Drywalls Partition Systems

Regular Partition Systems

SYSTEM COMPONENTS
ASSEMBLY & FINISHING



SYSTEM (ZW 100)

BRINGING
PLASTERBOARD
TO LIFE



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INSTALLATION

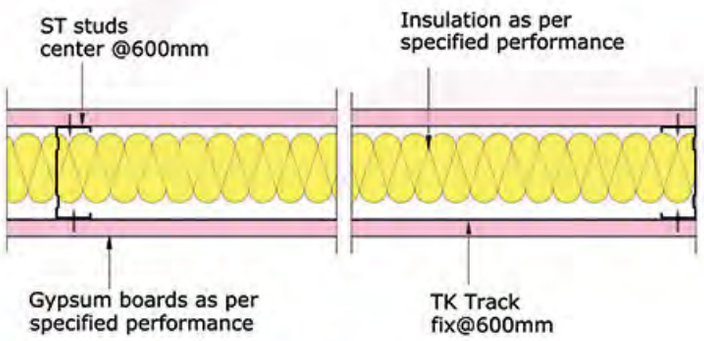
Laying out:
- Partitions layout should be marked accurately.
- Always check individual measurements against overall site dimensions.
- Define the partition width to define the frame width.
- Align the top and bottom tracks of the partition accurately according to the plan layout.



Frame Fixing

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.





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.

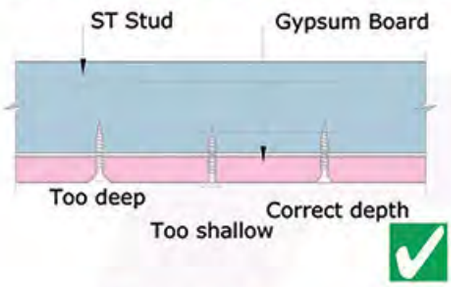


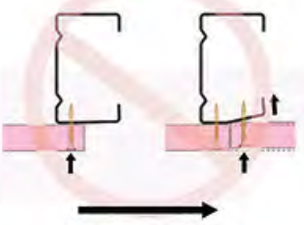
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CAUTION & APPLICATIONS

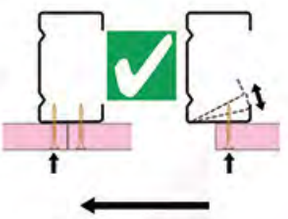
Fixing Plasterboards:
Fix plasterboard sheets in the direction of the open side of the stud to the closed side of the stud, and don't fix at the closed side.
(PLEASE LOOK AT FIGURES BELOW)

Correct way to fix Gypsum Boards



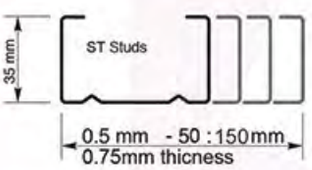


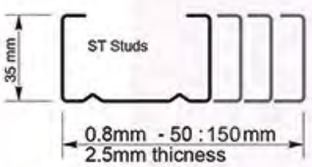
(Figure 1)



(Figure 2)

Fasteners





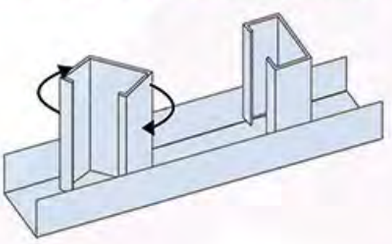


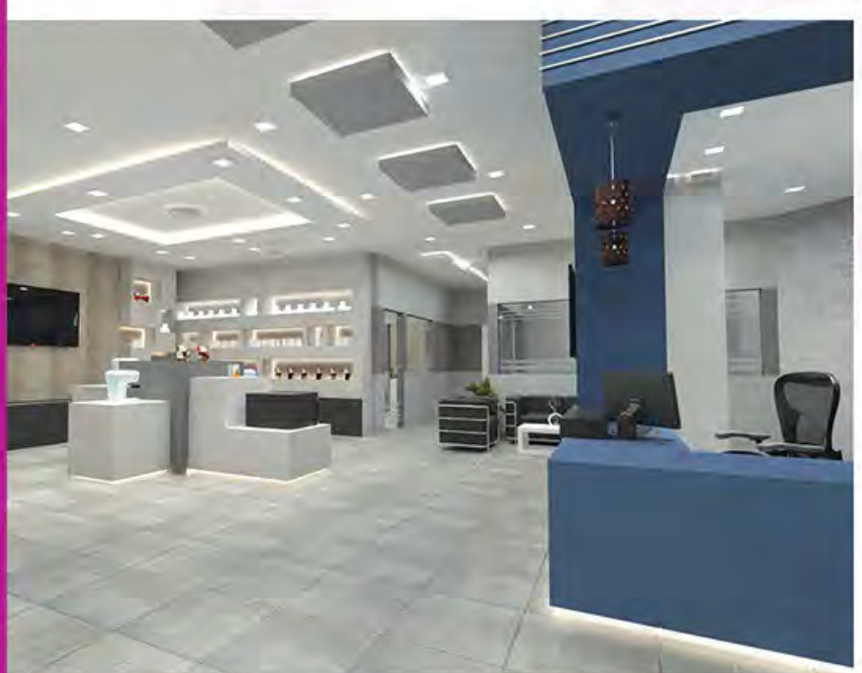
Needle point screw
suitable for thin studs



Drill point screw
suitable for thick studs

Correct way to install studs







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INSTALLATION (CONT.)

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.

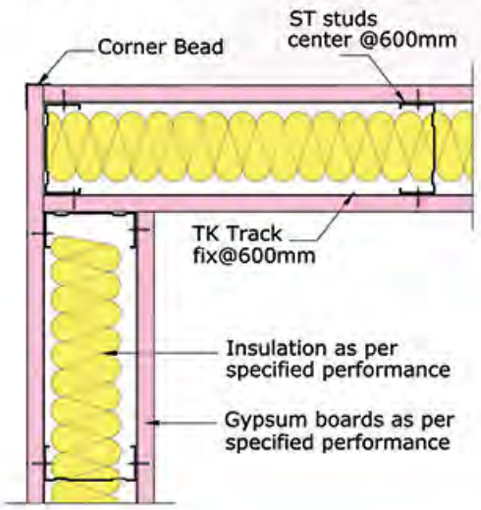
Multiple layer application

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.



Corner Detail



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INSTALLATION (CONT.)

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

(PLEASE SEE FIGURES BELOW)

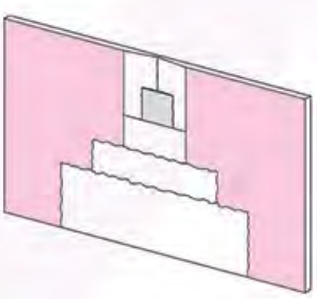


Caulking

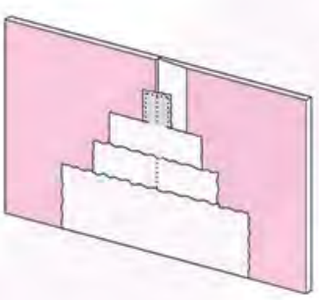
Caulk all perimeter gaps in fire rated walls with fire Sealant.

Applying Fiber Tape

Fiber Tape
First Coat
Second Coat
Finishing Coat



Tapered Edge Joints

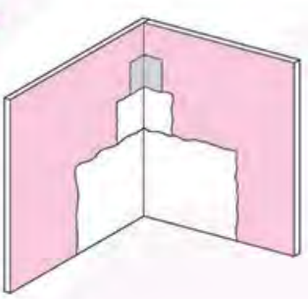


Fiber Tape
Bedding Coat (150mm)

Second Coat Feathred out 50to60mm beyond bedding coat

Finishing Coat (300mm) Feathred out 50to60mm beyond second coat

Internal Corner Joints

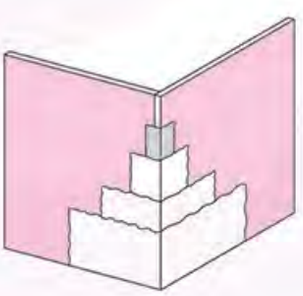


Fiber Tape
Bedding Coat (100mm) each side

Second Coat (125mm) each side Feathred beyond bedding coat

Finishing Coat (150mm) each side Feathred out beyond second coat

External Corner Joints



Fiber Tape
Bedding Coat (150mm) each side

Second Coat (200mm) each side Feathred beyond bedding coat

Finishing Coat (300mm) each side Feathred out beyond second coat

Screw Head Depressions



Screw Head

Treat Screw depression with three coates



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INSTALLATION (CONT.)

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.





HEIGHT
LESS THAN 5 METERS



HEIGHT
MORE THAN 5 METERS



MAXIMUM WALL HEIGHT

Plaster board linings		Single studs @600mm Centers						
Studs thickness		0.5		0.6		0.8		
Studs width		50mm	70mm	70mm	90mm	70mm	90mm	100mm
Lined both sides	1X12.5mm	3200	70mm	4130	4940	5020	5500	6100
	1X15.0mm	3380	4130	4300	5180	5250	---	---
Lined one side	1X12.5mm	2320	4300	3240	3610	3820	4180	5200
	1X15.0mm	2320	2720	3240	3610	3870	4200	5250

Note: The cladding did not take into account the presence of the reinforcement on the existing wall

Maximum heights are calculated based on a limiting deflection of L/240 at 200 Pascals

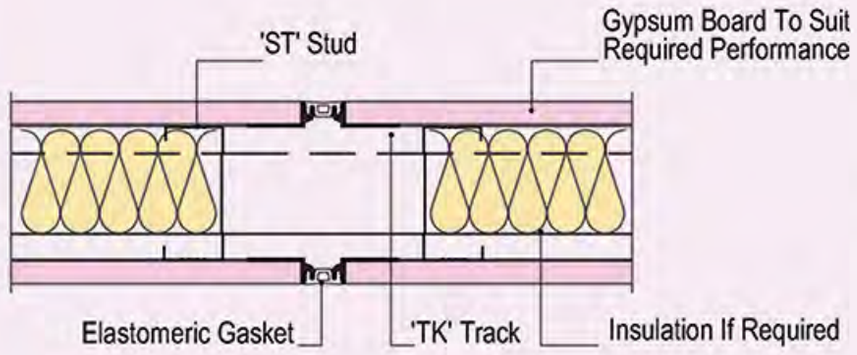


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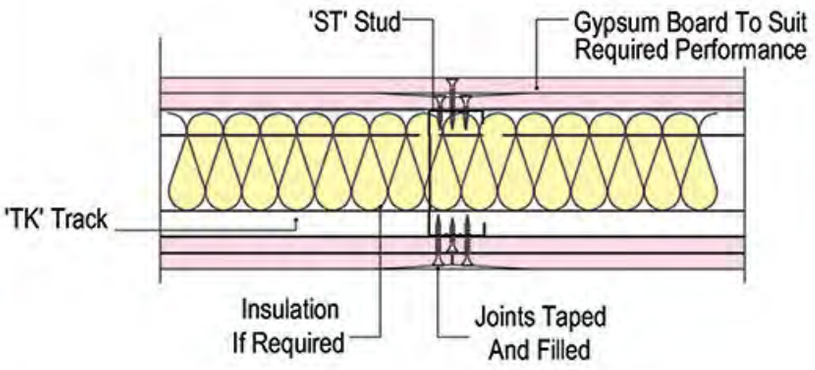
WALLS SYSTEM (ZW 100)

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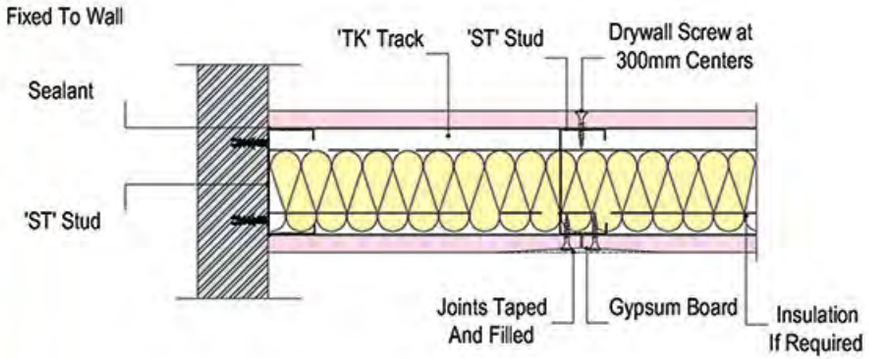
EXPANSION JOINT



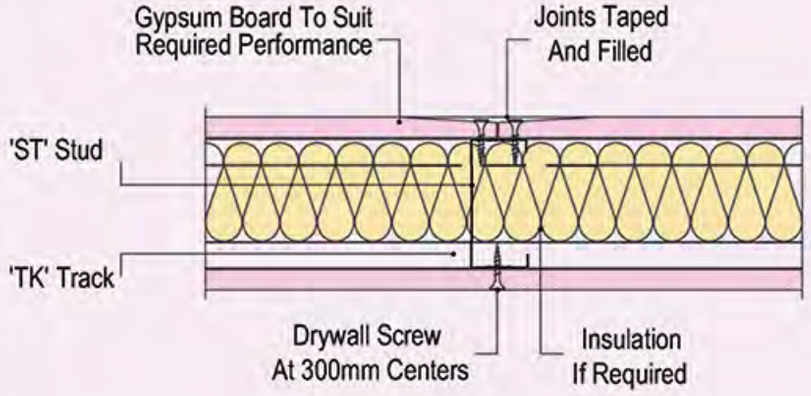
"ST" STUD DOUBLE LAYER



WALL ABUTMENT

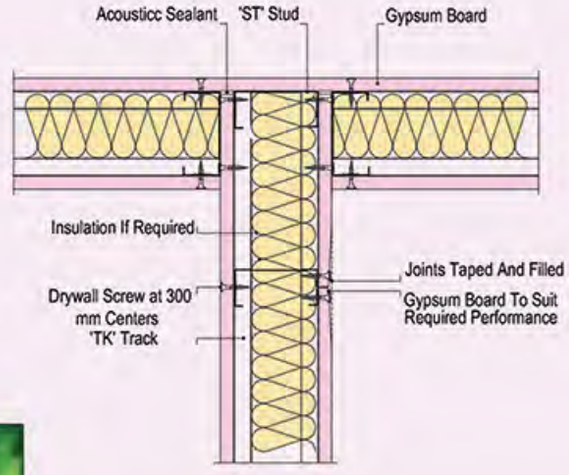


"ST" STUD SINGLE LAYER

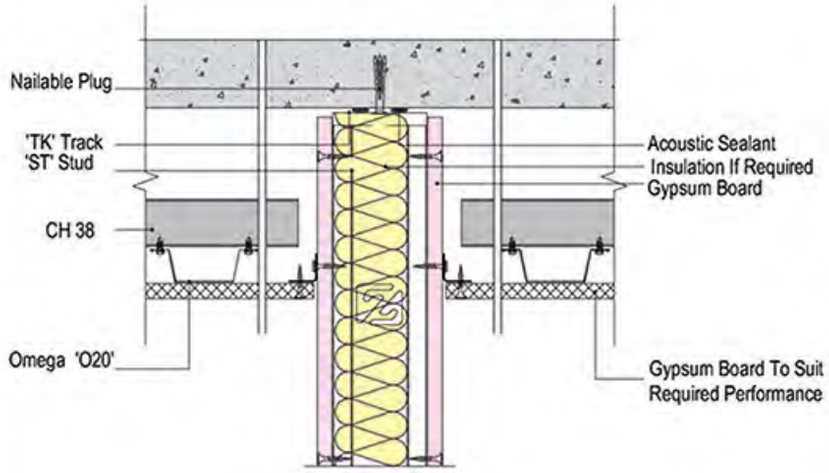


WALLS SYSTEM (ZW 100)

T-JUNCTION, SINGLE LAYER



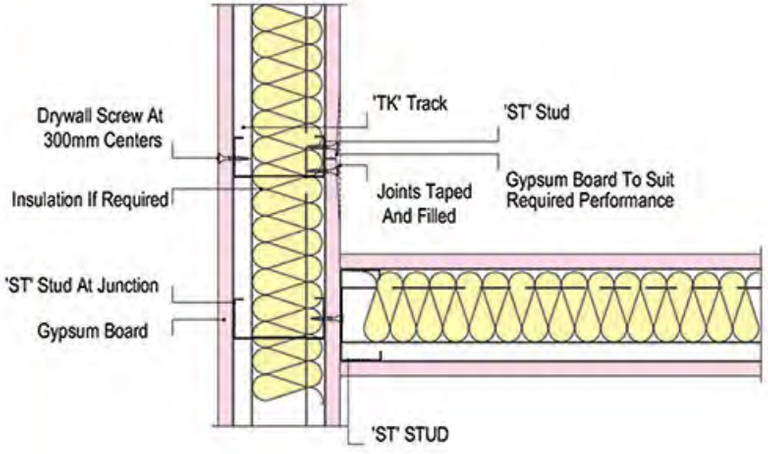
PARTITION TO CEILING



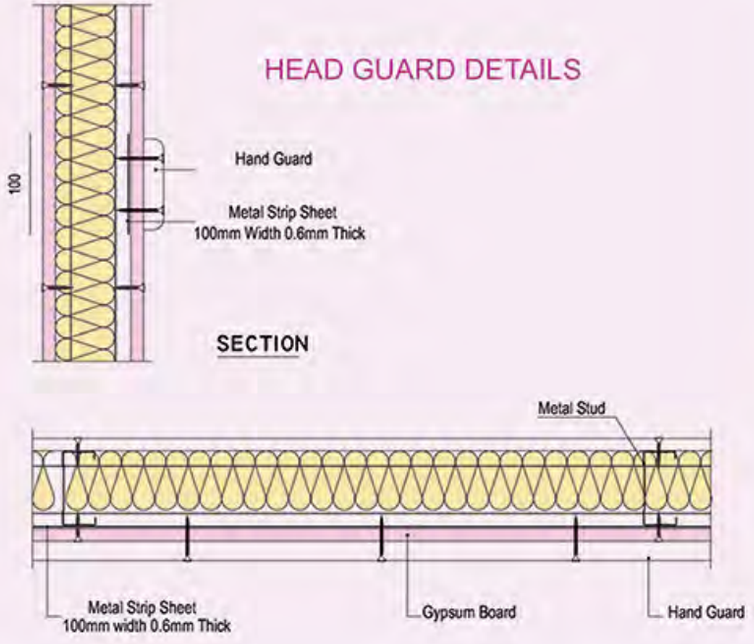


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T-JUNCTION, SINGLE LAYER



HEAD GUARD DETAILS



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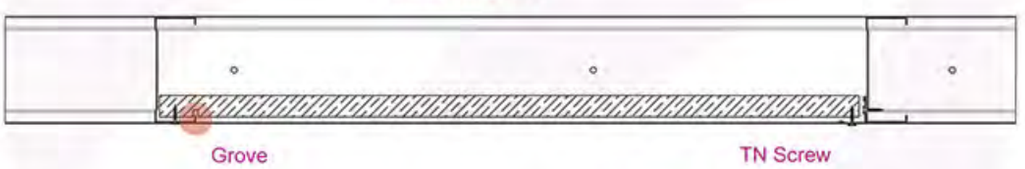
APPLICATIONS

Location of noggins services

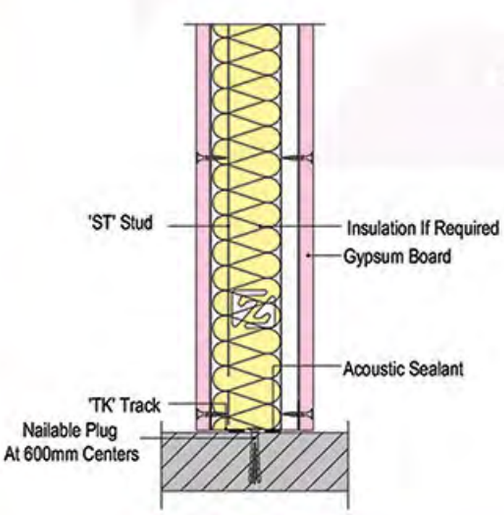
Correct noggin installation, marine plywood (by others) inserts provide More stability and a better fix for services such as hand dryers or towel rails.



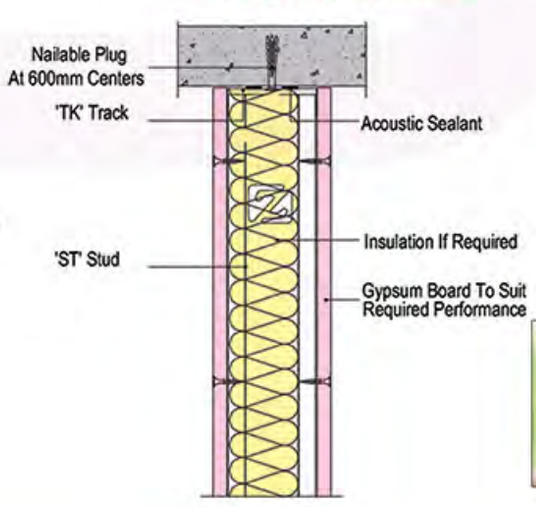
SECTION A-A



L Angle 25 x 25 x 0.5 mm



FLOOR TRACK



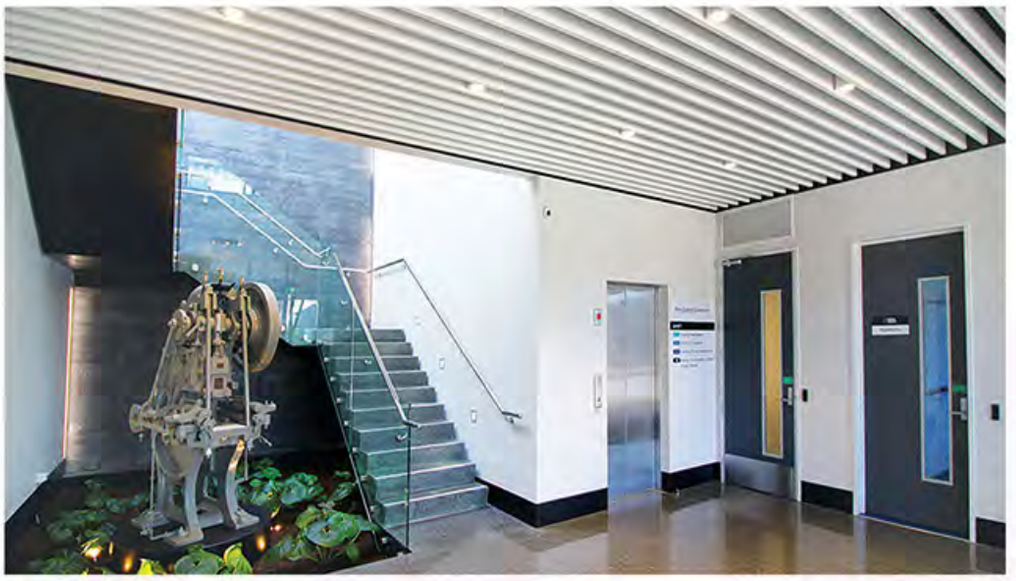
HEAD TRACK

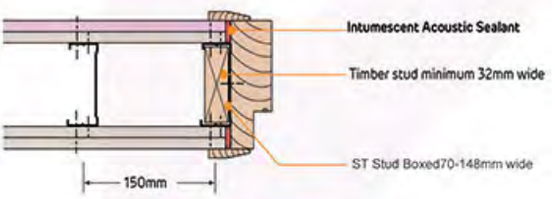


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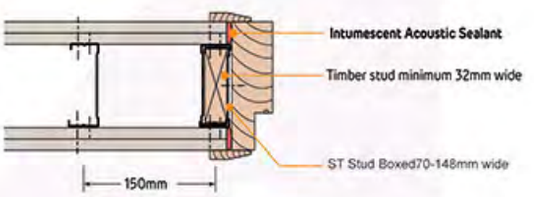
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PARTITION APPLICATIONS DOOR ZW 100) system

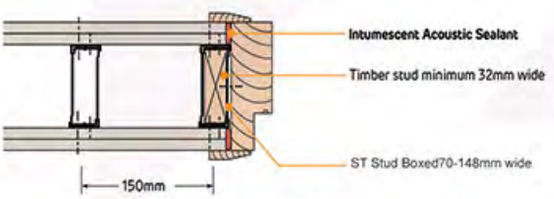




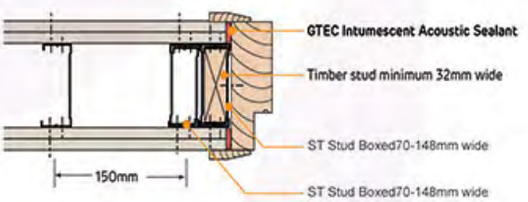
Door Up to 25 kg



Door Up to 50 kg



Door Up to 75 kg



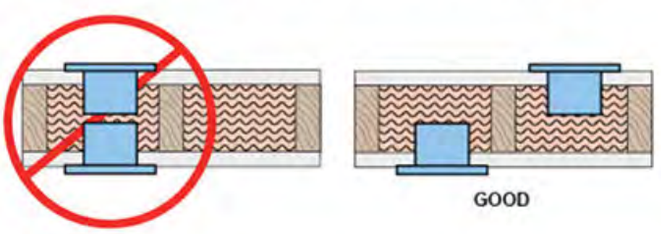
Door Up to 100 kg

Note: Insulation not shown for clarity

Electrical outlets

To avoid compromising sound isolation with electrical outlets, follow these basic guidelines:

1. Never put outlets back to back, always put them in separate stud cavities
2. Seal the outlets well with acoustical caulk. Seal quality around the outlet is critical.
3. Use an acoustical pad around the outlet.
4. Use insulation in the wall (something you should anyway do if you care about sound isolation). Insulation helps absorb sound as it travels from one outlet box to another.



GOOD



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APPLICATIONS



How to hang pictures and accessories

Install a nail or screw at an inclination and hang pictures or other accessories of items less than 10 kilogram

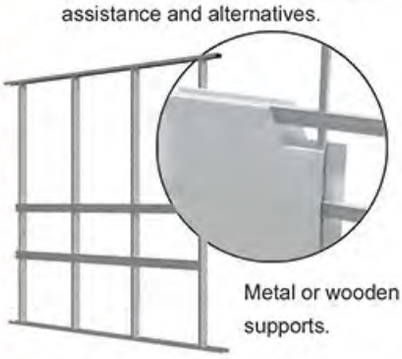




Using Hilti anchors and you can hang items between 10 to 25 kilograms, including flat screens.



For items more than 25 kilograms, please call our Technical Office for assistance and alternatives.



Metal or wooden supports.

Rectangular metal tubing with RHS (Rectangular Hollow Section) for hanging heavier accessories.



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CURVED PARTITIONS

System assembly

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

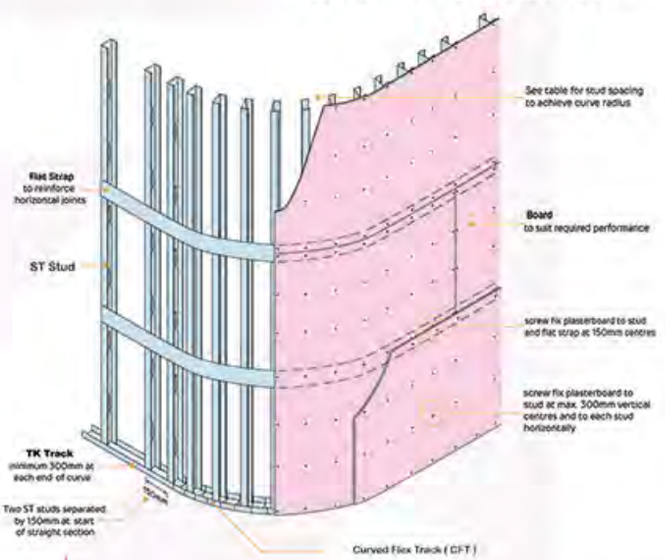
Alzahbia ® Flex Channel



Alzahabia Flex Channel

pre-cut at 50mm centres to allow curves of minimum radius of 600mm

Metal stud framing
Mark out the curves on the floor and ceiling. Curve width should be 2mm greater than the width of the Alzahbia ® ST-Stud.
Fix the Alzahbia ® Flex Channel to the floor and ceiling at 300mm centers along both lines of the marked curve.
Insert Alzahabia ® St-Studs into the track around the curve at centers shown in table 3.21. Where multiple board layers are installed, it may be necessary to insert extra studs at the board edges to account for the difference which arises between the inner and outer board radii.

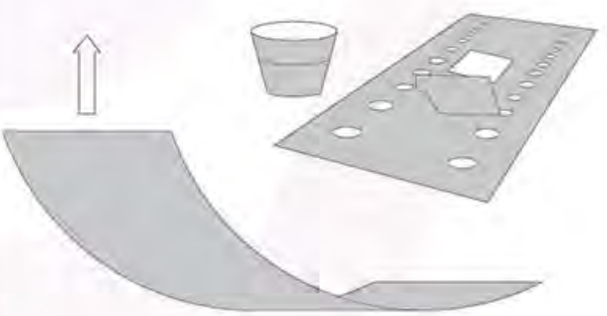


Board wetting

Thoroughly wet the side to be compressed of each plasterboard sheet using a brush or roller. Do not wet the opposite side. Allow the boards to stand for at least one hour before installation. When bending to a tight radius ensure that the wetting process softens the core of the plasterboard

Bending radii and stud centers

Radius (mm)	Flex Board (6mm)	Flex Board (12.5mm)	Flex Board (15mm)
600-900	150w	---	---
900-1000	200d	---	---
1000-1500	200d	150w	---
1500-2000	200d	200w	---
2000-2500	200d	200w	150w
2500-3000	250d	300w	200w
3000-4000	300d	400w	200w
>4000	300d	500w	350w



PLEASE NOTE: W= WETTED & D = DRY

Boarding:

Start boarding at one end, Butt plaster boards firmly against the ceiling. Screw fix to the first stud, fixing from the midpoint of the board at 150mm centers. Carefully screw the board to the framing, studs by stud, easing the board against the framing as you go. Ensure that the plaster boards are completely dry before jointing and making cut-out for services. On double layer boarded systems, horizontal joint of the outer layer of plasterboard may be supported by the use of ALZAHABIA FLAT STRAP fixed between plasterboard layers if required.

JOINTING:

All plasterboard joints should be taped and jointed as specified in the manual, (refer to the Finishing Solutions Section for details).



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