GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

تصنيع ألأسقف المعلقة والحوائط الجبسية

DRYWALLS (Partitions & Ceiling Systems)

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منتجات صديقة للبيئة

GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

GOLDEN METAL REFERENCE
Drywalls (Partitions & Ceiling Systems)

GOLDEN METAL
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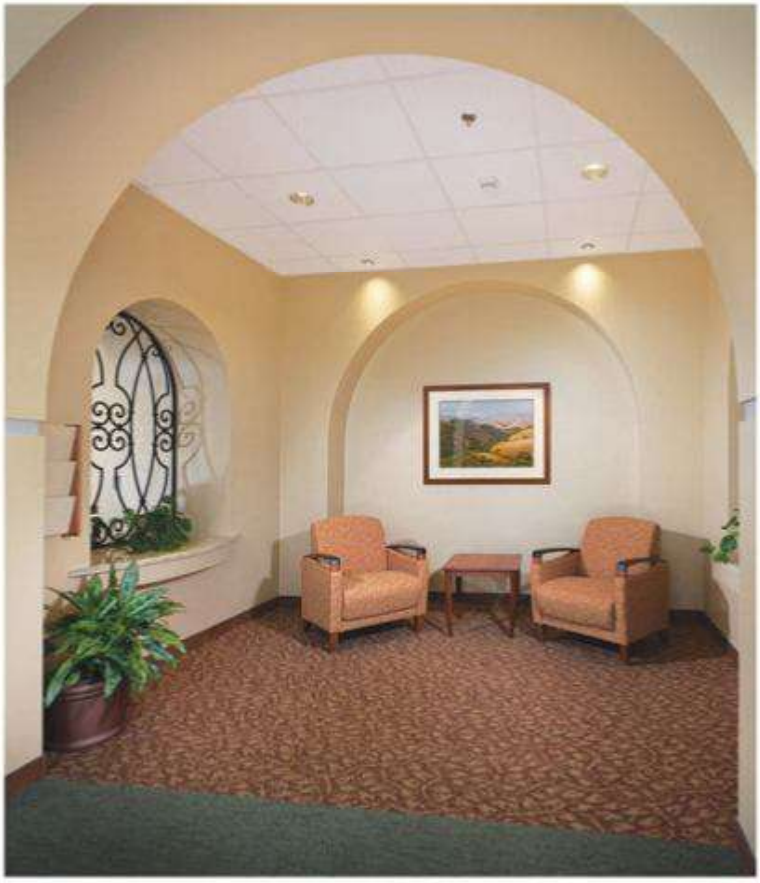

Welcome to Golden Metal

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منتجات صديقة للبيئة

COMPANY PROFILE

Golden Metal Factories, established in 2003, and is located in Al-Obour industrial city. The company has been in operation for nearly 12 years, it has achieved so much which is due to the vast and long experience that the founders enjoy for more than three decades in the field.
Golden Metal, is considered on of the largest in the field of manufacturing accessories for suspended ceilings being Gypsum, Metal Tiles, Metal Strips, as well as Gypsum wall and partitions.

Golden Metal Company, enjoys an excellent reputation because it has taken into consideration the high standard of beauty that fulfils the needs of todays' consumer level of expectations, as well, the high technical standards required by architects and interior designer specially the needs for materials that are resistant to Fire, Humidity,
bacteria and sound reduction.

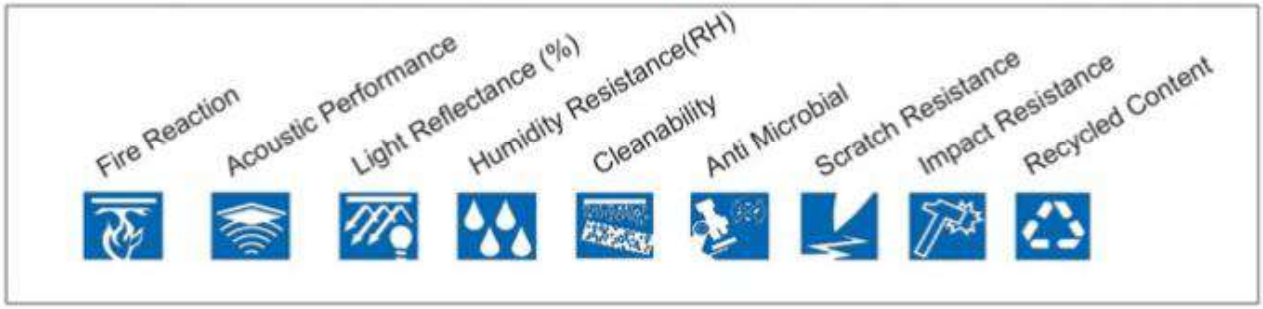
Golden Metal, with its aspirations to be one of the leading companies in the international arena, has been able to resolve the problem of producing a high quality product at an economical and competing prices .

We would like to invite you to join our valuable group of clients that consider Golden Metal, as their number one choice based on the following reasons:

* Because Golden Metal is always one step ahead in innovating their products .
* Because Golden Metal gives the highest level of guarantee on its products.
* Because Golden Metal always put its products through the toughest tests using the most reputable testing labs. to ensure its adherence to the international standards of quality such as (ASTM, BS, DIN).
* Because all its products are 100% EGYPTIAN made.
  &
* Because Golden Metal offer high quality and economical and competing prices .

In Simple words
Golden Metal team is your honest advisor for all your projects, be it your home or your tower.

Our Products Safety Features



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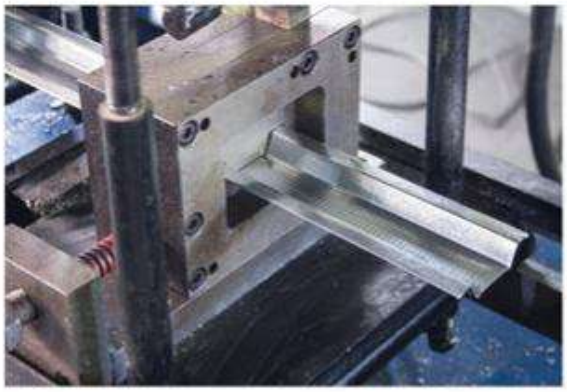
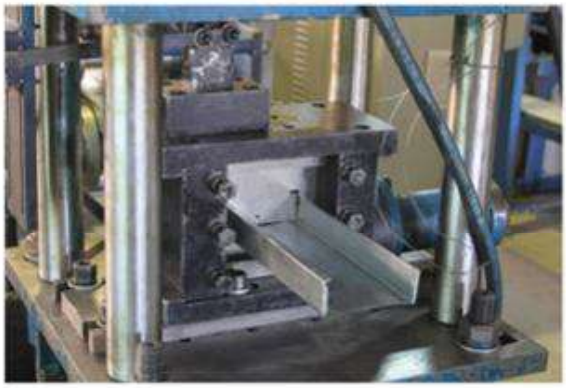
منتجات صديقة للبيئة

People & Machines
at work

Profiles at its inception

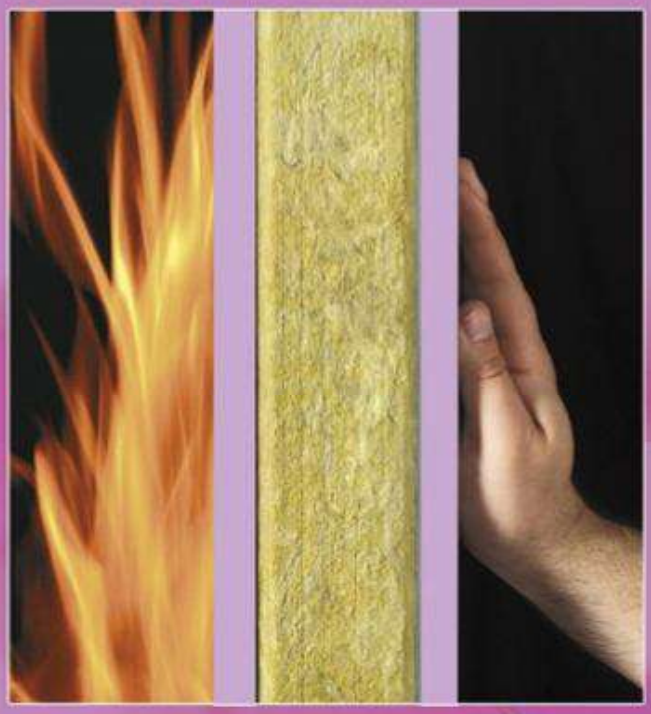
& Quality Control Check





GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

Drywalls Partition Systems



You can Rely on GM products
for your Safety

Golden Metal® Drywall Partitions Products, Can be described as Strong,Versatile and Fast, and without any doubt revolutionary. But one of the biggest benefits to keep in mind is that: Golden Metal has developed systems that have been tested and approved by pros in the field who demanded nothing less than achieving absolute ease of use.
Their performance have been proven by the most extensive laboratory evaluations available.
In fact, Golden Metal can reinforce your efforts to design and build more intelligently.

Yes,
- we're known as a manufacturer of extensively tested, code-compliant steel framing products, and we offer you so much more. Our products perform as a system and we support a range of selections for smarter installation and designs.

- We provide the expertise of a versatile engineering services team to facilitate your mission.
- We've put together an incredible array of resources to help you be successful in any project, regardless of its size or its complexity.

Within this catalogue, you'll discover the multiple advantages that Golden Metal offers, as well as, detailed information on the product lines, limiting heights, sound and fire assemblies, and much more.

Ultimately, your choice of Golden Metal doesn't come down to the integrity of its product alone, or even its ease of use. but also, the strength of the company that stands behind it.

Count on the expertise, services and full support for you now and far into the future.

Golden Metal Drywall Framing is an innovative method for constructing interior Gypsum dry wall partitions.
It consists of interlocking steel stud and track sections which are easy to install and offer many advantages and conventional metal framed assemblies.

Golden Metal Drywall Framing System reduces wall installation time, just insert the stud into the track and twist in place. Thus, typical track to stud screw attachments has been eliminated!
This method keeps the studs positioned in place to ease drywall alignment and attachments.

Systems are available in range from 50 mm up to 100 mm and several thickness.

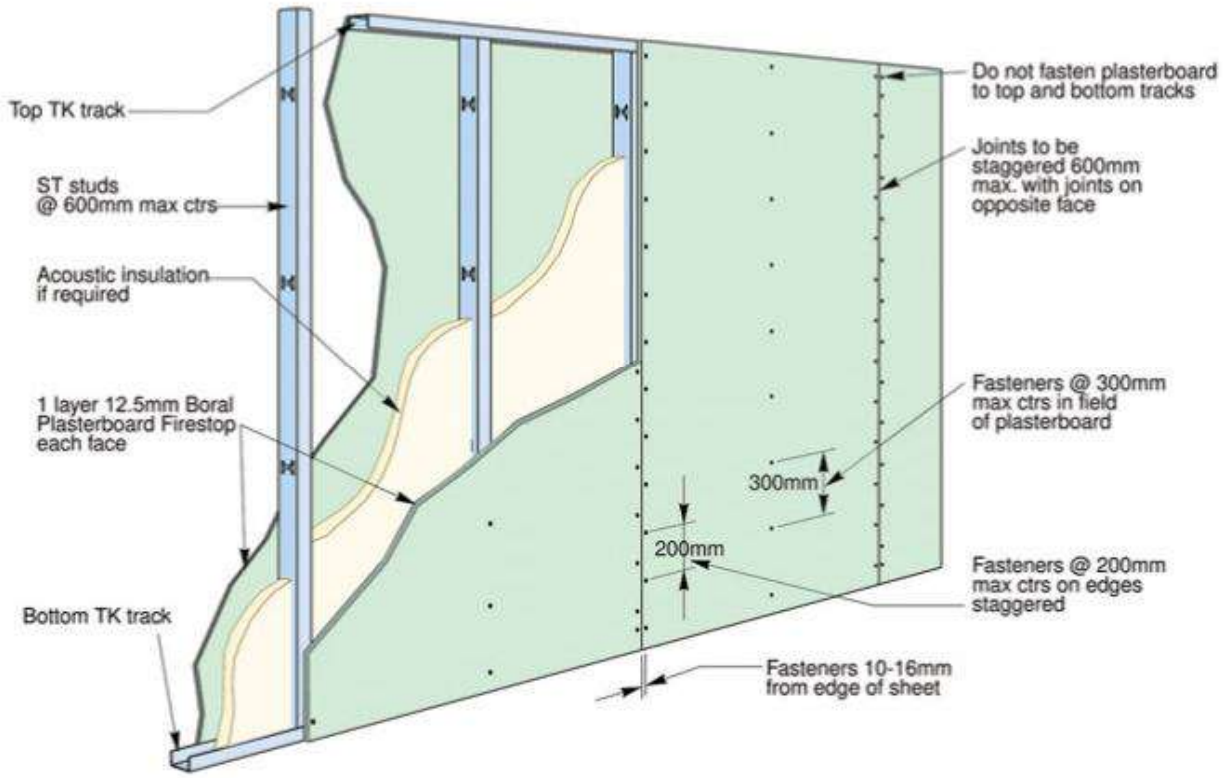
Golden Metal Drywall framing is the most recycled material.
Golden Metal Drywall framing is non-combustible. Steel does not add "fuel to fire".
Golden Metal Drywall framing is light weight and easy to handle.
Golden Metal Drywall framing is insect and vermin proof.
Golden Metal Drywall framing is resistant to rot and warp.
Gypsum wall board is screw attached to the studs.
Studs have knurled flanges to prevent slipping of the drywall screws during installation.
Studs are pre-punched with outlet service holes to ease installation & maintenance of wiring, plumbing, etc.

Regular Partition Systems

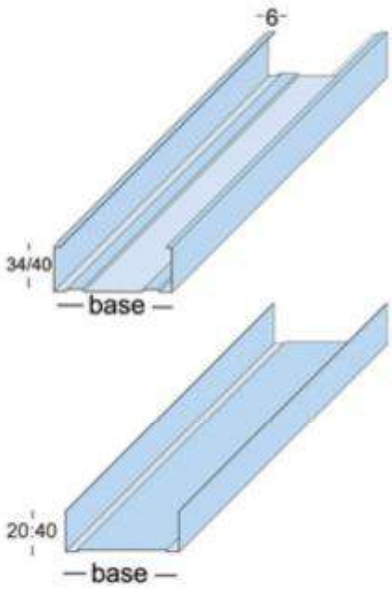
System Brief Description:

Golden Metal Stud Partitioning is an economical, friction-fit system for assembling internal partitions. The unique design of the components ensures high strength, easy installation and a higher performing alternative for traditional timber frame partitions.
Golden Metal STK Partitions are constructed using a frame of TK Track at the head and base with ST Studs for vertical framing elements. A range of ST Stud and TK Track widths allow varying partition depth, enhancing fire resistance, sound insulation and maximum heights. (The system comply with ASTM C645)

Golden Metal Drywall Systems Assembly



System component



Stud (ST)

ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
ST50	Galvanized C shaped metal section used with U Track to provide vertical framework for partition.	48	34/40	3000	0.5 -1mm	3ML	2ML
ST70		68	34/40	3000	0.5 -1mm	3ML	2ML
ST90		88	34/40	3000	0.5 -1mm	3ML	2ML
ST100		98	34/40	3000	0.5 -1mm	3ML	2ML

Track (TK)

ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter
		A	B			
TK50	Hot dipped Galvanized U shaped metal section used to receive ST Studs to provide framework for wall lining &partition.	50	20/25/30	3000	0.5 -1mm	1ML
TK70		70	20/25/30	3000	0.5 -1mm	1ML
TK90		90	20/25/30	3000	0.5 -1mm	1ML
TK100		100	20/25/30	3000	0.5 -1mm	1ML

Other Lengths & widths are available upon Request

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
Screw for metal frame	Metal frame Head pan screw use to connect metal frames components, Phosphate coating, Thickness 3.9 mm Length 11 mm. Comply with ASTM C954 - 4	5 pcs	
Self piercing Tapping Screw	Bugle head Screw for attaching plasterboard to light gauge metal Less than 0.8mm. Black Phosphate Coating Thickness 3.5mm & 3.9mm Length 25 mm up to 75mm Comply with ASTM C1002-4	15 pcs	
Steel Drill Screw	Bugle head Screw for attaching plasterboard to heavy gauge metal from 0.8mm to 2.8mm. Black Phosphate Coating, Thickness 3.5mm & 3.9mm. Length 25mm up to 75mm. Comply with ASTM C954 - 4	15 pcs	
Fiber Tape	Self-adhesive tape no bedding coat needed. Smooth joints in only two coats. Use with setting-type joint compounds for one-day joint finishing. width 50mm, Length 90ML. Comply With ASTM C475	1.3ML	
Meal Tape	Metal covered with paper attached to dry wall corner using setting-taping or all purpose joint compound instead of nails. Edge is finished with typical joint treatment system. Width 50mm, Length 30ML. Comply With ASTM C475	As per specified drawings	
Corner Bead	Hot dipped Galvanized steel profile Attached to drywall external corner with nails or screws. Finished with standard joint Compound and feathered at the edges. Thickness 0.4mm, Length 3ML. Comply With ASTM C1047	As per specified drawings	
L. Bead	Hot dip Galvanized steel profile Attached to exposed drywall edge. Finished with standard joint compound and feathered at the edges Thickness 0.4 mm, Length 3ML. Comply With ASTM C1047	2.0ML	

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
Mineral Fiber blanket insulation	Rock wool or glass wool Blanket is medium density insulation for building applications. Produced in Thickness from 25mm Up to 100mm and a width of 1200 mm. Comply with ASTM C665	1 sqm	
Jointing compound	Chemically setting powder compounds. Used For internal Filling to Jointing Between Boards and filling screw places. Comply with ASTM C28, ASTM C28m & ASTM C475.	0.45KG	
Acoustic Sealant	Used to prevent transmission of sound through gypsum ceiling and dry wall partitions. Comply With ASTM C834	As per specified drawings	

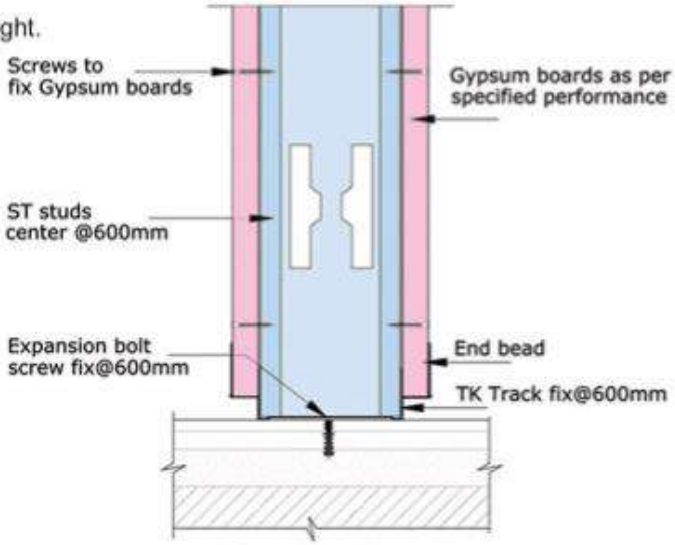
(Installation)

Laying out:

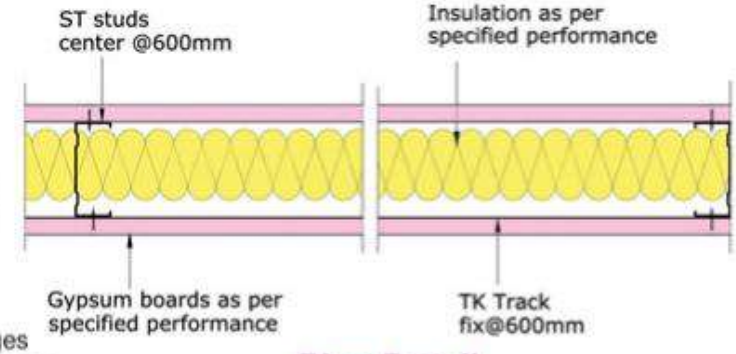
- Partitions layout should be marked accurately.
- Always check individual measurements against overall site dimensions.
- Define the partition width to define the frame width.
- Align the top and bottom tracks of the partition accurately according to the plan layout.

Framing installation:

- Attach The Track (TK) at ceiling and floor to structural elements.
- Use suitable fasteners for anchoring the partition wall at the base and head.
- Place fasteners at 50mm from each end, and spaced at maximum of 600mm and centres along each track.
- Cut stud (ST) to be 5mm shorter than floor to ceiling height.
- Place into perimeter track (TK) then install stud (ST) to be positioned at maximum of 600mm centres for Board.
- Studs in fire rated partitions are not to be fastened to top & bottom tracks, except boxed studs facing fire door openings, in which case the boxed studs are pop riveted to the tracks.



Section Detail



Plan Detail

Application of Plasterboard fixing methods:

Single layer application:

If no deflection requirement exists, cut Plasterboard to provide full length floor-to-ceiling sheets, allowing for 10mm maximum gap at floor and ceiling.

First side

- Screw fasten Plasterboard vertically to studs at edges and intermediate studs only, centring a butting edges on stud flanges.
- Sheets should be installed by advancing in the direction of the stud web, where one sheet only is to be applied to each side.
- Screws should be minimum 25mm long.
- Space at 200mm centres on sheet edges and at 300mm centres on intermediate studs.
- Fasten screws 10mm minimum - 16mm maximum from sheet edges.

Second side

- Cut the first sheet of Plasterboard 600mm wide only. This creates a stagger with the joints of the sheets applied on the opposite side of the partition.
- Screw fasten this sheet and all subsequent (full width sheets) to studs. Screws should be 25mm long.
- Space at 200mm centres on sheet edges and at 300mm centres on intermediate studs.

(Installation) cont.

Multiple layer application

Vertical application:

- Screw fasten additional layers of Plasterboard Fire stop in the same sequence as for the first layer, except that all joints are staggered at a minimum of 200mm with the previous layer to prevent vertical joints coinciding.
- Fasten second layer with screws staggered at 200mm minimum centres on sheet edges and at 300mm minimum centres on intermediate studs.

Horizontal application:

- Screw fasten additional layers of Plasterboard horizontally to all studs, centring the end-to-end joints on stud flanges.
- Stagger the face layer butt joints of upper and lower sheets by 600mm from each other and by 600mm from the vertical Joints of the first layer.
- Fasten the longitudinal edges to the inner layer of plasterboard between studs with laminating screws at 200mm centres maximum.

Fastener spacing

- Fasten Plasterboard to stud flanges with 25mm or 32mm screws for first layer, and 45mm screws for second layer.
- Face sheet only:- Space screws at 200mm centres on vertically a butting edges or ends, staggering screws in adjacent boards 100mm.
- Locate screws no closer than 10mm or more than 16mm from board edges and ends.
- Space screws at 300mm centres around openings and on intermediate studs in the field of the board.

INSULATION

Any type of insulation and thickness to achieve required performance is tightly installed in a continuous layer crossing behind studs.
Where insulation may be expected to slump, suspend it from Insulation Hold strips at 150mm from top of wall, and at 1200mm from vertical centers.10mm clear gap must be maintained between the substrate and insulation.

Taping and Jointing

Taping and Jointing is a 3 stage process:

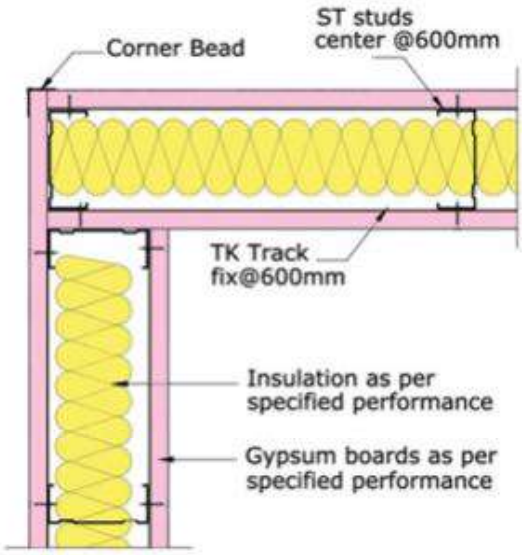
1- The plasterboard joints are normally first taped with self-adhesive fibre tape (scrim).
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Joining can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards

(See more details in page 28)

Caulking

Caulk all perimeter gaps in fire rated walls with fire Sealant.

Nogging & Trimmers (See drawing in page 27)



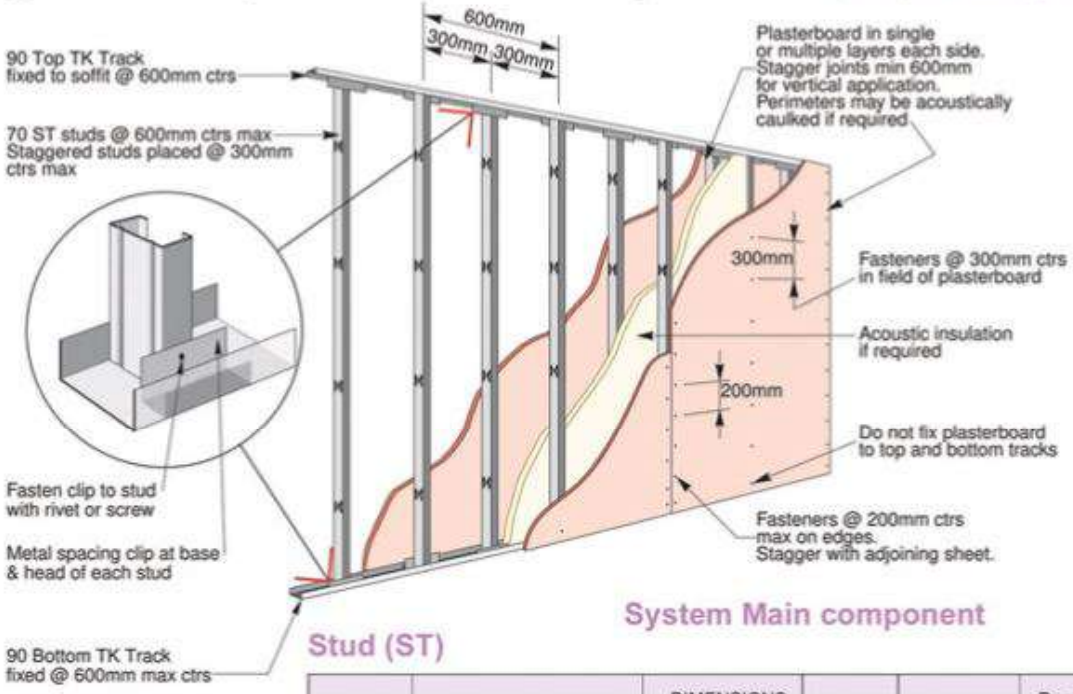
Corner Detail

Staggered Studs Partition Systems

System Brief Description:

The WP102 Partition System have been designed to provide improved acoustic performance when compared with equivalent widths of single stud partitions an average of 1~2 dB improvement is gained by using the staggered stud design. WP102 Staggered Stud Partition Systems are constructed by installing TK-Tracks which are slightly wider than the ST-Studs, this allows ST-Studs to be staggered creating a frame separation within the partition. Once frame is erected, plasterboard is then faced into each staggered frame. Due to the staggered stud frame design creating a separation within the partition.

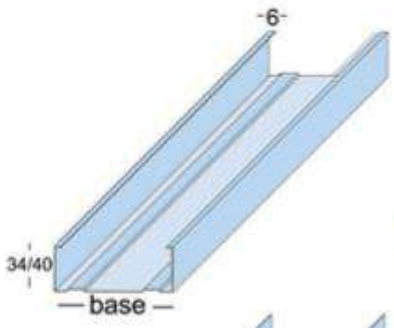
WP102 Staggered Stud Partition Systems are suitable for areas with a height limit of 4 meter. (The system comply with ASTM 645)



System Main component

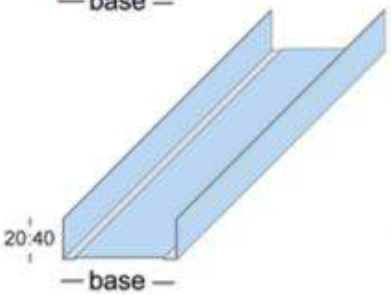
Stud (ST)

ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
ST50	Galvanized C shaped metal section used with U Track to provide vertical framework for partition.	48	34/40	3000	0.5 -1mm	6ML	4ML
ST70		68	34/40	3000	0.5 -1mm	6ML	4ML
ST90		88	34/40	3000	0.5 -1mm	6ML	4ML
ST100		98	34/40	3000	0.5 -1mm	6ML	4ML



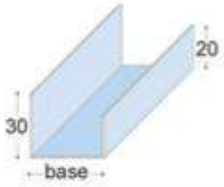
Track (TK)

ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter
		A	B			
TK50	Hot dipped Galvanized U shaped metal section used to receive ST Studs to provide framework for wall lining & partition.	50	20 - 40	3000	0.5 -1mm	1ML
TK70		70	20 - 40	3000	0.5 -1mm	1ML
TK90		90	20 - 40	3000	0.5 -1mm	1ML
TK100		100	20 - 40	3000	0.5 -1mm	1ML



Metal Spacing clip

ITEM	DESCRIPTION & USAGE	DIMENSIONS		BASE	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
SC 20	Galvanized C shaped metal section used with U Track to fill the gap between stud & track.	48	34/40	20	0.6mm	2.2 PCS	3.2 PCS
SC 30		68	34/40	30	0.6mm	2.2 PCS	3.2 PCS
SC 40		88	34/40	40	0.6mm	2.2 PCS	3.2 PCS
SC 50		98	34/40	50	0.6mm	2.2 PCS	3.2 PCS



Other Lengths & widths are available upon Request

(Installation)

Installation Steps:

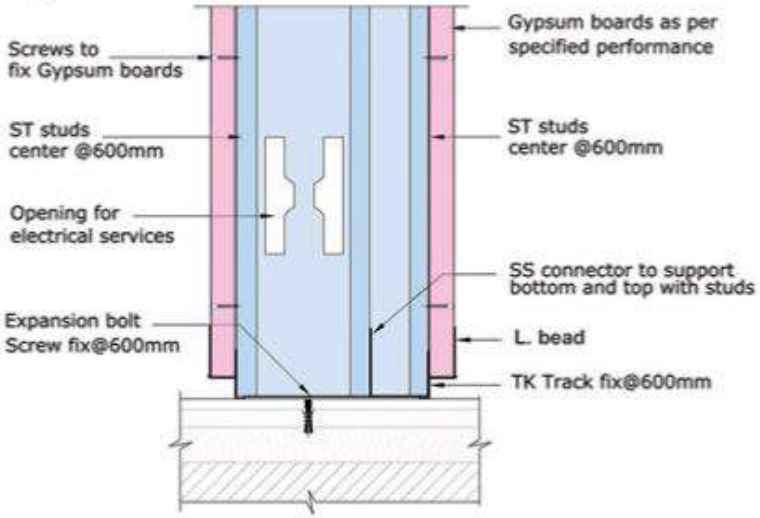
Laying out
- Partition layouts should be marked accurately.
- Always check individual measurements against overall Site dimensions.
- Define the partition width and Staggered type to define the frame width and SC connector.
- Align the top and bottom tracks of the partition accurately according to the plan layout.

Framing installation
- Attach The Track (TK) at ceiling and floor to structural elements.
- Use suitable fasteners for anchoring the partition wall at the base and head.
- Locate fasteners at 50mm from each end and spaced at maximum 600mm centers along each track.
- Cut Stud (ST) to be 5mm shorter than floor to ceiling height, located into perimeter (TK) track then install stud (ST) to be positioned in staggered at maximum 300mm centers for Board.
- Complete the distance between studs and track in top and bottom with suitable Metal connectors (SC).
- Studs in fire rated partitions are not to be fastened to top & bottom tracks except boxed studs facing fire door openings, in which case the boxed studs are pop riveted to the tracks.

Application of Plasterboard Fixing methods:

Single layer application
- If no deflection requirement exists, cut Plasterboard to provide full-length floor-to-ceiling sheets, allowing for 10mm maximum gap at floor and ceiling

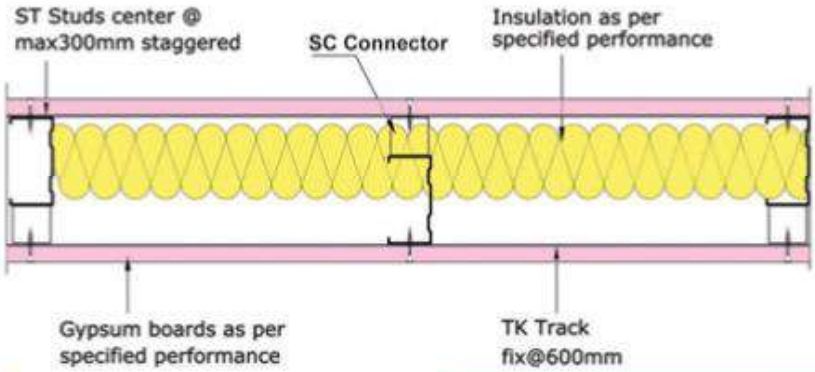
Section Detail



First side
- Screw fasten Plasterboard vertically to studs at edges and intermediate studs only, centering abutting edges on stud flanges. Sheets should be installed by advancing in the direction of the stud web, where one sheet only is to be applied to each side, screws should be minimum 25mm long.
- Space at 200mm centers on sheet edges and at 300mm centers on intermediate studs.
- Fasten screws 10mm minimum - 16mm maximum from sheet edges.

Second side
- Cut the first sheet of Plasterboard 600mm wide only. This creates a stagger with the joints of the sheets applied on the opposite side of the partition.
- Screw fasten this sheet and all subsequent full width sheets to studs.
- Screws should be 25mm long. Space at 200mm centers on sheet edges and at 300mm centers on intermediate studs.

Plan Detail



(Installation) cont.

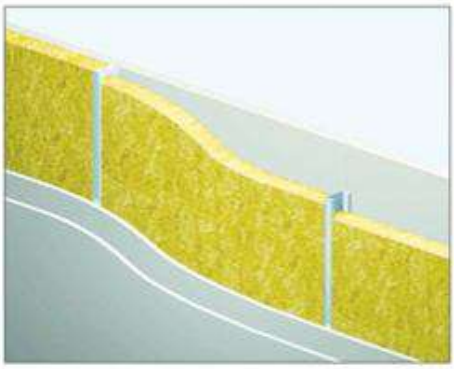
Fastener spacing

- Fasten Plasterboard to stud flanges with 25mm or 32mm screws for first layer, and 45mm screws for the second layer.
- Face sheet only: -
- Space screws at 200mm centers on vertically abutting edges or ends, staggering screws in adjacent boards 100mm. Locate screws no closer than10mm or more than 16mm from board edges and ends.
- Space screws at 300mm centers around openings and on intermediate studs in the field of the board.

Insulation

Any type of insulation and thickness to achieve required performance is tightly installed in a continuous layer crossing behind studs. Where insulation may be expected to slump, suspend it from Insulation Hold strips at 150mm from top of wall, and at 1200mm from vertical centers. 10mm clear gap must be maintained between the substrate and insulation.

Taping and Jointing



Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape (scrim).
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Joining can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards

(See more details in page 28)

Caulking

Caulk all perimeter gaps in fire rated walls with fire Sealant.

Nogging and Trimmers

Nogging is required as headers above doorways and borrowed light frames, for reinforcement behind fixture attachments, and where special circumstances require additional stiffening of the frame. (See Drawing on page 27)

Nogging is formed from lengths of steel track, approximately 150mm longer than the stud spacing.
- Cut the track flanges at approximately 45 degrees and bend the track ends at right angles to fit between studs.
- Position and fasten with suitable screws, or with pop rivets for Fire door application.

Multiple layer application

Vertical application:

- Screw fasten additional layers of Plasterboard Fire stop in the same sequence as for the first layer, except that all joints are staggered at a minimum of 200mm with the previous layer to prevent vertical joints coinciding.
- Fasten second layer with screws staggered at 200mm minimum centres on sheet edges and at 300mm minimum centres on intermediate studs.

Horizontal application:

- Screw fasten additional layers of Plasterboard horizontally to all studs, centring the end-to-end joints on stud flanges.
- Stagger the face layer butt joints of upper and lower sheets by 600mm from each other and by 600mm from the vertical Joints of the first layer.
- Fasten the longitudinal edges to the inner layer of plasterboard between studs with laminating screws at 200mm centres maximum.

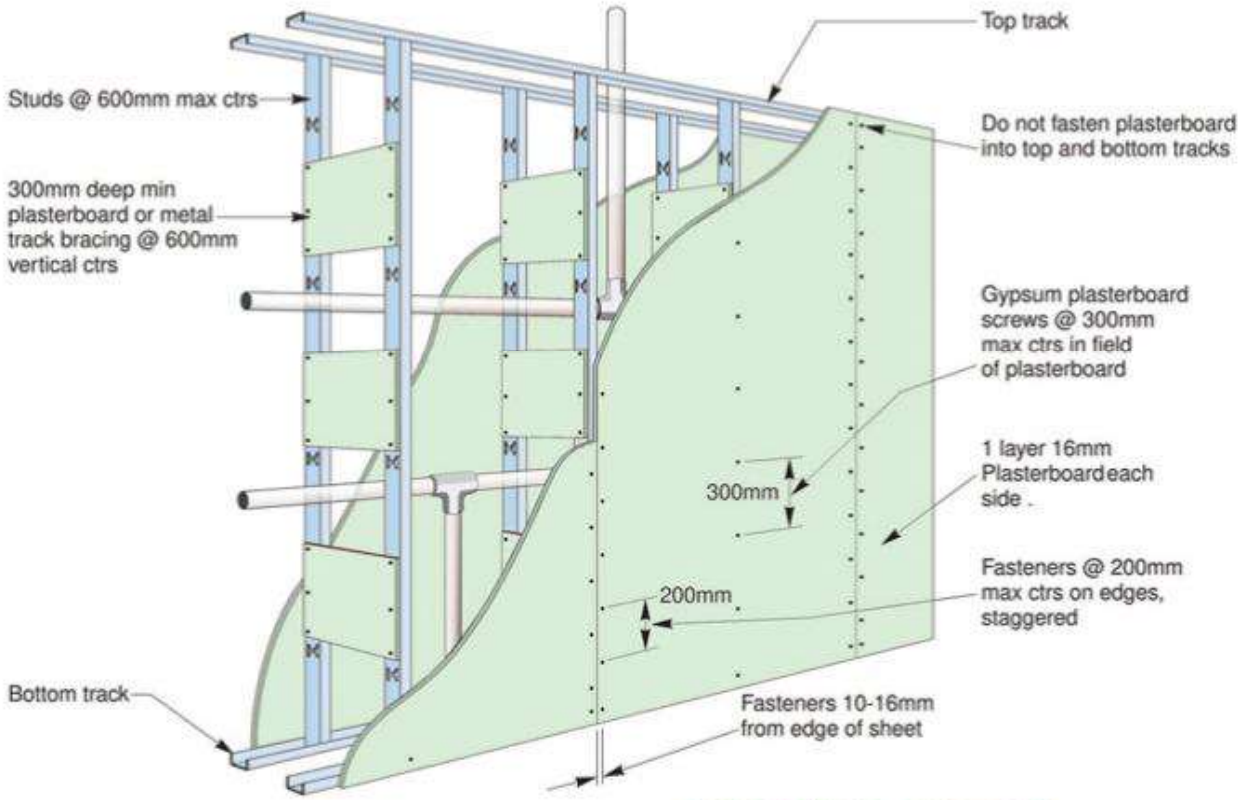
Fitting & fixing accessories (See pages 8 & 9)

Twin Stud Partition Systems

System Brief Description:

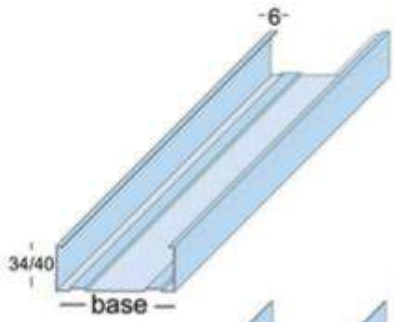
The WP103 system is a dual layer (ST) Stud Partition used where the highest fire and acoustic performance is required.
Or the height of partition is in excess of 10meters.
WP103 Twin Frame Partitions are constructed using two separate metal stud frames set at a minimum of 20mm apart and braced together from two metal frames in parallel with Track Brace, and boarded on the external sides only.
Varying cavity size options helps to optimize acoustic insulation and provide a service cavity.

The WP103 Twin Frame system is a light weight, flexible option compared to traditional masonry separating walls.
The highest performing WP103 Twin Frame partitions are commonly used in cinemas, theatres and schools.
(The system comply with ASTM C645)



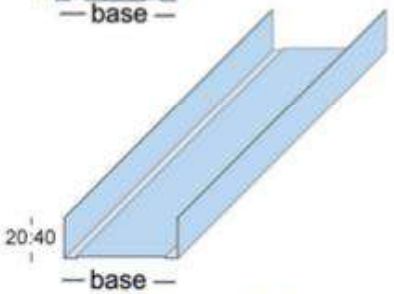
System Main component

Stud (ST)



Type	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
ST50	Galvanized C shaped metal section used with U Track to provide vertical framework for partition.	48	34/40	3000	0.5 -1mm	6ML	4ML
ST70		68	34/40	3000	0.5 -1mm	6ML	4ML
ST90		88	34/40	3000	0.5 -1mm	6ML	4ML
ST100		98	34/40	3000	0.5 -1mm	6ML	4ML

Track (TK)



Type	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter
		A	B			
TK50	Hot dipped Galvanized U shaped metal section used to receive ST Studs to provide framework for wall lining &partition.	50	20 - 40	3000	0.5 -1mm	2ML
TK70		70	20 - 40	3000	0.5 -1mm	2ML
TK90		90	20 - 40	3000	0.5 -1mm	2ML
TK100		100	20 - 40	3000	0.5 -1mm	2ML

Other Lengths & widths are available upon Request

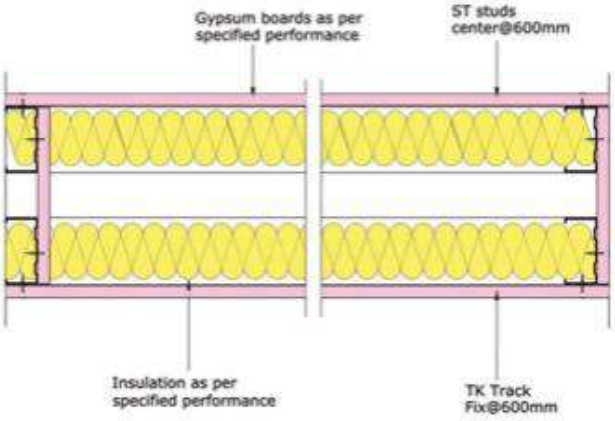
(Installation)

Laying Out

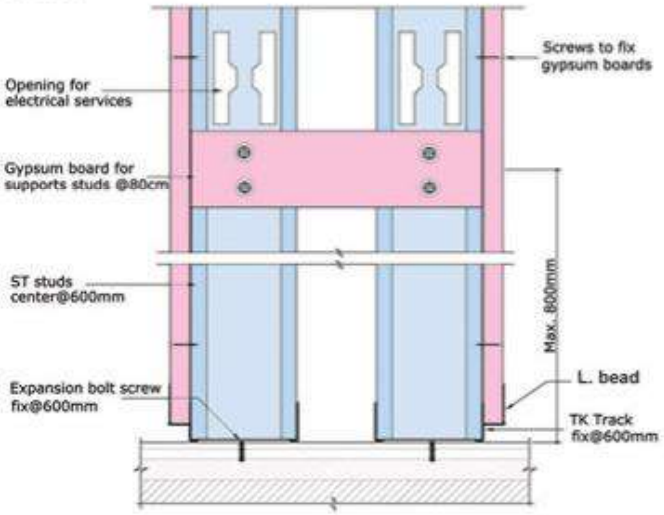
- Partition layouts should be marked accurately.
- Always check individual measurements against overall site dimensions.
- Define the partition width and gap between frames to define the frame width and connector between studs.
- Align the top and bottom tracks of the partition accurately according to the plan layout.

Framing Installation

- Attach the Tracks (TK) at ceiling and floor to structural elements, keeping a suitable distances in between for building the desired partition.
- Use suitable fasteners for anchoring the partition wall at the base and head.
- Locate fasteners at 50mm from each end and spaced at maximum 600mm centers along each track cut stud (ST) to be 5mm shorter than floor to ceiling height, located into each track TK install studs (ST) to be positioned at maximum 600mm centers for Board.
- Fix the distance between studs in both frames with Track bracing or slid from gypsum boards centers at 800mm.
- Studs in fire rated partitions are not to be fastened to top &bottom tracks except boxed studs facing fire door openings, in which case the boxed studs are screwed to the tracks.



Plan Detail



Section Detail

Single Layer Application

- If no deflection requirement exists, cut Plasterboard to provide full-length floor-to-ceiling sheets, allowing for 10mm maximum gap at floor and ceiling.

First Side

- Screw fasten Plasterboard vertically to studs at edges and intermediate studs only, centering abutting edges on stud flanges. Sheets should be installed by advancing in the direction of the stud web where one sheet only is to be applied to each side, screws should be minimum 25mm long.
- Space at 200mm centers on sheet edges and at 300mm centers on intermediate studs.
- Fasten screws 10mm minimum - 16mm maximum from sheet edges.

Second Side

- Cut the first sheet of Plasterboard 600mm wide only. This creates a stagger with the joints of the sheets applied on the opposite side of the partition.
- Screw fasten this sheet and all subsequent full width sheets to studs, Screws should be 25mm long.
- Space at 200mm centers on sheet edges and at 300mm centers on intermediate studs.

Note:

- Keep wall lining at least 20cm apart .
- Ensure the insulation cover whole wall area and fired together tightly.
- Ensure that all cavity stops (losers) are fixed to one frame only.
- Stagger joints dry wall the avoid path seal all joints in outer layer with tape or caulk with sealant.

(Installation) cont.

Fastener Spacing

- Fasten Plasterboard to stud flanges with 25mm or 32mm screws for first layer, and 45mm screws for second layer.
- Face sheet only:- Space screws at 200mm centres on vertically a butting edges or ends, staggering screws in adjacent boards 100mm.
- Locate screws no closer than 10mm or more than 16mm from board edges and ends.
- Space screws at 300mm centres around openings and on intermediate studs in the field of the board.

Insulation

Any type of insulation and thickness to achieve required performance is tightly installed in a continuous layer crossing behind studs.
Where insulation may be expected to slump, suspend it from Insulation Hold strips at 150mm from top of wall, and at 1200mm from vertical centers.
10mm clear gap must be maintained between the substrate and insulation.

Taping and Jointing

Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Joining can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards . (See more details in page 28)

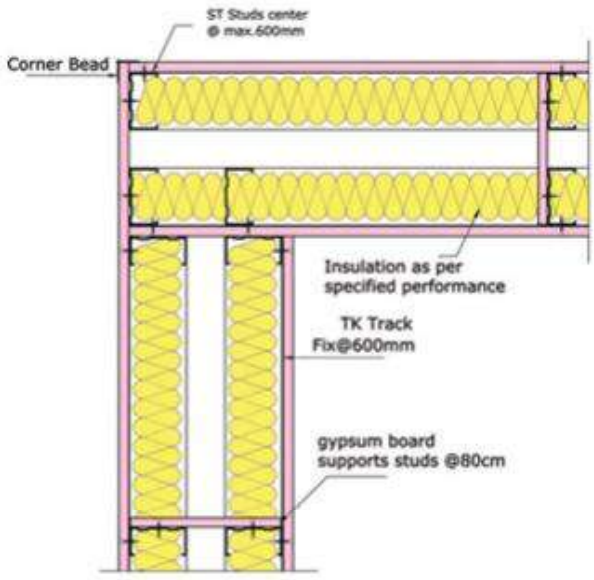
Caulking

Caulk all perimeter gaps in fire rated walls with fire Sealant.

Nogging and Trimmers (See details on page 27)

Nogging is required as headers above doorways and borrowed light frames, for reinforcement behind fixture attachments, and where special circumstances require additional stiffening of the frame.
Nogging is formed from lengths of steel track, approximately 150mm longer than the stud spacing.

- Cut the track flanges at approximately 45 degrees and bend the track ends at right angles to fit between studs.
- Position and fasten with suitable screws, or with pop rivets for Fire door application.



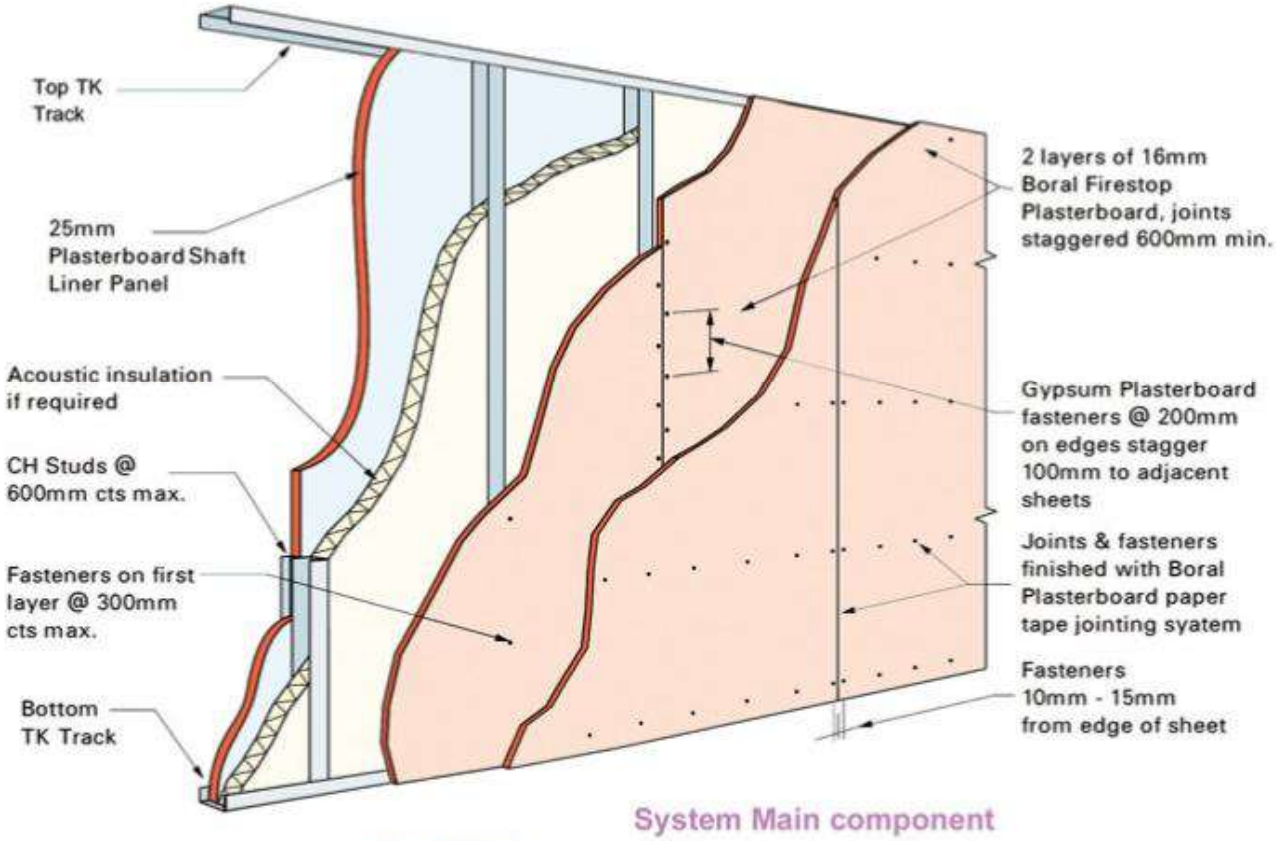
Corner Detail

Fitting & fixing accessories (See pages 8 & 9)

(Shaft Wall)

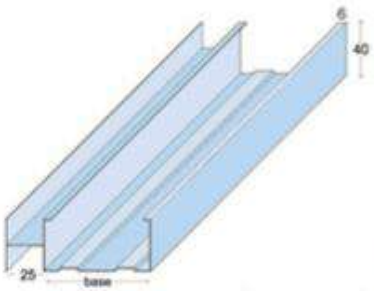
System Brief Description:

Walls, which enclose lift shafts, stairwells and other vertical shafts are the most important walls in a building from life-safety standpoint. Should a fire occur, firemen can't use the lifts to reach the fire, the stairwells provide the only means for human egress within the building. Since these walls contain the lifelines of the building, they must be structurally strong to withstand lateral loads and provide the needed fire protection.
Golden Metal have designed The WP104 system that is comprised of (CH) Stud and (TK) Track components, resulting in easier installation. (The system comply with ASTM C645)



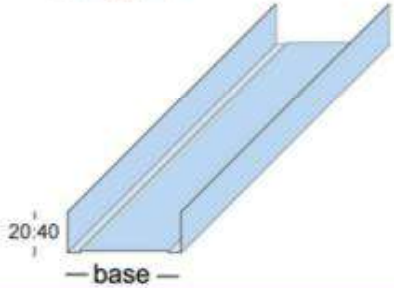
System Main component

Stud (CH)



ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter CENTERS 60CM
		BASE	WIDTH			
CH70	Hot dipped Galvanized C&T shaped metal section used with U track to provide vertical framework for shaft wall liner.	43	68	3000	0.8 -1.5mm	2ML
CH95		68	93	3000	0.8 -1.5mm	2ML
CH115		88	113	3000	0.8 -1.5mm	2ML
CH125		98	123	3000	0.8 -1.5mm	2ML

Track (TK)

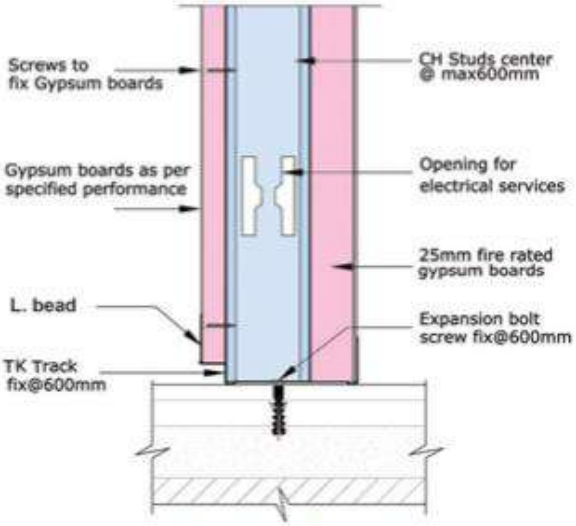


ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter
		A	B			
TK70	Hot dipped Galvanized U shaped metal section used to receive ST Studs to provide framework for wall lining &partition.	70	20 - 40	3000	0.8 -1mm	1ML
TK95		95	20 - 40	3000	0.8 -1mm	1ML
TK115		115	20 - 40	3000	0.8 -1mm	1ML
TK125		125	20 - 40	3000	0.8 -1mm	1ML

Other Lengths & widths are available upon Request

Installation

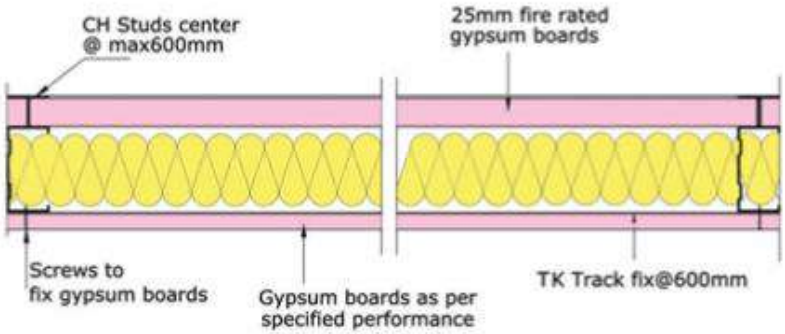
- Lay out shaft wall in locations indicated on construction drawings.
- Anchor (TK) Track perimeter framing at a butting horizontal and vertical construction.
- Anchor with approved fasteners spaced at maximum (600 mm) o.c.
- Apply non-hardening, flexible sealant in a continuous application at the perimeter.
- Space, (CH) Studs at (600 mm) o.c.
- Adjust the spacing at ends of shaft wall construction so that, end studs are at minimum of (200 mm) from the ends.
- Install the first Shaft liner panel. The panel length shall be (10 mm) less than the total height of the framed section.
- Plumb the panel against the web of the (TK) Track and secure the panel in place by Inserting a (CH) Stud into the top and bottom (TK) Tracks and fit tightly over the previously installed 1" (25 mm) panel.



Section Detail

- Allow equal clearance between track and stud at top and bottom of (TK) track. The stud length shall be (10 mm) less than the total height of the framed section.
- Install the second 1" (25 mm) Shaft liner panel inside the (TK) Track and fix the (CH) stud with (TK) track.
- Install succeeding studs and panels in the same manner as described for the first and second panels until the wall sections is complete.
- Anchor the final panel section at (300 mm) o.c. with suitable screws.
- Where wall heights exceed the standard or available length of Shaft liner, the panels shall be cut and stacked. The shorter panels shall be minimum (600 mm) long and of sufficient length to engage two stud tabs. Joints of adjacent panels shall be offset at least (300 mm).
- For doors, ducts or other large penetrations or openings, install (TK) Track as perimeter framing. Use another (TK) Track with a (40 mm) back leg for elevator doors and block cavity.
- Install (300 mm) wide gypsum filler strips for doors exceeding (2135 mm) height.

Plan Detail



(Installation) cont.

2- Installation of Gypsum Boards

A - when finished one side:

- Install the base layer of gypsum board horizontally with approved fasteners spaced at (600 mm) o.c. and (40 mm) from all edges.
- Offset the horizontal joints minimum (300 mm) from any splice joints in the shaft liner panels.
- Install the face layer of gypsum board vertically to the framing with approved fasteners spaced at minimum of (300 mm) o.c. and at (152 mm) from all edges.
- Offset edges and end joints from the base layer at least (600 mm).

B - Stairwell system finished both sides:

- Install gypsum board on both sides, either horizontally or vertically.
- Attach gypsum board with approved fasteners spaced at (300 mm) o.c. and at (152 mm) from all edges. Offset edges and ends of gypsum board on opposite side's minimum (600 mm).

Notes: Don't Fasten plaster board into top and bottom track.

3 - Insulation

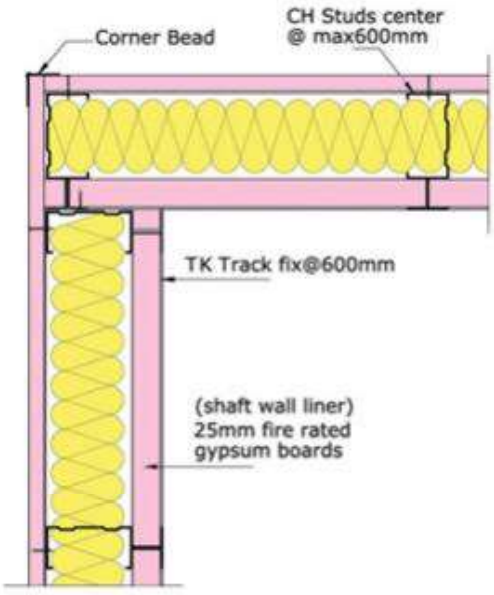
- Any insulation to be of type and thickness to achieve required performance are tightly installed in a continuous layer crossing behind studs.
- Where insulation may be expected to slump, suspend it from Insulation Hold strips 150mm from top of Wall and at 1200mm vertical centers.
- 10mm clear gap must be maintained between substrate and insulation.

Taping and Jointing

Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Joining can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards

(See more details in page 28)



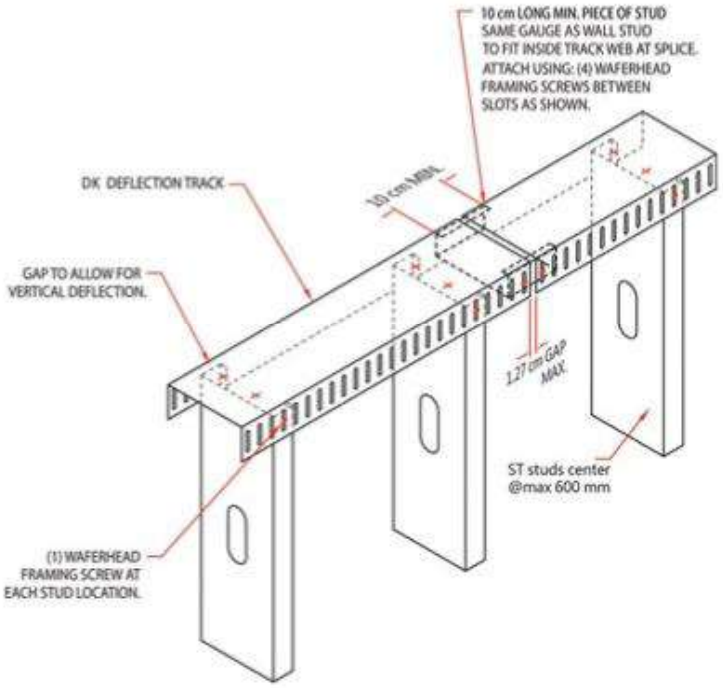
Corner Detail

Fitting & fixing accessories (See pages 8 & 9)

Deflection Track

For superior head-of-wall vertical deflection, and the added benefit of horizontal drift movement, **Golden Metal** introduced two solutions:
(DT100) Slotted Deflection Track and (DT200™) Slotted Deflection & Drift Track.

The (DT100) system has slots in the track legs to allow the top of the wall stud to float within the track legs. This connection allows for vertical live load movement of the primary structure without transferring axial loads to the wall studs. Total allowable vertical (deflection) movement of 1-1/2" (3/4"±).
The (DT200) has slots in the legs and in the web to allow for deflection and horizontal drift when seismic designs are required. Total allowable horizontal (drift) movement of 4" (2"±).



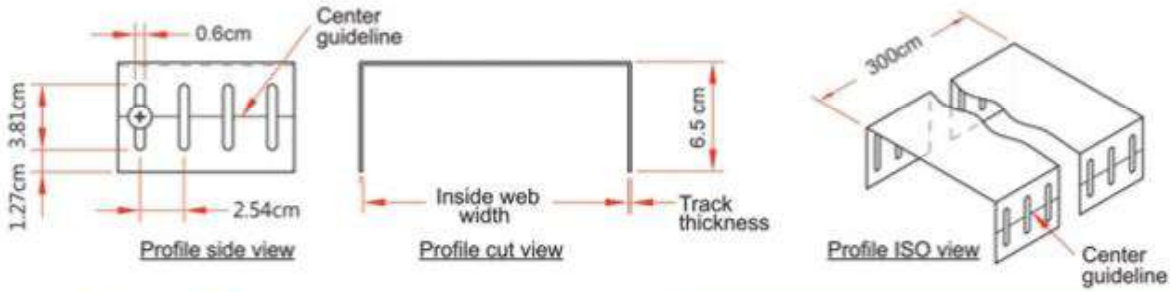
Slotted Deflection Track Detail

(DT100)

(DT200)

Construction Advantages

- Provides positive attachment to wall framing for overall wall strength with no additional components.
- Total allowable vertical (deflection) movement of 1-1/2" (3/4"±)
- Total allowable horizontal (drift) movement of 4" (2"±) (DT200) Only.
- One-piece system reduces the cost of materials and labor.
- Easy installation reduces labor costs.
- Fire-rated system integration.
- Guideline at center of vertical deflection slot helps installers correctly position fasteners accurately and quickly.



Technical Data Sheet

Material

Golden Metal components are fabricated from hot-dipped galvanized steel complying with ASTM A653, and ASTM A1003 Grade 33 Type H for 33 ksi yield strength steel with a minimum G40 coating complying with ASTM A924.
(other coatings are available up to G90 upon client request).

- Minimum thickness represents 95% of the design thickness, and is the minimum acceptable thickness of the base steel delivered to the construction site.

Fire Resistance

ASTM E119
Golden Metal Profiles are manufactured of non-combustible components; these systems offer a wide range of fire-resistance ratings to meet design requirements. Comply with ASTM E119 (Tec Office)
(See Guide lines in pages 24-25)

Elements of fire resistance

1- Using fire rated boards.
2- Increasing number of layers.
3- Minimizing inner spacing of studs.
4- Using Rock wool insulation in the cavity to delay fire spread.

Visually Tests (ASTM C645)

1- All our drywall sections are conforming to ASTM C645 & ASTM C955
2- Studs has knurlge prevent deviation from the path of screw installation.
3- Profiles are straight and free of any buckling.

Economical

Low material costs, dry construction and speed of installation enable realistic and competitive construction costs to be achieved

Sound isolation

Available ratings range up to STC 64, as achieved in acoustic tests (Tec Office). Comparable field performance depends on building design and careful attention to detailing and Workmanship. It is important that the full perimeter of the Wall Partition be sealed with an approved flexible acoustic sealant, as well as all penetrations.

Limitations

- Dry wall systems are non load-bearing.
- Fire-rated systems must be installed strictly in accordance with each test specification and professional opinion.
- Maximum stud spacing is 600mm.
- The maximum heights for interior partitions framed depend on the strength of the steel studs and the Gypsum drywall acting together, (see ASTM C754).
- Components must not be used if fractured or damaged.
- Control joints should be provided in long continuous run of partition at 12 meters centers maximum, and wherever structural joints are located.

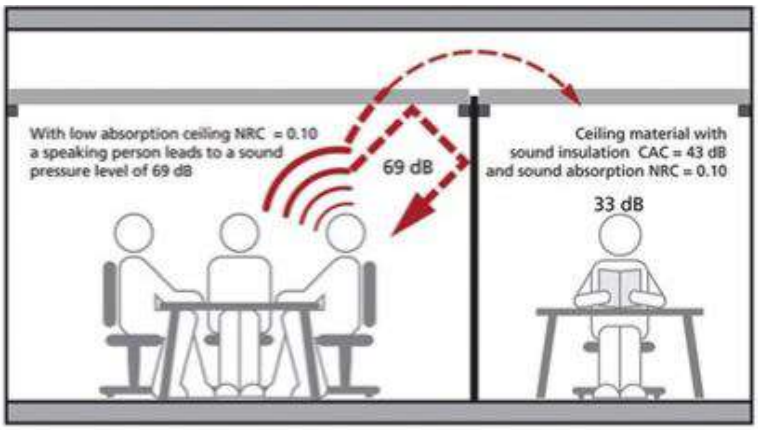
HRC High recycled content

Steel contains 85 % (post-consumer 75% & pre consumer 10%) and the rest is virgin iron metal in the form of DR/HBI. 70-75 % of scrap used delivered from international suppliers. 25-30 % from local suppliers. (collected from Cairo, Delta, Port Saied, Suez, and Alexandria).

Technical Manual

STC Ratings & Steel Stud Framed Walls.
Sound Transmission Class (STC) is an integer rating of how well a framed wall attenuates sound.

- Doubling the mass of a wall assembly does not double the STC.
- An empty framed wall (steel studs and a layer of gypsum wallboard on each side), has an STC of approximately 35dB.
- Adding an additional layer of gypsum wallboard (from two sheets to four sheets) increases the STC by about 5-6 points.
- Adding cavity insulation increases the STC approximately 4 – 6 dB.
- Fiberglass batts increase the STC to 39 & Cellulose insulation increases the STC to 44dB.
- Batt insulation must fit tight without gaps.
- Batt thickness provides better sound control than batt density. Compressing a batt reduces STC and thermal efficiency.
- Stud assembly must span from deck to ceiling.
- Structurally decoupling the gypsum wallboard panels from each other by (using resilient channel, a staggered stud assembly or a double stud wall) can yield an STC as high as 63dB or higher.
- Other materials such as; mass-loaded vinyl (MLV), "soundproof" gypsum wallboard, or liquid applied dampening compound may also improve STC ratings (Refer to manufacturer specifications).



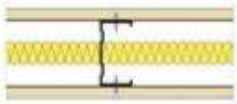
What Is Heard according to The different level of STC ?

STC Level	Results
25	Normal speech can be understood easily and heard distinctly.
30	Loud speech can be understood well, normal speech is heard.
35	Loud speech audible but not understood.
40	Beginning of " Privacy ".
42	Lod space is heard as a murmur.
45	Loud speech not audible.
50	Very loud sounds such as musical instruments and stereos are unheard.
60	Superior sound proofing. Most sounds inaudible.

Specification Table Guidline

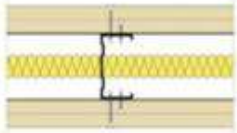
This technical document is to serve as a guideline and is not intended for any specific construction project.

System Reference



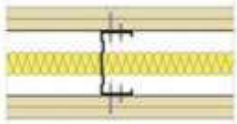
Components		
Facing Outer Layer(s):	System Weight (kg/m²)	27
1x12.5mm R Board	Max. Height (meter)	3.7
Studs: Single ST70 studs at 600mm centers	Overall Thickness (mm)	95
Insulation: 25mm 16kg/m³ glass mineral wool	Fire Performance (BS 476-22) Minutes.	30
	Acoustic Performance R db .	48

System Reference



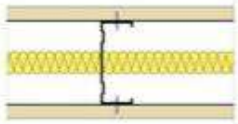
Components		
Facing Inner Layer(s):		
1x15mm R Board	System Weight (kg/m²)	64
Facing Outer Layer(s):	Max. Height (meter)	5.6
1x15mm R Board	Overall Thickness (mm)	130
Studs: Single ST70 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	57

System Reference



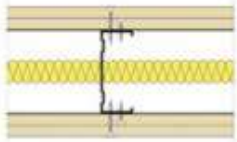
Components		
Facing Inner Layer(s):		52
1x12.5mm R Board	System Weight (kg/m²)	5.0
Facing Outer Layer(s)	Max. Height (meter)	120
1x12.5mm Board	Overall Thickness (mm)	90
Studs: Single ST70 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	56
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	

System Reference



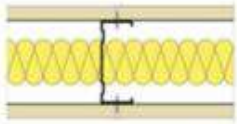
Components		
Facing Outer Layer(s):	System Weight (kg/m²)	33
1x15mm R Board	Max. Height (meter)	5.0
Studs: Single ST90 studs at 600mm centers	Overall Thickness (mm)	120
Insulation: 25mm 16kg/m³ glass mineral wool	Fire Performance (BS 476-22) Minutes.	60
	Acoustic Performance R db .	50

System Reference



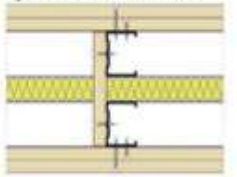
Components		
Facing Inner Layer(s):		52
1x12.5mm R Board	System Weight (kg/m²)	6.4
Facing Outer Layer(s)	Max. Height (meter)	140
1x12.5mm R Board	Overall Thickness (mm)	90
Studs: Single ST90 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	57
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	

System Reference



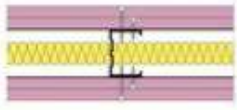
Components		
Facing Outer Layer(s):	System Weight (kg/m²)	33
1x15mm R Board	Max. Height (meter)	5.0
Studs: Single ST90 studs at 600mm centers	Overall Thickness (mm)	120
Insulation: 50mm 16kg/m³ glass mineral wool	Fire Performance (BS 476-22) Minutes.	60
	Acoustic Performance R db .	51

System Reference



Components		
Facing Inner Layer(s):		64
1x15mm R Board	System Weight (kg/m²)	6.4
Facing Outer Layer(s)	Max. Height (meter)	200
1x15mm R Board	Overall Thickness (mm)	120
Studs: Single ST50 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	65
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	

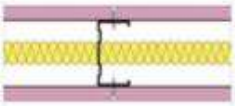
System Reference



Components		
Facing Inner Layer(s):		
1x12.5mm Fire Board	System Weight (kg/m²)	42
Facing Outer Layer(s)	Max. Height (meter)	3.6
1x12.5mm Fire Board	Overall Thickness (mm)	100
Studs: Single ST50 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	52

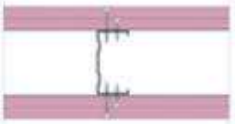
This technical document is to serve as a guideline and is not intended for any specific construction project.

System Reference



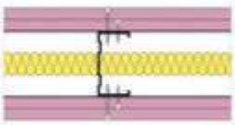
Components		
Facing Outer Layer(s):	System Weight (kg/m²)	26
1x15mm Fire Board	Max. Height (meter)	4.0
Studs: Single ST70 studs at 600mm centers	Overall Thickness (mm)	100
Insulation: 25mm 16kg/m³ glass mineral wool	Fire Performance (BS 476-22) Minutes.	60
	Acoustic Performance R db .	47

System Reference



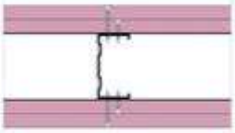
Components		
Facing Inner Layer(s):		
1x12.5mm Fire Board	System Weight (kg/m²)	42
Facing Outer Layer(s):	Max. Height (meter)	4.6
1x12.5mm Fire Board	Overall Thickness (mm)	120
Studs: Single ST70 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
	Acoustic Performance R db .	46

System Reference



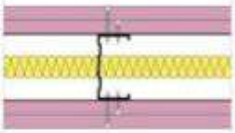
Components		
Facing Inner Layer(s):		
1x12.5mm Fire Board	System Weight (kg/m²)	42
Facing Outer Layer(s)	Max. Height (meter)	4.6
1x12.5mm Fire Board	Overall Thickness (mm)	120
Studs: Single ST70 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	53

System Reference



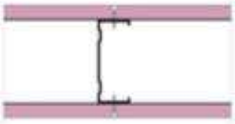
Components		
Facing Inner Layer(s):	System Weight (kg/m²)	50
1x15mm Fire Board	Max. Height (meter)	4.9
Facing Outer Layer(s):	Overall Thickness (mm)	130
1x15mm Fire Board	Fire Performance (BS 476-22) Minutes.	120
Studs: Single ST70 studs at 600mm centers	Acoustic Performance R db .	48

System Reference



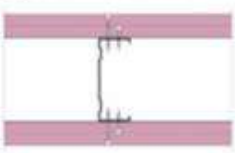
Components		
Facing Inner Layer(s):		
1x15mm Fire Board	System Weight (kg/m²)	51
Facing Outer Layer(s):	Max. Height (meter)	4.9
1x15mm Fire Board	Overall Thickness (mm)	130
Studs: Single ST70 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	56

System Reference



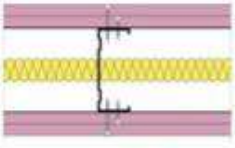
	System Weight (kg/m²)	26
Components	Max. Height (meter)	5.1
Facing Outer Layer(s):	Overall Thickness (mm)	120
1x15mm Fire Board	Fire Performance (BS 476-22) Minutes.	60
Studs: Single ST90 studs at 600mm centers	Acoustic Performance R db .	40

System Reference



Components		
Facing Inner Layer(s):	System Weight (kg/m²)	42
1x12.5mm Fire Board	Max. Height (meter)	5.3
Facing Outer Layer(s)	Overall Thickness (mm)	140
1x12.5mm Fire Board	Fire Performance (BS 476-22) Minutes.	120
Studs: Single ST90 studs at 600mm centers	Acoustic Performance R db .	48

System Reference

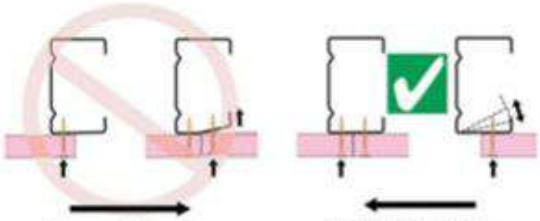


Components		
Facing Inner Layer(s):		
1x12.5mm Fire Board	System Weight (kg/m²)	42
Facing Outer Layer(s)	Max. Height (meter)	5.3
1x12.5mm Fire Board	Overall Thickness (mm)	140
Studs: Single ST90 studs at 600mm centers	Fire Performance (BS 476-22) Minutes.	120
Insulation: 25mm 16kg/m³ glass mineral wool	Acoustic Performance R db .	56

Cautions and Applications

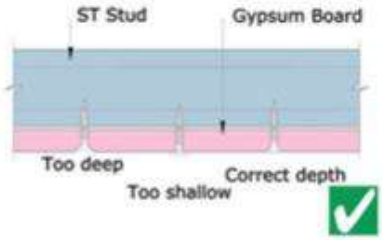
Fixing Plasterboards:

Fix plasterboard sheets in the direction of the open side of the stud to the closed side of the stud, and don't fix at the closed side. (Figure 1) & (Figure 2)

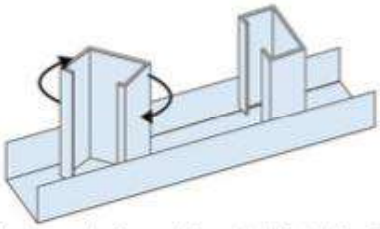


(Figure 1) (Figure 2)

Correct way to fix Gypsum Boards

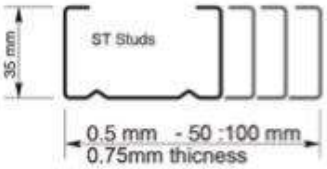


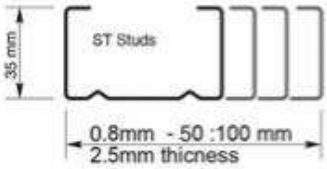
Correct way to install studs



Make sure to insert the stud into the Track and twist to fit tightly, as shown in the drawing.

Fasteners





Needle point screw suitable for thin studs

Drill point screw suitable for thick studs

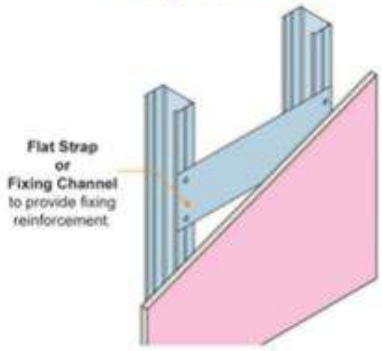
Loading at wall Partitions

Drywalls alone has little holding power when attaching light weight objects to them (9kg or less), Standard picture hangers or wire hangers work fine and will minimizes damages to the wall.

For medium weight items (9-18 kg), consider a spreading type ribbed plastic anchors or threaded anchors.

For heavy objects (over 18 kg), use a fastener such as a Toggle or Molly bolt that distribute the weight behind the wall.

Metal support pre-installed for medium weight fixtures



For special heavier weight items, OR the following applications, please contact the our technical office for free advice.

- Wall reinforcement for Sinks.
- Reinforcements for Stud Overlaps.
- Attachments of Pipelines.
- Reinforcements for Kitchen appliances and Book Cases.

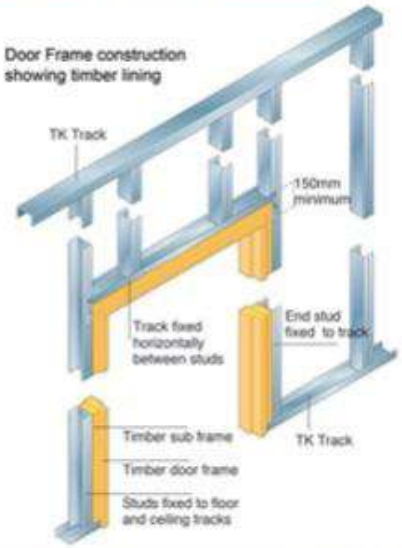
Cautions and Applications

Nogging and trimmers

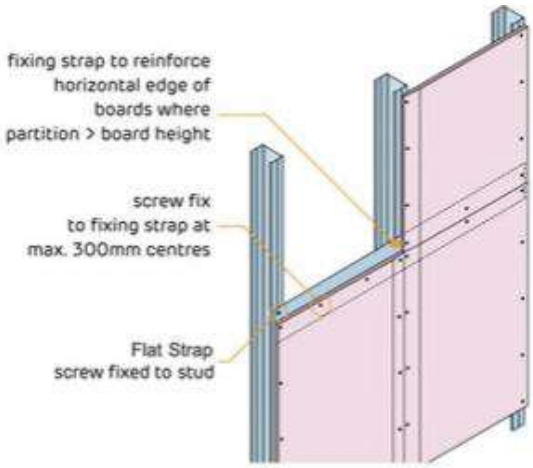
Nogging is required as headers above doorways and borrowed light frames, for reinforcement behind fixture attachments, and where special circumstances require additional stiffening of the frame.

Nogging is formed from lengths of steel track, approximately 150mm longer than the stud spacing.
- Cut the track flanges at approximately 45 degrees and bend the track ends at right angles to fit between studs.
- Position and fasten with stud crimper, or with pop rivets for Fire door application

Typical door opening treatment

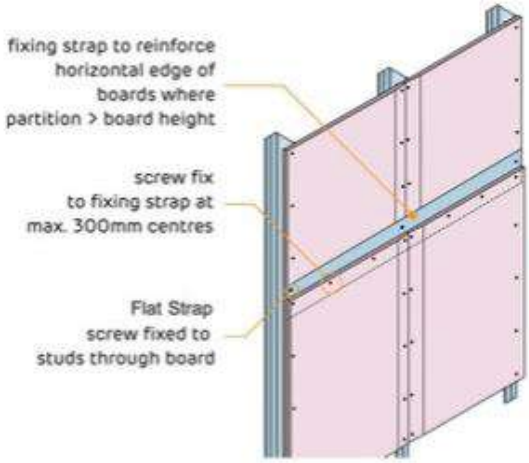


Horizontal joint reinforcement (single layer)



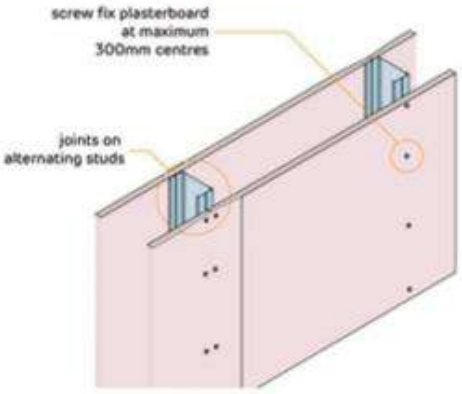
Where partition height exceeds board height fix boards to continuous band of flat strap behind all horizontal joints to maintain fire integrity.

Horizontal joint reinforcement (double layer)

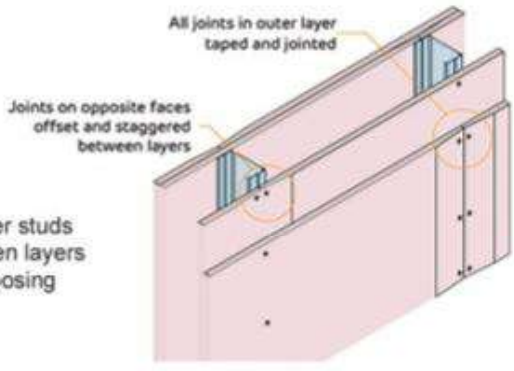


Where partition height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of flat strap behind all horizontal joints.

Board Fixing (single layer)



Board Fixing (double layer)

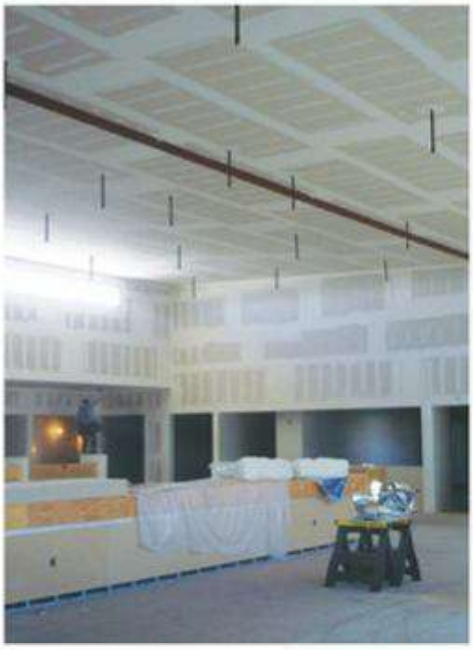


BOARDING

- Board edges to be centred over studs
- Stagger all board joints between layers
- Stagger all board joints on opposing sides of partition.

Cautions and Applications

Taping and Jointing



Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site condition) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Jointing can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards.

How to Install Drywall Tape

(1) 

TAPE COAT
Using a 6 inch knife, spread a 4 inch wide layer of joint compound along the seam.

(2) 

DRYWALL TAPE
Apply drywall tape along the joints.

(3) 

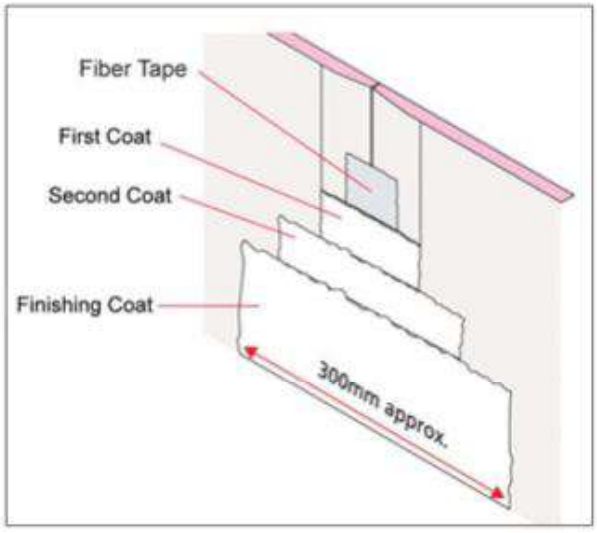
BLOCK COAT
Apply a second layer of compound on top of the tape.

(4) 

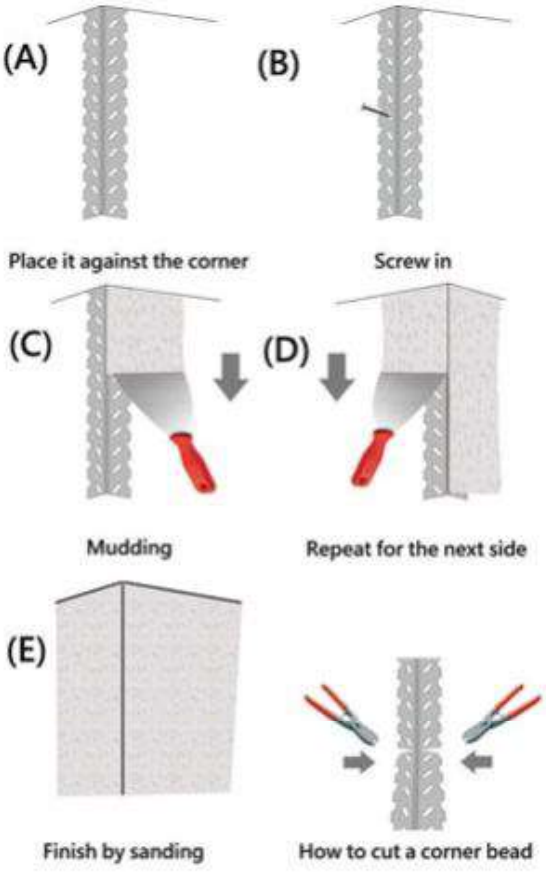
SKIM COAT
Use a 12 inch knife to apply a thin and smooth final layer of joint compound.

(5) 

SANDING
Wait 24 hours and use 120 grit sandpaper to smooth the walls.



How to Install Drywall Corner Bead



GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

Drywalls Cladding Systems

GM products are Dependable & Economical

Dry Lining

Introduction

GOLDEN METAL's lightweight wall liner system has been designed as an easy-to-use, economical method for lining internal walls with a wide range of applications including: residential, commercial and industrial.
The system is ideal to dry line, block and masonry walls and for concealing services.
All wall liner profiles are manufactured as a design of ASTM C645, BS 7364-1990 from pre galvanized material Comply with ASTM A653, ASTM A1003.

Key Benefits

- Insulation for improved sound and thermal properties are easy to install.
- A range of cavity depths can be created from 25 - 600mm using a variety of affixing methods, and it comes in two models (Types WL201 & WL202).

- **GOLDEN METAL** system is suitable for any type of proprietary plasterboard.
- Background must be treated for dampness and be of sufficient density to enable mechanical fixings to be achieved.

- All **GOLDEN METAL** profiles can be easily cut to the required length using appropriate cutting tools.
- Easy to decorate flat surface.
- Easy to decorate flat surface and the highest levels of insulation.
- Cavity frame design achieves higher technical performances.
- Reliable and commonly used *(with no thermal bridging created).*
- Can adjust the depth of high level of substrate correction.
- Upgrade existing structures.

Features

1. Plasterboard finish.
2. Completely variable cavity depth.
3. Mechanical board fixing for all Boards.
4. Completely independent from substrate.
5. Dry lines any substrate.
6. Creates false wall.

Dry Lining System

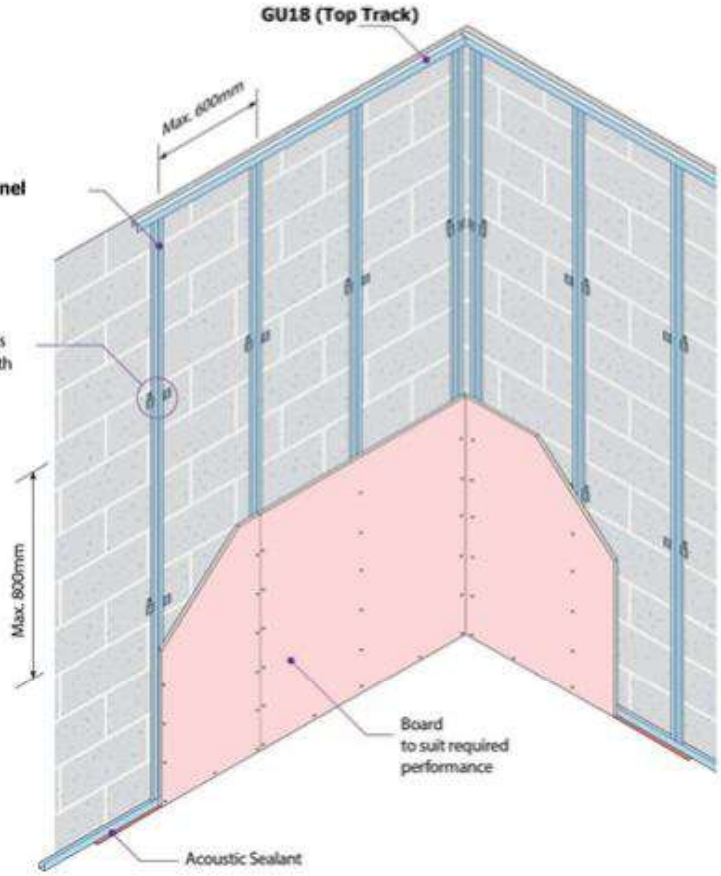
System Brief Description:

WL201 Dry liner ceilings are composed from, Connection Brackets (UB45) fixed to the soffit, with vertical Channels(CH45) secured to them. The channels provide strong and leveled substrate for fixing the plasterboard.
Connection Brackets(UB45) has a range of cavity depths up to 70mm.
Fire rating and acoustic performance can be enhanced by the selection of appropriate Boards.
(Comply with ASTM C645)

Advantages

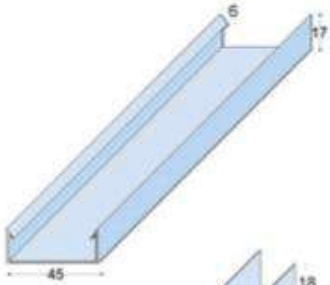
1. Independent Wall Lining framing using (one set of components on site).
2. Easy to install.
3. Perforated boards in a range of patterns provides a range of aesthetic options for variation in large spaces.

Lining System Assembly



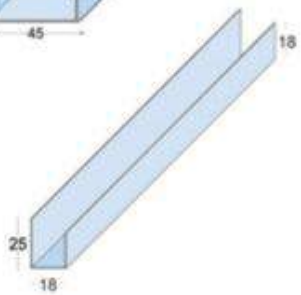
System component

Furring Channel (CH45)



ITEM	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
CH 45	Hot dipped Galvanized steel Furring Channel for plasterboard fixing in the dry liner systems.	45	17	3000	0.5 -1mm	3ML	2ML

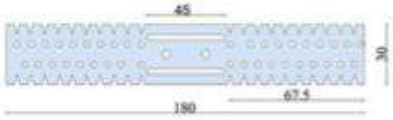
Channel Track (GU)



ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter
GU 18	Hot dipped Galvanized steel channel used to form the perimeter supprt of the dry liner systems.	25X18X25	3000	0.5-1mm	1ML

Other Lengths & widths are available upon Request

Connection Bracket



ITEM	DESCRIPTION & USAGE	WIDTH	LENGTH	THICKNESS	Req. per Sq.Meter	
					CENTERS 40CM	CENTERS 60CM
CB 45	Hot dipped Galvanized steel Furring Channel for plasterboard fixing in the dry liner systems.	30MM	180	0.8mm	3PCS	2PCS

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
Screw for metal frame	Metal frame Head pan screw use to connect metal frames components, Phosphate coating, Thickness 3.9 mm Length 11 mm. Comply with ASTM C954 - 4	5 pcs	
Self piercing Tapping Screw	Bugle head Screw for attaching plasterboard to light gauge metal Less than 0.8mm. Black Phosphate Coating Thickness 3.5mm & 3.9mm Length 25 mm up to 75mm Comply with ASTM C1002-4	15 pcs	
Steel Drill Screw	Bugle head Screw for attaching plasterboard to heavy gauge metal from 0.8mm to 2.8mm. Black Phosphate Coating, Thickness 3.5mm & 3.9mm. Length 25mm up to 75mm. Comply with ASTM C954 - 4	15 pcs	
Fiber Tape	Self-adhesive tape no bedding coat needed. Smooth joints in only two coats. Use with setting-type joint compounds for one-day joint finishing. width 50mm, Length 90ML. Comply With ASTM C475	1.3ML	
Meal Tape	Metal covered with paper attached to dry wall corner using setting-taping or all purpose joint compound instead of nails. Edge is finished with typical joint treatment system. Width 50mm, Length 30ML. Comply With ASTM C475	As per specified drawings	
Corner Bead	Hot dipped Galvanized steel profile Attached to drywall external corner with nails or screws. Finished with standard joint Compound and feathered at the edges. Thickness 0.4mm, Length 3ML. Comply With ASTM C1047	As per specified drawings	
L. Bead	Hot dip Galvanized steel profile Attached to exposed drywall edge. Finished with standard joint compound and feathered at the edges Thickness 0.4 mm, Length 3ML. Comply With ASTM C1047	1.0ML	

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
Mineral Fiber blanket insulation	Rock wool or glass wool Blanket is medium density insulation for building applications. Produced in Thickness from 25mm Up to 100mm and a width of 1200 mm. Comply with ASTM C665	1 sqm	
Jointing compound	Chemically setting powder compounds. Used For internal Filling to Jointing Between Boards and filling screw places. Comply with ASTM C28, ASTM C28m & ASTM C475.	0.45KG	
Acoustic Sealant	Used to prevent transmission of sound through gypsum ceiling and dry wall partitions. Comply With ASTM C834	As per specified drawings	

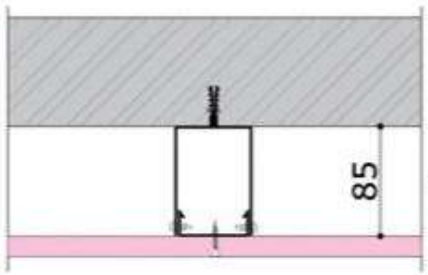
Installation

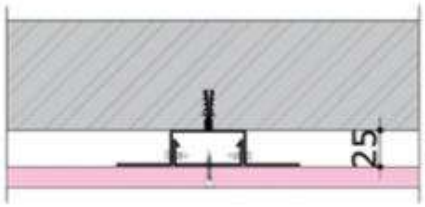
Cladding layouts should be marked accurately.
Always check individual measurements against overall site dimensions.
Align the top and bottom channel tracks of the cladding accurately according to the plan layout.
Attach at ceiling and floor to structural elements.
Allow for board depth when positioning and to achieve required cavity depth.

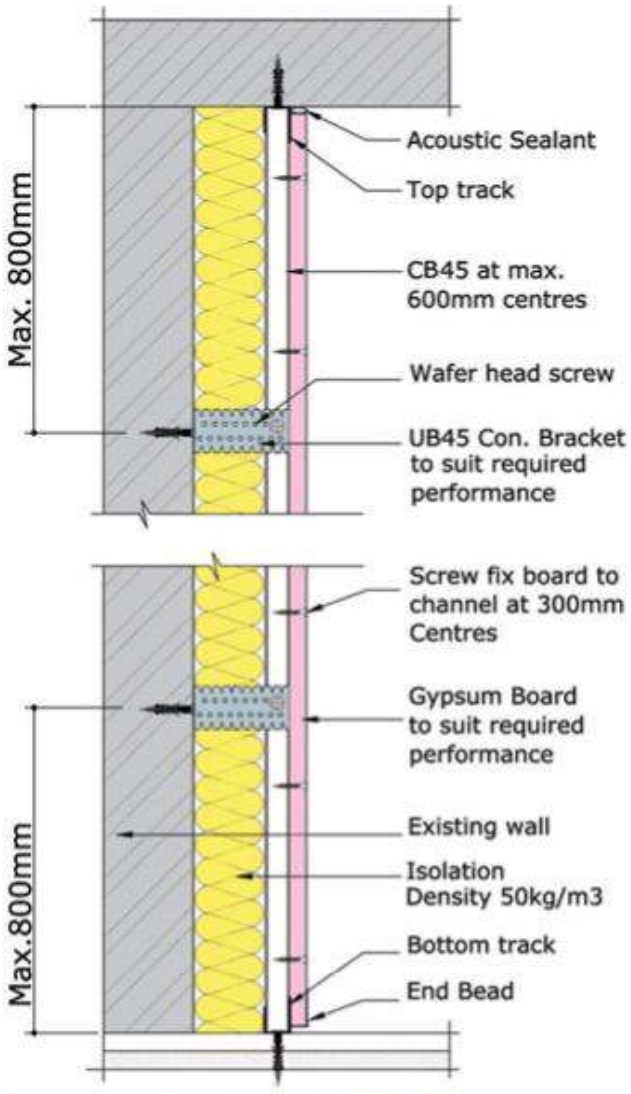
Framing installation:

- Use suitable fasteners for anchoring the cladding wall at the base and head. Locate fasteners at 50mm from each end and spaced at maximum 600mm centres along each channel track (GU18).
- Fix CB45 to structure in a line at maximum 800mm vertical centres to receive CH45 and to suit cavity depth required (the range 25mm-70mm).
- Cut the CH45 to be 5mm shorter than floor to ceiling heights and placed into bottom and top channel at Maximum 600mm centres in which attaching to CB45 with appropriate fastener and keeping the desired cavity .
- Excess bracket legs length to be removed or bent back.

* CH45 may be spliced if necessary using Channel Connector.







Section Details WL 201

Insulation:

Any insulation to be of type and thickness to achieve required performance, and tightly installed in a continuous layer between brackets and behind channels.
Where insulation may be expected to slump, suspend from Insulation Hold strips at 150mm from top of Wall, and at 1200mm vertical centres.
Fit boards securely with closely butted joints, (leaving no gaps).

(Installation) Cont.

Boarding

The Dry liner lining system is suitable for single, double and multiple layer boarding. Select base layer(s), and finishing layer(s) Boards to be 5mm less than floor to ceiling height. Board edges to be centred over channels. Boards to be mechanically fixed to channels and track at 300mm centres. using Board joints to be staggered between layers.

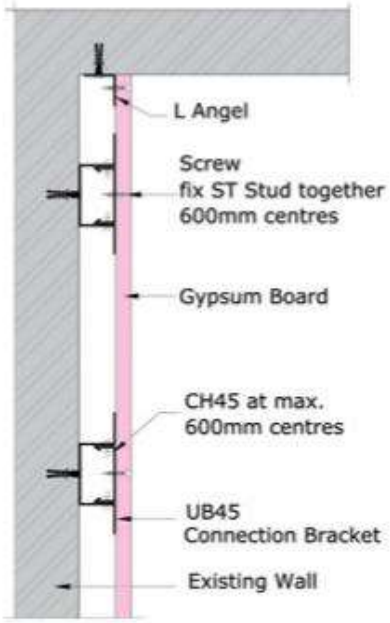
Over-height single layer boarding:

Where Wall height exceeds board height, fix boards to a continuous band of Metal Flat Strap behind all horizontal joints to maintain fire integrity.

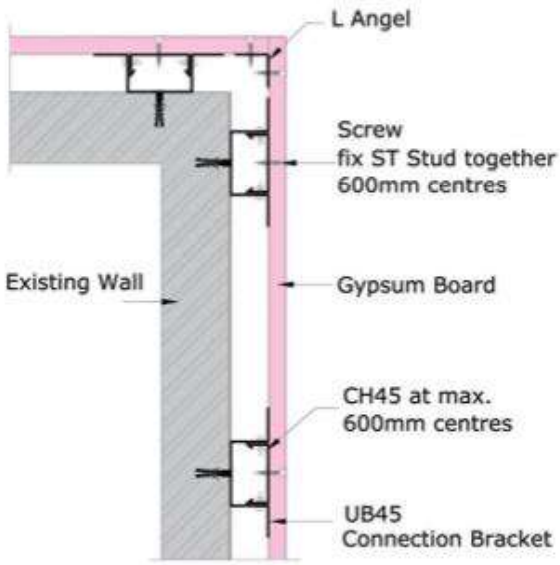
Over-height multiple layer boarding only:

Where Wall height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of Metal Flat Strap behind all horizontal joints. (See drawing in page 27)

(Form the movement control joints at a maximum of 10m intervals in the lining run. Form movement control joints where the lining crosses a structural movement joint. Butted end-to-end to board with galvanized staples).



Start Plan - WL 201



Corner Plan - WL 201

Taping and Jointing

Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site condition) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Jointing can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards. (See drawing on page 28)

Caulking

Caulk all perimeter gaps in fire rated walls with fire Sealant.

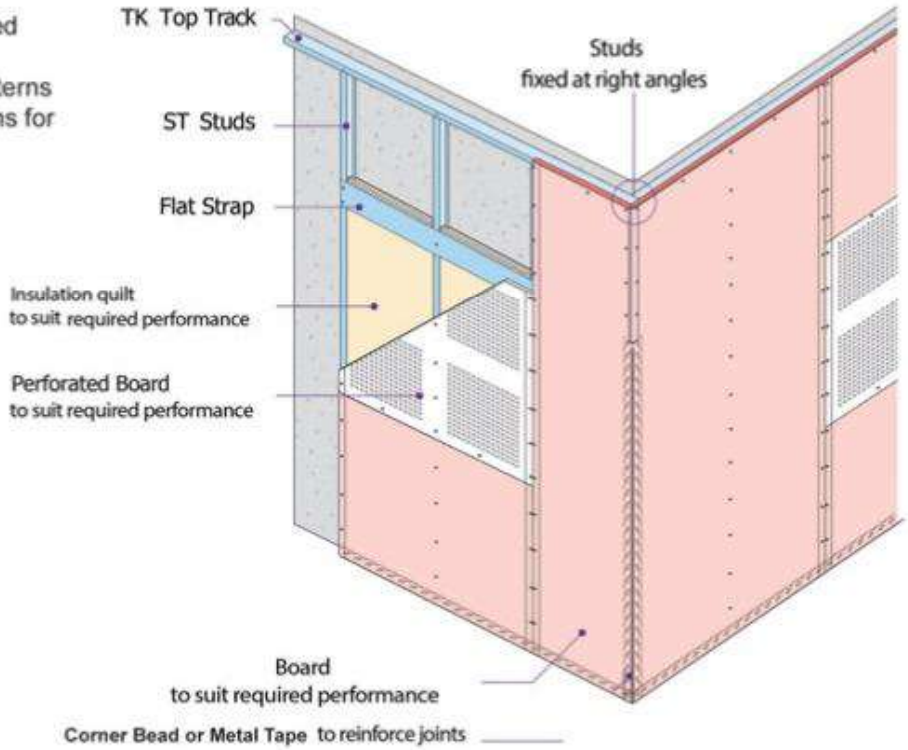
Dry Lining Systems

System Description

WL 202 system is used for lining walls when the cavity space or substrate is more than 70mm.
The system consists of a metal frame (STK 50, 70, 90 and 100) that is made of Galvanized steel .
The assembling of the system is the same as WP 101, a horizontal profile (TK) track, and a vertical profile (ST) stud that is inserted in the track then the Gypsum boards are attached on the visible side , after the space have been filled with the proper insulation. (The system comply with ASTM C645)

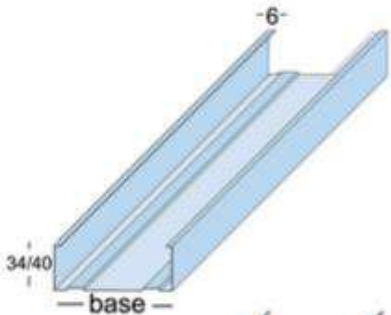
Advantages

1- Variable cavity.
2- Depth Cavity size can be optimized for service and insulation requirements Up to Class B acoustic absorption.
3- Independent Wall Lining framing one set of components on site.
4- Easy to install.
5- Creates a false wall that can be used to upgrade existing structures.
6- Perforated boards in a range of patterns Provides a range of aesthetic options for variation in large spaces.



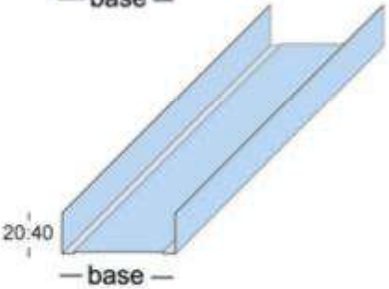
System component

Stud (ST)



Type	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter	
		A	B			CENTERS 40CM	CENTERS 60CM
ST50	Hot dipped Galvanized C shaped metal section used with TK Track to provide vertical frame-work for partition.	48	34/40	3000	0.5 -1mm	3ML	2ML
ST70		68	34/40	3000	0.5 -1mm	3ML	2ML
ST90		88	34/40	3000	0.5 -1mm	3ML	2ML
ST100		98	34/40	3000	0.5 -1mm	3ML	2ML

Track (TK)



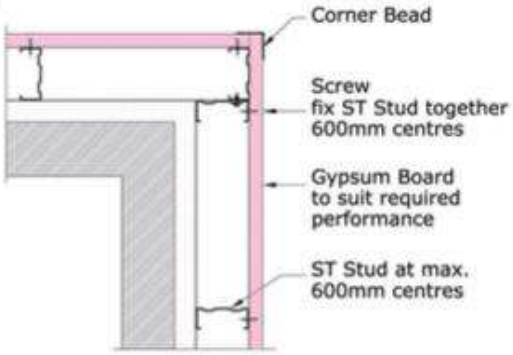
Type	DESCRIPTION & USAGE	DIMENSIONS		LENGTH	THICKNESS	Req. per Sq.Meter
		A	B			
TK50	Hot dipped Galvanized U shaped metal section used to receive ST Studs to provide framework for wall lining & partition.	50	20 - 40	3000	0.5 -1mm	1ML
TK70		70	20 - 40	3000	0.5 -1mm	1ML
TK90		90	20 - 40	3000	0.5 -1mm	1ML
TK100		100	20 - 40	3000	0.5 -1mm	1ML

Other Lengths & widths are available upon Request

Installation

Installation

Cladding layouts should be marked accurately.
Always check individual measurements against overall site dimensions.
Align the top and bottom tracks of the cladding accurately according to the plan layout. Attach at ceiling and floor to structural elements.
Use suitable fasteners for anchoring the cladding wall at the base and head. Locate fasteners at 50mm from each end and spaced at maximum 600mm centres along each track.



Corner Detail

Framing Installation

Install the track (TK) to structure at perimeter of lining run.
Fix at 600mm centres using appropriate fixings.
Allow for board depth when positioning and to achieve required cavity depth.Cut studs (ST) to be 5mm shorter than floor to ceiling height, located into perimeter track TK then install stud (ST)
to be positioned at maximum 600mm centres for Board.
when the height more than the allowable heights of studs as the schedule (depend on the width of studs) ,we must fix intersection track behind studs(Centers @ 800mm) and fixing with bracket support to the existing wall and the adjusting level process will become between track bracket and intersection track. Studs (ST.) maybe spliced and if necessary use track connector .

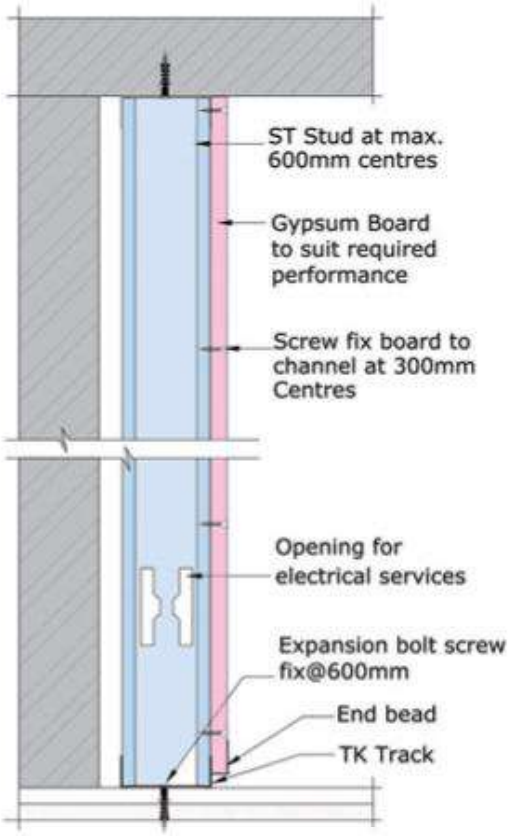
Boarding

The Dry liner lining system is suitable for single, double and multiple layer boarding.
Select base layer(s) and finishing layer(s)
Boards to be 5mm less than floor to ceiling height.
Board edges to be centred over Studs.
Boards to be mechanically fixed to Studs and track at 300mm centres. using Board joints to be staggered between layers.

Over-height single layer boarding:

Where Wall height exceeds board height
fix boards to continuous band of Metal Flat
Strap behind all horizontal joints to maintain fire integrity.
Over-height multiple layer boarding only:
Where Wall height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of Metal Flat Strap behind all horizontal joints.

1. Form movement control joints at maximum 10m intervals in the lining run.
   Form movement control joints where the lining crosses a structural movement joint.



Section Detail

(Installation) cont.

Insulation

Any insulation to be of type and thickness to achieve performance and tightly installed in a continuous layer between brackets and behind channels.
Where insulation may be expected to slump suspend from Insulation Hold strips 150mm from top of Wall and at 1200mm vertical centres. 10mm clear gap to be maintained between substrate and insulation.

Taping and Jointing

Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site condition) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Jointing can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. and L bead will be applied on the bottom edge of boards. (See drawing on page 28)

Caulking

Caulk all perimeter gaps in fire rated walls with fire Sealant.

Material

Golden Metal profiles are fabricated from hot-dipped galvanized steel complying with ASTM A653, and ASTM A1003. Grade 33 Type H for 33 ksi yield strength steel with a minimum.
G40 coating complying with ASTM A924.
(other coatings are available up to G90 upon client request).

- Minimum Thickness represents 95% of the design thickness, and is the minimum acceptable thickness of the base steel delivered to the work site.

Fire Rresistance

Golden Metal profiles are manufactured of non-combustible components; these systems offer a wide range of fire resistance ratings to meet design requirements. Comply with ASTM E119 (Tec Office)

Visual Tests

All our drywall lining sections are conforming to ASTM C645.

Economical

Low material costs, dry construction and speed of installation achieve realistic and competitive construction costs.

Sound Isolation

Available ratings range up to STC 64, as achieved in acoustic tests (Tec Office). Comparable field performance depends on building design and careful attention to detailing and workmanship. It is important that the full perimeter of the wall lining be sealed with an approved flexible acoustic sealant, as well as all penetrations.

HRC High Recysled Contents

Steel contains 85 % (post-consumer 75% & pre consumer 10%) and the rest is virgin iron metal in the form of DR/HBI. 70-75 % of scrap used delivered from international suppliers. 25-30 % from local suppliers. (collected from Cairo, Delta, Port Saied, Suez, and Alexandria).

Limitations

- Fire-rated systems must be installed strictly in accordance with each test specification and opinion.
- Maximum stud spacing is 600mm.
- The maximum heights for interior Wall Lining framed depends on, the strength of the steel studs and the Gypsum drywall acting together.
- Components must not be used if fractured or damaged.
- Control joints should be provided in long continuous runs of Wall Lining at 12 metre centres maximum, and wherever structural expansion joints are located.

WELCOME
TO ANOTHER UNIQUE SECTION OF
GOLDEN METAL EXCEPTIONAL PRODUCTS.

CLIENTS NOTES

GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

Drywalls Ceiling Systems

GM products are Made to suit Your Needs

Section Contents

INTRODUCTION

Golden Metal drywall ceiling systems has a range wide of applications including residential, commercial and is ideal where services are to be accommodated. It can be used to both upgrade and protect existing ceiling structures. Varying ceiling heights can be achieved to accommodate the varying ducting and services that are used in the market place today. Our ceiling systems is compatible with all proprietary plasterboards.
Golden Metal is able to offer its clients both high quality and competitive products..
Golden Metal drywall ceiling systems offers two systems of light steel framing to install drywall ceilings.

Type - GO120
Type - CO38

Key Benefits

- Quick and simple to construct and install.
- Our systems are suitable for any type of proprietary drywalls.
- Products can be easily cut to required length using appropriate cutting tools.
- Insulation for improved sound and thermal properties is easy to install.
- Can be used to create a perfect finish to receive most types of decorative finishes.

Over the next few pages you will find two of our unique systems being GO 120 & CO 38.

The GO 120 System

System Breif Description:

The GO 120 system is a unique System for Gypsum Ceilings. Its features are simply being: Fast to assemble, Strong, and versatile.
The GO 120 system consists of the main carrier (G 120) that is hanging from the concrete ceiling and attached to it the furring channel that is laid on the (GL) Perimeter angle creating the structure. The system is comparable with the requirements for acoustic and fire resistance needs. (The system comply with ASTM C645)

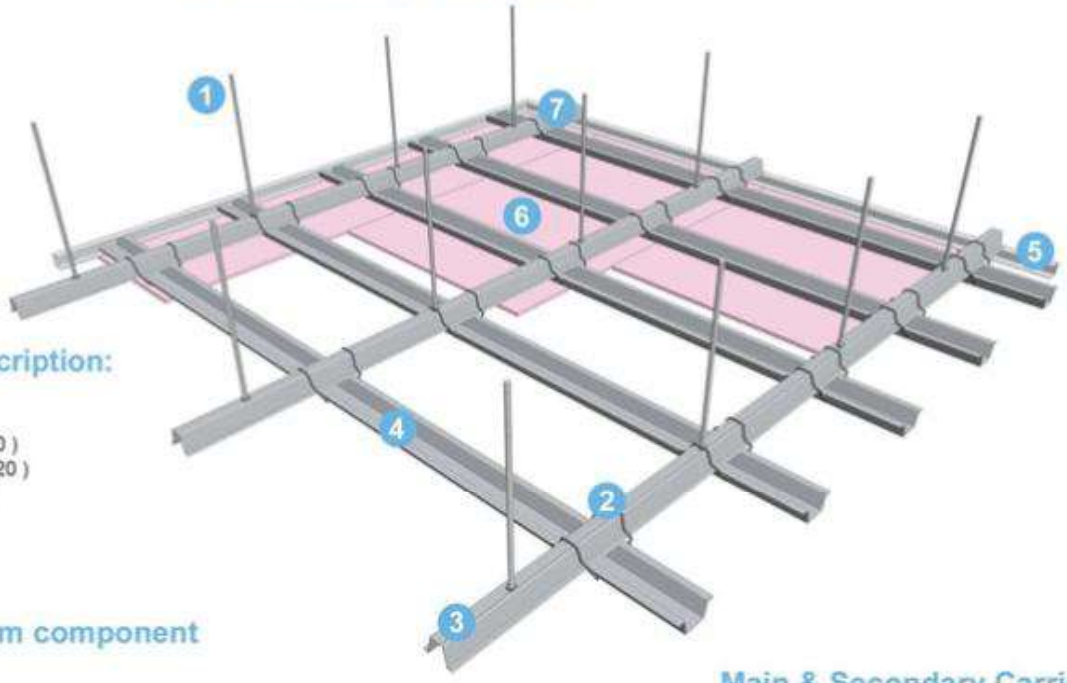
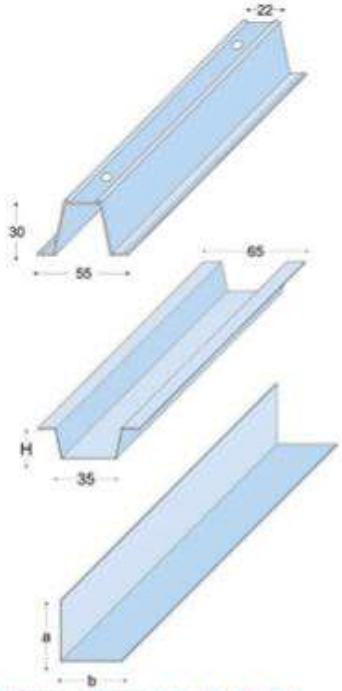


Diagram Description:

1- Threaded Rod
2- Wire Clip (WC 120)
3- Main Carrier (G 120)
4- Secondary Carrier
5- Perimeter Angle
6- Gypsum Board

Frame System component



Main & Secondary Carriers

TYPE	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter	
					Module 60x120	Module 40x120
G120	Main carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	55X30	3000	0.5 - 1mm	0.8ML	0.8ML
G19	Secondary carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	35x19x67	3000	0.5 - 1mm	2ML	3ML
G22		35x22x67	3000	0.5 - 1mm	2ML	3ML
G25		35x25x67	3000	0.5 - 1mm	2ML	3ML

Perimeter Angles

ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter
GL25	L shape perimeter angle, made from hot dipped Galvanized steel, G40 and G60.	25x25	3000	0.5 - 1.0mm	0.8ML
GL30		30x30			

Other Lengths & widths are available upon Request
Requirements per Square meter may differ based on site design.

Wire clips (WC 120)

Preformed wire clips used for comprising suspended primary channel CH38 with furring channel .
Fabricated from galvanized Mild. Steel wire, thickness 3mm.

Req. per Sq.Meter - 4pcs

The GO 120 System

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
Screw for metal frame	Metal frame Head pan screw use to connect metal frames components, Phosphate coating, Thickness 3.9 mm Length 11 mm. Comply with ASTM C954 - 4	5 pcs	
Self piercing Tapping Screw	Bugle head Screw for attaching plasterboard to light gauge metal Less than 0.8mm. Black Phosphate Coating Thickness 3.5mm & 3.9mm Length 25 mm up to 75mm Comply with ASTM C1002-4	15 pcs	
Steel Drill Screw	Bugle head Screw for attaching plasterboard to heavy gauge metal from 0.8mm to 2.8mm. Black Phosphate Coating, Thickness 3.5mm & 3.9mm. Length 25mm up to 75mm. Comply with ASTM C954 - 4	15 pcs	
Fiber Tape	Self-adhesive tape no bedding coat needed. Smooth joints in only two coats. Use with setting-type joint compounds for one-day joint finishing. width 50mm, Length 90ML. Comply With ASTM C475	1.3ML	
Meal Tape	Metal covered with paper attached to dry wall corner using setting-taping or all purpose joint compound instead of nails. Edge is finished with typical joint treatment system. Width 50mm, Length 30ML. Comply With ASTM C475	As per specified drawings	
Corner Bead	Hot dipped Galvanized steel profile Attached to drywall external corner with nails or screws. Finished with standard joint Compound and feathered at the edges. Thickness 0.4mm, Length 3ML. Comply With ASTM C1047	As per specified drawings	
L. Bead	Hot dip Galvanized steel profile Attached to exposed drywall edge. Finished with standard joint compound and feathered at the edges Thickness 0.4 mm, Length 3ML. Comply With ASTM C1047	As per specified drawings	

Fitting & fixing accessories (For All Systems)

ITEM	DESCRIPTION & USAGE	Req. per Sq.Meter	Item Image
U Bead	U shaped section formed from 0.40mm perforated hot dipped Galvanized steel, It is used to treat the edges of Gypsum Boards with thickness of 12.5 mm. Comply with ASTM C1047	As per specified drawings	
Steel Drop in Anchor (M6)	Used for fixing Threaded Rod to Concert Slap, Fabricated from Galvanized Steel plated, corrosion resistance. Thickness 6mm Up to 10mm, Comply with ASTM A 641	1 pcs	
Threaded Rod & Nut	Threaded Rod for hanging the structure to the Concert Slap, Fabricated from Galvanized Steel plated, corrosion resistance. Thickness 6mm Up to 10mm, Comply with ASTM A 641	1 pcs	
Mineral Fiber blanket insulation	Rock wool or glass wool Blanket is medium density insulation for building applications. Produced in Thickness from 25mm Up to 100mm and a width of 1200 mm. Comply with ASTM C665	1 sqm	
Jointing compound	Chemically setting powder com-pounds. Used For internal Filling to Jointing Between Boards and filling screw places. Comply with ASTM C28, ASTM C28m & ASTM C475.	0.45KG	
Acoustic Sealant	Used to prevent transmission of sound through gypsum ceiling and dry wall partitions. Comply With ASTM C834	As per specified drawings	

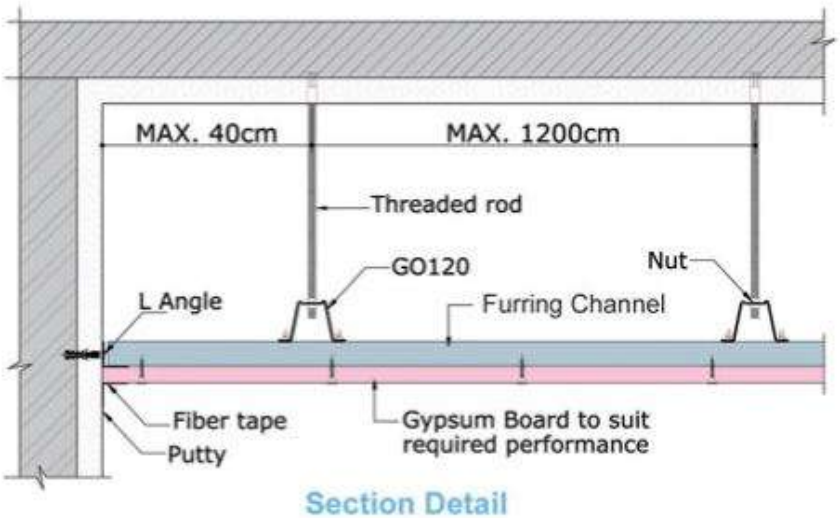
Installation

Installation

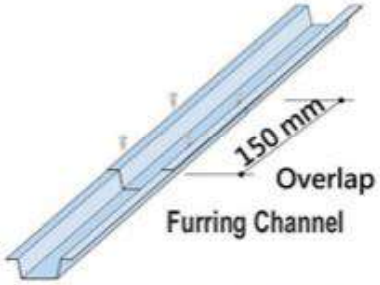
1- Check the Existing concrete ceiling and the location of all services as well as its relationship to the suspended ceiling.
2- Determine the locations of the threaded rods, making sure that the spacing between them must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm.
3- Make all the supporting units necessary around all services.

Frame Fixing

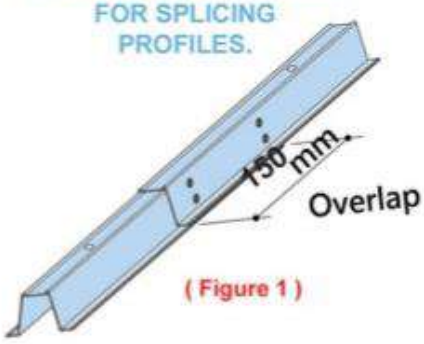
1- Always check individual measurements against overall site dimensions.
2- Calculate the requirements needed of each profile.
3- Determine the height of the suspended ceiling and mark the height on all walls using a laser scale unit or similar.
4- Affix the (Perimeter Angel) to all sides using the appropriate screws (space between screws should not exceed 400mm).
5- Affix the main carrier (GO120) to the hanging rods by passing them through the holes in the carrier and tighten them using the appropriate nut. (spacing between main carrier must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm).



Section Detail



THE CORRECT METHODS FOR SPLICING PROFILES.



(Figure 1)

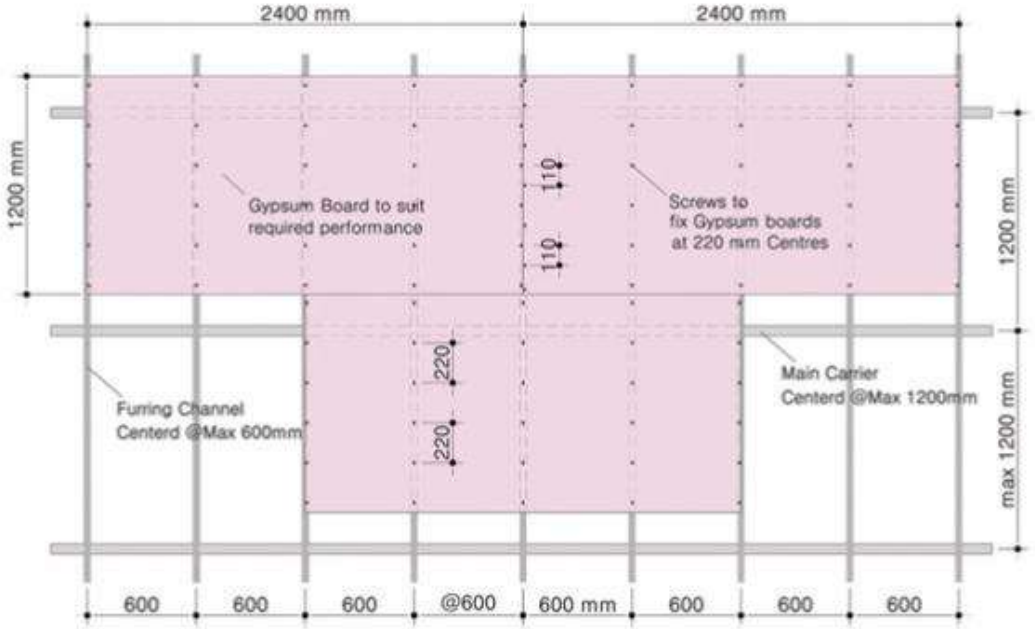
6- Affix the secondary carrier (Furring Channel) perpendicular with main carrier (GO120) and join them using (WC120) clip. as well, appropriate screws can be used if there is no need for expansion allowance, nor the total weight of the ceiling is no more than 20kg per m².
7- Ensure that the distance between secondary carriers is no more than 600mm, and distance from wall does not exceed 400mm.

Board Fixing

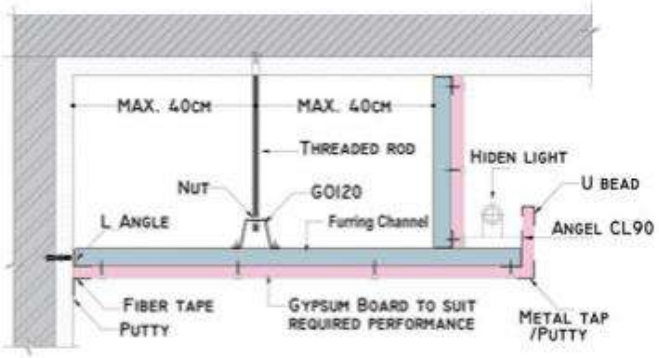
a. Ensure that the indoor temperature is stable to avoid damages of the boards.
b. Attach the boards directly to the secondary carrier (Furring Channel), using the appropriate screws for gypsum boards.
c. The distance between screws is 25mm, and not less than 10mm and no more than 25mm from the edges of the board .
d. Use the staggered method for attaching the boards by not aligning them. (See drawing on page 47)

Note: When building the ceiling structure, ensure that no cutting will take place in the structure main frame for passing any type of services such as, lighting fixtures, air conditioning grills, trap doors, ... etc. and in cases of necessity use additional support .

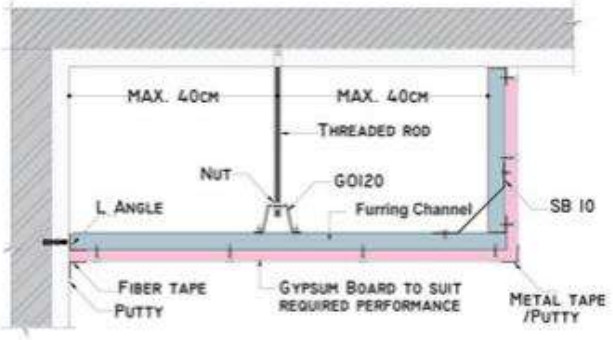
(Installation) cont.



Board joints to be staggered between layers



INDIRECT LIGHT SYSTEM



BULK HEAD DETAIL _ GOI20

Taping and Jointing

Taping and Joining is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .

2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .

3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Jointing can be painted in the same way as traditional plastering.

4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. (See drawing on page 28)

NOTE: When making any opening in the Gypsum Ceiling you must treat the edges of the opening with the appropriate edge profile such as (L Bead or U Bead)

1-Splicing connector between furring channel or main carrier must be not less than 150mm.

2-Furring channel and main carrier cut 5mm less than the distance related to the wall. (See Figure 1)

The CO 38 System

System Breif Description:

The CO 38 Ceiling System is the most traditional system for creating Gypsum ceilings. It is considered by those in the business as a flexible, reliable and lightweight. The CO 38 system consists of the main carrier (CH 38) that is hanging from the concrete ceiling and attached to it the furring channel that is laid on the (GL) perimeter angle creating the structure. The system is comparable with the requirements for acoustic and fire resistance needs.

(The system comply with ASTM 645)

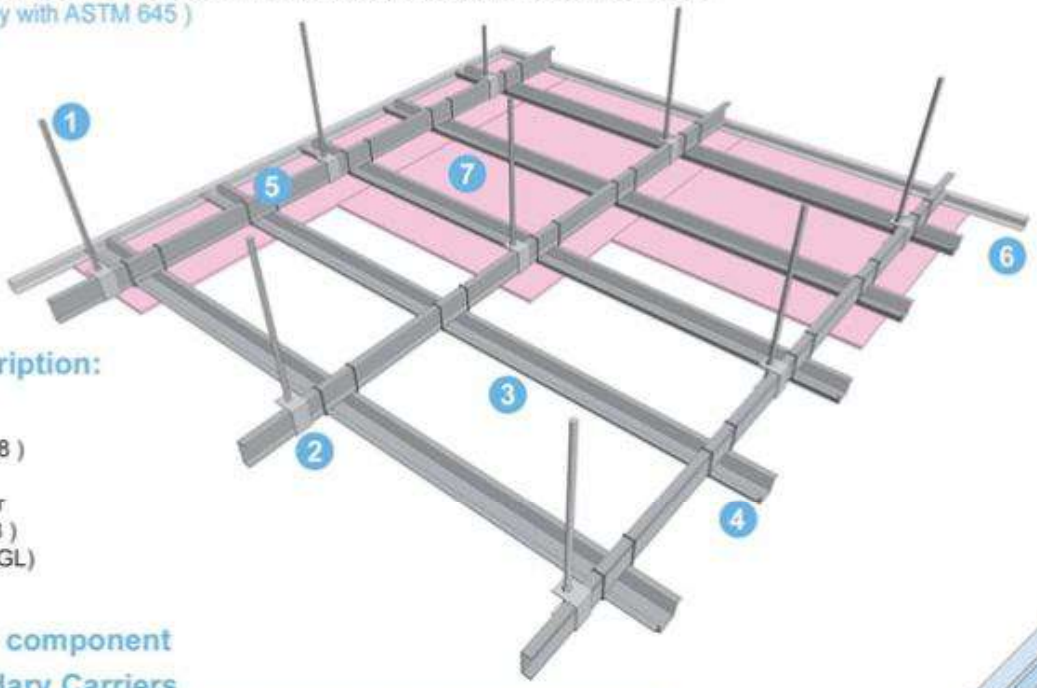


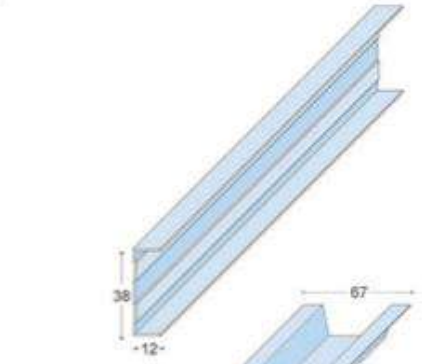
Diagram Description:

1-Threaded Rod
2- U. Bracket (UB 38)
3- Main Carrier
4- Secondary Carrier
5- Wire Clip (WC 38)
6- Perimeter Angel (GL)
7- Gypsum Board

Frame System component

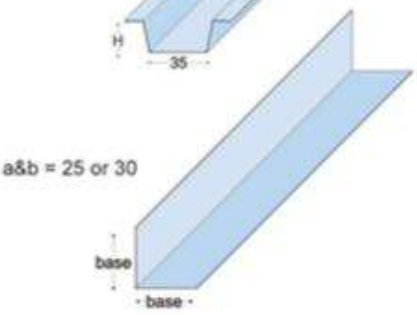
Main & Secondary Carriers

ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter	
					Module 60x120	Module 40x120
CH38	Main carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	12x38	3000	0.6 - 1.2mm	0.8ML	0.8ML
G19	Secondary carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	35x19x67	3000	0.5 - 1mm	2ML	3ML
G22		35x22x67	3000	0.5 - 1mm	2ML	3ML
G25		35x25x67	3000	0.5 - 1mm	2ML	3ML



Perimeter Angles

ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter
GL25 GL30	L shape perimeter angle, made from hot dipped Galvanized steel, G40 and G60.	25x25 30x30	3000	0.5 - 1.0mm	0.8ML



Other Lengths & widths are available upon Request
Requirements per Square meter may differ based on site design.

Wire clips (WC 38)

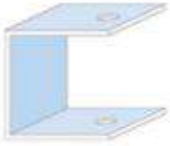
Preformed wire clips used for comprising suspended primary channel CH38 with furring channel . Fabricated from galvanized Mild. Steel wire, thickness 3mm.

Req. per Sq.Meter - 4pcs

U Bracket (UB 38)

Used to hold and adjust the main channel CH38 and secondary channel CR102
Fabricated from hot dipped galvanized steel 0.6mm up to 1mm

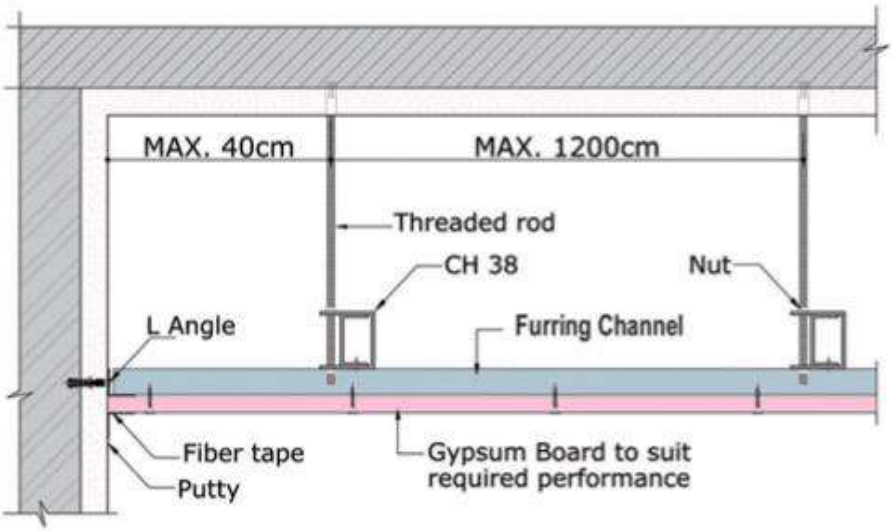
Req. per Sq.Meter - 1pc



Installation

1- Check the Existing concrete ceiling and the location of all services as well as its relationship to the suspended ceiling.
2- Determine the locations of the threaded rods, making sure that the spacing between them must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm.
3- Make all the supporting units necessary around all services.

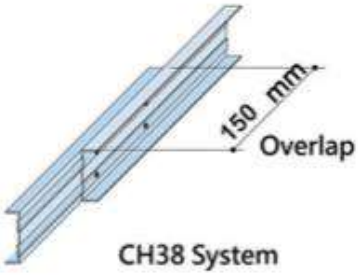
Section Detail



4- Always check individual measurements against overall site dimensions.
5- Calculate the requirements needed of each profile.
6- Determine the height of the suspended ceiling and mark the height on all walls using a laser scale unit or similar.

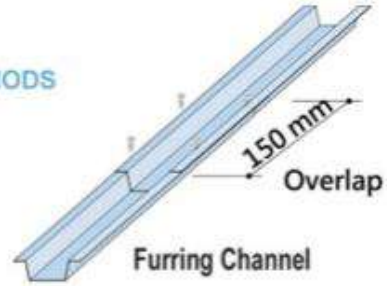
Frame Fixing :

1- Affix the (Perimeter Angel) to all sides using the appropriate screws (space between screws should not exceed 400mm).



THE CORRECT METHODS FOR SPLICING PROFILES.

(Figure 1)



2- Affix the main carrier (CH38) to the hanging rods using (UB38),ensuring that spacing between main carrier must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm).
3- Affix the secondary carrier (Furring Channel) perpendicular with main carrier (CH38) and join them using (WC38) clip. as well, appropriate screws can be used if there is no need for expansion allowance, nor the total weight of the ceiling is no more than 20kg per m².
4- Ensure that the distance between secondary carriers is no more than 600mm, and distance from wall does not exceed 400mm.

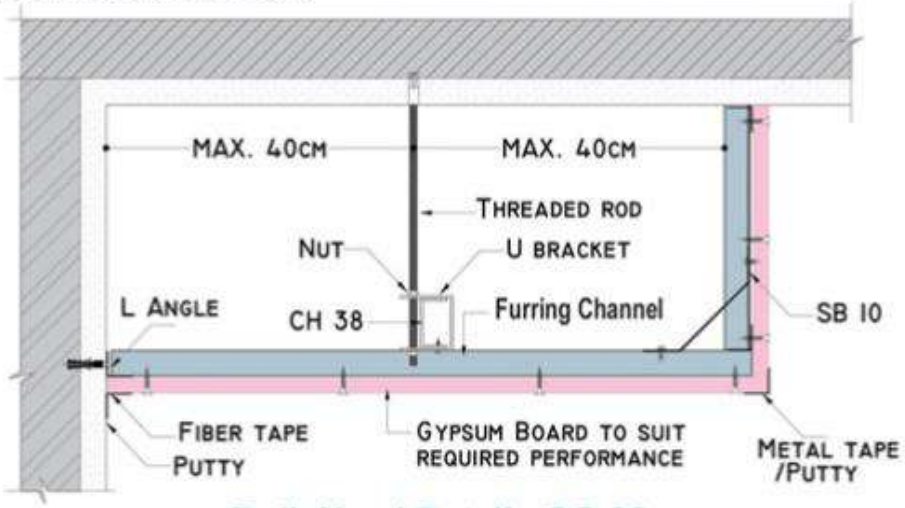
Board Fixing :

a. Ensure that the indoor temperature is stable to avoid damages of the boards.
b. Attach the boards directly to the secondary carrier (Furring Channel), using the appropriate screws for gypsum boards.
c. The distance between screws is 25mm, and not less than 10mm and no more than 25mm from the edges of the board .
d. Use the staggered method for attaching the boards by not aligning them. (See drawing on page 47)

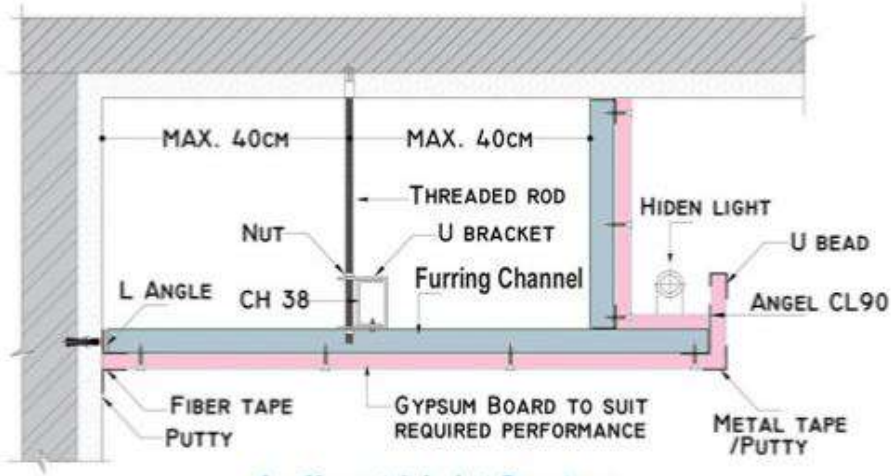
Note: When building the ceiling structure, ensure that no cutting will take place in the structure main frame for passing any type of services such as, lighting fixtures, air conditioning grills, trap doors, ... etc. and in cases of necessity use enough support .

(Installation) cont.

e - When making any opening in the Gypsum Ceiling you must treat the edges of the opening with the appropriate edge profile such as (L Bead or End Bead).



Bulk Head Detail - CO 38



Indirect Light System

Taping and Jointing

Taping and Jointing is a 3 stage process:

1- The plasterboard joints are normally first taped with self-adhesive fibre tape .
2- 1st coat of Joint Filler applied. After the Joint Filler sets (usually within 90 minutes) apply 2 coats of Joint .
3- When the 2nd coat of Joint is completely dry (this usually takes 24 hours depending on site condition) sand it down with Vacuum Sanders to minimize the dust in building site. After sanding, the Taping and Jointing can be painted in the same way as traditional plastering.
4- Corner beads or a metal tape will be applied to all external corners and then taped and jointed with a 3 coats process described above. (See drawing on page 28)

Note:

1-Splicing connector between furring channel or main carrier must not be less than 150mm. (See Figure 1)
2-Furring channel and main carrier cut 5 mm less than the distance related to the wall.
3-Use metal strap instead of threaded rod that can be cut and bend to form the desired fixing.
4-Fasten screws at least 10mm in from paperbound edges of plasterboard.
5-Fasten at least 13mm in from cut edges of plasterboard.
6-Fasten at least 3mm in from the edges of metal framing.

Material

Golden Metal profiles are fabricated from hot-dipped galvanized steel complying with ASTM A653, and ASTM A1003. Grade 33 Type H for 33 ksi yield strength steel with a minimum G40 coating complying with ASTM A924. *(other coatings are available up to G90 upon client request).*

• Minimum Thickness represents 95% of the design thickness, and is the minimum acceptable thickness of the base steel delivered to the work site.

Fire Resistance

Golden Metal profiles are manufactured of non-combustible components; these systems offer a wide range of elements of fire resistance ratings (up to 120 minutes) to meet design requirements.
Comply with ASTM E119 (Tec Office)

Visual Tests

1- All our ceiling sections are conforming to ASTM C645.
2- The furring channel is unique for having grooves that prevent the screws from deviating from its direction.
3- All profiles are straight and free of any twists.

Economical

Low material costs, dry construction and speed of installation achieve realistic and competitive construction costs.

Sound Isolation

Available ratings range up to STC 64, as achieved in acoustic tests (Tec Office). Comparable field performance depends on building design and careful attention to detailing and workmanship. It is important that the full perimeter of the wall lining be sealed with an approved flexible acoustic sealant, as well as all penetrations.

The effectiveness of sound isolation depends on:
1- The use of proper insulation above the suspended ceiling.
2- The number of Gypsum Boards used.
3- The use of (GS200) isolator hanger especially in mechanical rooms.

HRC High recycled content

Steel contains 85 % (post-consumer 75% & pre consumer 10%) and the rest is virgin iron metal in the form of DR/HBI. 70-75 % of scrap used delivered from international suppliers. 25-30 % from local suppliers. (collected from Cairo, Delta, Port Saied, Suez, and Alexandria).

Loading System

Maximum Load Bearing for Dry Wall ceiling systems:

Maximum Primary Carrier centers	Maximum Loading Including System frame and Boards			
	(CO38)		(GO 120)	
	Furring channel Centre 60cm	Furring channel Centre 40cm	Furring channel Centre 60cm	Furring channel Centre 40cm
600mm	66	74kg/m²	85	93kg/m²
900mm	42	50kg/m²	62	68kg/m²
1200mm	28	35kg/m²	46	52kg/m²

Under tests with DIN 18168

Limitations

* Installation shall not commence until the building is fully enclosed and dry.
* Mechanical and electrical duct work above the suspension system should be completed.
* For exterior soffits or areas of high wind up loft use rigid suspension hangers and make provision for the plenum to breath.

The CO 45 System

System Breif Description:

The CO 45 Ceiling System is the most traditional system for creating Gypsum ceilings. It is considered by those in the business as a flexible, reliable and lightweight. The CO 45 system consists of the main carrier (CH 45) that is hanging from the concrete ceiling and attached to it the furring channel that is laid on the (GL) perimeter angle creating the structure. The system is comparable with the requirements for acoustic and fire resistance needs.

(The system comply with ASTM 645)

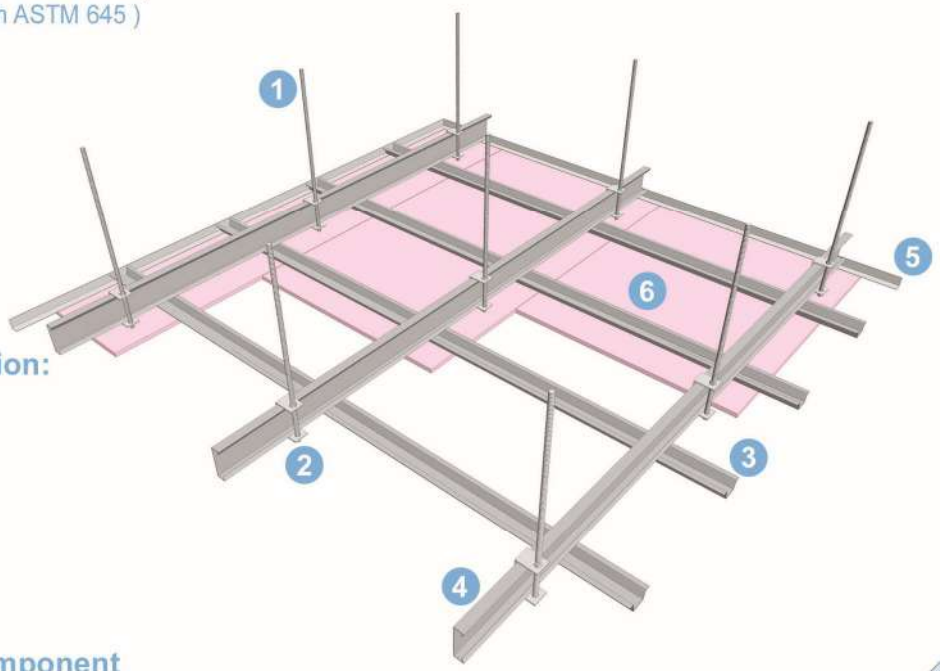


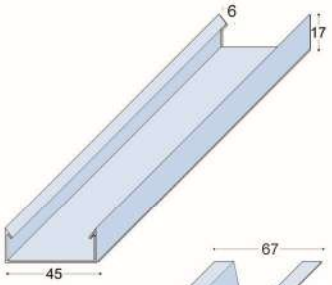
Diagram Description:

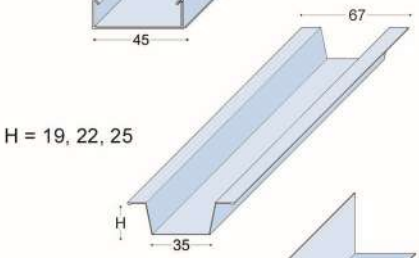
1-Threaded Rod
2- U. Bracket (UB 45)
3- Main Carrier
4- Secondary Carrier
5- Perimeter Angel (GL)
6- Gypsum Board

Frame System component

Main & Secondary Carriers

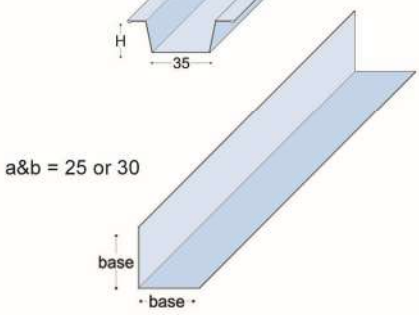
ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter	
					Module 60x120	Module 40x120
CH45	Main carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	17x45	3000	0.6 - 1.2mm	0.8ML	0.8ML
G19	Secondary carrier for ceiling systems, made from hot dipped Galvanized steel, G40 and G60.	35x19x67	3000	0.5 - 1mm	2ML	3ML
G22		35x22x67	3000	0.5 - 1mm	2ML	3ML
G25		35x25x67	3000	0.5 - 1mm	2ML	3ML





Perimeter Angles

ITEM	DESCRIPTION & USAGE	DIMENSIONS	LENGTH	THICKNESS	Req. per Sq.Meter
GL25	L shape perimeter angle, made from hot dipped Galvanized steel, G40 and G60.	25x25	3000	0.5 - 1.0mm	0.8ML
GL30		30x30			

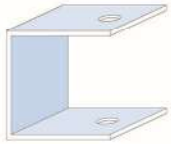


Other Lengths & widths are available upon Request
Requirements per Square meter may differ based on site design.

U Bracket (UB 45)

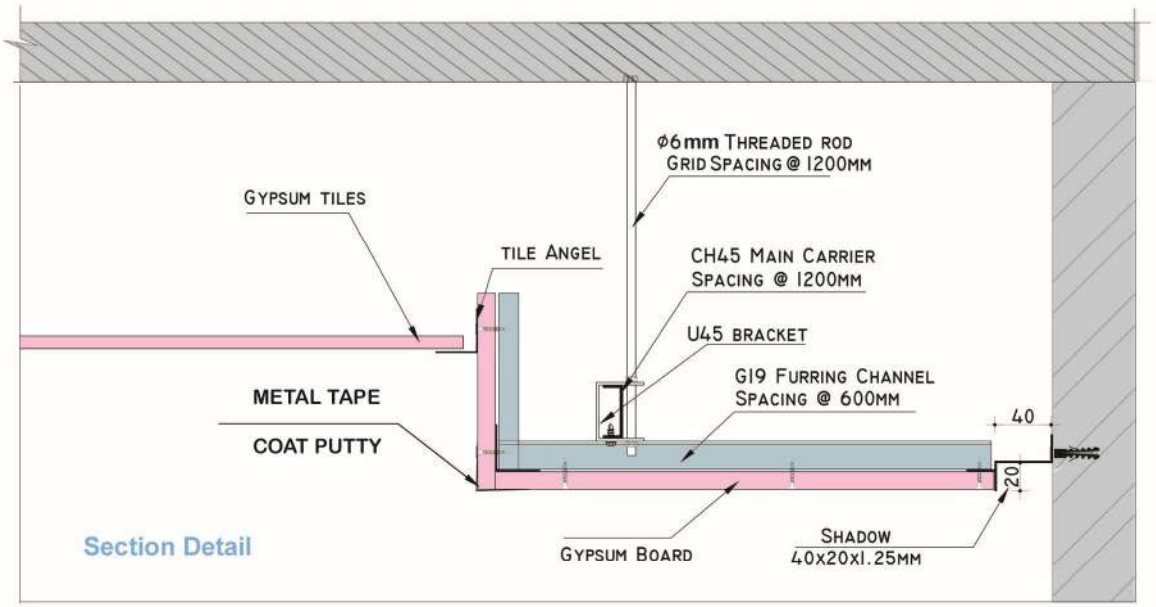
Used to hold and adjust the main channel CH45 and secondary channel (G19, G22, OR G25)
Fabricated from hot dipped galvanized steel 0.6mm up to 1mm

Req. per Sq.Meter - 1pc



Installation

1- Check the Existing concrete ceiling and the location of all services as well as its relationship to the suspended ceiling.
2- Determine the locations of the threaded rods, making sure that the spacing between them must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm.
3- Make all the supporting units necessary around all services.



4- Always check individual measurements against overall site dimensions.
5- Calculate the requirements needed of each profile.
6- Determine the height of the suspended ceiling and mark the height on all walls using a laser scale unit or similar.

Frame Fixing :

1- Affix the (Perimeter Angel) to all sides using the appropriate screws (space between screws should not exceed 400mm).

2- Affix the main carrier (CH45) to the hanging rods using (UB45),ensuring that spacing between main carrier must no exceed 1200mm in all directions, and that the distance from the wall is no more than 400mm).
3- Affix the secondary carrier (Furring Channel) perpendicular with main carrier (CH45) and join them using Screws .
4- Ensure that the distance between secondary carriers is no more than 600mm, and distance from wall does not exceed 400mm.

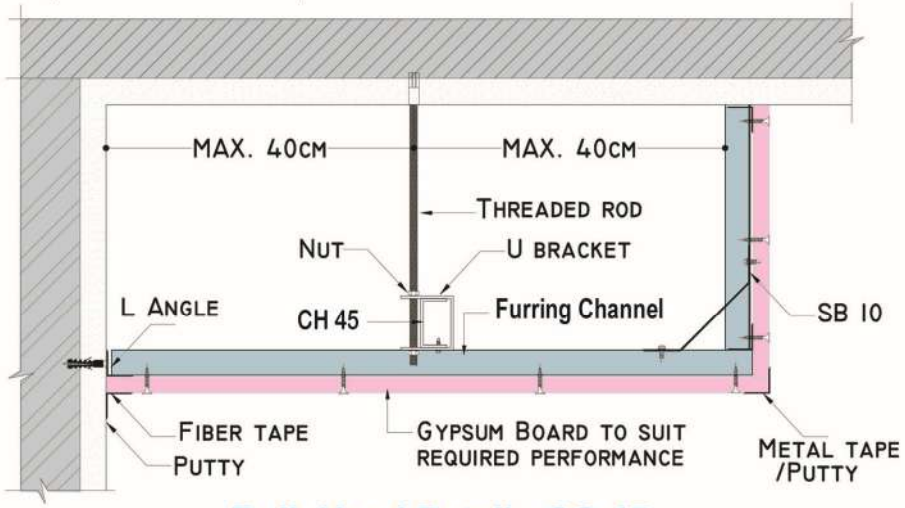
Board Fixing :

a. Ensure that the indoor temperature is stable to avoid damages of the boards.
b. Attach the boards directly to the secondary carrier (Furring Channel), using the appropriate screws for gypsum boards.
c. The distance between screws is 25mm, and not less than 10mm and no more than 25mm from the edges of the board .
d. Use the staggered method for attaching the boards by not aligning them. (See drawing on page 47 In The main Catalogue)

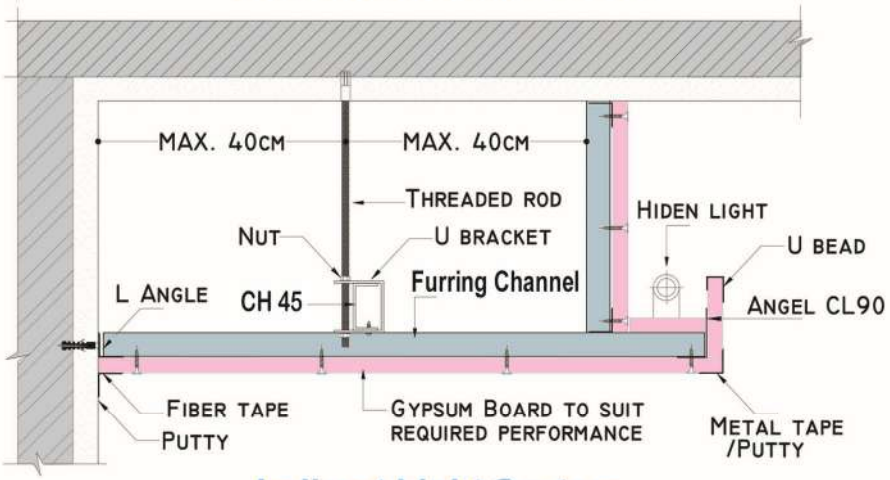
Note: When building the ceiling structure, ensure that no cutting will take place in the structure main frame for passing any type of services such as, lighting fixtures, air conditioning grills, trap doors, ... etc. and in cases of necessity use enough support .

(Installation) cont.

e - When making any opening in the Gypsum Ceiling you must treat the edges of the opening with the appropriate edge profile such as (L Bead or End Bead).



Bulk Head Detail - CO 45



Indirect Light System

Taping and Jointing

Taping and Jointing is a 3 stage process:

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WELCOME
TO DRYWALL CEILINGS SECTION OF GOLDEN METAL EXCEPTIONAL PRODUCTS.

CLIENTS NOTES

GOLDEN METAL
WALLS & CEILINGS SPECIALISTS

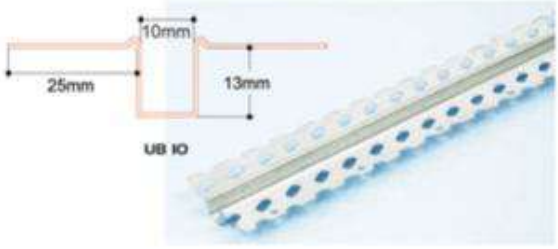
Special Application Systems

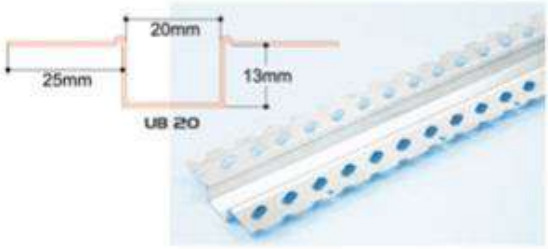
GM products Means Innovation to serve you better

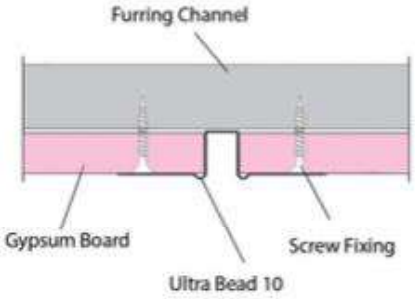
UB 10 - UB 20 - SB 10 and CL 90

Ultra Bead (UB10 & UB20)

Athetic profiles used for enhancing beauity of your dry walls and ceilings. The profiles are inserted between Cut Boards creating a gap of 10 or 20 mm, and finished with standard joint compound feathered at the edges. it is made of Hot dipped Galvanized steel sheet in thic 0.4 mm, length 3ML.

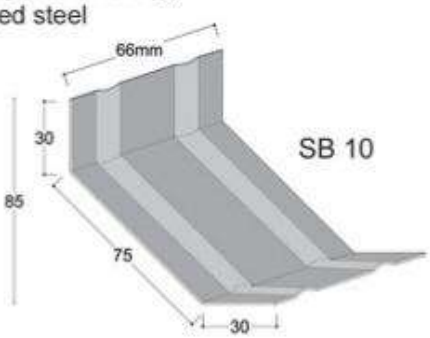


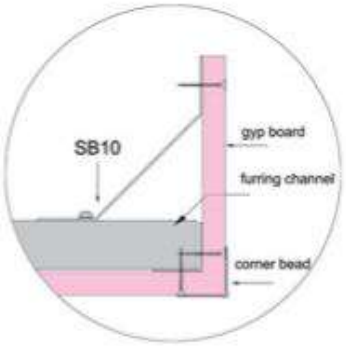




SB10

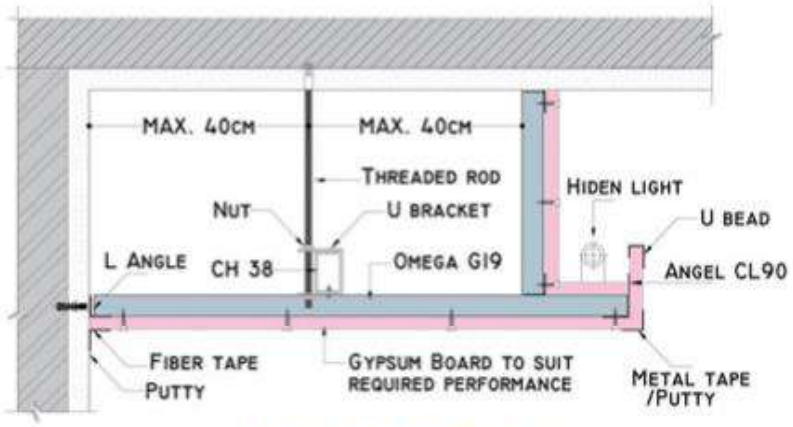
Is used to support the vertical drywall bulk head (height up to 100mm) and keeping it straight and strong. It is fabricated from hot dipped galvaniezed steel of thickness not less than 0.6mm .

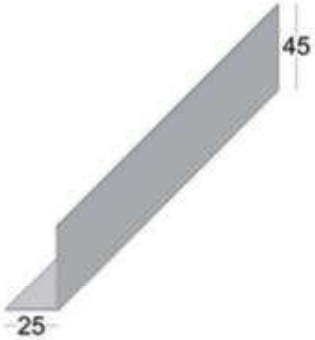




CL 90

L shape angle, made from hot dipped Galvanized steel sheets, Used for supporting external bulk head of Cove light in Gypsum Board and keeping it at a right angle.





Indirect Light System

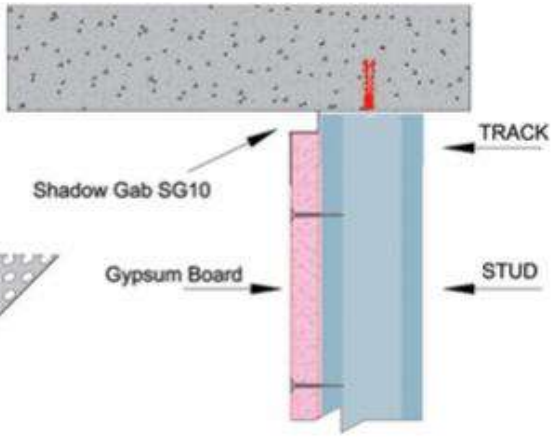
SG 10, SG 20 And SG 20A

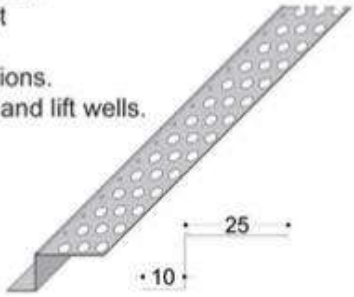
INTRODUCTION

Golden Metal Produces several profiles that treat the relationship between Gypsum ceiling components, the profiles are versatile in its usage and as well the decorative dimension.

SG10

'Z' shaped section formed from 0.4 mm perforated hot dip galvanized steel,
with a 25mm stopping leg.
Minimizes the appearance of 'out of alignment' walls and ceilings by giving a clean straight shadow edge after setting.
Suitable for vertical and horizontal applications.
Ideally suitable for use around door jambs and lift wells.



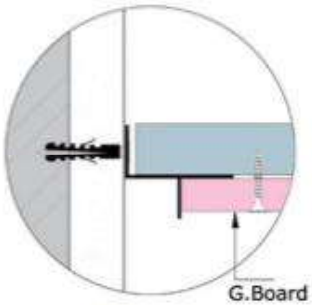


SG20

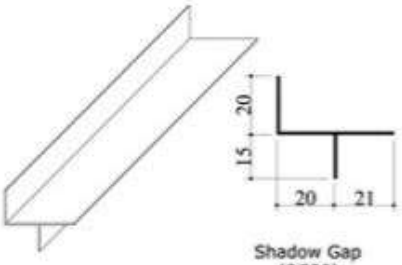
Mainly used to perfect the relationship between the drywall Ceiling & The Wall.

MAIN FEATURES

1- Treating the cracks which may exist between Drywall ceiling and Plaster wall.
2- Avoiding the painting problem of adjacent colors.
3- Adding a beautiful touch to the ceiling in a multi level design.



Shadow Gap (SG20)



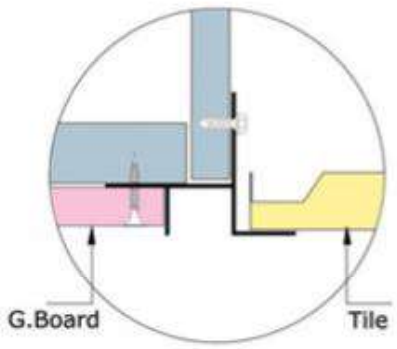
Shadow Gap (SG20)

Req. per Sq.Meter	DESCRIPTION	DIMENSIONS	LENGTH	THICKNESS
0.8ML	SG20 profile is made of aluminum(using the extrusion method). and is painted with white color or as requested.	15x20	3000	1mm

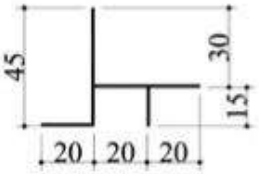
SG20A

It is used to treat the relationship between surrounding gypsum boards and ceiling tiles.

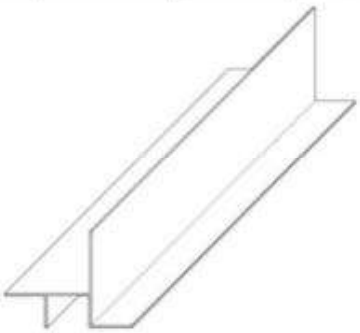
Req. per Sq.Meter	DESCRIPTION	DIMENSIONS	LENGTH	THICKNESS
0.8ML	SG20a profile is made of aluminum(using the extrusion method). and is painted with white color or as requested.	15x20	3000	1mm



Shadow Gap (SG20A)



Shadow Gap (SG20A)



Isolator Hanger (GS 200)

Introduction

Designed specifically for applications where audible noise attenuation is of most concern, the GS200 offers a low cost alternative to (larger & more traditional) spring and rubber hangers.
Primarily used to effectively recouple mass acoustic ceilings from the supporting building structure, thus preventing noise breakout or break-in.
The GS200 may also be used to reduce noise transmission from air conditioning equipment suspended in the ceiling void.

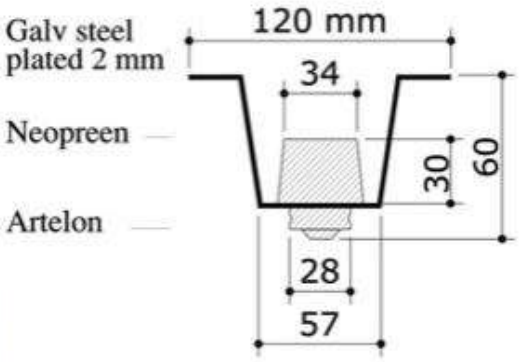
Design Features

- High resilience first grade natural rubber elements with deflections up to 3.5 mm.
- Available in two sizes for loads from 5 kg to 50 kg.
- Typical force isolation at maximum load of 40 dB to 46 dB @ 125 Hz.
- Integral fail safe steel overload washers.
- All steel components are zinc plated.
- Fitted into a drop rod support to an acoustic ceiling.

GS200 ISolator Hanger

Typical Applications

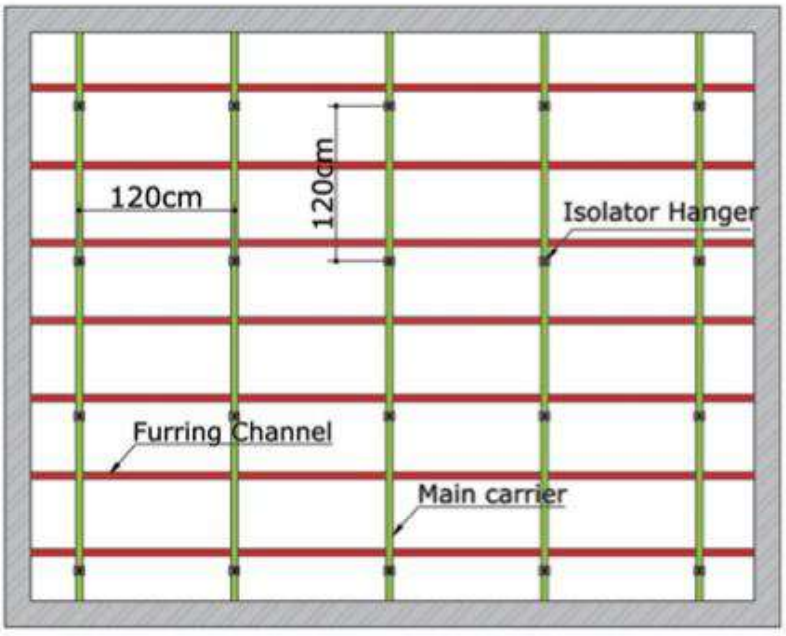
- Acoustic Ceilings.
- Pipe work.
- Axial Fans and Fan Coil Units.
- Duct work and Attenuators.
- Air Conditioning Equipment.



Type GS Acoustic Ceiling Hangers

Structural Force Attenuation of GS Acoustic Ceiling Hanger

Part No	Rated Load (kg)	Deflection At Rated Load (mm)
GS 200	50	3.5

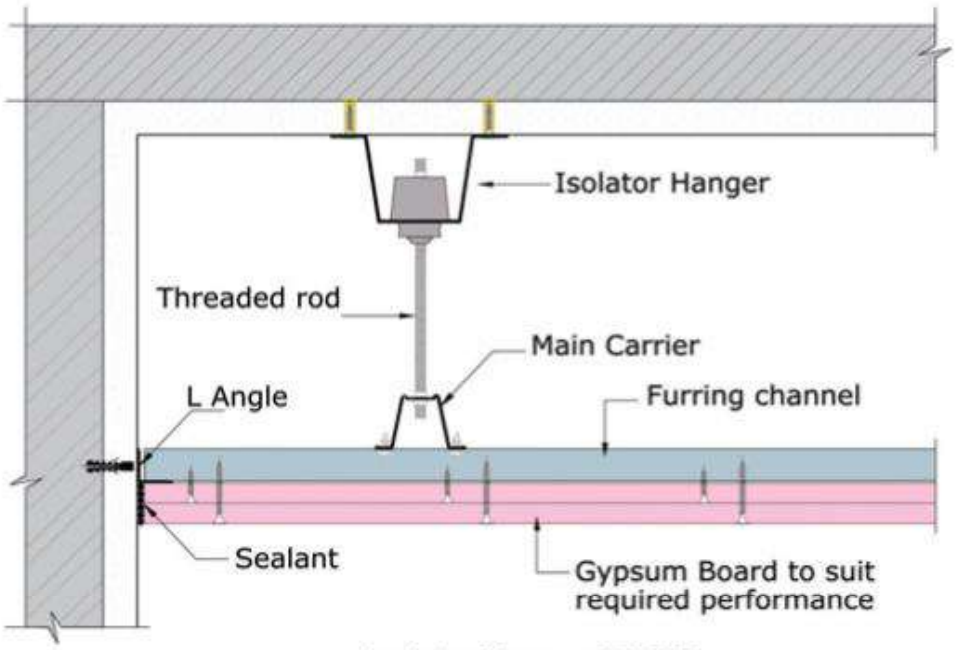


- **Furring Channel**
- **Main Carrier**
- **Isolator Hanger**

Gypsum Board as per Specified Performance

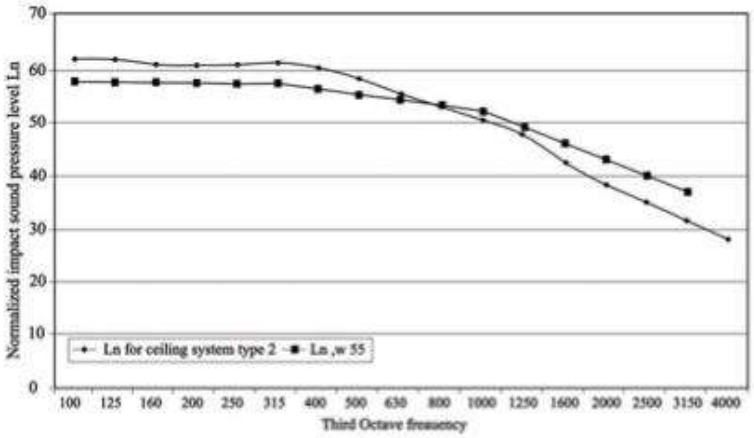
TYPICAL APPLICATIONS

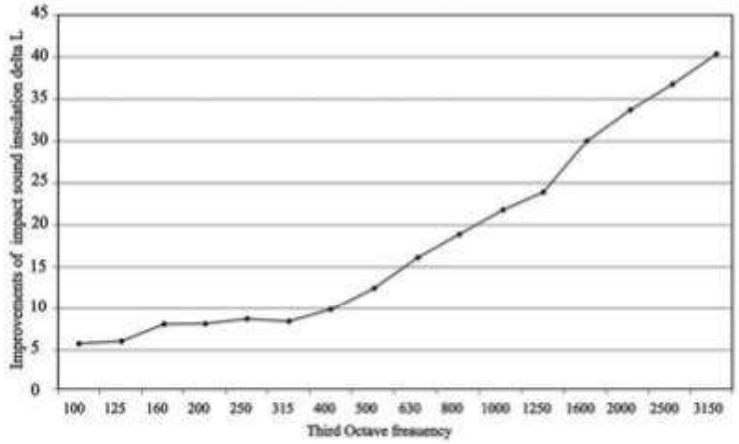
- Acoustic Ceilings.
- Pipe work.
- Axial Fans and Fan Coil Units.
- Duct work and Attenuators.
- Air Conditioning Equipment.



Isolator Hanger GS200

Freq. Hz	Ln dB	∇L dB
100	61.4	5.6
125	61.7	5.8
160	60.1	7.9
200	60.5	8.0
250	60.4	8.6
315	61.1	8.4
400	60.2	9.8
500	58.1	12.4
630	55.0	16.0
800	52.6	18.9
1000	50.1	21.9
1250	48.0	24.0
1600	42.0	30.0
2000	38.1	33.9
2500	35.0	37.0
3150	31.5	40.5
Ln ,w	**55**	
∇L w		**16**





Walls & Ceilings Expansion Joints

Introduction

All buildings move and flex, and nearly all building materials expand and contract. Unfortunately, the installation of stress relief to mitigate the impact of any type of stress on a building system, such as a gypsum board ceilings & partitions, is too often an afterthought. Proof of this can be observed in the occasional long corridor that exhibits cracking from the top corner of a door frame to the ceiling.

The usual explanation for cracking in a gypsum board system is the movement in the building's board main structure that was not properly accommodated; however, Gypsum Board Systems can also expand and contract as they react to extreme changes in temperature.

In every instance, some sort of control joint or stress relief device is needed to accommodate possible system movement and to inhibit potential cracking of the gypsum membrane. Control joints in the Gypsum Board Systems shall be specified by the Architect or Designer where any of the conditions listed below exist:

1. A partition, wall, or ceiling traverses a construction joint (expansion, seismic, or building control element) in the building base structure.

2. Where a wall or partition runs in an uninterrupted straight plane exceeding 30 ft. (9 m) in length and the total area between control joints does not exceed 900 ft.² (81 m²).

NOTE: Full height door frames may be considered as a control joint.

3. Interior Ceilings with Perimeter Relief; Control Joints shall be installed so that :
   a- linear dimensions between control joints shall not exceed 50 feet (15meter) and
   b- total area between control joints does not exceed 2500ft² (225 m²).

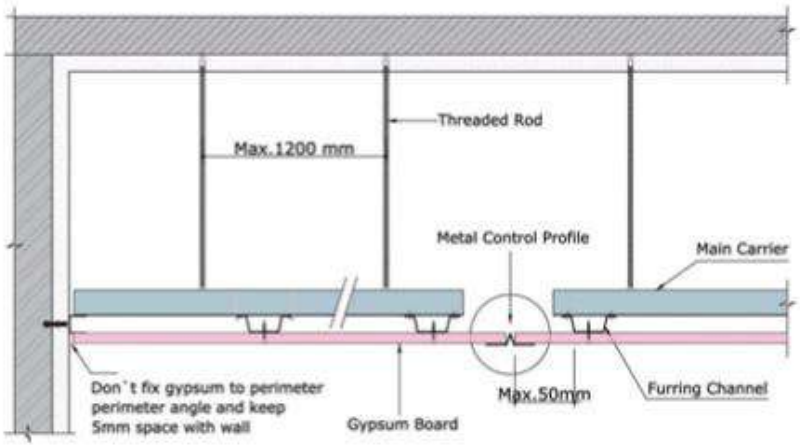
4. Interior Ceilings without Perimeter Relief; Control Joints shall be installed so that :
   a- linear dimensions between control joints shall not exceed 30ft (9 meter) and
   b- total area between control joints does not exceed 900ft² (81 m²).

5. Exterior Ceilings and Soffits; Control Joints shall be installed so that :
   a- linear dimensions between control joints shall not exceed 30ft (9 meter) and
   b- total area between control joints does not exceed 900ft² (81 m²).

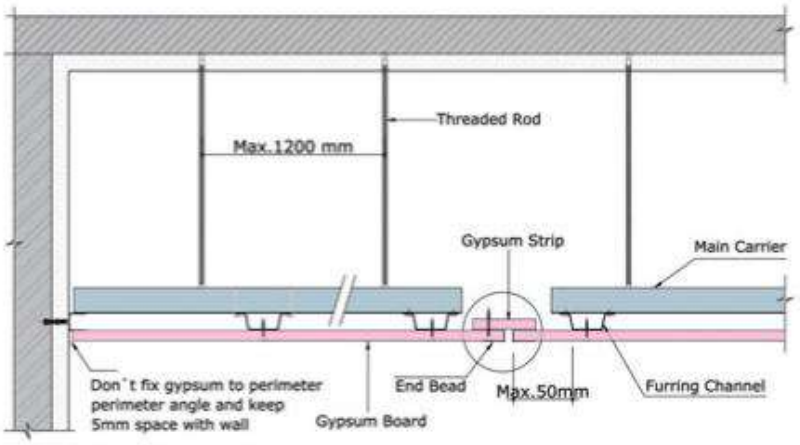
6- A control joint or intermediate blocking shall be installed where ceiling framing members change direction.

7- A control joint is desired or incorporated as a design accent or architectural feature.

Installation of Expansion Joints (Ceilings)

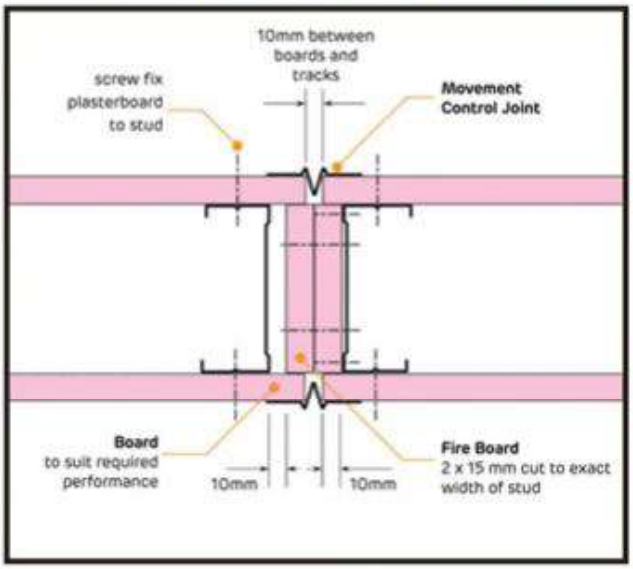


EXpantion Joint

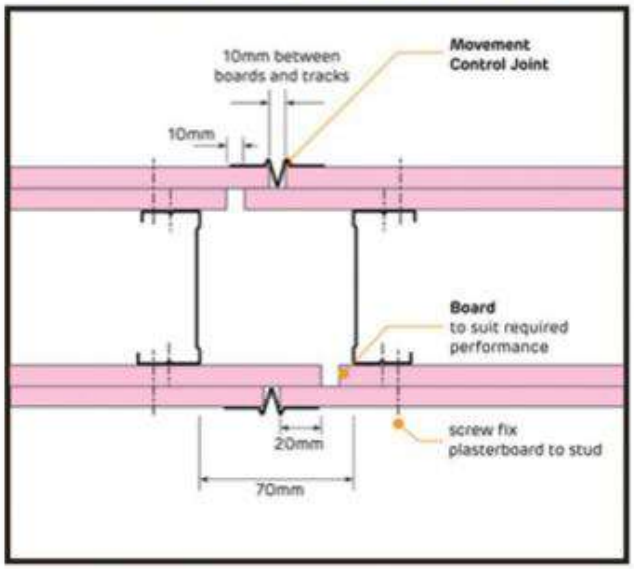


Installation of Expansion Joints (Walls)

Movement control joint - Single Boarded



Movement control joint - Double Boarded



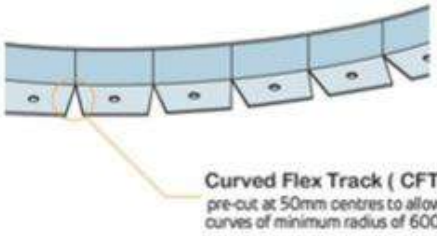
Curved Partition & Drywall Ceilings

System Assembly

Curved Channel is designed to allow easy construction of curved wall linings, in both partitions and ceilings. It is supplied pre-cut to allow a minimum radius of 600mm to be achieved.

Material

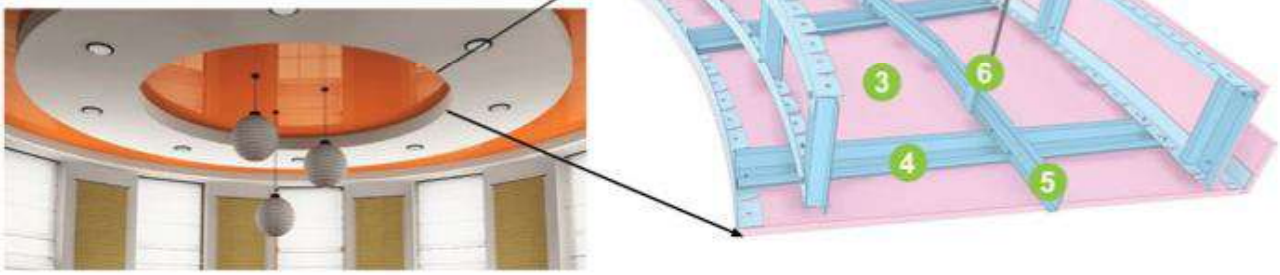
Fabricated from hot dipped Galvanized steel,
- Minimum thickness 0.5mm.
- Diameter 25mm x 25mm.
- Length 3 ML.



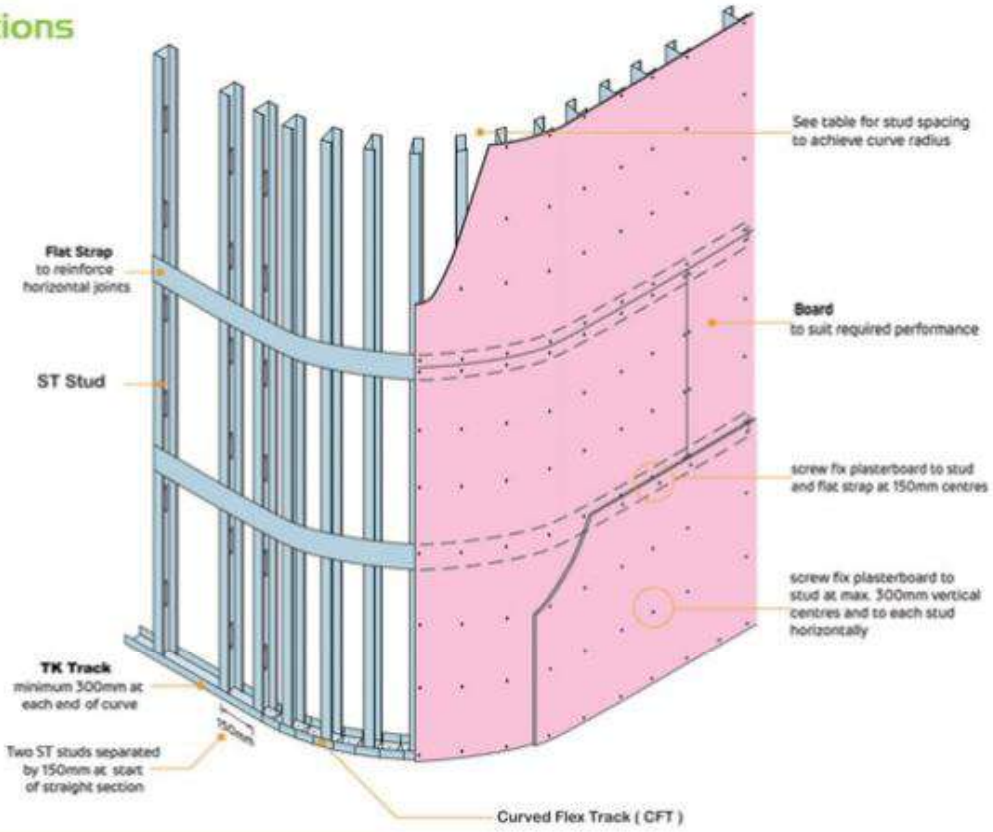
Curved Ceilings

Diagram Description:

1- CFT Curved Angle
2- Threaded Rod
3- Gypsum Board
4- Furring Channel
5- Main Carrier
6- UB 38



Curved Partitions



Trap Door for Dry Walls

Introduction

Access doors built into drywall to allow people to reach areas that need occasional attention. For example, some plumbing fixtures are prone to failure, so rather than ripping out the entire wall or ceiling to reach these fixtures, many people just build access doors so they can quickly open it to handle the problem.
Larger access doors, such as those that lead to attics or crawl spaces, allow people to move items in and out that are of long term storage.
Keep in mind that you should determine the size of the opening area based on how you plan to use it.

Model D 101

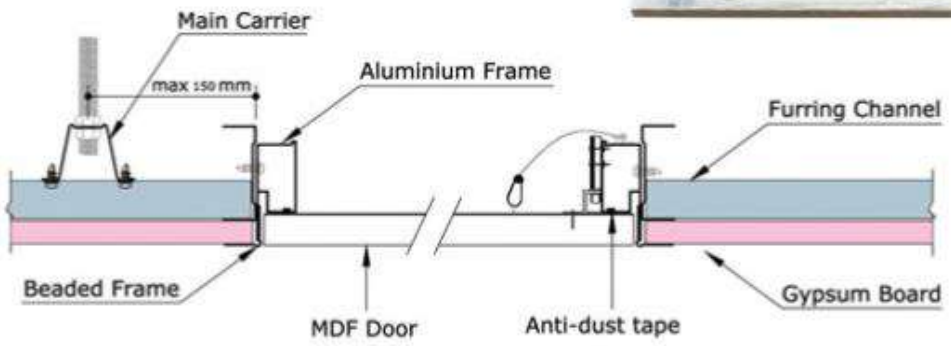
We use this model when we need trap door has more strong and stiffness or very big door size
D101 access door is designed with a beaded frame to be taped and skimmed on site to fit into any type of plasterboard ceiling systems allowing easy access above. A beaded frame surround is provided, which enables the panel to be inserted directly into the clear structural opening, and screw-fixed into position through the side of the panel frame.

components

1- frame: Fabricate from Extruded Aluminum Alloy 6063-T6 .combined with Concealed Beaded frame for use in ceiling with skimmed finish
2-Door. 15:20mm Wooden recessed door with aluminum foil on the back side .
3-Hinge: concealed, two-point pin hinge, non-corroding. Allows door to open 90 degrees.
4- Concealed touch latch. Furnish number of latches required to hold door in flush smooth pane when closed (only in the small size)
5-Key operated cylinder lock with easy way to lock, ,this only in the big size

MODEL D101

Frame fabricates from extrusion aluminum
and door leaf is from treatment MDF
DIMENSION : 30x30 to 100X200cm
OTHER WIDTH ARE AVAILABLE UPON REQUEST



Installation

I- Locate the right place for the door before making the opening in gypsum boards ensuring that there is no obstacle such as. sectors of the metal frame or pipes of the fire system, air dockets, electrical wires... etc.
2- Make the slot size larger than the outside frame by 2.5mm in all the sides.
3- the aluminum frame should be fixing directly to steel frame (in small size) and fixing directly to concrete slab when exceed Than 600mmX900mm ,using (self drilling screws.)
4- skim the beaded frame with joint compound in three stages ,and keep the joint compound away from the around the door.

Please take into account the following when using the door:

1- Do not leave the Door open for a long period of time.
2- Make sure to close the Door Tightly.

Trap Door for Dry Walls

Introduction

Access doors built into drywall to allow people to reach areas that need occasional attention. For example, some plumbing fixtures are prone to failure, so rather than ripping out the entire wall or ceiling to reach these fixtures, many people just build access doors so they can quickly open it to handle the problem.
Larger access doors, such as those that lead to attics or crawl spaces, allow people to move items in and out that are of long term storage.
Keep in mind that you should determine the size of the opening area based on how you plan to use it.

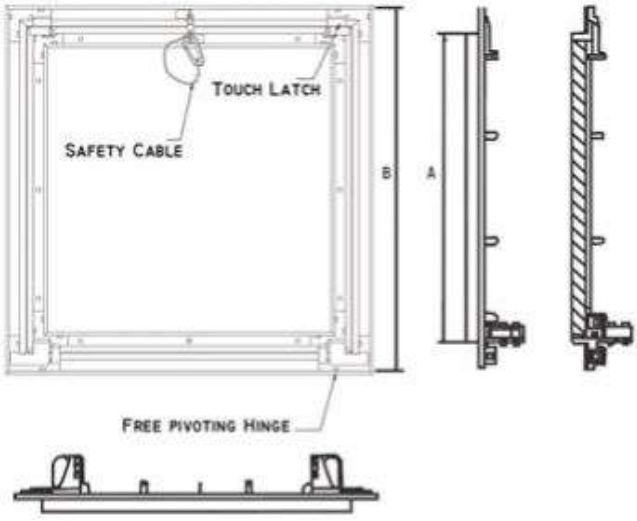
Features

a.Strong Aluminum frame and Hardware.
b.Strong 12.5mm water-resistant gypsum board inlays.
c. Strong Standard sizes shipped from stock.
d.Strong Rectangular sizes easily customized.
e.Strong Concealed touch latch standard on all doors.
f. Strong Removable door panel, with or without safety cables.

Standard Sizes of Panels

Size	Notes
300 X 300 mm 400 X 400 mm 500 X 500 mm 600 X 600 mm 600 X 120 mm	Special Size can be supplied Upon Request

Access Panel Dimensions mm	
A	B
300x300 400x400 500x500 600x600 600x1200	360x360 460x460 560x560 660x660 660x1260



Access Door

1.Door: Fabricated using Extruded Aluminum Alloy 6063-T6. (Standard on all doors)
2.(12.5 mm) proprietary gypsum boards inlay for Anti-rust-plated screws safety hooks; the door is to be taped and finished consistent with the surrounding surface.
3.Frame: Recessed aluminum frame provides edge similar to drywall bead against which wall or ceiling surface can be finished. Specify model for 12.5 mm board.
4.Hinge: concealed, two-point pin hinge, non-corroding. Allows door to open 120 degrees. Door can be removed.
5.Latching/Locking devices: Screwdriver cam latch - standard.

a. Key operated cylinder lock with two (2) Identical keys per lock.
b. Tamper-resistive torn head cam latch.
c. Concealed touch latch. Furnish number of latches required to hold door in smooth flush with panel when closed.

6.Finish: Aluminum frames, gypsum board, aluminum cam latch, to receive the same finish and paint as the surrounding surface.

Trap Door for Dry Walls

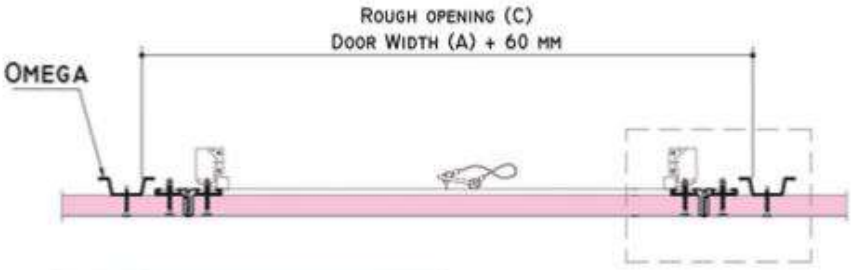
INSTALLATION PROCEDURE

Tools that must be available

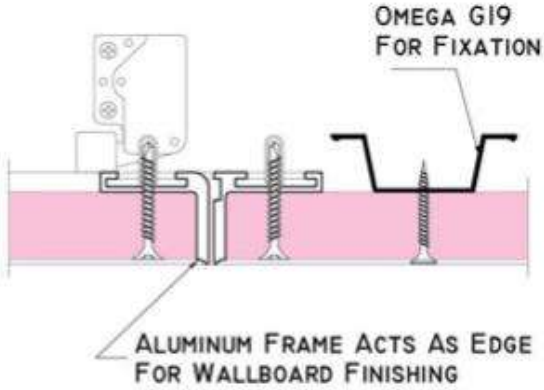
Screw driver - self-drill Screws 35 mm - Leveling Scale - Meter -Saw - Square Angle - Putty Knife.

1- Locate the right place for the door before making the opening in Gypsum Panels ensuring that there is no obstacle such as, sectors of the steel structure of the Gypsum Panels or Pipes of the fire system, Air dockets, Electrical wires... etc.
2- Make the slot size larger than the outside frame by 2.5mm in all the sides.
3- Install the outside frame of the door by passing it through the slot at a (45) angle unite it snaps in place and be at the level of surrounding panels. Then fix it using (self drilling) screws.
4- Mount the internal door to ensure the stability of the outside frame dimensions.
5- Apply the plaster around the outside frame ensuring that the gap between the outside frame and the door is free of any plaster traces.
6- Install the door in its place.

Access door Model DIO2 details



DETAIL B



DETAIL B

Please take into account the following when using the door

1- It is important to observe appropriate health and safety legislation when working on site.
2- Handling (manual off loading) of this product should be carried out with care to avoid necessary strain.
3- Do not leave the Door open for a long period of time.
4- Make sure to close the Door tightly.
5- Mark the direction of opening & closing the door.

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