
Approved Document B

The various parts of the Approved Document set out the following objectives:

B1 – To ensure the correct design, construction and provision of means of escape for persons in the event of a fire.

B2 – To ensure, through appropriate construction and workmanship, that firespread over the internal linings of buildings is inhibited.

B3 – To ensure the stability of buildings in the event of fire by creating separated compartments within buildings to inhibit internal spread of fire. To create sufficient and effective separation between adjoining buildings. To inhibit unseen spread of smoke and fire via concealed spaces within buildings.



Areas in which Knauf products may be used to inhibit spread of fire

Part B2 – Internal fire spread (linings)

To inhibit the spread of fire within the building, the internal linings shall:

- Adequately resist the spread of flame over their surfaces.
- Have, if ignited, either a rate of heat release or a rate of fire growth, which is reasonable in the circumstances.

The above can be achieved by selection of materials, such as Knauf plasterboard, that have low rates of surface spread of flame. It is also beneficial for material to have a low rate of heat release, minimising the material's contribution to fire growth.

These qualities are particularly important in circulation or communal spaces, where it will often be the linings that must minimise the spread of flame to give the occupants more escape time.

Part B3 – Internal fire spread (structure)

- The building shall be designed and constructed so that, in the event of fire, its stability will be maintained for a reasonable period.
- A wall common to two or more buildings shall be designed and constructed so that it adequately resists the spread of fire between those buildings. For the purposes of this sub-paragraph, a house in a terrace and a semi-detached house are each to be treated as a separate building.
- To inhibit the spread of fire within the building, through either sub-division with fire-resisting construction, or installation of suitable automatic fire suppression systems
- The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited.



Northern Ireland



Technical Booklet E Fire Safety

This document covers both dwellings and non-dwellings.

Sections 2 and 3 deal with internal

fire spread to linings and structure, respectively.

Scotland



Technical Handbook (Domestic), Section 2: Fire

This Handbook covers new build work and work to existing dwellings.

Fire Section 2.3: Structural protection

Fire Section 2.4: Cavities

Fire Section 2.5: Internal linings

Ireland



Technical Guidance Document B – Fire safety

The Technical Documents, commonly known as TGD's give guidance on how to construct a building so that it complies with the Regulations. Where works

are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. Sections B2 and B3 deal with 'internal fire spread (linings)' and 'internal fire spread (structure)', respectively.

The ultimate objective of the Approved Document, as with all fire considerations, is first to protect the lives of occupants, emergency workers, and those passing by or engaged in activities near to the building in question and, second, to try to minimise the structural damage.

The principal means of achieving the fire resistance of a construction element is to:

- Maintain the element's loadbearing capacity (resist collapse)
- Maintain the integrity of the elements (resist fire penetration)
- Provide insulation from high temperature (resist heat transfer)

Knauf Drywall products provide an efficient solution for many construction elements.

Compartmentation in dwellings

Sub-dividing dwellings into separate fire-resisting compartments is critical to the ability of the structure as a whole to prevent rapid fire spread and minimise the size of fires. Again, the overriding aim being to save lives and minimise destruction.

Knauf plasterboard systems are an effective method of achieving compartmentation in dwellings.

The Building Regulations include provisions which state that:

Provision of compartmentation

- Every wall separating semi-detached houses, or houses in terraces, should be constructed as a compartment wall, and the houses should be considered as separate buildings.
- If a domestic garage is attached to (or forms an integral part of) a house, the garage should be separated from the rest of the house by providing 30 minutes fire resistance to any wall and floor between garage and house.

Construction of compartmentation

Every compartment wall and compartment floor should:

- Form a complete barrier to fire between the compartments they separate.
- Have the appropriate fire resistance as indicated in AD B Appendix A, Tables A1 and A2, pages 59 and 60.

Minimum periods of fire resistance for dwellinghouses†

Minimum periods (minutes) for elements of structure in a:

Basement storey including floor over ¹	Ground or upper storey height of top floor above ground	
	Not more than 5m	More than 5m
30 ²	30 ²	60 ³

¹ The floor over a basement (or if there is more than one basement, the floor over the topmost basement) should meet the provisions for the ground and upper storeys if that period is higher.

² Increased to a minimum of 60 minutes for compartment walls separating buildings.

³ 30 minutes in the case of three storey dwellinghouses, increased to 60 minutes minimum for compartment walls separating buildings.

† Table derived from Part B, 2006, Appendix A, Table A2 page 61

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Commercial Thermal

We offer a range of fast, easy to design and easy to install systems to provide increased thermal efficiency for all non-residential buildings.

- Simple to achieve Part L2A and B compliance.
- Brio dry floor screed to maximise underfloor heating efficiency
- Simple, efficient construction processes to maximise thermal integrity



Approved Document L2A (new buildings)

The Approved Document covers all types of non-domestic building. The Energy Performance of Buildings Directive requires a calculation method that adopts a whole building approach to energy performance. A completely new calculation method, the Simplified Building Energy Model (SBEM) has been developed for Approved Document L2A that meets this requirement. The SBEM programme and user guide can be downloaded from www.ncm.bre.co.uk.

In addition, there is greater emphasis on ensuring that the building construction meets the standards assumed at the design stage and that the building services are correctly commissioned.

The SBEM

The SBEM is a computer programme that provides an analysis of a building's energy consumption. It is based on a set of CEN standards and has been developed in order to comply with the EPBD. The first approved version of SBEM was issued in December 2005. The latest version can be downloaded for free from www.ncm.bre.co.uk.

How to comply

Points 1-3 below outline the process the designer and builder must go through to show compliance. The SBEM calculates the building's energy performance in terms of CO₂ emissions per m² per year for heating, cooling, hot water, ventilation systems and lighting.

1 Calculate the Target CO₂ Emission Rate (TER)

Approved software, such as the SBEM, will automatically generate the CO₂ emission rate of the notional building* from the information input.

The TER is arrived at by applying an improvement factor and a LZC (Low or Zero Carbon energy source) benchmark factor to the CO₂ emission rate for the notional building.

The SBEM or other approved software will automatically generate the Target Emission Rate using the improvement factor and LZC benchmark.

2 Calculate the Building CO₂ Emission Rate (BER) for the proposed building

This is calculated using the same software programme as for the notional building, but using the actual U-values, air permeability, building services, fuels and any low or zero carbon energy sources to be used in the proposed building. A fuel factor is applied if mains gas is not used as the main fuel in the proposed building.

The SBEM automatically calculates the BER and takes account of the fuel factor, where relevant.

The BER must be no worse than the calculated TER.

3 Additional compliance criteria

As well as ensuring the CO₂ emission rate for the building is within target, the AD lists four additional criteria that must be met to achieve compliance:

Design limits: Show that the thermal performance of the building fabric and building services are within the design limits set out in the Approved Document.

Limiting solar gains in summer: Where buildings are not provided with air conditioning, show that suitable measures have been taken to control excessive solar gains.

Quality of construction, inspection and commissioning of building services: All buildings must undergo an air pressure test to confirm the specified design air permeability of the building has been achieved.

Provide a notice declaring that the building services have been inspected, tested and commissioned and are in accordance with the proposed building design.

Providing information: Provide a building log book to enable the building owner to operate and maintain the building.

* The notional building must be the same size and shape as the actual building as described in AD B, section 1.22



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Approved Document L2B (existing buildings)

The Approved Document retains an elemental method of demonstrating compliance, although in some cases there is an option to use the SBEM calculation method to show that the overall energy performance of the whole new or altered building is no worse than it would be if the elemental method were used. In addition, for extensions, it is possible to use a weighted U-value calculation to trade-off between different elements of the construction.

The guidance is set out in relation to three classes of building work:

- Extensions to existing buildings, including conservatories
- Buildings created as a result of a material change of use
- Thermal upgrading as part of material alterations.

For each of these classes of work the Approved Document gives relevant energy efficiency standards for:

- New thermal elements
- Replacement thermal elements
- Renovated thermal elements
- Retained thermal elements
- Controlled fittings (glazed elements)
- Controlled services



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Northern Ireland



Technical Standard F2

Section 2 covers the regulations for new buildings other than dwellings.

Section 3 covers the regulations for existing buildings other than dwellings.

Scotland



Non-domestic Technical Handbook Section 6: Energy

These Handbooks cover new build work and work to existing dwellings.

Ireland



Technical Guidance Document L – Conservation of fuel and energy

The Technical Documents, commonly known as TGDs

give guidance on how to construct a building so that it complies with the Regulations. Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. The adoption of an approach different to the TGDs is not prohibited, provided that the approach meets the requirements of the Regulations.



Commercial Fire

Designing-in the specific fire-resisting characteristics of products such as Knauf Fireshield and systems such as Knauf Shaftwall, ensure the requirements of Part B are met and defined levels of fire resistance for differing zones of usage are achieved.

- **Specifiable fire-resisting periods from 30 to 120 minutes**
- **Fire-rated solutions for partitions, linings, ceilings, floors, shafts and encasements**



Approved Document B

Amongst the provisions in the Approved Document are the following:

B1 – To ensure the correct design, construction and provision of means of alarm and escape for persons in the event of a fire.

B2 – To ensure, through appropriate construction and workmanship, that firespread over the internal linings of buildings is inhibited.

B3 – To ensure the stability of buildings in the event of fire by creating separated compartments within buildings to inhibit internal spread of fire. To create sufficient and effective separation between adjoining buildings.

To inhibit unseen spread of smoke and fire via concealed spaces within buildings.

Other considerations

Below are some key elements relating specifically to non-residential construction:

Concealed spaces (cavities)

Concealed spaces or cavities in the construction of a building provide a route for smoke and flame spread. This is particularly so in the case of voids above other spaces in a building; e.g. above a suspended ceiling or in a roof space. As any spread is concealed it presents a greater weakness in the fabric of the building. Provisions are made to restrict this by interrupting cavities which could form a pathway around a barrier to fire, sub-dividing extensive cavities, and by closing the edges of openings.

Protected shafts

Openings in floors for stairways, lifts, escalators and pipes and ducts should be enclosed in a protected shaft, which has the same period of fire resistance (integrity, insulation and, where applicable, load-bearing capacity) as the compartment floor.

Protected shafts for stairways and lifts should be provided with protected lobbies, except where they are accessed from the street.

Knauf Shaftwall and Firefighting Shaftwall provide up to 120 minutes fire resistance and can be constructed totally from one side, making them ideal for lift and service shaft constructions.

Protection of openings and penetrations

For fire separating elements to be effective, every joint and opening for services must be adequately sealed so that the fire resistance of the element is maintained.

Ventilation ductwork

Ventilation ductwork should comply with the requirements of Section 10 of Approved Document B.

External walls

The requirement is for sufficient fire-resistance to prevent fire spread across the relevant boundary. If an external wall is more than 1 metre from the relevant boundary, the wall only needs fire resistance from inside.



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Minimum periods of fire resistance†

Purpose group of building	Minimum periods (minutes) for elements of structure in a:					
	Basement storey ¹ including floor over depth (m) of a lowest basement		Ground or upper storey height (m) of top floor above ground in a building or separated part of a building			
	more than 10	not more than 10	not more than 5	not more than 18	not more than 30	more than 30
Office:						
Not sprinklered	90	60	30 ²	60	90	*
Sprinklered ⁴	60	60	30 ²	30 ²	60	120 ³
Assembly and recreation:						
Not sprinklered	90	60	60	60	90	*
Sprinklered ⁴	60	60	30 ²	60	60	120 ³
Storage and other non-residential, any building or part not described elsewhere:						
Not sprinklered	120	90	60	90	120	*
Sprinklered ⁴	90	60	30 ²	60	90	120 ³
Car park for light vehicles						
Open-sided car park ⁴	n/a	n/a	15 ²	15 ²⁺⁵	15 ²⁺⁵	60
Any other car park	90	60	30 ²	60	90	120 ³

- The floor over a basement (or if there is more than 1 basement, the floor over the topmost basement) should meet the provisions for the ground and upper storeys if that period is higher.
- Increased to a minimum of 60 minutes for compartment walls separating buildings.
- Reduced to 90 minutes for elements not forming part of the structural frame.
- 'Sprinklered' means that the building is fitted throughout with an automatic sprinkler system meeting the relevant recommendations of BS 5306 Fire extinguishing installations and equipment on premises. Part 2 Specification for sprinkler systems; i.e. is the relevant occupancy rating together with the additional requirements for life safety.
- For the purposes of meeting the Building Regulations, the following types of steel elements are deemed to have satisfied the minimum period of fire resistance of 15 minutes when tested to the European test method:
 - Beams supporting concrete floors maximum section factor (A/V)+230m¹
 - Free standing columns, maximum section factor (A/V)+180m¹ operating under full design load
 - Wind bracing and struts, maximum section factor (A/V)+210m¹ operating under full design load
 Guidance is also available in BS 5959 Structural use of steel in building. Part 8 Code of practice for fire resistant design.

* Not permitted

† The above table is derived from Part B vol 2, Table A2, page 124

Northern Ireland



Technical Booklet E – Fire Safety
This document is designed to mirror the requirements of England and Wales.

Scotland



Non-domestic Technical Handbook Section 2: Fire
These Handbooks cover new build work and work to existing dwellings.

Ireland



Technical Guidance Document B – Fire safety
The Technical Documents, commonly known

as TGDs give guidance on how to construct a building so that it complies with the Regulations. Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. The adoption of an approach different to the TGDs is not prohibited, provided that the approach meets the requirements of the Regulations.



Education Acoustic

Educational establishments have wide-ranging acoustic requirements, often with large differentials between adjacent rooms. Knauf Drywall systems have the design and performance flexibility to accommodate these differing requirements without compromise on installation or layout efficiency.

- Acoustic-specific products and systems for sound reduction and reverberation control



Relevant regulations and guidelines

Section 8 of Part E of the Building Regulations covers acoustic conditions in school buildings.

Requirement E4 from Part E of the Building Regulations states that:

“Each room or other space in a school building shall be designed and constructed in such a way that it has the acoustic conditions and the insulation against disturbance by noise appropriate to its intended use”.

The usual route to compliance is by meeting the performance standards set out in Building Bulletin 93: Acoustic design of schools – a design guide: 2003, DfES (also referred to as BB93).

There is a consensus that low ambient noise levels are required in the teaching environment, particularly in view of the ‘Special Educational Needs and Disability Act’ 1991 (updated in 2001) (now part of DDA) which demands the inclusion of children with special needs within mainstream schools.



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www.knaufdrywall.co.uk

Many school rooms provide inadequate acoustics for their intended function because of their age, poor design and planning, inefficient sound insulation, or multi-purpose functionality.

All newly built or refurbished LEA-maintained and independent schools are required to comply with Building Bulletin 93 Section 1 and where the performance values for sound insulation, reverberation time and indoor ambient noise levels given in Section 1 are followed, the Building Regulations Part E4 will be satisfied.

Airborne sound insulation between rooms^{5,6}

	Minimum $D_{nT} (T_{mf,max}),w$	Activity noise in source room			
		Low	Average	High	Very high
Noise tolerance in receiving room (see table opposite)	High	30	35	45	55
	Medium	35	40	50	55
	Low	40	45	55	55
	Very low	45	50	55	60

⁵ Each value in the table is the minimum required to comply with the Building Regulations.

⁶ Where values greater than 55dB $D_{nT} (T_{mf,max}),w$ are required, special high performance constructions may be necessary. Knauf Drywall Technical Services can offer advice regarding these types of construction.

Table derived from BB93 Table 1.2 (page 10).



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Performance standards for indoor ambient noise levels[†]

Room type	Room classification for purpose of airborne sound insulation		Upper limit for indoor ambient noise
	Activity Noise (source room)	Noise Tolerance (receiving room)	L _{Aeq} [†] 30 min (dB)
Nursery school playrooms	High	Low	35*
Nursery school quiet rooms	Low	Low	35*
Primary school classrooms and general areas	Average	Low	35*
Secondary school classrooms and general areas	Average	Low	35*
Open plan: ¹			
Teaching areas	Average	Medium	40*
Resource areas	Average	Medium	40*
Music:			
Music classroom	Very high	Low	35*
Small practice/group room	Very high	Low	35*
Ensemble room	Very high	Very low	30*
Performance/recital room	Very high	Very low	30*
Recording studio ²	Very high	Very low	30*
Control room (for recording)	High	Low	35*
Lecture rooms:			
Small (fewer than 50 people)	Average	Low	35*
Large (more than 50 people)	Average	Very low	30*
Classrooms for use by hearing impaired pupils	Average	Very low	30*
Study room (individual study, remedial work etc.)	Low	Low	35*
Libraries:			
Quiet study area	Low	Low	35*
Resource areas	Average	Medium	40
Science laboratories	Average	Medium	40
Drama studios	High	Very low	30*
Design and technology:			
Resistant materials/CAD/CAM areas	High	High	40
Electronics/control/textiles etc	Average	Medium	40
Art rooms	Average	Medium	40
Assembly ³ /multi-purpose halls ² (PE, drama, audio/visual presentations, occasional music, assembly)	High	Low	35*
Audio-visual/video conference	Average	Low	35*
Atria, pupil circulation spaces	Average	Medium	45
Indoor sports hall	High	Medium	40
Dance studio	High	Medium	40
Gymnasium	High	Medium	40
Swimming pool	High	High	50
Interviewing/counselling/medical rooms	Low	Low	35*
Dining rooms	High	High	45
Ancillary spaces:			
Kitchens [†]	High	High	50
Offices [†] , staff rooms [†]	Average	Medium	40
Corridors [†] , stairwells [†]	Average - high	High	45
Coats and changing areas [†]	High	High	45
Toilets [†]	Average	High	50

* Teaching can be disrupted by individual noisy events even where the noise level is below the above limits. For rooms requiring 35 dB or less, the noise level should not regularly exceed 55 dB L_{A1}, 30 min.

† The extension of Part E of Schedule 1 to the Building Regulations 2000 (as amended by SI 2002/2871) to schools applies to teaching and learning spaces and is not intended to cover administration and ancillary spaces. For these areas, the performance standards are for guidance only.

1 Acoustic considerations of open-plan areas are complex. A specialist acoustic consultant should be contacted.

2 Studios require specialised acoustic environments and the noise limits for these will vary with the size, intended use and type of room.

3 Halls are often multi-functional spaces (especially in primary schools) and the designer should design to the lowest indoor ambient noise level for which the space is likely to be used.

‡ This table is derived from BB 93, Table 1.1 page 9

Northern Ireland



Technical Standards G and G1
G1 covers the reduction of sound transmission and reverberation in new buildings.

G 'Sound conversions' covers the reduction of sound transmission and reverberation in conversions

Scotland



Technical Handbook Section 5, non-domestic
This Handbook covers new build work and work to existing buildings other than dwellings.

Ireland



Technical Guidance Document E - Sound
The Technical Documents, commonly known

as TGDs give guidance on how to construct a building so that it complies with the Regulations. Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. The adoption of an approach different to the TGDs is not prohibited, provided that the approach meets the requirements of the Regulations.

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Education Fire

The ultimate objective of the regulations is first to protect the lives of occupants, emergency workers, and those passing by or engaged in activities near to the building in question and, second, to try to minimise structural damage.

Knauf Drywall systems are designed to:

- **Minimise surface spread of flame**
- **Contain fire in discrete compartments**
- **Help maintain the structural integrity of the building**



Approved Document B (2006, amended 2007)

Amongst the provisions in the Approved Document are the following:

- B1: Means of warning and escape
- B2: Internal fire spread (linings)
- B3: Internal fire spread (structure)
- B4: External fire spread

Fire considerations for education

The design of fire safety in schools is covered by Building Bulletin 100 – Design for fire safety in schools (also referred to as BB 100) published by the DfES. Part B of the Building Regulations will typically be satisfied where the guidance in that document is followed.

Fire resisting and smoke restricting construction

Much of the detailed construction design guidance in BB100 is concerned to a greater or lesser degree with restricting the spread of fire and smoke by appropriate construction.

This has three primary objectives:

- To prevent fire and smoke from spreading into protected routes: i.e. protected corridors and stairways.
- To isolate areas where the risk assessment has identified hazardous areas or areas identified as critical to the functioning of the school.
- To restrict disproportionate damage to the school as a result of a fire by means of compartmentation thus limiting the fire to the room of origin.

BB100 recognises that it is important to restrict spread of fire so that the normal working of the school can be resumed as soon as possible, minimising the harm to children's life chances when their school is destroyed by fire.

Places of special fire hazard

These areas need special consideration as they may either be High Hazard, ie, the source of 'hot' activities thus contributing to a high risk area, or may represent a valuable resource that is difficult to replace.

Places of special fire hazard that require additional protection include the following:

- Boiler rooms
- Storage space for fuel or other highly flammable substances (including PE mats) or chemicals
- Laboratories
- Technology rooms with open heat sources
- Kitchens
- Oil-filled transformer and switch-gear rooms
- Rooms housing a fixed internal combustion engine

Cloakrooms should also be regarded as places of special fire hazard.

Knauf Drywall systems can be used in all of these areas to provide up to 120 minutes fire resistance.

Protected escape routes

BB 100 states that: 'Protected stairways are designed to provide virtually 'fire sterile' areas which lead to places of safety outside the building. Once inside a protected stairway, a person can be considered to be safe from immediate danger from flame and smoke.'



Knauf Drywall fire-resistant systems, designed-in to escape routes, can help provide the necessary protection and compliance with Part B.

Protected shafts

Lift wells should be either:

- (a) Contained within the enclosures of a protected stairway; or
- (b) Enclosed throughout their height with fire-resisting construction if they are sited so as to prejudice the means of escape.

Ducts passing through the enclosure of a protected escape route should be fire-resisting.

Knauf Shaftwall and Firefighting Shaftwall can be constructed totally from one side and are ideal for lift and service shaft constructions.

Internal fire spread (linings)

Part B requires that linings:

- (a) Adequately resist the spread of flame over their surfaces; and
- (b) Have, if ignited, a rate of heat release or a rate of fire growth, which is reasonable in the circumstances.

The choice of lining materials for walls and ceilings can significantly affect the spread of a fire and its rate of growth, even though they are not likely to be the materials first ignited. It is particularly important in circulation spaces where

linings may offer the main means by which fire spreads and where rapid spread is most likely to prevent occupants from escaping.

Knauf plasterboards are tested together with Knauf Metal Studs and Fixings to give guaranteed periods of fire resistance as a complete system.

Compartmentation

The spread of fire within a building can be restricted by sub-dividing it into compartments separated from one another by walls and/or floors of fire-resisting construction.

The object here is twofold:

- To prevent rapid fire spread which could trap occupants of the building
- To reduce the chance of fires becoming large fires which are more destructive, life threatening and liable to spread to other buildings

Special forms of compartmentation may be required where walls are common to two or more buildings, where walls divide buildings into separated parts, or where a construction encloses places of special fire hazard.



Design Partner Series

Our dedicated Education brochure is available free, upon request.

Please telephone 08700 613700 to request a copy, or download from our website: www.knaufdrywall.co.uk

Northern Ireland



Technical Booklet E Fire Safety (2005)

This document covers both dwellings and non-dwellings.

Sections 2 and 3 deal with internal fire spread to linings and structure, respectively.

Scotland



Technical Handbook: Non-domestic, Section 2 Fire (May 2007)

This Handbook covers new build work and work to existing non-dwellings.

Ireland



Technical Guidance Document B - Fire safety

The Technical Documents, commonly known as TGDs give

guidance on how to construct a building so that it complies with the Regulations. Where works are carried out in accordance with the TGDs, this will indicate compliance with the Regulations. The adoption of an approach different to the TGDs is not prohibited, provided that the approach meets the requirements of the Regulations.

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Healthcare Acoustic

The acoustic requirements for hospitals can be extremely complex and demanding. Knaf Drywall have the expertise, design tools, products and systems to provide tailor-made and compliant solutions to meet HTM and Building Regulation requirements.

- **Specifically designed acoustic systems with added performance characteristics; moisture resistance, impact resistance, etc.**
- **Free design service**



Health Technical Memorandum 08-01: Acoustics, is a guidance document to help healthcare professionals better understand acoustic requirements and to help designers build facilities that meet these requirements. In practice, a specialist acoustic adviser should be involved from outline design onwards to ensure that the complex criteria are met holistically.

HTM 08-01 recommends acoustic criteria for:

- Noise levels in rooms – both from mechanical services within the building and for noise coming from outside
- External noise levels
- Sound insulation between rooms – allows rooms with differing noise requirements to exist side by side
- Impact sound insulation
- Room acoustics
- Audio systems
- Audiology facilities
- Vibration caused by plant

The document supersedes all other guidance by the Department of Health on acoustics. It is always advisable to check for updates and corrections on-line.

Internal sound insulation

HTM 08-01 states that appropriate sound levels should be set for each room; so that for instance, noisy activities do not interfere with the need for quiet in adjacent rooms; nor should private conversations be 'overhearable' from designated private rooms or areas.

Acoustic requirements for partitions and floors

The general parameters for these rooms and areas are set out in tables 3 (sound insulation parameters) and 4 (sound insulation ratings $dB D_{nT,w}$) of HTM 08-01 and specific sound insulating performance requirements for an extensive range of room types are set out in Table 5.

'Source' rooms and 'receiving' rooms

Rooms in a healthcare environment may have three sets of acoustic criteria to which they must comply:

- Privacy requirement as a source room
- Noise generation as a source room
- Sensitivity to incoming noise as a receiving room

Key parameters and criteria from HTM 08-01

The document sets out a series of tables progressively covering performance requirements as follows:

Table 1 – Criteria for noise intrusion from external sources

Sets out recommended allowable levels of noise intrusion for the completed building and covers rain noise, traffic noise, sirens etc.

Table 2 – Criteria for internal noise from mechanical and electrical services

Sets out the recommended levels of noise for areas within the healthcare environment from services such as medical equipment, plantrooms, nurse-call systems etc.

Table 3 – Sound insulation parameters for rooms

Sets out the privacy needs of a source room, its anticipated levels of noise generation (as a noise source) and the sensitivity of the space to incoming noise (as a receiving room). For example, a consulting room has a 'confidential' privacy requirement; 'typical' noise generation (source) levels and 'medium' sensitivity as a receiving room.

Table 4 – Sound insulation ratings ($dB D_{nT,w}$) to be achieved on site

Used to select the standard of sound insulation required based on the parameters from Table 3 in terms of weighted standardised level difference ($D_{nT,w}$). Again, taking the consulting room as an example, as a confidential room with typical noise generation and medium sensitivity, it requires a $D_{nT,w}$ 47 dB sound insulation rating as a receiving room.



Table 5 – Matrix showing sound insulation performance required (dB $D_{nT,w}$)
Summarises the installed sound installation performance ($D_{nT,w}$) required for a range of healthcare rooms and other spaces across the categories of clinical, public and staff areas. The table gives values for rooms both as source and receiving rooms.

Knauf Drywall system solutions for healthcare can help compliance

Knauf Drywall products are tested as complete systems – plaster, plasterboard, metal sections and fixings, together – and give proven levels of acoustic performance for a very wide range of applications.



Throughout this Complete Drywall Manual you will find healthcare specific solutions developed through our years of experience working on the UK's largest hospitals. Look for the healthcare icon.



Design Partner Series

Our dedicated Hospital brochure is available free, upon request.

Please telephone 08700 613700 to request a copy, or download from our website: www.knaufdrywall.co.uk



Northern Ireland



Technical Standards G1 and G2

G1 covers the reduction of sound transmission and reverberation in new buildings.

G 'Sound conversions' covers the reduction of sound transmission and reverberation in conversions.

Scotland



Technical Handbook Section 5, non-domestic

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Healthcare Fire

In environments containing large numbers of infirm and immobile people, the ability of the fabric of those buildings to minimise fire risk, contain fire spread and maximise structural stability is absolutely paramount.

- **Fire-resisting periods from 30-120 minutes**
- **Specialised products and systems such as steelwork encasements and linings to lift shafts**
- **Our technical service can design bespoke solutions, compartmentation, communal areas, internal escape routes, etc.**



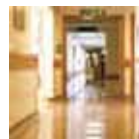
Healthcare fire considerations

HTM 05-02 'Firecode - fire safety in the NHS' is a code of practice that contains guidance and measures to satisfy all of the requirements of Approved Document B and applies to the full range of premises used for the provision of treatment or care - new, refurbishment, or change of use.

It completely supercedes HTM 81.

As fire safety is dependent not only on the physical fire precautions provided, HTM 05-02 also considers the fire safety implications of:

- The dependency of the patient
- Fire hazards within the hospital
- Management policies
- Availability of sufficient and adequately trained staff



Where Knauf products can help with compliance

Means of escape: Healthcare establishments must be constructed so that there are appropriate means of escape in the event of a fire. This requires means of vertical and horizontal escape that are fire resistant and/or minimise heat release once ignited.

Internal fire spread (linings): In a similar fashion to means of escape, linings can inhibit the spread of fire within the building generally if they adequately resist the spread of flame over their surfaces. Additionally, they should, if ignited, have a rate of heat release that is suited to whichever area of the hospital they have been used for.

In both these areas of construction, Knauf Drywall products – plasterboards, metal components and fixings, tested together as complete systems – offer defined periods of fire resistance which help achieve compliance.

Compartmentation: Compartmentation is a form of construction used to help prevent the spread of fire to or from another part of the same building or an adjoining building.

'Compartment' floors or walls are fire-resisting constructions used to separate one fire compartment from another and require a minimum period of resistance of 60 minutes (30 minutes in single storey buildings).

Knauf Drywall systems are an ideal means of achieving a wide variety of compartment types with differing but defined periods of fire resistance along with other acoustic or thermal properties, if required.

Minimum periods of fire resistance for compartment walls†

Hospital construction	Unsprinklered	Sprinklered
Single-storey healthcare buildings	30 minutes	30 minutes
Healthcare buildings with storeys up to 12 metres above ground level or basements no more than 10m deep	60 minutes	30 minutes* (Basements 60)*
Healthcare buildings with storeys over 12 metres above ground level or basements no more than 10m deep	90 minutes	60 minutes*
Healthcare buildings with storeys over 30 metres and floors over 12 metres above ground	120 minutes	90 minutes*

* The reduction in fire resistance is conditional upon clear instructions regarding the maintenance and inspection requirements for the sprinkler system.

† Derived from HTM 05-02, Table 2, page 24.

Periods of fire resistance

The performance of those elements of the building that are required to achieve a specified period of fire resistance is determined by reference to BS 476-20–24: 1987.

The table below summarises the specific requirements for each element in terms of load-bearing capacity, integrity and insulation.

Specific periods of fire resistance for building elements†

Part of building	Minimum provisions when tested to the relevant part of BS 476 ¹ (minutes)			Min provisions when tested to relevant European Standard ³ (minutes)	Method of exposure
	Load-bearing capacity ²	Integrity	Insulation		
Structural frame beam or column	see Table 2 [†]	not applicable	not applicable	R (see Table 2 [†])	exposed faces
Load-bearing wall	see Table 2 [†]	not applicable	not applicable	R (see Table 2 [†])	each side separately
Compartment floor ^{4,5}	60	60	60	REI 60	from the underside
Compartment wall ⁶	not applicable	60 ⁷	60 ⁷	REI 60	each side separately
Single-storey buildings		30	30	REI 30	
Sub-compartment wall ⁶	not applicable	30	30	EI 30	each side separately
Wall to a fire hazard room	not applicable	30	30	REI 30	each side separately
Protected shaft	60	60	60	REI 60	each side separately
Fire-fighting shafts	120	120	120	REI 120	from side remote from shaft
1) construction separating the shaft from the building	60	60	60	REI 60	from shaft side
2) construction separating fire-fighting stairway from fire-fighting lift shaft and fire-fighting lobby	60	60	60	REI 60	each side separately
Cavity barrier ⁸	not applicable	30	15	EI 30	each side separately
Fire-resisting ceiling as described in HTM 05-02 paragraphs 5.23 and 6.30	not applicable	30	30	E 30	from below

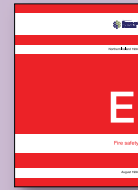
Notes:

- BS 476-2 for load bearing elements; BS 476-22 for non-load bearing elements; BS 476-23 for fire protecting suspended ceilings; and BS 476-24 for ventilation ducts. BS 476-8 results are acceptable for items tested or assessed before 1st January 1988.
- Applies to load bearing elements only (see Approved Document B - B3.ii and Appendix E).
- The national classifications do not automatically equate with the equivalent classifications in the European column; therefore, products cannot typically assume a European class unless they have been tested accordingly.
 - “R” is the European classification of the resistance to fire performance in respect of load bearing capacity.
 - “E” is the European classification of the resistance to fire performance in respect of integrity.
 - “I” is the European classification of the resistance to fire performance in respect of insulation.
- See Table 2[†] for floors that are over 12m and 30m above ground level.
- Guidance on increasing the fire resistance of existing timber floors is given in BRE Digest 208 ‘Increasing the fire resistance of existing timber floors’.
- Except for any limitations on glazed elements.
- May be reduced if sprinklers are installed.
- For the purposes of meeting the Building Regulations, cavity barriers will be deemed to have satisfied the provisions above, provided that they achieve an integrity requirement of at least 30 minutes and an insulation requirement of at least 15 minutes.

† HTM 05-02 Table 2 - Fire resistance of elements of structure, page 24.

† Derived from HTM 05-02 Table A1, pages 51-52.

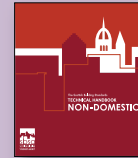
Northern Ireland



Technical Booklet E Fire Safety (2005)

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Scotland



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Our Service to You



Quality

The Knauf Group is one of the largest drywall manufacturers in the World with a group turnover in excess of €2.5billion. Still privately owned, with our head office in Germany, we pride ourselves on the quality of our products and our commitment to staff and customers – not shareholders. Knauf Drywall manufacture in the UK to EN 520, BS 1191 and BS EN ISO 9000 using advanced production facilities.

Our sites are ISO 14001 certified for environmental management.

Performance

Our systems use Knauf materials throughout – board, metal, insulation, plaster and accessories. All are manufactured to strict British and European Standards and are thoroughly independently tested together as complete, warranted systems. Fire, acoustic, robustness, longevity, and structural performance are all tested for the relevant application. Full details can be found online, or this Manual.

Service – throughout the supply chain

As a specifier, you can benefit from friendly, expert technical advice from our Technical Service teams, our in-depth literature (including the RIBA CPD approved Design Partner Series) and our award-winning website (CAD downloads, interactive tools, system information and so on). Our commitment to service goes far deeper, though, extending throughout the supply chain to ensure that the delivery and installation process on-site is as smooth as possible.

Innovation

Can you still innovate in plaster and drywall systems? We believe so. Our fire and sound rated Aquapanel tile backing systems can be completely saturated without losing any performance. Seamless Apertura perforated boards offer endless design opportunities with exceptional sound absorption properties. Our Acoustic Stud significantly increases sound reduction without increasing width or complexity. Our projection plasters are 3 times faster than traditional 2 coat, and without the mess. Our Brio dry floor screed boards are light, strong and maximise underfloor heating efficiency.

Time

Time is precious and we know that you are busy. That is why we have developed a whole host of timesaving devices for the specifier. Our online Partition Selector chooses the correct partitions for your requirements (you can value engineer multiple partitions too) and writes the specification for you – you can have the full specifications in pdf format for, say, 10 partitions in a matter of minutes. It will also create bespoke technical manuals for you at the same time. Our system literature provides sector specific guidance to regulations, and optimised systems that we know are ideal for that sector's requirements. Our Technical Services department won't keep you hanging on the telephone.

The Environment

We use recycled materials wherever possible in our manufacturing processes and are committed to taking back and re-processing waste plasterboard from sites. The paper liners on our boards are from 100% recycled stock. We use recycled and 100% synthetic gypsum whenever possible – normally desulphurised gypsum (a by-product from power stations). And of course, we are ISO 14001 certified.

Project & Specification Managers

Our national team of Project & Specification Managers (PSMs) can provide help and support throughout the duration of your project. They are often involved with the entire supply chain from the distributor through to the client, speeding up the flow of information and spotting and eliminating likely issues. Our PSMs are all highly skilled and technically qualified, and specialise in bespoke design and value engineering large projects.

Call 01795 416259 to find out more.

The Technical Services team

Our office based Technical Support Officers (TSOs) work hand in hand with our PSM team, providing design back-up and a quick response to all your technical enquiries. Our TSOs are all technically qualified and enjoy comprehensive and ongoing training. Our commitment to investing in people has resulted in a large number of TSOs going on to become PSMs in the field, and the two teams have an excellent working relationship – enhancing the level of service you can expect from us.

Call 01795 416259 for technical advice.

CPD

Knauf Drywall are active members of the RIBA CPD Providers Network. We offer a range of CPD essential seminars designed to enhance and increase the knowledge and skills of the professional architect.

For more information, telephone 01795 424499.



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Supporting Tools and Literature



Online

Our award-winning website is an invaluable tool and features CAD downloads, interactive tools, system information and much more.

www.knaufdrywall.co.uk

The Manual online

The online partner to this document quickly gives you the information you need on our products and systems, wherever you are.

manual.knaufdrywall.co.uk

Partition Specifier

How would you like to specify and value engineer all the drywall partitions on your project, complete with paperwork in a few minutes?

Our online Partition Specifier does exactly that – and it's totally free for you to use. Just part of the service. Try it and our other online tools at www.knaufdrywall.co.uk – you won't be disappointed.

partitionspecifier.knaufdrywall.co.uk

BB93 calculator

Makes specifying for schools easy. Simply choose the source and receiving rooms and enter the required data in the spaces provided.

manual.knaufdrywall.co.uk





Literature

We know that different sectors have their own unique requirements and dedicated regulations. That's why we created our Design Partner series of technical guides – they're far quicker to reference than the regulations without being dumbed down. And they give you access to our sector-optimised systems and specification advice.

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Alternatively, they can be downloaded from:
www.knaufdrywall.co.uk

Our Design Partner Series includes technical guides for Housing, Hospitals, Schools, Commercial, Retail and Leisure buildings. Combine these with our award-winning online Manual, with its tools to specify partitions, write O&M Manuals and calculate BB93 performances and you can make short work of specifying even the largest project.

For our complete list of product and system literature please refer to:

www.knaufdrywall.co.uk/literature

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System Performance Warranty Your peace of mind



Knauf Drywall's range of comprehensive fully warranted drylining systems offer a single source of supply and complete peace of mind for clients, specifiers and contractors.

Our systems have been developed as complete drywall constructions to ensure consistent and effective performance on-site.

Knauf products are tested together as component parts of these systems to recognised standards: for correct warranted performance only genuine Knauf components should be used.



The Knauf Drywall System Performance Warranty ensures your drywall systems are:

- ✓ Designed to perform consistently for the lifetime of the system
- ✓ Fully supported by Knauf Drywall Technical Services both pre-site and during construction
- ✓ Guaranteed in the unlikely event of unsatisfactory product or system performance



All the systems in this brochure are covered by our comprehensive Knauf Drywall Performance Warranty, giving you the assurance that the systems you specify and install will perform to specification.

Our full system and product warranty statements are available from Knauf Drywall Technical Services on 01795 416259, our literature line on 08700 613700 and online at www.knaufdrywall.co.uk

Further information

For all queries regarding the Knauf Drywall System Performance Warranty contact Knauf Drywall Technical Services or download from www.knaufdrywall.co.uk

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Knauf a Family Business

Family principles, global dimensions

Knauf is a family name *and* a corporate group of global dimensions. At the same time synonymous with a type of corporate culture which has become rare. Knauf is a typical family firm in spite of its size and this is precisely the reason for its amazing success. It is the short and direct decision-making paths, the courage to tackle new ideas, innovations, investments and the wealth of ideas contributed by all Knauf employees that characterise the company.

Knauf was founded in 1932 and has expanded and diversified to become a corporation with worldwide activities, delivering products and services in many fields:

- Building materials and systems based on gypsum and gypsum-related products
- Thermal insulating and sound insulation materials
- Limestone and lime products
- Chalk and cement related products
- Mechanical engineering
- Pre-formed parts
- Interior construction
- DIY products
- Facades
- Logistics

For further information on the Knauf Group visit:
www.knauf.com

Knauf in the UK

The successful development of the UK business started in 1988 with the construction of our first plasterboard plant in Sittingbourne, Kent. A second plasterboard plant at Immingham, N.E. Lincolnshire, and a plaster plant at Sittingbourne closely followed. To date, in excess of £100 million has been invested in the most advanced manufacturing technology making Knauf Drywall one of the largest suppliers of gypsum-based building materials in the UK.

Knauf is firmly committed to on-going technology developments and diversification, working closely with the industry to deliver quality, innovative, cost-effective products to our customers. Knauf systems have been used and installed around the world with proven success. In the UK, products have the quality assurance of the Company's BS EN ISO 9001:2000 and BS EN ISO 14001 certification.

To ensure that this success continues into our third decade, we are not only working to continually improve the quality of current products and services, but constantly monitoring and evaluating trends for new materials, technologies and systems. In this way we can identify and develop each new opportunity to maintain our leading edge position.



Gypsum, a sustainable material

Huge deposits of natural gypsum were laid down 100 to 200 million years ago. These are now extracted by both open cast and underground mining. The extraction process requires only small surface areas, minimising interruption of natural processes in terms of space and time.

FGD Gypsum

Flue Gas Desulphurisation (FGD) systems are used by coal-fired power stations to reduce emission levels. Knauf was instrumental in the research, development and implementation process that has enabled the use of one of the end products (FGD gypsum – chemically identical to natural gypsum) of the cleaning process in the manufacture of its products.

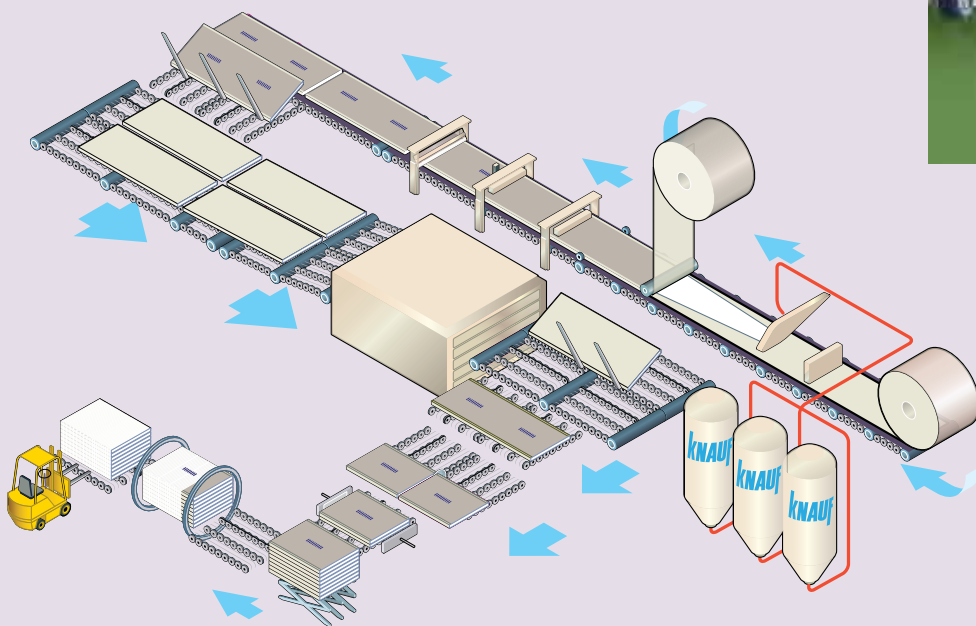
Knauf recycle every available tonne of this resource, constantly checking its quality, into a range of our high quality products.

In addition we are increasingly incorporating recycled site-waste gypsum into our products which, themselves, remain completely recyclable.

For more information on sustainability, please see pages 294-299.



Plasterboard production



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Knauf Performer 'C' Stud partition performance information

For more information on these and other system performances, please contact Knauf Drywall Technical Services on 01795 416259.

 Dimensions (mm)				 Maximum height (mm) ²		
'C' Stud depth and gauge	Overall width	Board width	Layers	'C' Stud centres		
				600mm	400mm	300mm
50mm (0.55)	77	12.5	1	2500	2900	3100
	82	15	1	2800	3100	3300
	102	12.5	2	3400	3600	3800
	112	15	2	3700	3900	4000
60mm (0.55)	87	12.5	1	3200	3500	3800
	92	15	1	3400	3700	4000
	112	12.5	2	4100	4300	4600
	122	15	2	4400	4600	4800
70mm (0.55)	97	12.5	1	3600	4000	4300
	102	15	1	3800	4200	4500
	122	12.5	2	4600	4900	5100
	132	15	2	4900	5100	5300
70mm Acoustic (0.6)	97	12.5	1	3800	4200	4500
	102	15	1	4000	4400	4700
	122	12.5	2	4800	5100	5300
	132	15	2	5100	5300	5500
92mm (0.7)	119	12.5	1	4800	5200	5600
	124	15	1	5000	5400	5800
	144	12.5	2	6000	6300	6500
	154	15	2	6200	6500	6700
146mm (0.55)	173	12.5	1	6200	6900	7500
	178	15	1	6500	7200	7700
	198	12.5	2	7600	8100	8500
	208	15	2	7900	8400	8700

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Acoustic rating (dB R_w)



Fire rating (resistance in minutes)

Acoustic rating (dB R _w)				Fire rating (resistance in minutes)				
Wallboard ³		Soundshield/ Sound Moistureshield		BS 476		EN 1364		
No Insulation	With Insulation ¹	No Insulation	With Insulation ¹	Wallboard ⁴	Fireshield/ Fire Moistureshield/ Impact Panel	Wallboard ⁴	Soundshield/ Sound Moistureshield	Fireshield/ Fire Moistureshield/ Impact Panel
36	42	37	43	30	30	–	30	30
37	42	40	44	30	60	30	60	60
42	48	47	52	60	120	60	60	120
45	49	49	54	90	120	60	90	120
36	42	37	43	30	30	–	30	30
37	42	40	44	30	60	30	60	60
42	48	47	53	60	120	60	60	120
46	49	49	54	90	120	60	90	120
37	44	40	45	30	30	–	30	30
39	44	42	45	30	60	30	60	60
46	52	49	54	60	120	60	60	120
47	53	51	55	90	120	60	90	120
40		43	48	30	30	–	30	30
				30	60	30	60	60
				60	120	60	60	120
				90	120	60	90	120
37	44	40	45	30	30	–	30	30
39	44	42	46	30	60	30	60	60
46	52	49	54	60	120	60	60	120
48	54	51	55	90	120	60	90	120
38	44	42	47	30	30	–	30	30
40	44	43	48	30	60	30	60	60
48	52	51	54	60	120	60	60	120
49	55	55	57	90	120	60	90	120

1 One layer of 25mm Knauf Earthwool Acoustic Roll.

2 Maximum Heights calculated based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476: Part 22:1987. For maximum heights in relation to the use of EN 1364-1:1999 please contact Knauf Drywall Technical Services.



3 The acoustic ratings for Wallboard also apply to all Knauf plasterboard types except for Knauf Soundshield and Knauf Sound Moistureshield.

4 The fire ratings for Wallboard in this column also apply to Knauf Moistureshield.

Appendices Performance tables

Knauf Performer 'I' Stud partition performance information

For more information on these and other system performances, please contact Knauf Drywall Technical Services on 01795 416259.

 Dimensions (mm)				 Maximum height (mm) ¹		
'I' Stud depth and gauge	Overall width	Board width	Layers	'I' Stud centres		
				600mm	400mm	300mm
50mm (0.55)	77	12.5	1	2900	3400	3700
	82	15	1	3100	3500	3800
	102	12.5	2	3700	3900	4200
	112	15	2	3900	4200	4400
60mm (0.55)	87	12.5	1	3600	4000	4400
	92	15	1	3800	4200	4500
	112	12.5	2	4400	4700	5000
	122	15	2	4600	4900	5200
70mm (0.70)	97	12.5	1	4600	5100	5600
	102	15	1	4700	5300	5700
	122	12.5	2	5300	5700	6100
	132	15	2	5500	5900	6300
92mm (0.90)	119	12.5	1	6000	6800	7400
	124	15	1	6100	6900	7500
	144	12.5	2	6800	7400	7900
	154	15	2	6900	7500	8000
146mm (0.90)	173	12.5	1	8300	9400	10300
	178	15	1	8500	9600	10500
	198	12.5	2	9200	10100	10900
	208	15	2	9400	10300	11100



Fire rating (resistance in minutes)

BS 476		EN 1364		
Wallboard ²	Firesield/ Fire Moistureshield/ Impact Panel	Wallboard ²	Soundshield/ Sound Moistureshield	Firesield/ Fire Moistureshield/ Impact Panel
30	30	–	30	30
30	60	30	60	60
60	120	60	60	120
90	120	60	90	120
30	30	–	30	30
30	60	30	60	60
60	120	60	60	120
90	120	60	90	120
30	30	–	30	30
30	60	30	60	60
60	120	60	60	120
90	120	60	90	120
30	30	–	30	30
30	60	30	60	60
60	120	60	60	120
90	120	60	90	120
30	30	–	30	30
30	60	30	60	60
60	120	60	60	120
90	120	60	90	120

1 Maximum Heights calculated based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476: Part 22:1987. For maximum heights in relation to the use of EN 1364-1:1999 please contact Knauf Drywall Technical Services.

2. The fire ratings for Wallboard in this column also apply to Knauf Moistureshield.

Note: For acoustic ratings for specific Knauf 'I' Stud partitions, please contact Knauf Drywall Technical Services.

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For more information on these and other system performances, please contact Knauf Drywall Technical Services on 01795 416259.

Knauf Easybuild

 Dimensions (mm)				 Maximum height (mm)	 Acoustic rating (dB R_w)	 Fire rating (resistance in minutes)	
Stud depth and gauge	Overall width	Board width	Layers	Stud centres		BS 476	EN 1364
50mm Acoustic 'C' (0.60)	82	15	1	2600	40	30	30

Note: All data relates to the use of Knauf Soundshield

Knauf Isolator

 Dimensions (mm)				 Maximum height¹ (mm)	 Acoustic rating¹ (D_{nT,w}+C_{tr})	 Fire rating¹ (resistance in minutes)
Stud depth and gauge	Overall width	Board width	Layers			BS 476
70mm 'C' (0.55)	250	12.5	2	3000	45	60

Dimensions (mm)				Maximum height² (mm)	Acoustic rating² (dB R_w)	Fire rating² (resistance in minutes)
Stud depth and gauge	Overall width	Board width	Layers			BS476
50mm 'C' (0.55)	170	15	2	2600	63	90
50mm 'I' (0.55)	170	15	2	3100	63	90
70mm 'C' (0.55)	210	15	2	3000	65	90
70mm 'I' (0.70)	210	15	2	4300	65	90

Dimensions (mm)				Maximum height³ (mm)	Acoustic rating (dB R_w)	Fire rating (resistance in minutes)
Stud depth and gauge	Overall width	Board width	Layers			BS476
92mm 'I' (0.90mm)	300	15	2	5700	69 ⁴	90 ⁴
92mm 'I' (0.90mm)	550	15	3	5700	75 ⁴	120 ⁴
92mm 'I' (0.90mm)	550	15	3	5700	76 ⁵	120 ⁵

¹ Data relates to use of Knauf Soundshield and 50mm Knauf Earthwool Universal Slab RS33

² Data relates to use of Knauf Soundshield and 2 layers of 25mm Knauf Earthwool Acoustic Roll

³ Maximum height data relates to the use of unbraced Knauf 'I' Stud systems and are based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476: Part 22: 1987. For data in relation to the use of Knauf 'C' studs, braced at maximum 1500mm centres with acoustic braces [by others], please contact Knauf Drywall Technical Services.

⁴ Data relates to use of Knauf Soundshield and 100mm Knauf Earthwool Acoustic Roll

⁵ Data relates to use of Knauf Soundshield and 2x100mm Knauf Earthwool Acoustic Roll

Note: Fire ratings quoted in accordance with BS 476:Part 22:1987. For ratings in accordance with EN 1364-1:1999, please contact Knauf Drywall Technical Services.

Knauf Shaftwall

Stud depth and gauge	Dimensions (mm)			Maximum height (mm) ²	Acoustic rating (dB R _w)		Fire rating ³ (resistance in minutes) BS 476
	Overall width	Board width	Layers		No Insulation	With Insulation ¹	
60mm 'CT' (0.92)	77	15	1	4300	34	41	60
	87	12.5	2	4900	37	45	90
	92	15	2	5000	41	46	120
92mm 'CT' (0.92)	109	15	1	6200	40	45	60
	119	12.5	2	6400	42	46	90
	124	15	2	6700	43	48	120
146mm 'CT' (0.92)	163	15	1	7400	41	46	60
	173	12.5	2	7900	45	50	90
	178	15	2	8000	45	50	120

1 One layer of 25mm Knauf Earthwool Acoustic Roll.

2 Maximum Heights calculated based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476 :Part 22: 1987. For maximum heights in relation to the use of EN 1364-1:1999 please contact Knauf Drywall Technical Services.

3 Fire ratings quoted in accordance with BS 476:Part 22:1987 (Integrity Only). The temperature of the exposed flange of the CT Stud may exceed the requirements of BS 476: Part 22:1987 within the quoted fire test period. Relaxation should be sought from the approving Authority on the basis that no combustible materials are likely to be stored adjacent to the structure where the full insulation period is required. For ratings in accordance with EN 1364-1:1999, please contact Knauf Drywall Technical Services.

Note: All data relates to the use of Knauf Fireshield, Knauf Fire Moistureshield or Knauf Impact Panel on the non-Shaft side.

Knauf Silent Spacesaver

Stud depth and gauge	Dimensions (mm)				Maximum height (mm) ¹	Acoustic rating (dB R _w)	Fire rating ² (resistance in minutes) BS 476
	Overall width	Board width	Layers	Channel (mm)			
60mm 'I' (0.55)	122	12.5	2	72	3500	57*	60
	132	15	2	72	3500	60*	90
60mm 'I' (0.7)	122	12.5	2	72	3800	57*	60
	132	15	2	72	3800	60*	90
92mm 'I' (0.9)	198	12.5	2	148	5700	61**	60
	208	15	2	148	5700	62*	90

* One layer of 50mm Knauf Earthwool Acoustic Roll should be used

** One layer of 25mm Knauf Earthwool Acoustic Roll should be used

1 Maximum Heights calculated based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476:Part 22:1987.

For maximum heights in relation to the use of EN 1364-1:1999 please contact Knauf Drywall Technical Services.




2 Fire ratings quoted in accordance with BS 476:Part 22:1987. For ratings in accordance with EN 1364-1:1999, please contact Knauf Drywall Technical Services.

Note: All data relates to the use of Knauf Soundshield.

Appendices Performance tables

For more information on these and other system performances, please contact Knauf Drywall Technical Services on 01795 416259.

Knauf 'I' Stud Linings

Stud depth and gauge	 Dimensions (mm)			 Maximum height (mm) ²			 Fire rating BS 476 (resistance in minutes) ¹	
	Overall width ³	Board width	Layers	600mm stud centres	400mm stud centres	300mm stud centres	Wallboard/Soundshield/Moistureshield	Fireshield/Fire Moistureshield/Impact panel
50mm 'I' (0.55)	63	12.5	1	3100	3600	3900	-	30
	65	15	1	3100	3600	3900	-	60
	75	12.5	2	3100	3600	3900	60	60
	80	15	2	3100	3600	3900	60	90
60mm 'I' (0.55)	73	12.5	1	3500	4100	4500	-	30
	75	15	1	3500	4100	4500	-	60
	85	12.5	2	3500	4100	4500	60	60
	90	15	2	3500	4100	4500	60	90
60mm 'I' (0.70)	73	12.5	1	3800	4400	4800	-	30
	75	15	1	3800	4400	4800	-	60
	85	12.5	2	3800	4400	4800	60	60
	90	15	2	3800	4400	4800	60	90
70mm 'I' (0.70)	83	12.5	1	4300	4900	5400	-	30
	85	15	1	4300	4900	5400	-	60
	95	12.5	2	4300	4900	5400	60	60
	100	15	2	4300	4900	5400	60	90
92mm 'I' (0.90)	105	12.5	1	5700	6500	7100	-	30
	107	15	1	5700	6500	7100	-	60
	117	12.5	2	5700	6500	7100	60	60
	122	15	2	5700	6500	7100	60	90
146mm 'I' (0.90)	159	12.5	1	8000	9100	10000	-	30
	161	15	1	8000	9100	10000	-	60
	171	12.5	2	8000	9100	10000	60	60
	176	15	2	8000	9100	10000	60	90

¹ Fire Resistance Period for complete wall structure including external steel cladding to BS 476:Part 22:1987 (Integrity only).

² Maximum Heights calculated based on a limiting deflection of L/240 at 200 Pa. These relate to fire resistances in accordance with BS 476:Part 22:1987.

For maximum heights in relation to the use of EN 1364-1:1999 please contact Knauf Drywall Technical Services.

³ Overall width for Knauf lining system only.

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