



# ACOUSTIC MOVABLE WALLS

# “ flexible design innovative space solution ”

## INTRODUCTION

MODWAL has been the Front runner in the manufacture of Solid and Glass operable partitions in India for more than decade now. Modwal boast itself has India's leading and dedicated Manufacturer with full range of operable partitions (Solid, Glass and High panels) with an enviable client base in India and Abroad.

We have a dedicated factory at Chennai for manufacturing mobile wall systems. MODWAL enjoys more than 25% of the product made being exported to countries such as UAE, Saudi Arabia, Qatar, Bahrain & other African countries.

MODWAL is India's First manufacturer to introduce Acoustic Glass operable partition and super high operable partition upto 10mtrs high in the Indian market. We are capable of taking up any huge or Complex installation projects and can custom design the space solution depending upon the client's requirement.

MODWAL is proud to announce that all the manufacturing process and Installation is in compliant with ISO 9001:2015 registration. All our products are lab tested using an independent lab and our results are graphically plotted to technically satisfy the stringent acoustic rating, for the series of panel manufactured.

Our range of products offered helps designer / Architects to expand their imagination in terms of flexible Space solutions. Our products are exclusively applied for Hotel Banquets, Offices, Educational Institutes, Shopping Centre and Commercial Buildings. One of our greatest strengths being is our ability to deliver custom design projects to the client. We have executed more than 400 projects throughout India and abroad which stands as a testimonial of our Experience in the movable wall industry.

Whether you are looking for a simple Non-Acoustic Panels for privacy or a Complex layout to be divided, We can satisfy your need at a very Competitive Rate and Quick lead time. Our Designers / Engineers would be happy to meet you and offer any custom design solutions, demonstration of the product and Site co-ordination to Final Handover of the project.

You are welcome to contact MODWAL when a new partition is needed to create flexibility in the work space or facility. We will be happy to assist you in selecting the most appropriate wall systems to suit your particular needs.



**SEASONS BANQUET LLP\_PUNE**



**LEELA GALLERIA\_INNOVENT SPACES BANGALORE**

# MODWAL - TECHNICAL SPECIFICATION

TYPE		65' Series	80' Series	100' Series	100'Series / Super High
Panel Thickness		65mm	80mm	100mm	100/110mm
Decibal Level (dB)		32-36	40-45	50-55	50-55
Panel Support System		Top Supported	Top Supported	Top Supported	Top Supported
Application Areas		Privacy divisions such as Dining areas, Quite discussion room, Residential purpose etc.	Meeting room, Training room , Class room, Conference room, Board room etc.	Banquet hall, Large conference hall, Auditorium, Convention centres etc.	High ceiling Banquet hall, Large conference hall, Auditorium, Convention centres etc.
Panel Height	Min(mm)	2000	2000	2000	5000
	Max(mm)	3500	5000	7000	10000
Panel Width	Min(mm)	600	600	600	850
	Max(mm)	1220	1220	1220	1220
Weight (kg/m2)		28	32	38	55
Track System		Single Point or Double Point Trolley	Single Point or Double Point Trolley	Single Point or Double Point Trolley	High Guideless Aluminium Track
Accessories		Kick Plate, Door Exit Signs, Vision Panel	Kick Plate, Door Exit Signs, Vision Panel	Kick Plate, Door Exit Signs, Vision Panel	Kick Plate, Door Exit Signs, Vision Panel
Trims	Visible	Available	Available	Available	Available
	Invisible	Available	Available	Available	Available
Lock Mechanism		Retractable / Scissor Winding	Retractable / Scissor Winding	Retractable / Scissor Winding	Retractable / Scissor Winding
Frame Constructions		Aluminium / Steel	Aluminium / Steel / MS	Aluminium / Steel / MS	Aluminium / Steel / MS
Telescopic Type		Yes	Yes	Yes	Yes
Retractable Seals	Top	Sweep / Retractable	Sweep / Retractable	Sweep / Retractable	Sweep / Retractable
	Bottom	Retractable / Retractable	Retractable / Retractable	Retractable / Retractable	Retractable / Retractable
Operation Type		Manual	Manual	Manual	Manual
Face Material		MDF Board / Chip Board / Fire Rated MDF / Marine Ply	MDF Board / Chip Board / Fire Rated MDF / Marine Ply	MDF Board / Chip Board / Fire Rated MDF / Marine Ply	MDF Board / Chip Board / Fire Rated MDF / Marine Ply
Pass Doors		Full Height Door	Full Height Door, Single Inset Pass Door, Double Inset Pass Doors	Full Height Door, Single Inset Pass Door, Double Inset Pass Doors	Single Inset Pass Door, Double Inset Pass Door

Note :  
Any custom design layouts such as 90° L Corner, T Intersection, Angled, Window Cutouts, Single / Double Leaf Doors can be incorporated in the design.





***KOTHARI INDUSTRIAL CORPORATION\_NUNGAMBAKKAM***



***Ramjee Banquet\_Chennai***



## TRIM TYPES





## ACOUSTICS

Sound levels are expressed in decibels (dB)

The decibel scale ranges from Zero all the way to up to 120 decibels  
The industry accepted "measuring stick" for acoustical performance of operable walls is the sound transmission class (STC) rating.

Walls are tested under laboratory conditions with varying frequencies (125 – 4000 cycles per second) to determine how much a sound level decreases when it transmits from one side of the wall/partition to the other. This decrease is called Transmission Loss (TL)

STC RATING - APPROXIMATE EFFECTIVENESS	
dB Level	Performance
30	Loud speech audible & understood
35	Loud speech audible but not intelligible
40	Loud speech is barely audible
45	Must strain to hear loud speech
50	Loud speech not audible
52	Major function Noise can be controlled

The actual STC rating may vary from the test rating depending on workmanship, the existence of flanking sound paths through adjacent construction & construction practices.

For instance, if a sound measures at 70dB on one side of a partition, and only 40dB on the other, the TL rating would be at 30dB at that particular frequency.

Since common sounds cover a wide range of frequencies, Sound Transmission Class (STC) ratings are used to provide a single number rating to identify the Transmission loss of a partition as it varies with frequency. A higher STC rating indicates higher transmission loss.

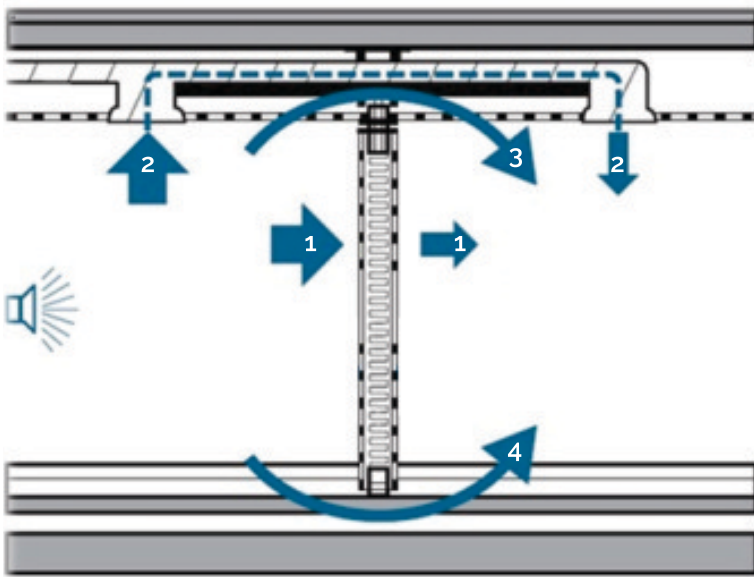
In real time operable partition will sound control from 50 to 80% of its performance balance decibel loss is due to various factors such as the near by

### List of factors near to the operable partition area which drastically bring down the dB / STC level

- Entry doors
- Fixed Glass Panels / Glass doors swinging type for Access
- Sliding windows
- Electrical cable / trays / HVAC Pipes
- AC ducts
- False flooring
- Side gypsum board partitions



## FLANKING PATH



1. Direct transmission as measured in a lab test
2. Flanking noise via duct work
3. Flanking noise via Empty Ceiling
4. Flanking noise via Hollow or False flooring

## WAYS TO IMPROVE STC RATING / DECIBEL LEVEL

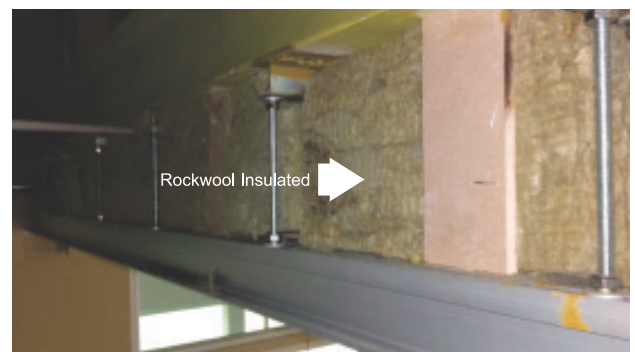
Whatever amount of thickness or load we increase inside the panel will show the real time result only if all proper surroundings are acoustically treated like

- Sound baffling (there should not be any AC ducts / cable trays passing in between the partition track area)

## SOUND BAFFLING METHOD

Close the existing gap of MS structural support + Track fixing partition area from True ceiling RCC Slab to False ceiling with 12mm / 16mm Ply or Gypsum board also fill the inside hollow portion with Double Layer Rock wool / Glass wool so that the movable partition will perform well in line with Acoustic property.

- Both side walls to be concrete in plum if possible you can also put fabric panelling so as to avoid leakages in sides of concrete walls.
- You can opt for Fabric finish in operable partitions with foam backing which will absorb the sound passing through the partition area.







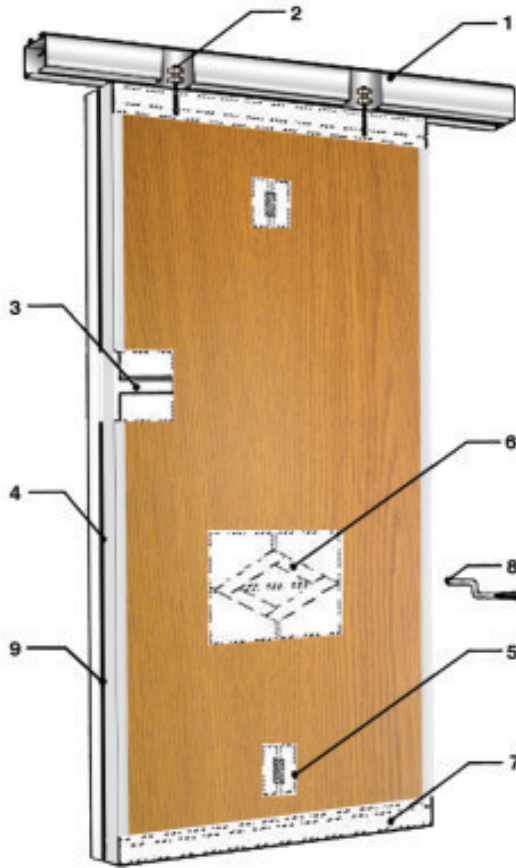
**ANNALAKSHMI BANQUET - CHENNAI**



**HOTEL SANGEETHA\_CHENNAI**



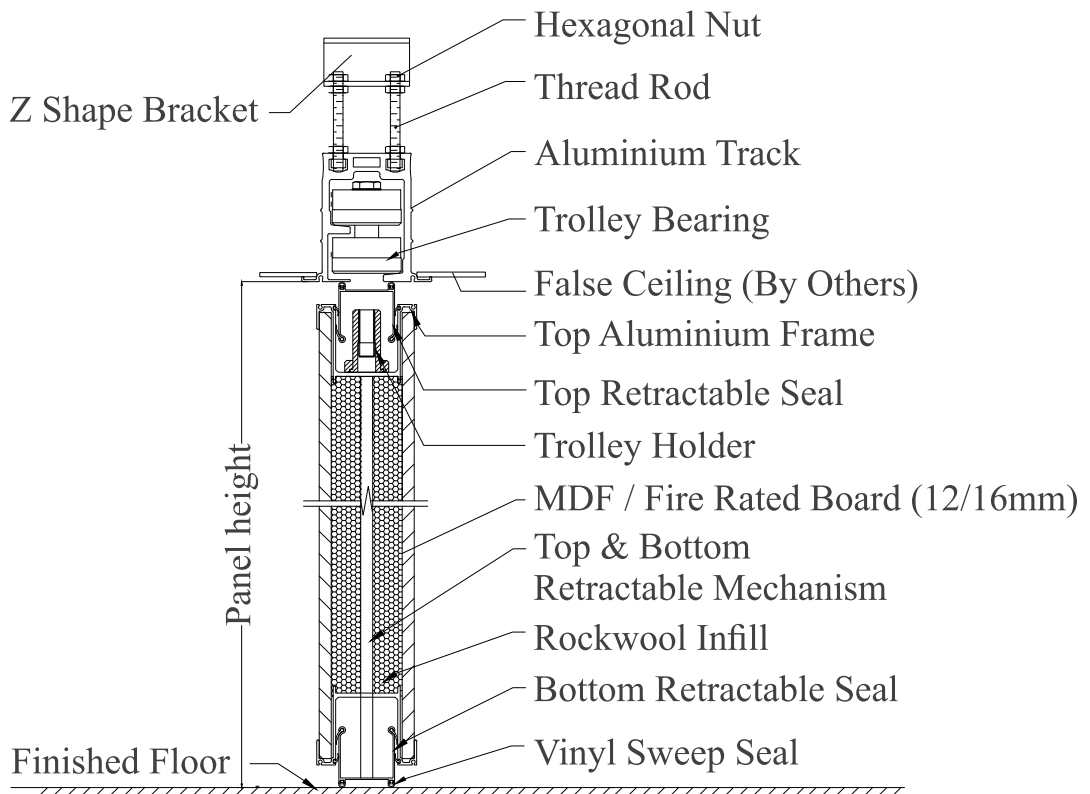
## PANEL DESCRIPTION



- 1. ALUMINIUM TRACK
- 2. TROLLEY
- 3. SOFT WOOD
- 4. BASE PROFILE
- 5. LOCK SPRING
- 6. SCISSOR WINDING MECHANISM
- 7. TOP & BOTTOM RETRACTABLE SEAL
- 8. REMOVABLE LOCK HANDLE
- 9. MAGNETIC STRIP

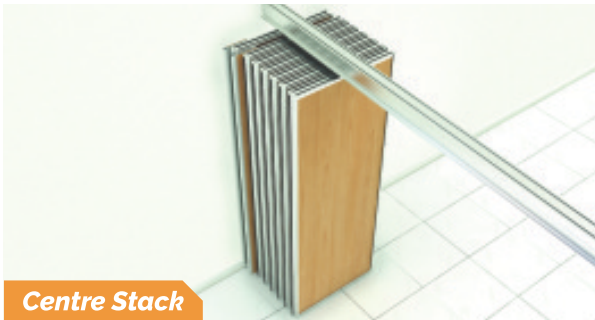


## PARTITION SECTIONAL DRAWING





## PARKING ARRANGEMENT



**Centre Stack**

The panels will be rested in the main Track with a Single roller system.

**Advantage:** Economical, quick set up. Beam work is straight forward.

**Disadvantage:** Panels have to remain stacked on the main track.



**Parallel Stack**



**Single Side Stack**

Single panels are suspended from two carriers at the top corners of each panel. Panels stack with one carrier remaining on the main track and the other in the side track.

**Advantage:** Single panels are easier to move. Flexibility to stack to the side of the track & to negotiate junctions.

**Disadvantage:** Beam work is needed over the side track.



**Single Parallel Stack**



**Remote Stack**

Panels have Omni-directional carriers to negotiate L or T junctions and panels are stacked completely away from the main track, sometimes in a cupboard or recess.

**Advantage:** Panels can be stacked away from the main track, useful in complex layouts.

**Disadvantage:** Extra tracking & beamwork required.

Inexperienced users can get panels out of order on large installations.



**Double Side Stack**



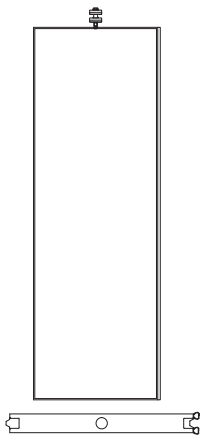
**Double Remote Stack**

## PANEL TYPES

MODWAL manufacture a Series of custom designed panel to suit the layout and demanding application for the project.

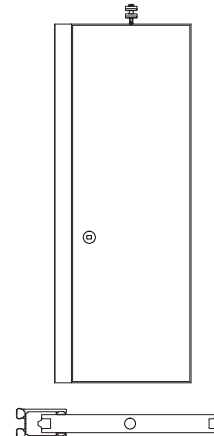
The Following types of panel are generally used as part of the layout designs.

### BALLOON PANEL



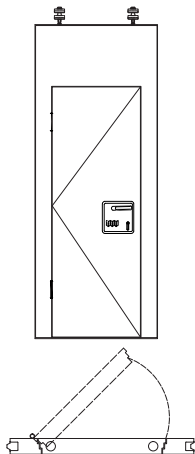
Balloon Panel are typically used as last panel in the partition and where the passive jamb installation is not possible. Balloon panel gives you the desired acoustic rating to that of panels closing against the passive jamb.

### EXPANDA / TELESCOPIC PANEL



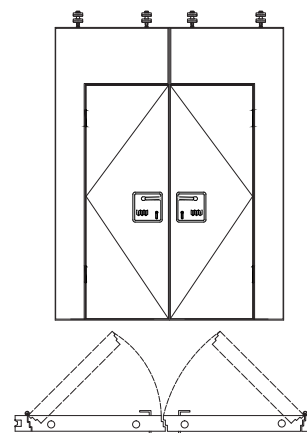
Expanda / Telescopic are used as a Final Closure for movable partition. The extended sleeve travels horizontally upto 140mm and closes the final gap in the movable partition, thus providing the desired acoustic fit. The telescopic is typically used as the first panels in the movable partition arrangement.

### A - TYPE INSET PASS DOOR



A - Type Inset Pass door is typically used where access is required to other side of the partition when the panels are built and the door is also moved and stacked along with the other panels. Generally recommended for heights from 2500mm or above.

### DOUBLE INSET L - TYPE PASS DOOR

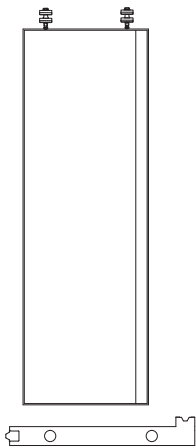


It is generally used where large door access is required. Typical usage is large Banquets.



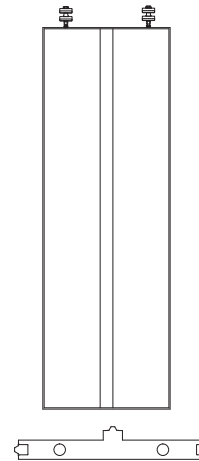
## PANEL TYPES

### 90 DEGREE CORNER PANEL



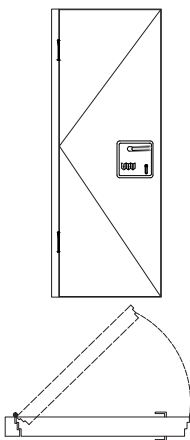
90° corner panel is used to provide "L" Type layout and where 90° join is required. The panel provides unmatched versatility in creating complex layouts. The 90° corner panel can be joined with Normal Panels and well as inset pass door for access.

### T - INTERSECTION PANEL



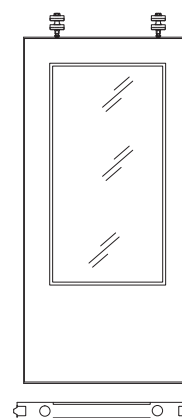
It is normally used to form "T" type layout configuration. The Panel has inbuilt jamb to close the other partition. The "T" type panel provides a very good acoustic fit when "T" type layout layouts are used in design.

### FULL HEIGHT HINGED PASS DOOR



Full height or hinged pass door are used when inset pass door is not recommended due to limitation in height & Stacking possibilities. The drawback of hinged pass door is always keep open and remain fixed to the wall jamb when partition are stored in stack.

### PANEL WITH INSET GLASS



This is typically used when client needs Transparent opening in the form of glass in the panels. The typical arrangement is single 6mm Clear toughened glass is wrapped all around with Aluminium beading to form a uniform Inset glass panel. The size of the glass and cut out can be customised as per the client's requirement.

## CLOSURE TYPES

### Expanda Telescopic Panel



### Full Height Door



### Single Inset Pass Door



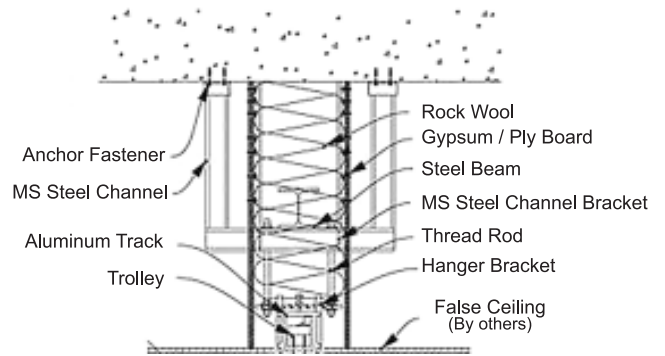
### Double Inset Pass Door



## HIGH PARTITION

Ultrahigh heavy duty aluminum track system are used when the partition height or weights limit exceed that recommended for the normal aluminum system. Maximum height can reach to 10 meters with panel weight up to 500kg, each carrier has four steel wheels with precision ground radial bearings.

Carriers can be programmed for self-directing and sorting. All junction tracks are factory assembled & welded.



L Junction



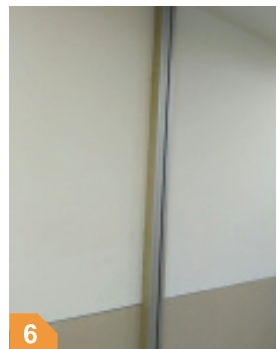
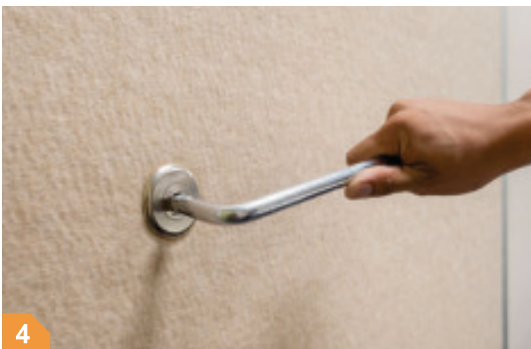
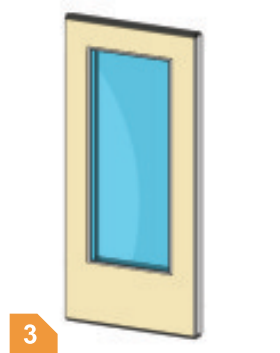
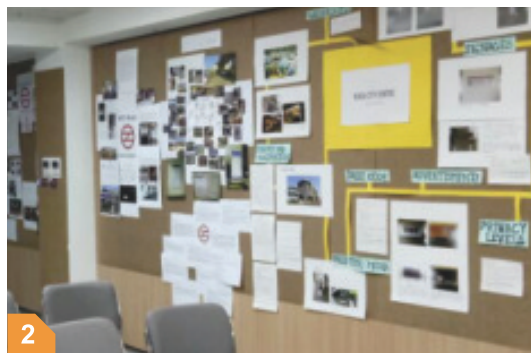
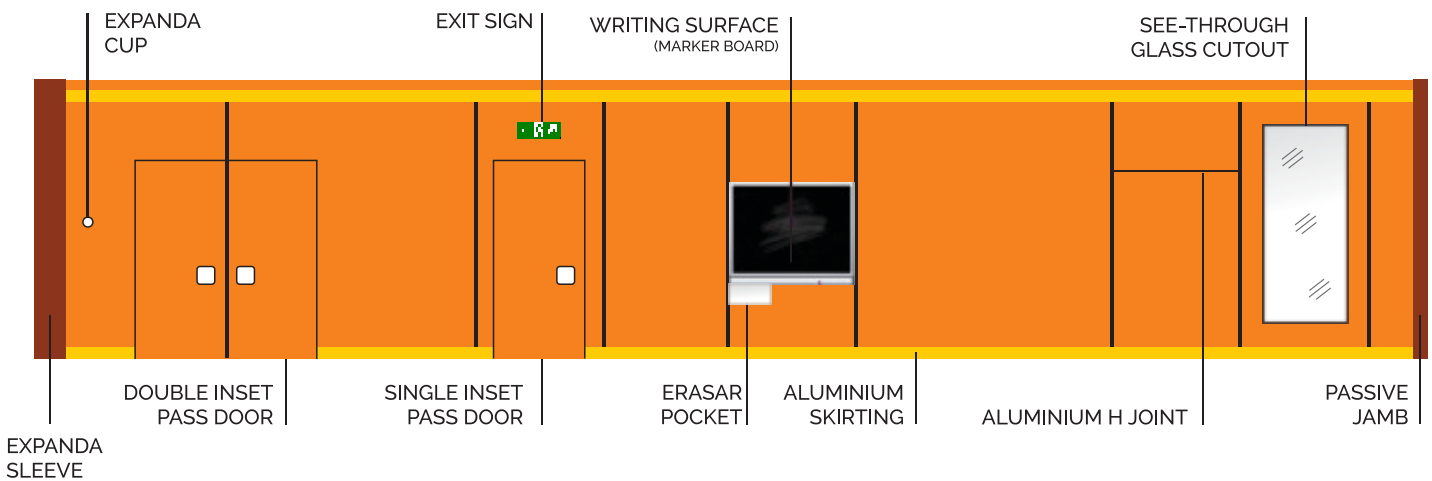
T Junction

## ACCESSORIES

A range of accessories can be incorporated in the operable partition panels and doors such as,

1. Writing Board
2. Pin Up Board
3. See-Through Glass Cutouts
4. Expanda Cup with Lock Handle
5. Aluminium H Joint
6. Passive Jamb
7. Eraser Pocket
8. Door Closer / Wheel Chair Access Option Can Be Provided in Single Inset pass door
9. Aluminium Skirting
10. Exit Sign

All the accessories can be custom designed and fitted accordingly to the client's requirement. Please contact MODWAL for more information.

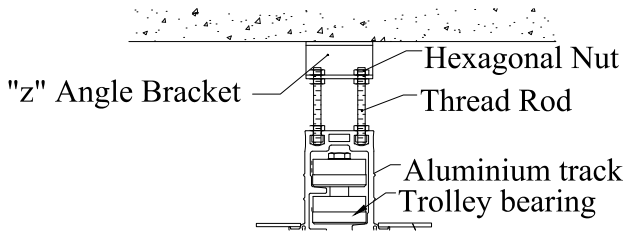




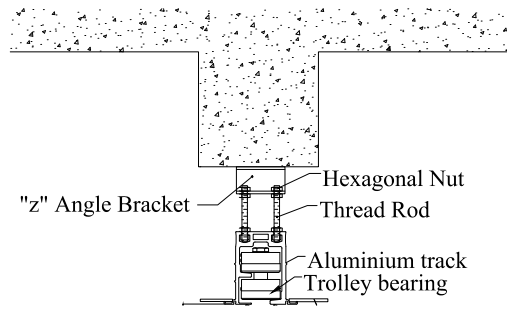


# STRUCTURAL SUPPORT

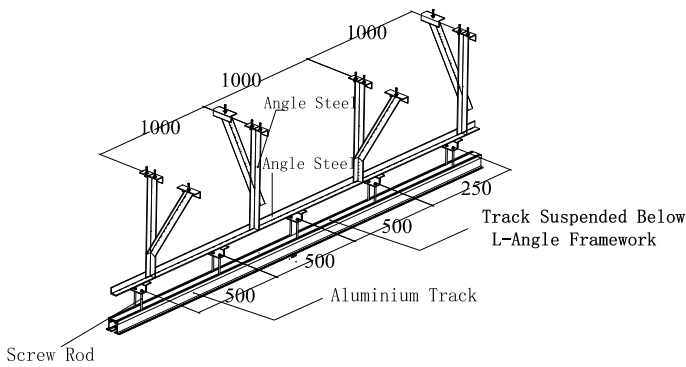
### Direct Fixing In True Ceiling Slab



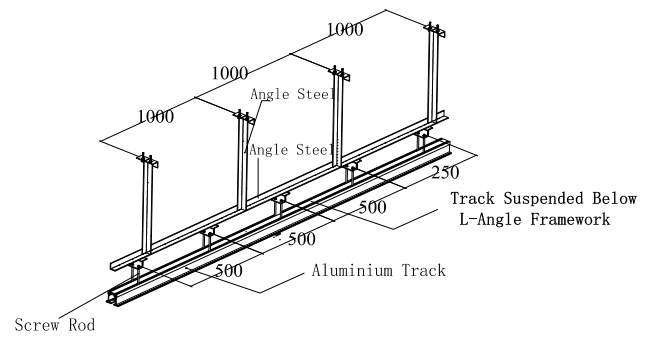
### Direct Fixing Below Concrete Beam



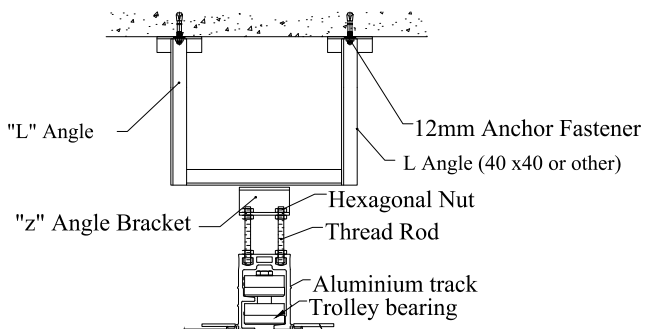
### "Y" Type Structure



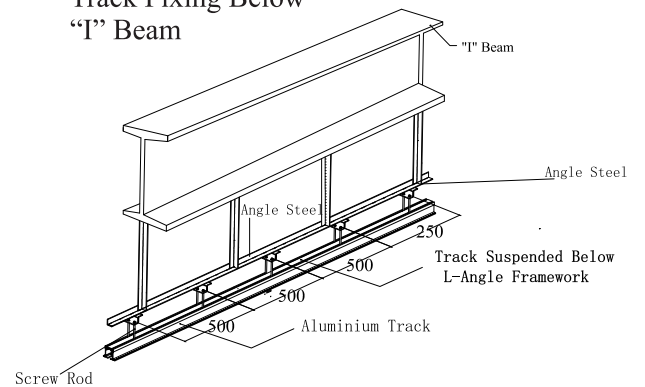
### "T" Type Structure



### MS "U" Type Structure



### Track Fixing Below "I" Beam



## FINISHES

**MODWAL makes sure your partition choices blend into the desired character of your facility**

Types of Finishes / Web links for your Make & Code selection as below

### LAMINATE

[www.centurylaminates.in/lookbook-1mm.php](http://www.centurylaminates.in/lookbook-1mm.php)

[www.merinolaminates.com/categories.aspx](http://www.merinolaminates.com/categories.aspx)

[www.greenlam.com/india/architects-designers/laminates](http://www.greenlam.com/india/architects-designers/laminates)

[www.aicasunmica.com/aica-collection/decorative-laminates](http://www.aicasunmica.com/aica-collection/decorative-laminates)

[www.formica-india.com](http://www.formica-india.com)



*ITC LTD - i5 DESIGNS*



*OLAM - MTA DESIGNS*

### FABRIC

[www.responsefabrics.com/product.php](http://www.responsefabrics.com/product.php)

[www.atmospheredirect.com/fabrics](http://www.atmospheredirect.com/fabrics)



*HOTEL SARAVANA BHAVAN*



*STANDARD CHARTERED - SANKALPAN*

## VENEER

[www.centuryveneers.com](http://www.centuryveneers.com)

[www.decowoodveneers.com](http://www.decowoodveneers.com)



HPCL



HPCL

## MURAL FINISH

These finishes can be customized at site based on client's requirement



TECHNO FAC

## RAL COLOR DETAILS FOR PROFILE ANODIZING / POWDER COATING

[www.modernpartitions.com/ral-powder-color-chart.html](http://www.modernpartitions.com/ral-powder-color-chart.html)

Whether aiming to achieve a unique design for the operable partition or to match existing walls, MODWAL has the capability to ship a completed project direct from the factory or to allow customization in the field.



## Modern Partition System Pvt Ltd.

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### *Head Office / Factory*

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Chettimedu, Vadaperumpakkam  
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