MOVABLE ACOUSTIC WALL

TABIEXPERT TX-110.SILENCEGLASS

The TABIEXPERT TX-110.SILENCEGLASS model is our most advanced acoustic movable wall model and belongs to the high-performance range of walls (Rw>45dB). This is a model designed for the most ambitious projects that seek a solution that transcends function for an overall aesthetic value while delivering the high performance required in professional settings and public buildings like convention centers and hotels. This model creates a partition that does not visually block off spaces, providing the advantages of an open space while delivering the privacy and sound control needed for a high degree of concentration.

The TX-110.SILENCEGLASS system offers 48/50 dB of airborne sound insulation in accordance with the UNE-EN ISO 717-1:2013 standard, certified by an ENAC/ILAC MRA accredited laboratory.

From a movie screening or a large cocktail party on one side to a work meeting on the other, this range makes different activities on both sides of the wall possible with a fully soundproof solution.

This panels are compatible with the TX-110, making it possible to combine panels from both models.

This model, with exposed framing, supports a unidirectional (single suspension) or multidirectional (double suspension) motion system via an aluminum track attached to a load-bearing ceiling support. The track is recessed in the dropped ceiling and can be finished off with a white casing to conceal the hardware, or with the same finish as the panels if there is no dropped ceiling.

The movable wall features separate panels that range from 800 mm to 1200 mm wide and fit together with an aluminum tongue-and-groove system that incorporates a magnetic strip for guaranteed panel interlocking. The panels' outer layer is double 5+5 clear laminated glass supported by an aluminum frame to create a 93 mm inner chamber.

The panels are locked into position by a double retractable seal that can be extended to the floor and a side-operated track activated with a 90º turn of the removable handle. The panels align vertically with the walls via fixed side jambs; the last panel has a lateral seal to lock the wall in place. The seals and joints are made with EPDM profiles and neoprene strips that guarantee flawless sealing and soundproofing.

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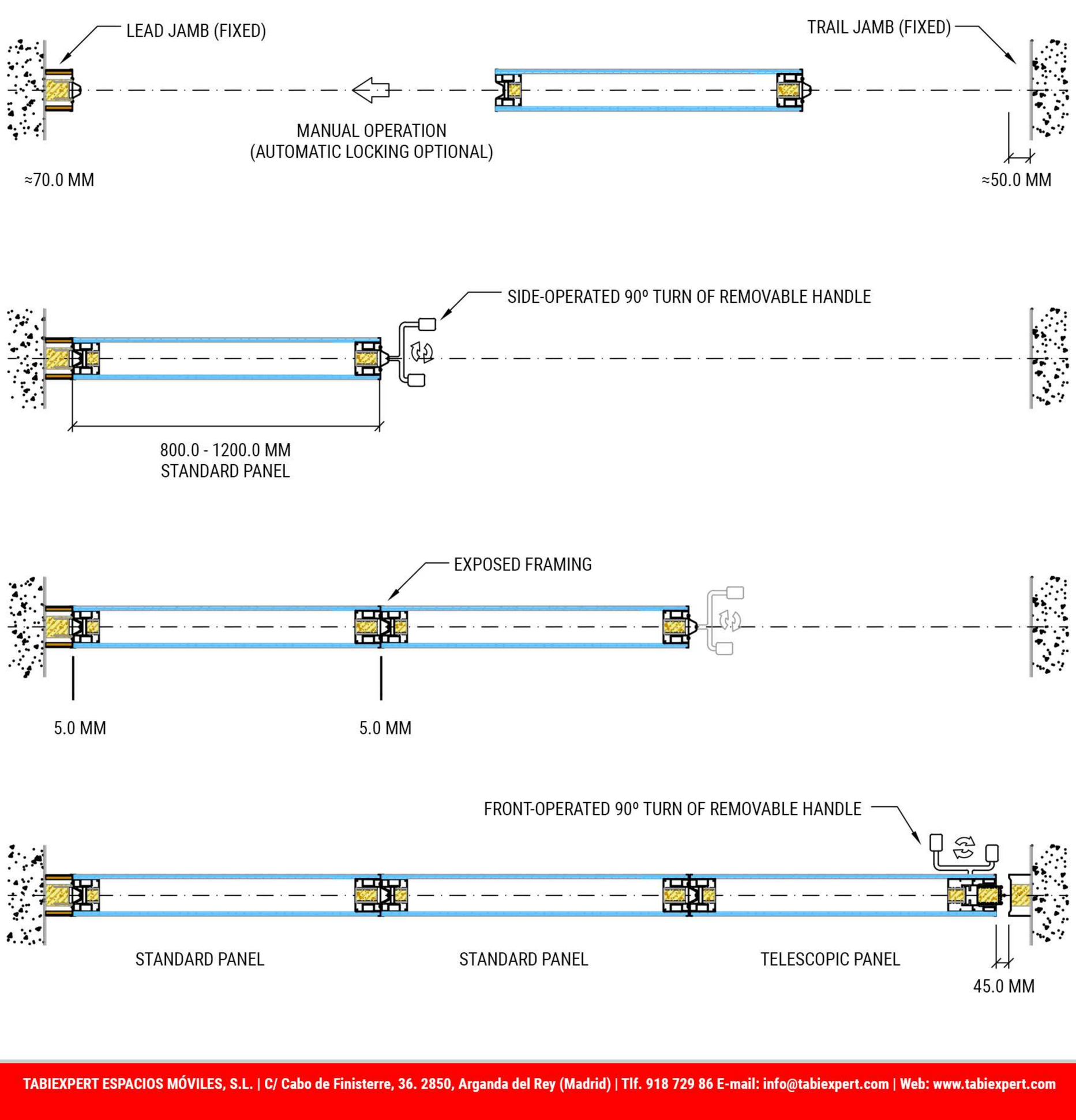
GENERIC ELEVATION

MANEUVER SCHEME



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MOVABLE ACOUSTIC WALL

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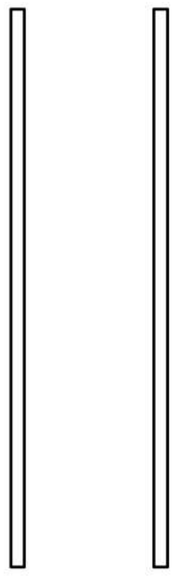
PANEL TYPES

STANDARD PANELS

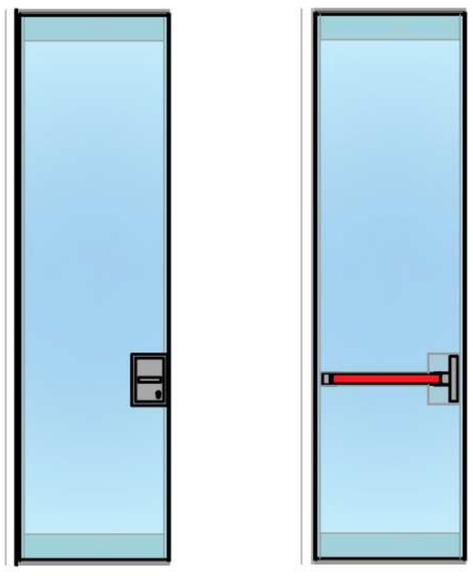
TELESCOPIC PANEL

STANDARD PANEL

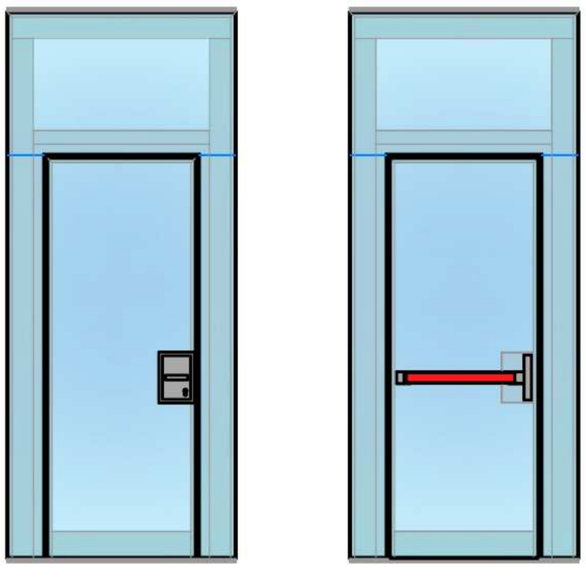


LEAD AND TRAIL JAMBS (FIXED)

DOOR PANELS



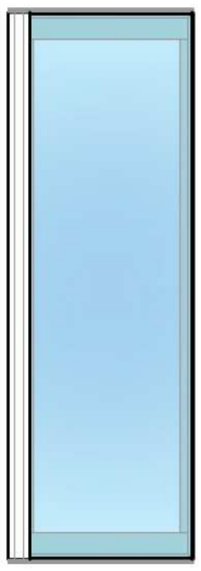
FIXED HINGED DOOR
(PANIC BAR OPTIONAL)



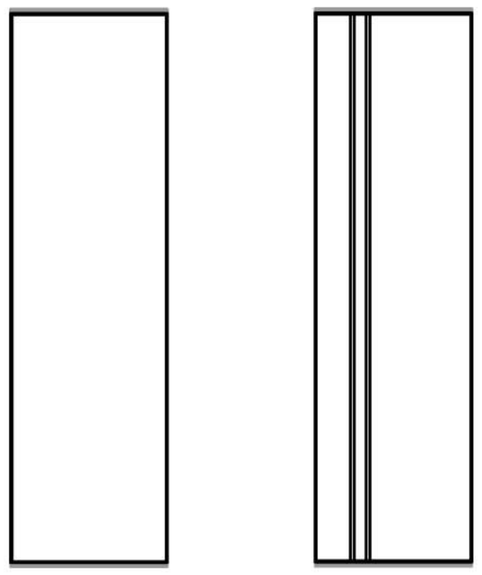
PANEL WITH DOOR
(PANIC BAR OPTIONAL)

SPECIAL PANELS

LOCKING PANEL FOR
FIXED HINGED DOOR



L-JUNCTION
PANEL



TX-110 COMPATIBLE MAKING IT POSSIBLE TO
COMBINE PANELS FROM BOTH MODELS

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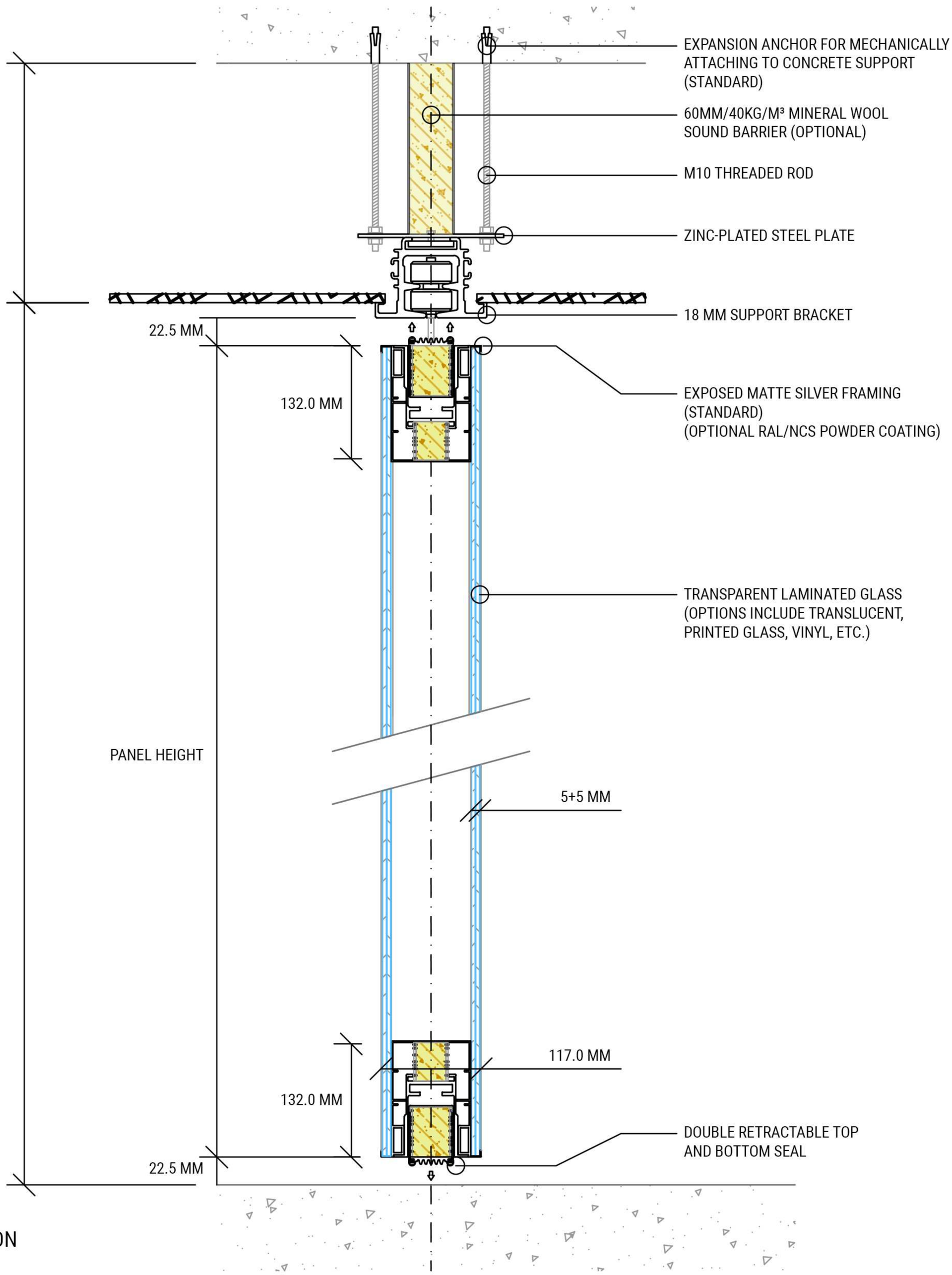
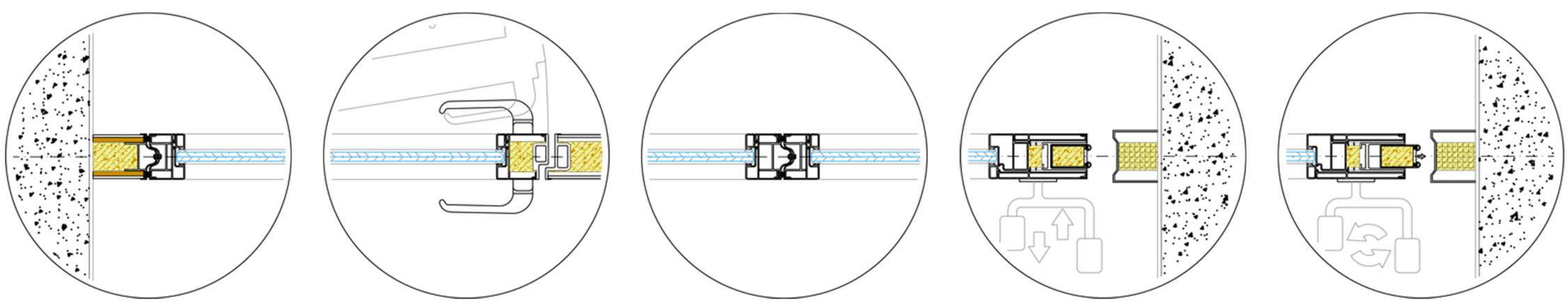
VERTICAL SECTION



HORIZONTAL SECTION



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TECHNICAL SPECIFICATIONS

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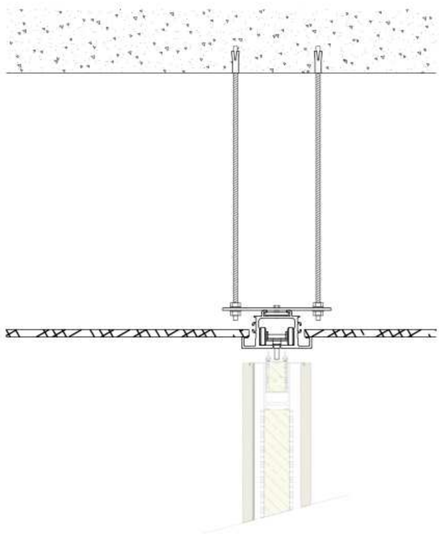
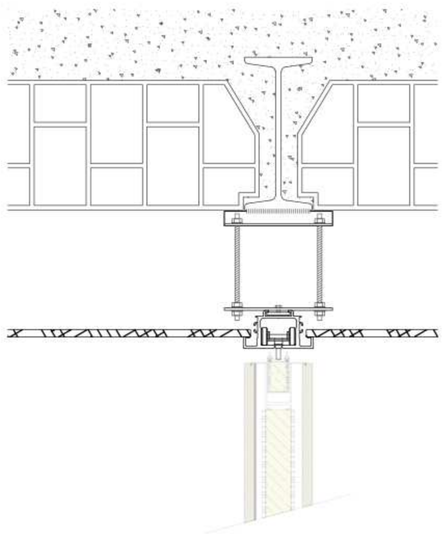
UPPER RAIL FOR MOVABLE WALL INSTALLATION

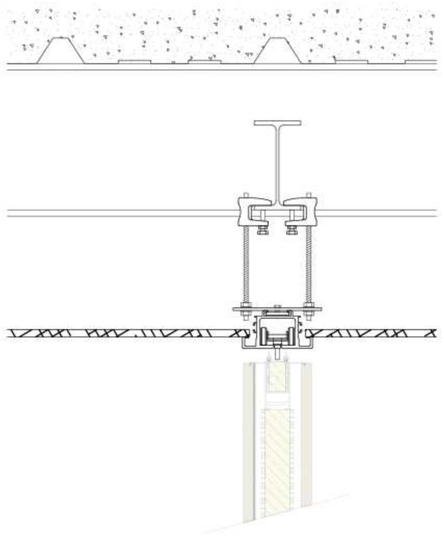
Our movable walls travel along a recessed aluminum track attached to a load-bearing part of the overhead support, recessed into the dropped wall, no floor track required. We use different track widths adapted to each wall model and a variety of locking systems depending on the existing structures; if this does not offer the required load-bearing strength, an additional structure to suspend the track will be installed. The track is installed perfectly level and has two lateral brackets that attach to a dropped ceiling or casing to conceal the hardware.

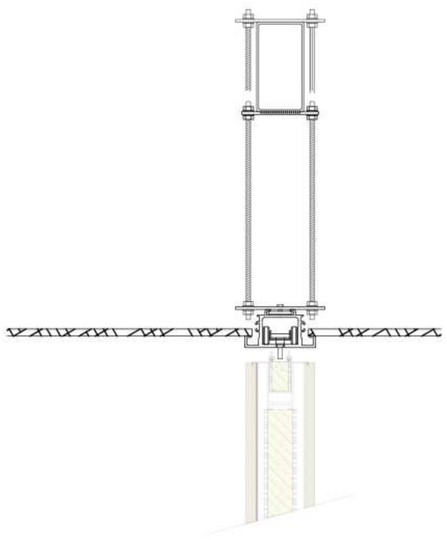
DIRECT ANCHORING VIA EXPANSION ANCHORS OR WELDING



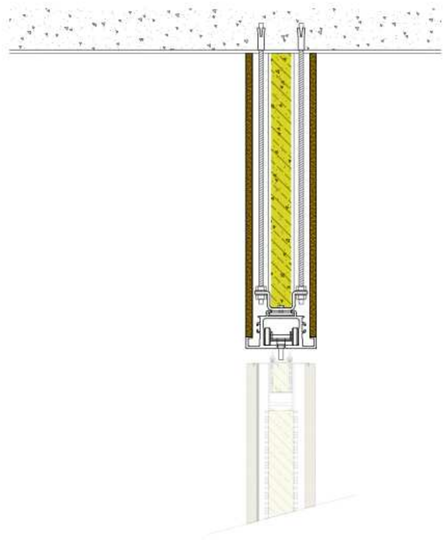


MECHANICAL OR AUXILIARY STRUCTURE-WELDED ANCHORS





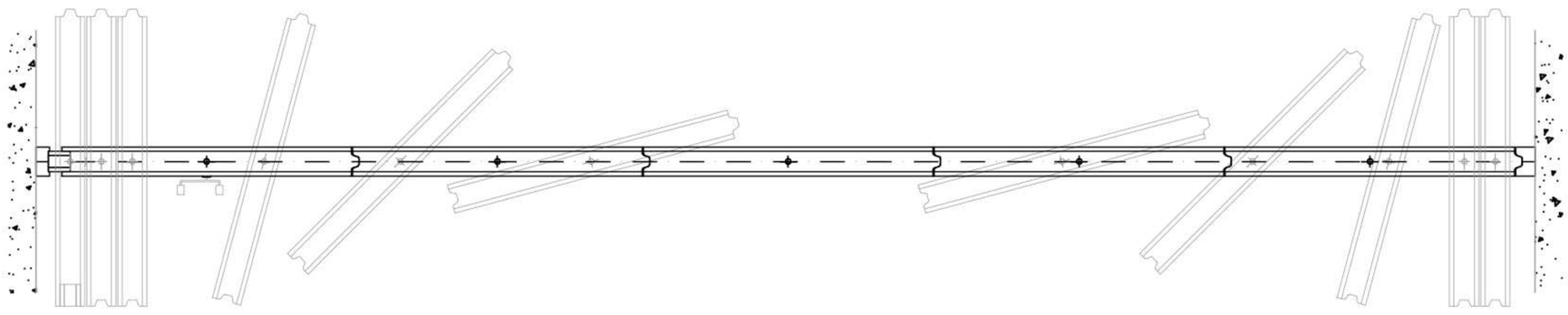
CASING TO CONCEAL HARDWARE



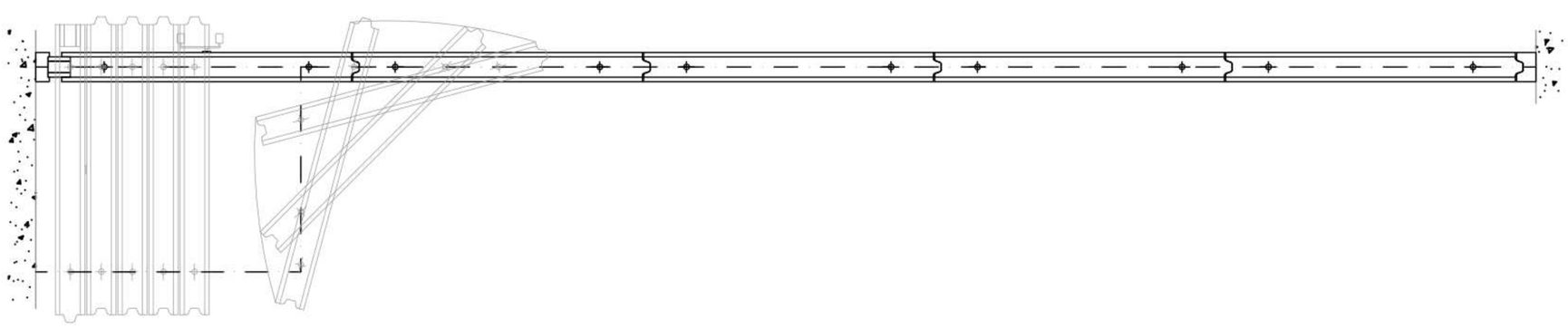
MOVING PANELS

Movable walls move in two different ways:

When walls are unidirectional (UD), the panels are center-hung from a single suspension point in the middle of the panel. This means that the panels are limited to linear movement along the upper track. The panels turn 90º from their final position and can be stacked towards one or both ends of the main track. The panels take up half their width on either side of the track when stacked. This is the simplest and most cost-effective motion system, although it is not recommended when the wall is installed next to doors or windows, because the wall could potentially block them.



When walls are multidirectional (MD), the panels have a twin-point suspension, which means they can move off the main track using special parts and additional sections of track. This makes it possible to stack the panels differently depending on the project requirements. The multidirectional system delivers complete layout flexibility, freeing up trafficked areas without blocking light sources.



The panels can be moved manually and quickly locked into place via a 90º turn of the removable handle (automatic closing system optional).

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TECHNICAL SPECIFICATIONS

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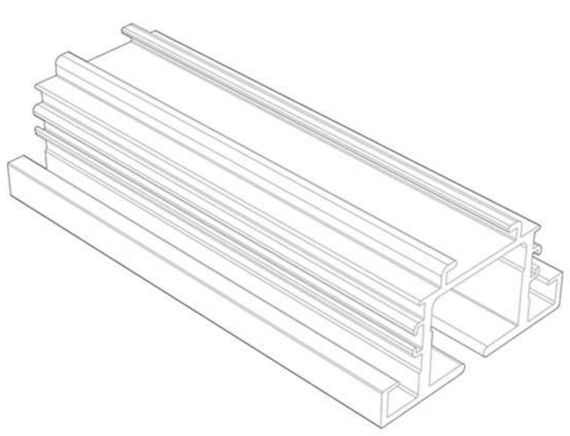
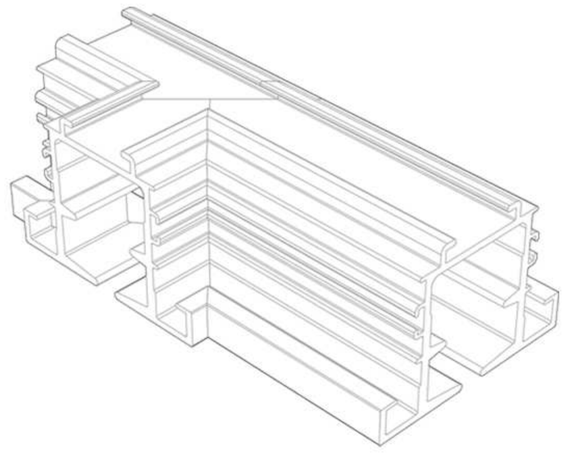
TRACK

The track is formed by an extruded anodized aluminum frame with an average thickness of 6 mm and a tensile strength of over 10 kN. The multidirectional track has two tracks at different levels to support the rollers, making it possible to change the direction of this motion system. The rails are attached to the upper load-bearing element with threaded rods for a perfectly level system. TABIEXPERT has staff trained to use the anchorage system required (mechanical, welding, etc.) based on the existing structure



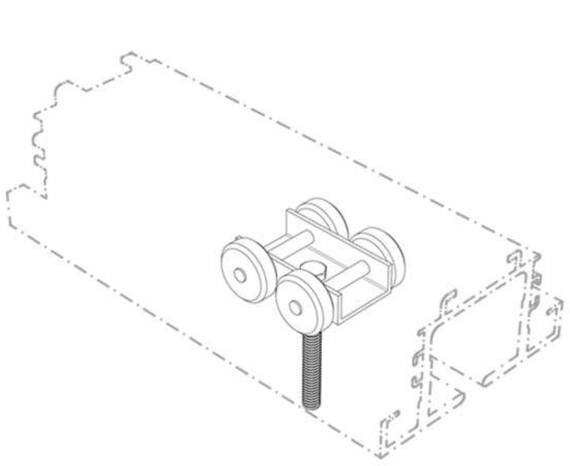


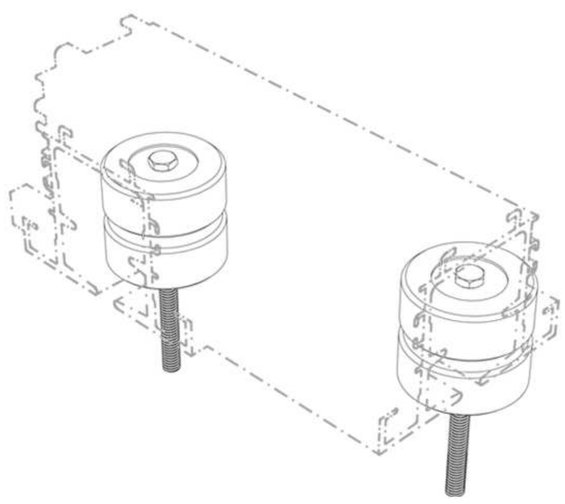
BEARINGS

The polymers used to manufacture the bearings have a low coefficient of friction and are highly resistant to wear and tear, corrosion, and chemicals thanks to their high strength-to-weight ratio. The composition of the bearings' polymers, with a low tendency to slip, guarantees long-lasting dimensional stability and their self-lubricating design ensures that they can work dry and without regular maintenance.

The unidirectional panels hang from a single point via a suspension set (trolley) composed of four radial bearings. The unidirectional track has a guiding rail, which prevents lateral friction and ensures the panels glide silently along the track. Each trolley has resistance to wear and tear under a load of 1.80 kN.

The multidirectional panels require two sets of suspensions (trolleys) to change direction and move along the auxiliary track using junctions and switches. Each trolley has a double bearing. These are mounted on two rails inside the track allowing them to slide through a range of junctions and switch directions along the track. Each trolley has resistance to wear and tear under a load of 2.5 kN, tested for 25,000 cycles (1 meter).





FRAMING

The panel frames are manufactured in accordance with the UNE EN 12020:2017 standard on aluminum and aluminum alloys: special extruded precision profiles in alloys EN AW-6060 and EN AW-6063. Specifically, we use aluminum (6060 - AlMgSi 0.5) with T6 heat treatment.

This alloy is widely used on the market because of its versatility. TABIEXPERT only works with suppliers approved by the Spanish Aluminum Industry which ensures compliance with international regulations on the use of raw materials, alloys, and the extrusion process. The extruded 6060 aluminum is extremely lightweight (three times lighter than steel) and it is easy to recycle, so we increase the life cycle of the panels by incorporating them into a circular economy strategy. We use frames with 15-micron anodized coating (an electrolytic process that coats the extruded frame with a layer of aluminum oxide to provide an eye-catching, durable finish). An 80-micron electrostatic powder coat can be applied to this finish in a broad range of colors (RAL, NCS, etc.) to best adapt to the project's architectural requirements. These procedures comply with the guidelines of the QUALANOD and QUALICOAT quality labels.

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TECHNICAL SPECIFICATIONS

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PANEL ASSEMBLY AND INSTALLATION

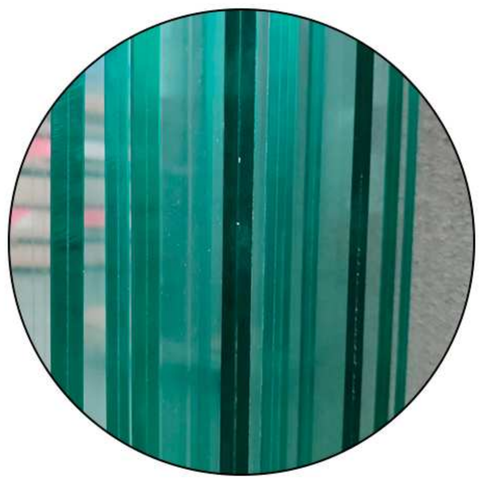
The panels feature a self-supporting steel and extruded anodized aluminum structure that provide excellent mechanical qualities. We use mechanically inserted joints (clips) and screws to manufacture the panels. We are a highly industrialized company with the ability to fully adjust to deadlines, even during peak production. The panels fit together using a tongue-and-groove system as well as a magnetic strip for guaranteed panel interlocking and flawless soundproofing. The panel's internal mechanisms are formed by a double drive that operates the upper and lower telescopic elements and which incorporate a neoprene joint to guarantee soundproofing. When the mechanism is activated, compression works against the panel locking it completely in place. This same system is used in the last panel to laterally close the wall.

BOARDS

Chipboard (MDP) is used to make the solid panels, which are covered on either side with a decorative coating treated with melamine resins, creating a completely sealed, pore-free surface that is waterproof, hard, and resistant to superficial wear and tear. Available in a wide range of colors and textures, we can adapt each project to our customer's specific needs and tastes. The chipboard is partially made of recycled board and is easily recycled in turn, so we increase the life cycle of the panels by incorporating them into a circular economy strategy.

GLASS

We use safety glass for the glazed parts of the panels. We regularly use laminated double-glazed glass of varying thicknesses joined together with a clear polyvinyl butyral (PVB) sheet. The main advantage of this type of glass is that if any of the panes break, the fragments remain attached to the plastic sheet. We also often use tempered glass which, thanks to the internal stresses created during its fabrication, is exceptionally strong and only breaks into small granular pieces instead of large shattered fragments. The glass is attached to the frames by support wedges and synthetic silicone perimeter joints compatible with the support material.



SOUND INSULATION

The design of our movable walls is based on the spring-mass system, which weakens sound waves as they pass through several layers with increasing density (mass) or increasing elasticity (spring). The combination of different finishes (board, glass, etc.) and insulation (rock wool, bitumen membrane, air chamber, etc.) as well as their thickness and density allow us to create everything from modest sound insulation to high acoustic performance, often exceeding the requirements set by current regulations.

We use uncoated mineral wool as the main insulator, a product that uniquely combines low thermal conductivity, an elastic structure (spring), and a high fire-resistance rating. We use modified bitumen sheets to enhance the insulation provided by the rock wool and to fulfill project requirements by eliminating the resonance frequencies of the rigid elements and improving the sound attenuation curve at low frequencies, which are the most difficult to insulate. This system removes the pressure placed on the air chambers, delivering high levels of insulation with relatively thin panels.

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TECHNICAL SPECIFICATIONS

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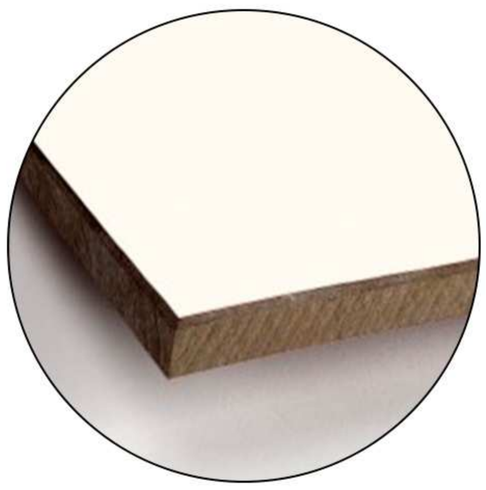
AVAILABLE FINSHES

Melamine-coated chipboard (standard)

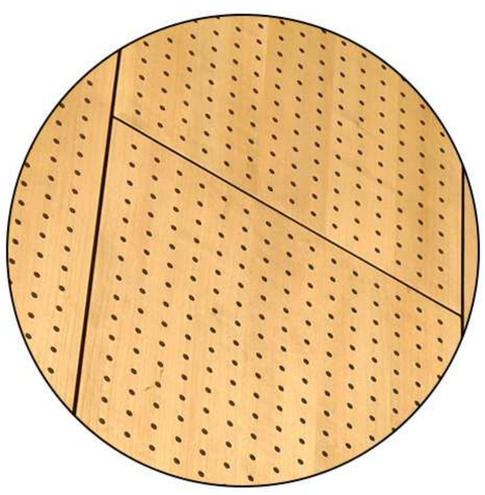


High pressure laminate (HPL)

Veneered natural wood

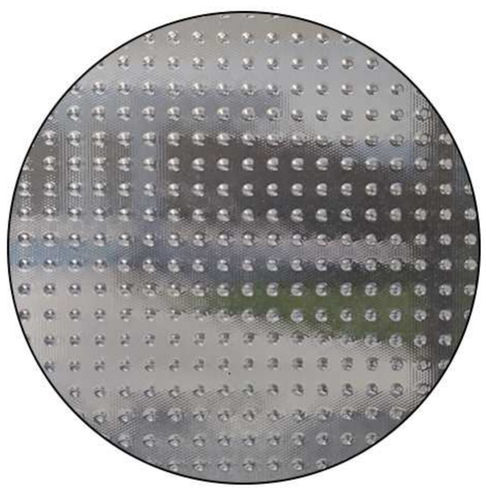
Waterproof, fireproof, powder-coated board, etc.

Textile



Enhanced acoustic performance (sound absorption)

High-gloss, writable surfaces, magnetic, etc.



Transparent, translucent, printed glass, etc.

OSB, raw MDF for painting, etc.

CERTIFICATES

TABIEXPERT has an integrated quality and environmental management system based on the ISO 9001:2015 and ISO 14001:2015 international standards and is certified for the design, manufacturing, and installation of movable walls.

This means that by using our products and services our customers will reduce waste management and treatment costs, become compliance in relevant regulations, gain access to financial aid and achieve higher scores in public tenders and sustainable construction certifications (BREEAM©, LEED©, GREEN©, etc.).

The TX-110.SILENCEGLASS system offers 48 dB airborne sound insulation in accordance with UNE-EN ISO 717-1:2013, certified by an ENAC/ILAC MRA accredited laboratory.

* The documentation shown is generic. You can find the updated documentation on our website.

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