



**Installation Guide**  
Gboard RG, MR, FR, FMR



BEAM Consolidated is the leading manufacturer of finishing building materials in the region. Our expertise in manufacturing is refined by years of research and development. We provide durable finishing building materials and solutions. Our manufacturing process takes place in our facilities spread across the MENA region.

With more than 50 years of experience in the industry, we refined our manufacturing methods to produce the highest quality products. Our aptitude in the sector, our technology, and our team of experts, enable us to design and manufacture efficient construction products, systems, and solutions.

## TABLE OF CONTENT

ABOUT GBOARD®	2
GBOARD® RG	4
GBOARD® MR	6
GBOARD® FR	8
GBOARD® FMR	10
METAL PROFILES	13
TOOLS AND ACCESSORIES	13
INSTALLATION GUIDE	14
STORAGE AND HANDLING	26
RECOMMENDATIONS	26



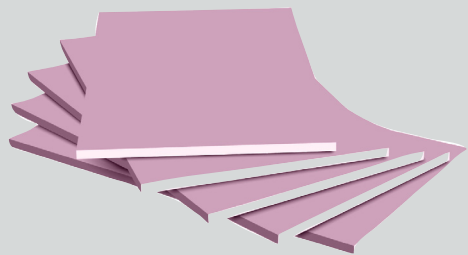
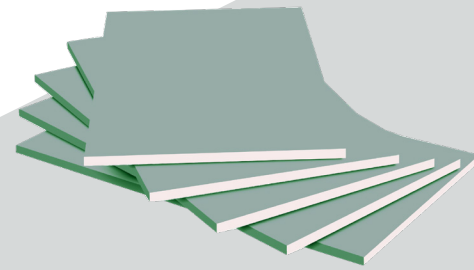
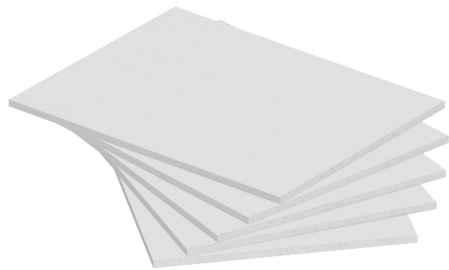
## || ABOUT GBOARD®

BEAM Consolidated is one of the leading manufacturers of gypsum boards (Gboard®) in the Middle East.

A wide range of plasterboards is available with various properties – from moisture and fire resistant to acoustic, X-Ray, waterproof, and much more. Each Gboard® is suitable for applications in different locations and for different purposes, inside or outside the building.

This catalogue highlights the most commonly used types of gypsum boards

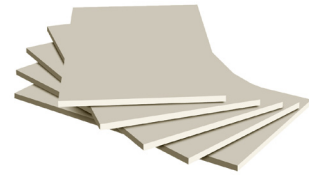
- Gboard® RG (Regular)
- Gboard® MR (Moisture Resistant)
- Gboard® FR (Fire Resistant)
- Gboard® FMR (Fire and Moisture Resistant)





Gboard® RG is a regular plasterboard ideal for general drywall and ceiling applications. It is a flexible gypsum board as it can accommodate any indoor architectural design.

It is composed of the best quality gypsum, extracted straight from our quarries, and processed using the best ecological practices.



## FEATURES

- Easy and dry installation
- Eco-friendly, recyclable
- Lightweight
- No cracking
- Versatile
- Durable



Durable



Eco-friendly



No cracking



Lightweight

## APPLICATION

- Drywall partitions
- Suspended ceiling systems
- Wall lining
- Commercial or residential buildings
- Prefabricated constructions
- Malls, lounges, shops

## PHYSICAL APPEARANCE

- Edges: SE / TE
- Colour: Ivory

## DIMENSIONS

- Thickness: 8.0, 9.5, 12.5, 15, 15.9, 18 mm
- Width: 1200, 1220 mm
- Length: 2000, 2400, 2440, 2500, 3000 mm



## PHYSICAL SPECIFICATIONS

SPECIFICATIONS	UNIT	VALUE	STANDARD
Thickness	mm	12.5	ASTM C 1396
Density	Kg/m <sup>3</sup>	705.95	ASTM C 1396
Weight per unit area	Kg/m <sup>2</sup>	8.76	ASTM C 1396
Tolerance of length	mm	2401	ASTM C 1396
Tolerance of width	mm	1200	ASTM C 1396
Tolerance of thickness	mm	12.5	ASTM C 1396
Depth of taper	mm	1.23	ASTM C 1396
Width of taper	mm	42.57	ASTM C 1396
Squareness of edges	mm	1.7	ASTM C 1396
Core hardness	N	192	ASTM C 1396
Edges hardness	N	144	ASTM C 1396
Ends hardness	N	200	ASTM C 1396
Flexural breaking load long edge	N	517	ASTM C 1396
Flexural breaking load short edge	N	211	ASTM C 1396
Nail pull strength	N	363	ASTM C 1396
Bending radius	mm	1875	ASTM C 1396
Humidified deflection	mm	1.4	ASTM C 1396
Thermal conductivity	W/m.K	0.1839	ASTM C 518

## STANDARDS

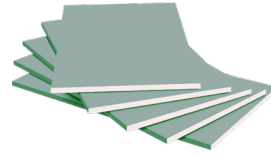
- ASTM C1396: Standard Specification for Gypsum Board.
- ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- ASTM C473: Standard Test Methods for Physical Testing of Gypsum Panel Products.





## **GBOARD® MR - H2**

Gboard® MR - H2 is a moisture resistant board having a reasonable percentage of water absorption classified as H2 (5 to 10 %). The silicone oil in its core acts as a water repellent rendering it more resistant to moisture. Gboard® MR - H2 is the perfect suit for areas of high humidity.



Gboard® MR - H2 is composed of the best quality gypsum, non-toxic minerals, and moisture repellent additives which suit health conditions.

### **FEATURES**

- Thermally balanced
- Highly resistant to cracks
- Low moisture absorption rate
- Suitable sound insulation
- Easy to handle and install
- Lightweight
- Eco-friendly, recyclable



Moisture resistant



Durable



No cracking



Sound insulation

### **APPLICATION**

- Bathrooms
- Laundry rooms
- Kitchens
- Cafeterias, restaurants
- Areas exposed to high humidity

### **PHYSICAL APPEARANCE**

- Edges: SE / TE
- Colour: Green

### **DIMENSIONS**

- Thickness: 8.0, 9.5, 12.5, 15, 15.9, 18 mm
- Width: 1200, 1220 mm
- Length: 2000, 2400, 2440, 2500, 3000 mm



## **PHYSICAL SPECIFICATIONS**

SPECIFICATIONS	UNIT	VALUE	STANDARD
Thickness	mm	12.5	ASTM C 1396
Density	Kg/m <sup>3</sup>	785	ASTM C 1396
Weight per unit area	Kg/m <sup>2</sup>	9.8	ASTM C 1396
Tolerance of length	mm	2401	ASTM C 1396
Tolerance of width	mm	1200	ASTM C 1396
Tolerance of thickness	mm	12.5	ASTM C 1396
Depth of taper	mm	1.21	ASTM C 1396
Width of taper	mm	42.23	ASTM C 1396
Squareness of edges	mm	1.7	ASTM C 1396
Core hardness	N	231	ASTM C 1396
Edges hardness	N	205	ASTM C 1396
Ends hardness	N	221	ASTM C 1396
Flexural breaking load long edge	N	700	ASTM C 1396
Flexural breaking load short edge	N	310	ASTM C 1396
Nail pull strength	N	380	ASTM C 1396
Bending radius	mm	1895	ASTM C 1396
Humidified deflection	mm	1.2	ASTM C 1396
Thermal conductivity	W/m.K	0.1701	ASTM C 518
Water absorption	%	H2<10	EN 520

### **STANDARDS**

- ASTM C1396: Standard Specification for Gypsum Board.
- ASTM C473: Standard Test Methods for Physical Testing of Gypsum Panel Products.
- ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- EN 520: Gypsum Plasterboards - Definitions, Requirements and Test Methods.



## GBOARD® FR

Gboard® FR is a fire-resistant gypsum board reinforced with fiberglass. The fiberglass acts as a retardant and protection to the board, improving the performance of the system when exposed to fire.

Gboard® FR is used in indoor areas such as internal walls and ceiling applications where improved fire protection is needed.



### FEATURES

- Fire resistant
- Low flame spread and smoke development
- Suitable sound insulation
- High surface quality
- High strength
- High resistance to cracks



Fire resistant



Eco-friendly



Low smoke development



Lightweight

### APPLICATION

- Fire-rated partitions
- Suspended ceiling systems
- Wall linings
- Shaft wall encasements
- Wall dressings
- Escape areas
- Commercial and residential buildings

### PHYSICAL APPEARANCE

- Edges: SE / TE
- Colour: Pink

### DIMENSIONS

- Thickness: 8.0, 9.5, 12.5, 15, 15.9, 18 mm
- Width: 1200, 1220 mm
- Length: 2000, 2400, 2440, 2500, 3000 mm



## PHYSICAL SPECIFICATIONS

SPECIFICATIONS	UNIT	VALUE	STANDARD
Thickness	mm	12.5	ASTM C 1396
Density	Kg/m <sup>3</sup>	713.77	ASTM C 1396
Weight per unit area	Kg/m <sup>2</sup>	8.83	ASTM C 1396
Tolerance of length	mm	2399	ASTM C 1396
Tolerance of width	mm	1200	ASTM C 1396
Tolerance of thickness	mm	12.5	ASTM C 1396
Depth of taper	mm	1.27	ASTM C 1396
Width of taper	mm	41.76	ASTM C 1396
Squareness of edges	mm	1.2	ASTM C 1396
Core hardness	N	215	ASTM C 1396
Edges hardness	N	186	ASTM C 1396
Ends hardness	N	209	ASTM C 1396
Flexural breaking load long edge	N	509	ASTM C 1396
Flexural breaking load short edge	N	219	ASTM C 1396
Nail pull strength	N	361	ASTM C 1396
Bending radius	mm	1920	ASTM C 1396
Humidified deflection	mm	1.3	ASTM C 1396
Thermal conductivity	W/m.K	0.1681	ASTM C 518
Flame spread index (FSI)	-	0	ASTM E 84
Smoke development index (SDI)	-	0	ASTM E 84

### STANDARDS

- ASTM C1396: Standard Specification for Gypsum Board.
- ASTM C473: Standard Test Methods for Physical Testing of Gypsum Panel Products.
- ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- ASTM E84 : Standard Test Method for Surface Burning Characteristics of Building Materials.



## GBOARD® FMR

Gboard® FMR is a fire and moisture resistant gypsum board with fiberglass and silicon oil in the core. Gboard® FMR has the combined properties of Gboard® FR and Gboard® MR. It has a green paper front face and a pink back face.



It has a wide range of applications where increased fire resistance and moisture repellency are required. Hence, Gboard® FMR is highly performant in interiors exposed to both properties.

### FEATURES

- High fire resistance
- Hydrophobic boards with anti-moisture absorption
- Easy and dry installation
- Eco-friendly
- Thermally balanced
- Suitable sound insulation



Fire resistant



Moisture resistant



Eco-friendly



Lightweight

### APPLICATION

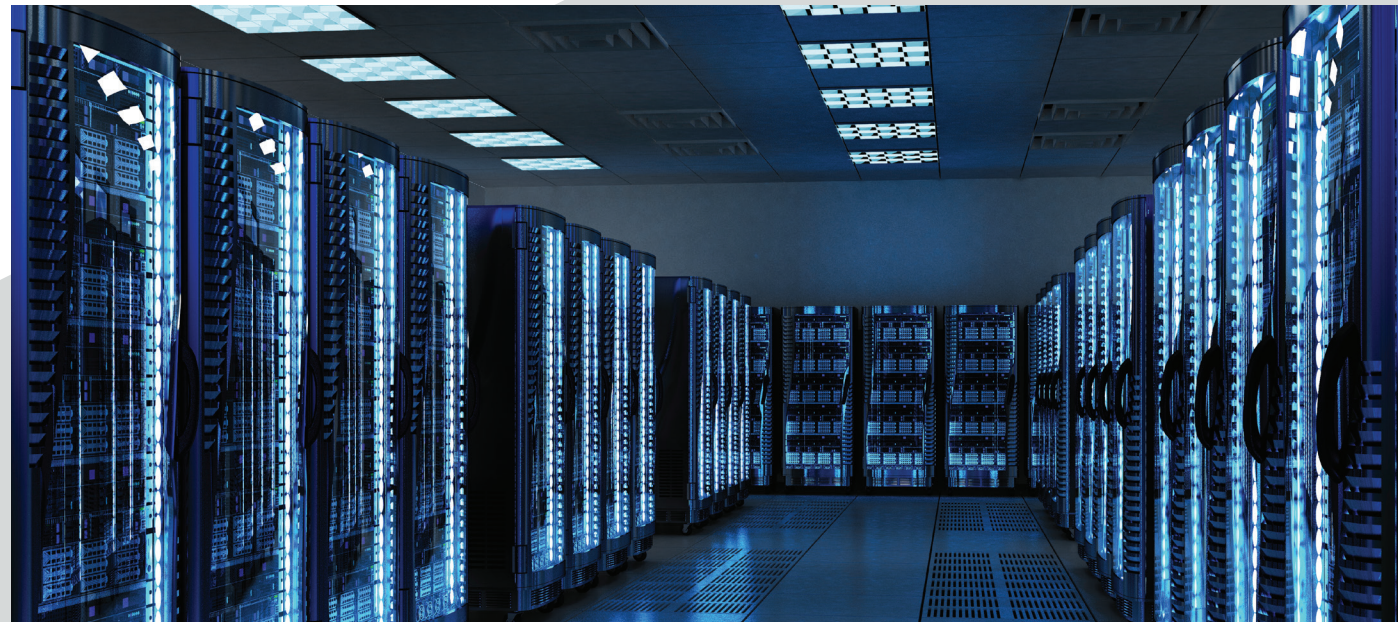
- Suspended ceiling systems
- Wall claddings
- Drywall partitions
- Commercial and residential buildings
- Shaft walls
- Hospitals, bathrooms, airports, kitchens...

### PHYSICAL APPEARANCE

- Edges: SE / TE
- Colour: Pink / Green

### DIMENSIONS

- Thickness: 8.0, 9.5, 12.5, 15, 15.9, 18 mm
- Width: 1200, 1220 mm
- Length: 2000, 2400, 2440, 2500, 3000 mm



### PHYSICAL SPECIFICATIONS

SPECIFICATIONS	UNIT	VALUE	STANDARD
Thickness	mm	12.5	ASTM C 1396
Density	Kg/m <sup>3</sup>	764.84	ASTM C 1396
Weight per unit area	Kg/m <sup>2</sup>	9.48	ASTM C 1396
Tolerance of length	mm	2402	ASTM C 1396
Tolerance of width	mm	1201	ASTM C 1396
Tolerance of thickness	mm	12.5	ASTM C 1396
Depth of taper	mm	1.26	ASTM C 1396
Width of taper	mm	43.7	ASTM C 1396
Squareness of edges	mm	1.5	ASTM C 1396
Core hardness	N	270	ASTM C 1396
Edges hardness	N	212	ASTM C 1396
Ends hardness	N	247	ASTM C 1396
Flexural breaking load long edge	N	504	ASTM C 1396
Flexural breaking load short edge	N	231	ASTM C 1396
Nail pull strength	N	379	ASTM C 1396
Bending radius	mm	1905	ASTM C 1396
Humidified deflection	mm	1.4	ASTM C 1396
Thermal conductivity	W/m.K	0.1694	ASTM C 518
Water absorption	%	3.8	ASTM C 1396
Flame spread index (FSI)	-	5	ASTM E 84
Smoke development index (SDI)	-	15	ASTM E 84

### STANDARDS

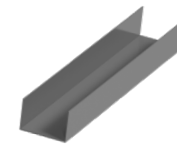
- ASTM C1396: Standard Specification for Gypsum Board.
- ASTM C473: Standard Test Methods for Physical Testing of Gypsum Panel Products.
- ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- ASTM E84 : Standard Test Method for Surface Burning Characteristics of Building Materials.



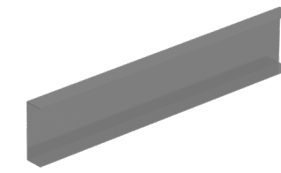


the POWER  
to FIGHT fire

## METAL PROFILES



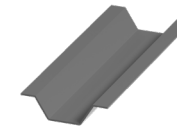
**Gframe™ Track**  
Fixed to the floor or ceiling to support the Gframe™ C-studs forming a channel for Gboard®.



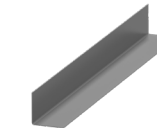
**Gframe™ C-38 Channel**  
Carrying suspended ceiling profiles.



**Gframe™ C-stud**  
Vertical profile for the framing system.



**Gframe™ Furring Channel**  
Used in ceiling framework and for drywall lining systems.



**Gframe™ Perimeter Angle**  
Supports channels using anchors and forms the perimeter of the drywall ceiling system.



**C-clamp**  
Holds the C-38 channel for suspended ceilings.

## TOOLS AND ACCESSORIES



**Fire and Acoustic Sealant**  
Applied at the perimeter areas.



**Fiberglass Insulator**  
Material made of fiberglass.



**Gcoat™ All Purpose Joint Compound**



**Drop-in Anchor**  
Fixing threaded rods



**Threaded Rod**  
Fixing of ceiling frames.



**Self-Tapping Phosphate Screws**  
Fixing boards to profiles with thicknesses up to 0.7mm.



**Anchor Bolt**  
Fixing profiles and accessories to concrete walls.



**Phosphate Self Drilling Screws**  
Fixing boards to profiles with thicknesses above 0.7 mm.





the **POWER**  
to **REPEL** moisture

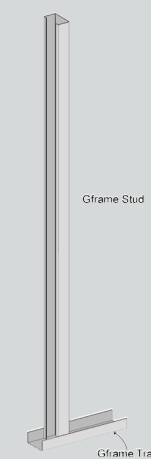
## INSTALLATION GUIDE

### DRYWALL PARTITIONS

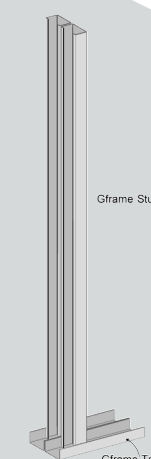
#### Installation

##### 1- Metal Framing Assembly

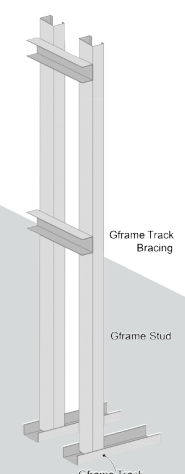
- Mark the location of the partitions on the floor and ceiling to fix the top and bottom Gframe™ Tracks according to plans by using the appropriate measurement tapes and marking tools.
- Snip the Gframe™ Tracks according to the required length.
- Apply a fire and acoustical sealant under the Gframe™ Tracks and C-studs, forming the perimeter of the frame.
- Align the bottom and top Gframe™ Tracks by using a laser then fix them using anchor bolts with a spacing of 600 mm center to center and a maximum of 100 mm from each end.
- Snip the vertical Gframe™ C-stud shorter than the wall by 5 - 10 mm.
- Push the Gframe™ C-stud completely inside the bottom track and position it vertically between the top and bottom tracks.
- The Gframe™ C-stud spacing should not exceed 600 mm center to center or according to the partition performance.
- Attach the metal profiles by using either stamp Pliers or wafer head screws (4.2\*13 mm metal to metal screw).



Single Profile



Double Profile



Double Profile  
with Gap

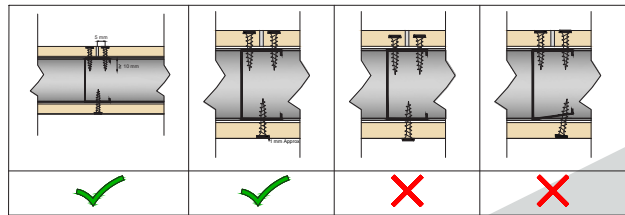


## 2- Board Cutting

- Score the board from its face using a sharp knife simple tool (Utility Knife).
- Break Gboard® by snapping it from the other side of the scored area and cut the other side of the paper. Pass the cutter from the bottom to the top to avoid damaging the board.
- Chamfer the cut edge of Gboard® in 45 degrees by using a Rasp Tool to obtain neat joints.
- Chamfer the short edges using a Beveled Tool to soften them.

## 3- Board Fixing

- Place Gboard® on the Gframe™ C-stud by staggering the board from both sides of the wall with a minimum extension of 450 mm on one side, making sure the joints do not interlock.
- Cut Gboard® 15mm less than the height of the wall and lift it off the ground using a lift footer tool. Or, put a small piece of gypsum under the board, to avoid the cracks that are caused by expansion or moisture exposure.
- Use phosphate plated screws to fix Gboard®, depending on the number of layers to be installed. The horizontal screw spacing ranges from 200 to 300 mm center to center.



## 4- Jointing

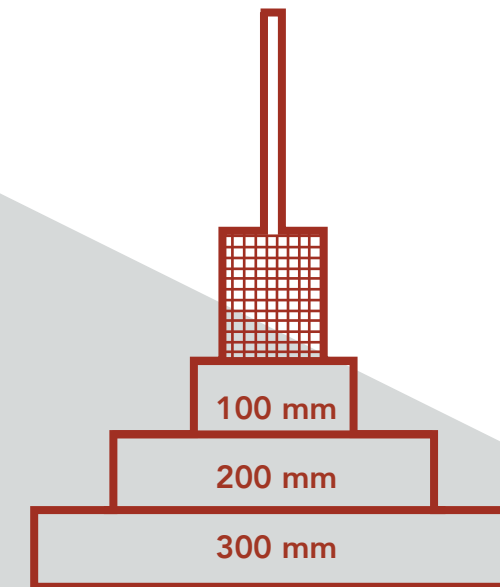
### Using Gcoat™

- Clean the surfaces from dust and other impurities.
- Cover the head of the screws with a thin layer of compound.
- Apply the self-adhesive mesh tape along the joints.
- Apply the first layer of Gcoat™ All-Purpose Joint Compound (100 mm width) to extend 50 mm beyond both sides of the jointing area.
- Embed the mesh tape in the jointing compound to reinforce the joints between the boards.
- Sand the first layer once it dries, if needed, two hours later, by using an appropriate sanding paper then, apply a second layer of the compound with a width of 200 mm.
- Sand the second layer once it dries, if needed, by using a sanding paper then apply a third thin layer of compound with a width of 300 mm.



### Using Extrafill™

- Add approximately 55 to 60% of water by bag of Extrafill. Use clean water since the presence of organic substances or high concentration of sulfate will reduce the setting time and the quality of the mixture.
- Add ExtraFill™ gradually to the entire surface of the water then leave it for 2 mins till it soaks completely.
- Stir the mix in all directions until it becomes a homogeneous putty with a consistency ready for the application.
- For mechanical mixing use a three-blade mixer with a blade diameter of 1/4 to 1/3 x height of the mixing bucket, at low speed. Avoid high speed mixing since it produces a non-homogenous and low-quality mixture.
- Mixing time should not be less than 1 minute. Note that the initial setting time is 90-180 mins.
- After preparing the compound, follow the steps of option 1 using Extrafill instead of Gcoat.
- The final setting time is reached two days later depending on the surface conditions, thickness, and weather conditions.



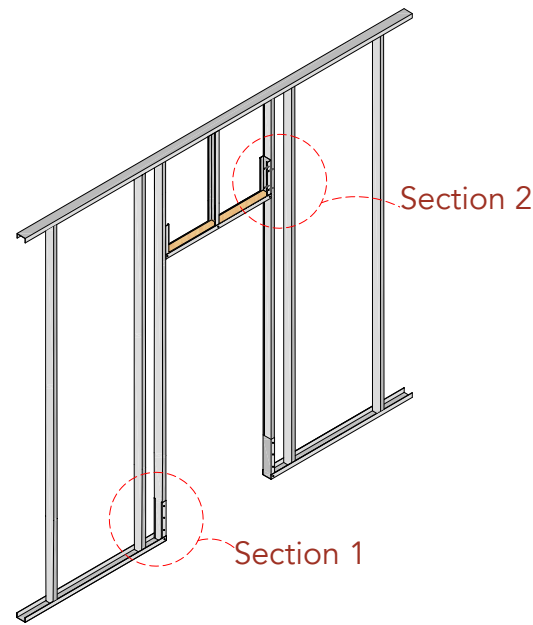
## 5- Finishing

- Skim the whole surface using Gcoat™ All Purpose Joint Compound with a maximum thickness of 3 mm.
- Coat the surface with a primer using a brush to reduce the board's paint absorption.
- Use emulsion-based paints and emulsion-based silicate paints for final coatings.
- Use ceramic tiles (for toilets/kitchen...) or wallpapers for further finishing options.



## 6- Door Installation

### a) Door Framing



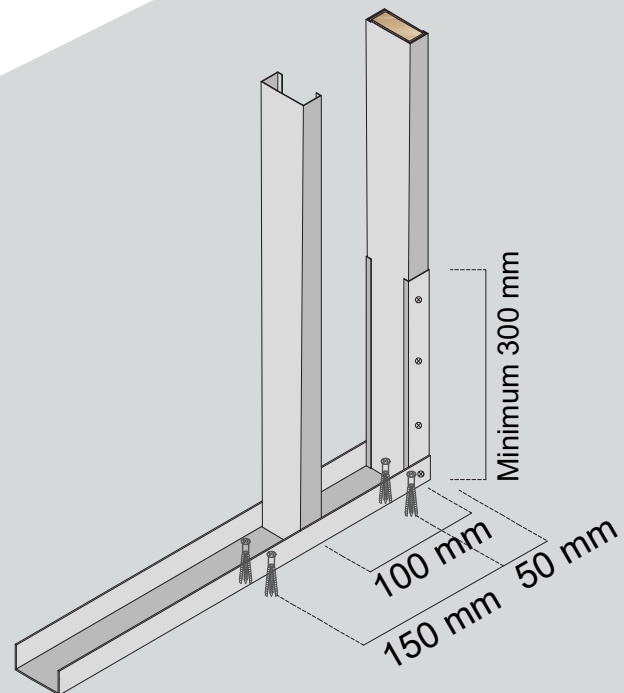
#### WALL WEIGHT

#### FRAMING METHOD

< 55 kg	Double box of Gframe™ C-stud.
> 55 kg	Double box of Gframe™ C-stud and wood or hollow steel square.

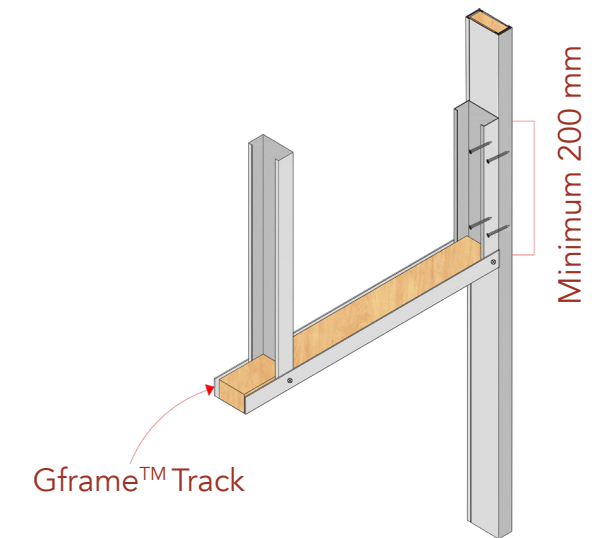
### Section 1

- Add additional Gframe™ C-stud at 100 mm away from the center of the supporting frame.
- The first anchor bolt supports the Gframe™ track on the ground and is distanced 50 mm away from the edge of the door opening.
- The second anchor bolt will be 150 mm away from the edge of the door opening.
- The Gframe™ track on the ground should be extended and bent towards the door stud by 300 mm.



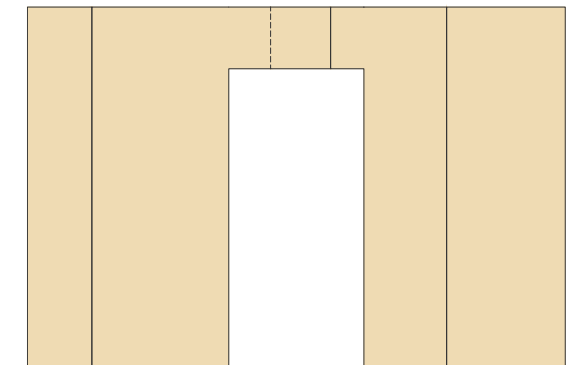
### Section 2

- Prepare a 1400 mm Gframe™ Track with 1000 mm for the door width.
- Cut 200 mm from both ends of the track and bend it in 90 degrees.
- Place the Gframe™ Track horizontally to the relevant height and attach it to the web of the Gframe™ C-stud using suitable screws.
- Cut Gframe™ C-stud at a suitable height and place it between the head of the door and the ceiling tracks.
- This section will be movable until Gboard® is fixed to the frame.



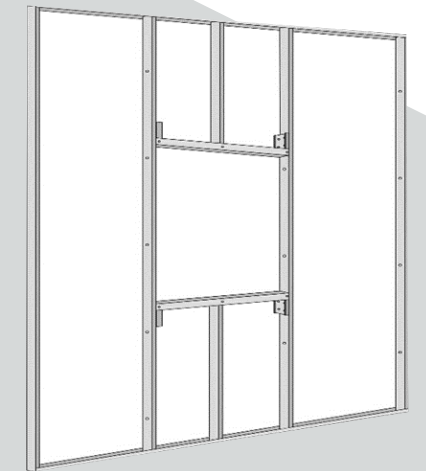
### b) Door Cladding

- Stagger the cladding of the door openings.
- Cut Gboard® into L-shaped panels to avoid weak points at the edges of the door frame.
- The joint should be 200 mm away (minimum) from the edge of the door.
- Stagger Gboard® from both ends of the wall.



## 7- Window Installation

- The installation of the window frame follows the same steps as the installation of the door frames.
- The Gframe™ C-studs are always reinforced with a wood or hollow steel square regarding the weight of the window.
- Cut Gboard® into L-shaped panels and stagger them from both ends of the wall.





# DRYWALL LINING

## A. Lining With Gframe™ C-studs

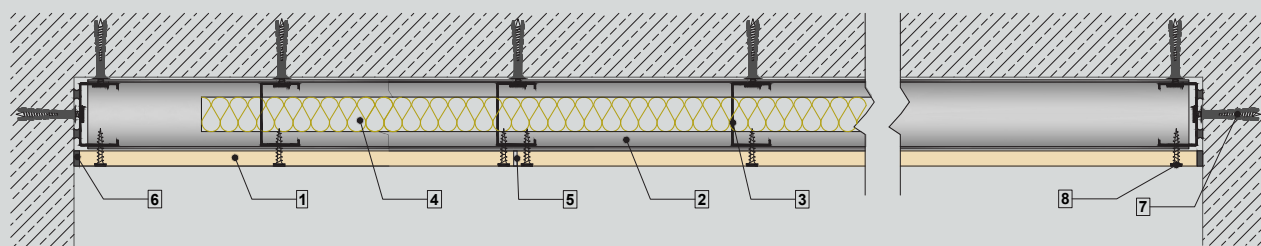
### Installation

- Step 1** Mark the boundaries of the Gframe™ Tracks to be installed by using the appropriate measurement tape and marking tools.
- Step 2** Snip the Gframe™ Tracks according to the required length.
- Step 3** Apply a fire and acoustic sealant (or insulation tape) under the Gframe™ Tracks, forming the perimeter of the frame.
- Step 4** Fix the bottom, top and edge Gframe™ Track using anchor bolts spaced at 600 mm center to center (or as provided by calculation).
- Step 5** Snip the Gframe™ C-studs 50 mm shorter than the clear height between the top and bottom tracks.
- Step 6** Attach the Gframe™ C-studs vertically and fit them into the top and bottom Gframe™ tracks. The standard distance between the Gframe™ C-studs is 600 mm. It may vary based on design requirements.
- Step 7** Fasten Gboard® using phosphate screws at a vertical spacing of 200 mm center to center on edges, and 300 mm in the boards field.

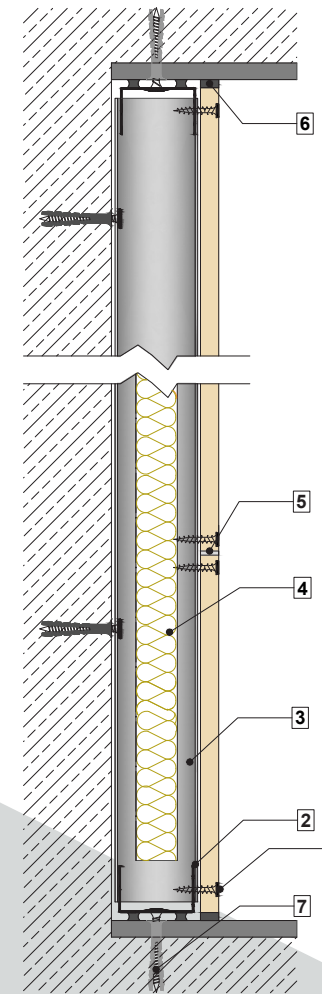
**Note** Gframe™ profiles and methods of installation should meet the building regulations and requirements. Profile thicknesses and spacings are designed to have deflection values below the allowable limits.

### Typical sections

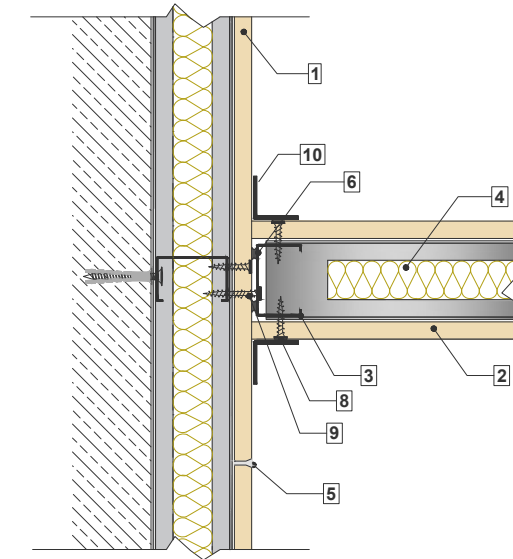
01- Plan Section



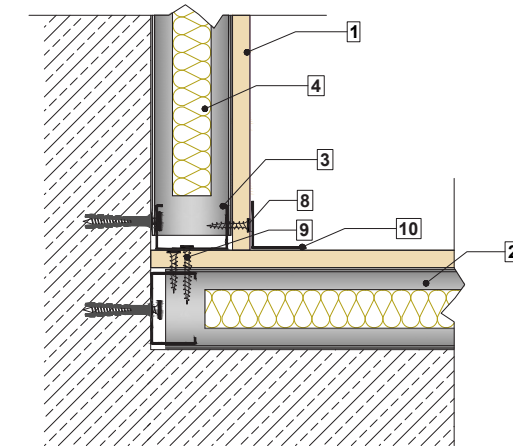
02- Floor/Ceiling Connection



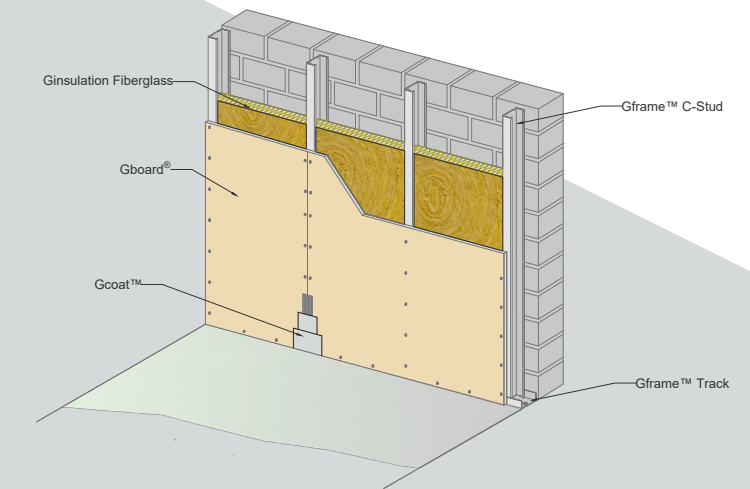
03- T junction



04- Corner Details



Number	Description
1	Gboard®
2	Gframe™ Track
3	Gframe™ C-stud
4	Ginsulation Fiberglass
5	Gcoat™
6	Fire and Acoustic Sealant
7	Anchor Bolt
8	Phosphate Screw 3.5x35 mm
9	Phosphate Screw 3.5x45 mm
10	Metal corner tape



## B. Lining With Universal Brackets

### Installation

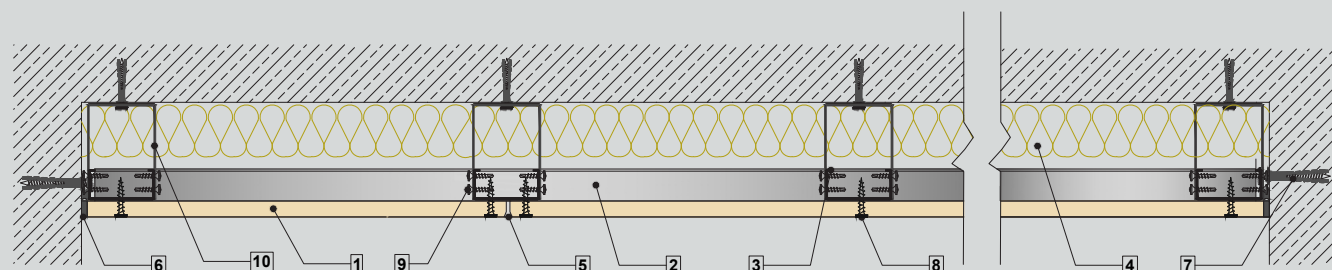
- Step 1** Mark the boundaries of the Gframe™ Tracks to be installed by using the appropriate measurement tapes and marking tools.
- Step 2** Snip the Gframe™ Tracks according to the required length.
- Step 3** Apply a fire and acoustic sealant (or insulation tape) under the Gframe™ Tracks, forming the perimeter of the frame.
- Step 4** Fix the bottom, top and edge Gframe™ Tracks using anchor bolts spaced at 600 mm center to center (or as provided by calculation).
- Step 5** Fix the universal brackets to the wall using anchor bolts spaced at 800 mm centers (vertically).
- Step 6** Add insulation if required.
- Step 7** Snip the Gframe™ C-studs 50 mm shorter than the clear height between the top and bottom Gframe™ tracks.
- Step 8** Attach the Gframe™ C-studs vertically and fit them into the top and bottom Gframe™ Tracks. Fix the Gframe™ C-studs to the universal bracket using wafer head screw.
- The standard distance between the Gframe™ C-studs is 600 mm. It may vary based on design requirements.
- Step 9** Fasten Gboard® using phosphate screws at a vertical spacing of 200 mm center to center on edges, and 300 mm in the board's field.

**Step 10** Leave a 4 mm gap at the joints between the board edges.

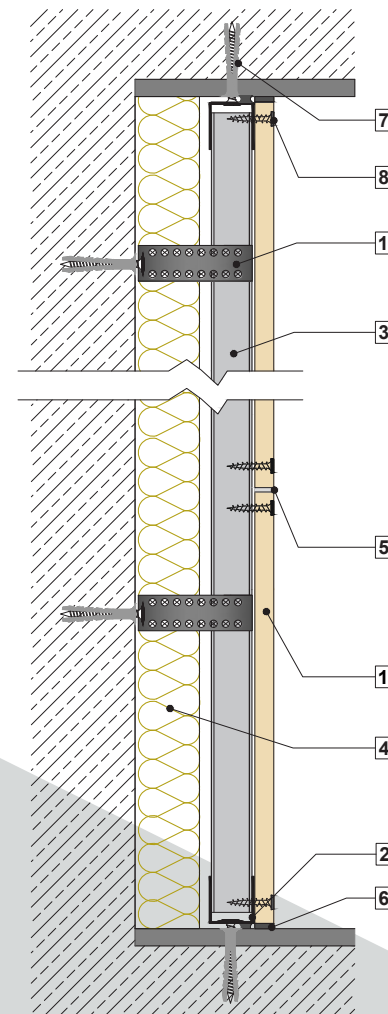
**Note** Gframe™ profiles and methods of installation should meet the building regulations and requirements. Profile thicknesses and spacings are designed to have deflection values below the allowable limits.

### Typical sections

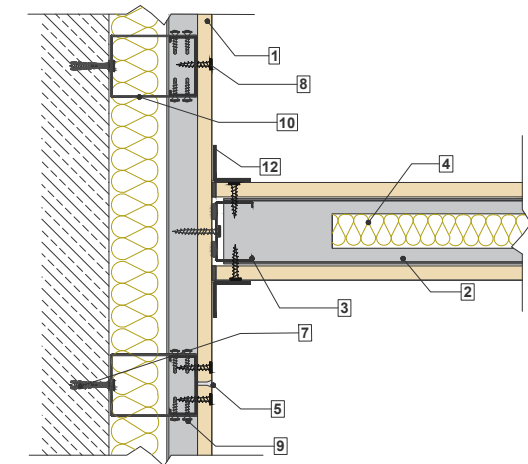
01- Plan Section



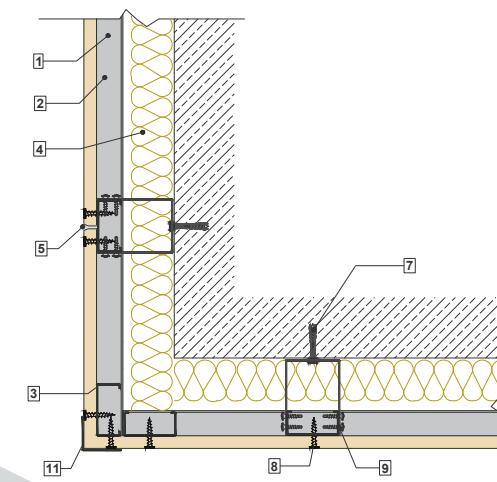
02- Floor/Ceiling connection



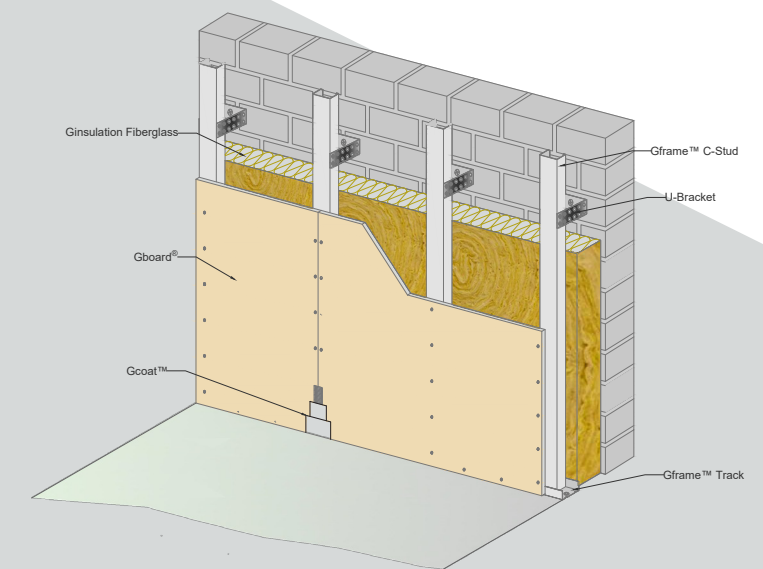
03- T junction



04- corner details



Number	Description
1	Gboard®
2	Gframe™ Track
3	Gframe™ C-stud
4	Ginsulation Fiberglass
5	Gcoat™
6	Fire and Acoustic Sealant
7	Anchor Bolt
8	Phosphate Screw 3.5x35 mm
9	Wafer Head Screw 4.2x13 mm
10	Universal Bracket
11	Corner Bead
12	Metal Corner Tape





## C. Lining With Gframe™ Furring Channel

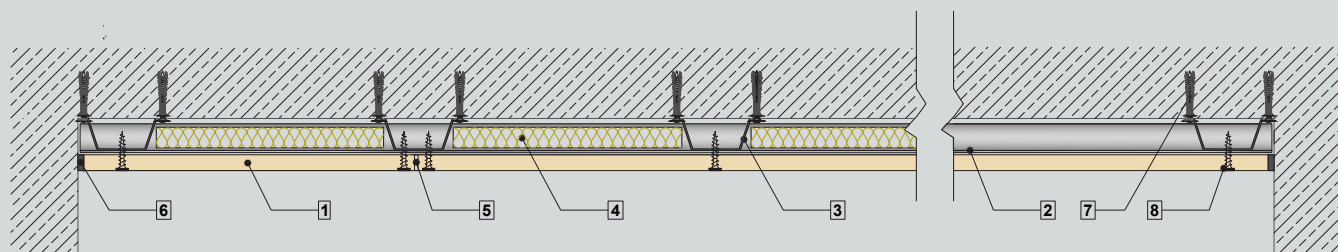
### Installation

- Step 1** Mark the boundaries of the Gframe™ L-angle to be installed using the appropriate measurement tape and marking tools.
- Step 2** Snip the Gframe™ L-angle according to the required length.
- Step 3** Apply a fire and acoustic sealant (or insulation tape) under the Gframe™ L-angle forming the perimeter of the frame.
- Step 4** Fix the bottom and top Gframe™ L-angle using Anchor Bolts spaced at 600 mm center to center (or as provided by calculations).
- Step 5** Snip the Gframe™ Furring Channel to obtain a length 50 mm shorter than the height between the top and bottom Gframe™ L angle.
- Step 6** Fix the Gframe™ furring channel to the wall using anchor bolts spaced 600mm centers.
- Step 7** Fasten Gboard® using phosphate screws spaced at 300 mm centers in the board field and 200 mm centers at the board edges.
- Step 8** Leave a 4 mm gap at the joints between the board edges.

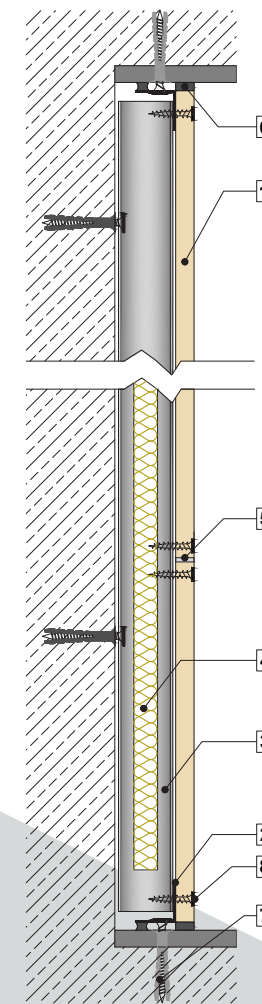
**Note** Gframe™ profiles and methods of installation should meet the building regulations and requirements.  
Profile thicknesses and spacings are designed to have deflection values below the allowable limits.

### Typical sections

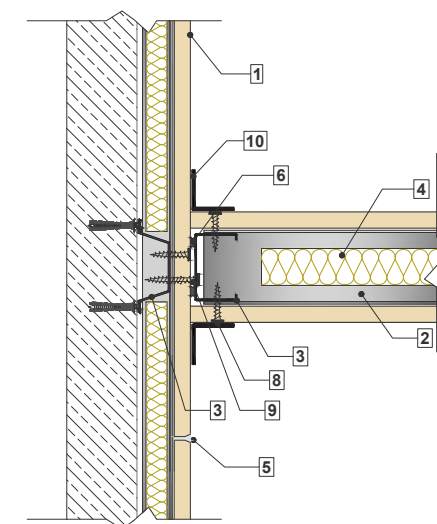
01- Plan Section



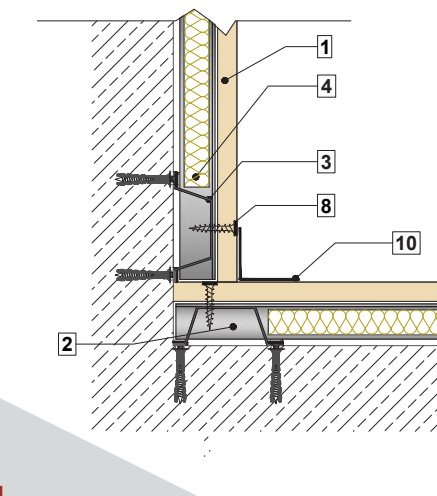
02- Floor/Ceiling connection



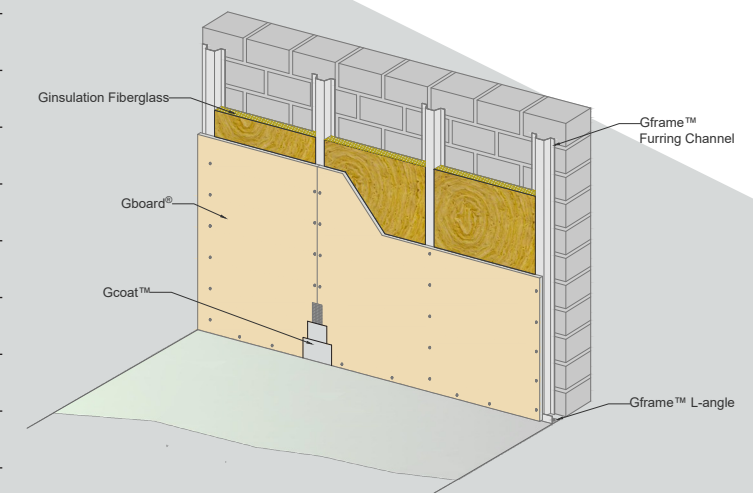
03- T junction



04- corner details



Number	Description
1	Gboard®
2	Gframe™ L-angle
3	Furring Channel
4	Ginsulation Fiberglass
5	Gcoat™
6	Fire and Acoustic Sealant
7	Anchor Bolt
8	Phosphate Screw 3.5x35 mm
9	Phosphate Screw 3.5x45 mm
10	Metal corner tape





## SUSPENDED CEILING

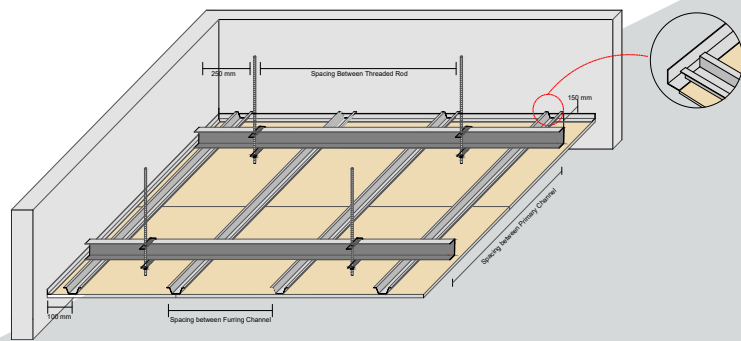
### Installation

#### 1- Framing System

- Determine the ceiling level and mark the height of the L angle perimeter, as per design drawings.
- Fasten L-angles to the walls along the perimeter using anchor bolts spaced at 600 mm centers.

Fix the threaded rod (6 mm) to the soffit ceiling using drop-in anchors with a maximum spacing of 1200mm center to center (spacing varies based on design loads). The first hanger should be 250 mm away from the wall.

- Suspend the Gframe™ C-38 channel (in longitudinal direction) from the soffit ceiling by threaded rods. The Gframe™ C-38 channel is connected to the threaded rod using C-clamps. The C-clamps fit around the Gframe™ C-38 channel and are fastened to the threaded rods from the top and bottom ends.
- The first Gframe™ C-38 channel should be 150 mm away from the wall; spacing between the Gframe™ C-38 channel is 1200 mm maximum and varies based on the design load.
- Place the Gframe™ Furring Channels on the primary grid (from the lower flange of the main channel C-38) in a transverse direction using wafer head screws. The first Gframe™ Furring Channel should be 100 mm away from the wall; with a spacing of 400 or 600 mm center to center, depending on the design loads.



P.S: The framing elements should not be attached to the L-angles along perimeters (channels around the walls) to allow a free movement of structures.

LOAD CLASS (kg/m <sup>2</sup> )	GFRAME™ C-38 CHANNEL (mm)	HANGER SPACING (mm)	GFRAME™ FURRING CHANNEL SPACING (mm)
>15	1200	1200	600
>20	1100	1100	600
>25	1000	1000	600
>35	900	900	400
50 < Load Class < 65	800	800	400

#### 2- Gboard® Installation

- Score the boards from the paper face side using a utility knife from bottom to top.
- Break Gboard® by snapping it in a reverse direction and cut the other side of the paper by passing the cutter from the bottom to the top to avoid damaging the paper.
- Chamfer the cut and short edges using beveled/rasp tools for neat joints and edges.
- Install ducts and MEP piping before fixing Gboard®.
- Screw Gboard® to the Gframe™ furring channels in a longitudinal direction using phosphate self-taping or self-drilling screws. Keep a 3mm gap between the boards for jointing.
- Check all the levels of Gboard® using levelling tools and ensure that the screws are well fixed and embedded inside the board.
- Cut out holes for MEP fixtures.
- Install all MEP fixtures.

#### 3- Jointing

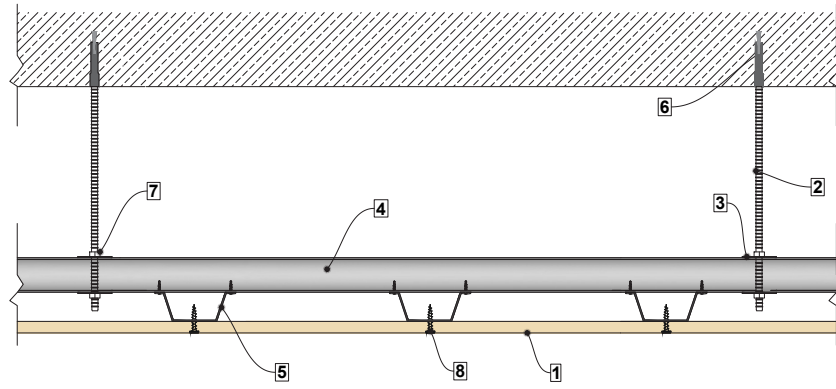
- Clean the surfaces from dust and other impurities.
- Cover the head of the screws with a thin layer of Gcoat™ All Purpose Joint Compound.
- Apply the self-adhesive fiberglass mesh tape along the joints.
- Apply the first layer of Gcoat™ All Purpose Joint Compound (100 mm width) to extend 50 mm beyond both sides of the jointing area.
- Embed the mesh tape in the Gcoat™ to reinforce the joints between the boards.
- Sand the first layer once it dries, two hours later, by using the appropriate sanding paper. Then, apply a second layer of the compound with a width of 200 mm.
- Sand the second layer after it dries by using a sanding paper then apply a third thin layer of the compound with a width of 300 mm.
- Skim the whole surface with one coat of Gcoat™ All-purpose Joint Compound with a maximum thickness of 3 mm.

#### 4- Paint Coating

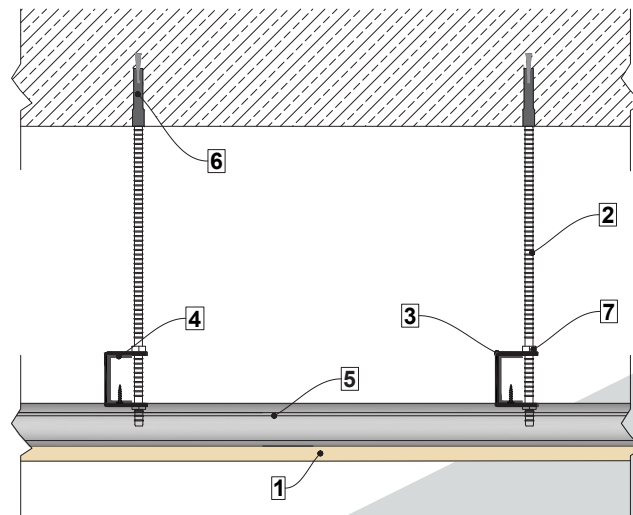
- Coat the surface with a primer using a brush.
- Use emulsion-based paints, alkyd paint, or any other type of paint for final coatings.



Typical sections



NUMBER	DESCRIPTION
1	Gboard®
2	Threaded Rod
3	C-Clamp
4	Gframe™ C-38 Channel
5	Gframe™ Furring Channel
6	Drop-in Anchor
7	Nut
8	Phosphate screw





## RECOMMENDATIONS

- Cutting and scoring happen from the front face side of the board.
- Use phosphate self-tapping screws with a metal frame lower than 0.7 mm for board fixing.
- Use phosphate self-drilling screws with a metal frame greater than 0.7 mm for board fixing.
- Vertical screw spacing for the first layer of gypsum is 25 cm, 50 cm for the second, and 75 cm for the third.
- It is recommended to use Gcoat™ All Purpose Joint Compound for joint treatments or skim coating.
- Use paper tape for the jointing of the square edges.
- Leave a 3 mm gap between the boards and fill it with an acoustic sealant.

## STORAGE AND HANDLING

- Store in a dry/ventilated area above ground level (not in direct contact with the ground).
  - Cover boards with plastic sheets and do not expose them to direct rain or sunlight.
  - Lift the boards from their corners and place them vertically along the long edge (long edge parallel to the ground).
  - Do not lift the boards from the short edges nor carry them horizontally. Hold the boards vertically keeping the long edge parallel to the ground level.
  - Hold boards in a balanced manner. Each board is carried by two people supporting one long edge and gripping the upper edge to avoid flexing and consequently breaking.
-

[www.beam.world](http://www.beam.world)

KSA  
Yanbu Industrial City, Light industrial Area, Al Razi Street, Road 10,  
KSA  
Tel: +966 12 613 0000

