

UNLEASH ACOUSTIC PERFORMANCE

DOORMAX LTD. SOLID ACOUSTIC OPERABLE WALLS

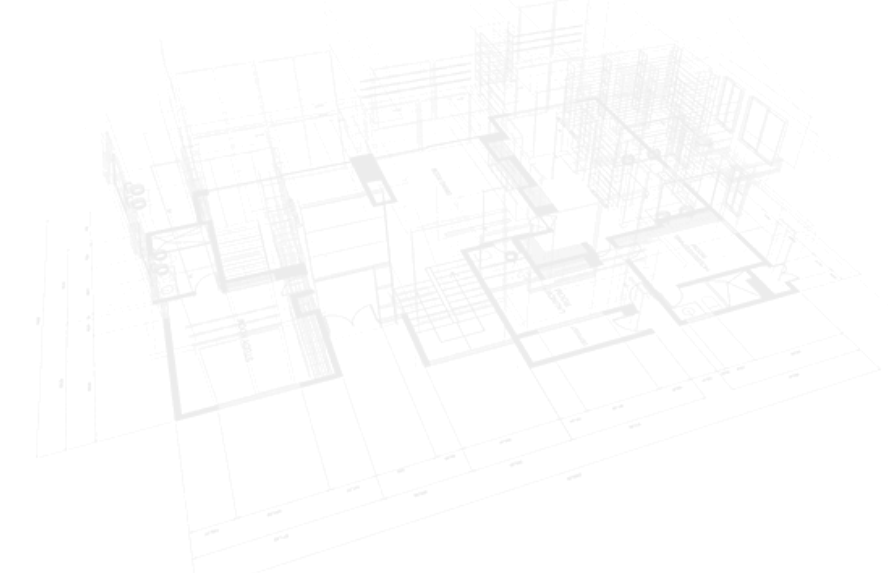
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SOLID ACOUSTIC OPERABLE WALLS

Doormax 100 series Acoustic Movable Partition System, a groundbreaking advancement in acoustic environments. By incorporating cutting-edge materials like steel sheets, sound-dampening mats, and acoustic panels, it achieves exceptional sound transmission levels (STC) ranging from 45db to 56db. The baseboard offers flexibility with options such as 15mm/18mm plywood, MDF, HDF, or HPL, laying the groundwork for unparalleled acoustic performance.

The 100 series system features single or double-leaf doors for seamless passage while maintaining excellent soundproofing capabilities. Its robust outer frame is constructed from 6061 aluminum alloy, complemented by an inner frame consisting of 3.0mm hot-dip galvanized C-shaped steel and 1.2mm hot-dip galvanized square steel tubes, ensuring long-lasting durability. With high-density 100kg/m³ rock wool and a door thickness of 105mm, the 100 series system establishes a new standard in acoustic solutions.



OPERABLE WALL TYPES

The Doormax Acoustic Operable Wall system come in three models:

MANUAL OPERATION

[Doormax 100 Series Acoustic Operable Wall](#) is ideal for use in hotels, conference centres, lecture theatres, civic halls, meeting rooms and office environments. It is particularly adaptable to the demands of complex multi-functional usage requirements for both corporate and public environments regardless of size, finish or acoustic properties.

SEMI-AUTOMATED

The [semi-automated operable wall](#), also known as a [semi-automatic](#) movable partition, is a flexible space-division system that combines manual panel movement with an automated sealing mechanism. Unlike fully manual systems that require a hand crank to lock panels in place, semi-automated walls use an electric motor to extend and retract the top and bottom acoustic seals.

FULLY AUTOMATED

Our [100 series fully automated acoustic operable wall](#) offer unparalleled speed and flexibility, transforming any space with the simple push of a button. Unlike manual systems, this innovative solution is powered by a smooth, quiet electric drive, eliminating the need for physical effort. The individual panels glide effortlessly into position, and the top and bottom seals automatically engage to create a superior acoustic barrier instantly.

SPECIFICATIONS

Suspension:

- Double & Single

Track Type:

- L450
- L500
- L600
- L800
- L1000
- L1500
- L2000

Roller:

- DuPont POM Material
- Steel Roller With Safety Steel Wire
- Automatic Guiding Mechanism With Automatically Preset Guidance

Track Loadbearing / 2 Rollers:

- L450:450kg
- L500:500kg
- L600:600kg
- L800:800kg
- L1000:1000kg
- G2000:2000kg

Panel Thickness:

- 85 Series: 90mm
- 100 Series: 105mm

Panel Configuration:

- Outer frame: Aluminium
- Inner frame: 3.0mm Galvanizing C-Shape Steel + 1.2mm Galvanizing Square Steel Tube
- Rockwool: 100kg/m³
- Board Thickness : 15mm & 18mm
- Built-In Controller, PLC Circuit and Extended DC Motors

Vertical Seal:

- Concave & Convex Profile With 40N Magnetic Strip and Rubber Seal

Top Seal:

- 30mm Automatic Telescopic Motor Seal Support, With Soft Rubber Strips

Bottom Seal:

- 50mm Automatic Telescopic Motor Seal Support, With Soft Rubber Strips

Retractable Seal:

- Top & Bottom

Mechanism:

- Jack Lifting of Power 10KN
- Automatic

Locking:

- Clockwise Rolling

Infilled Materials:

- 100kg/m³ Rockwool

Soundproof Treatment:

- Steel Sheet
- Sound Dampening Mat
- Acoustic Panel

Base Board:

- 9 mm
- 15 mm
- 18 mm Plywood
- MDF
- HDF
- HPL

Face Finish:

- Bare Board
- Plywood, Melamine
- Fabric, PU
- HPL
- Wood
- Vinyl
- Leather
- Acoustic Panel
- Autex
- Customized

Controller:

- Panels are Programed and Conrolled by 10-Inche Touch Screen.

STC:

- 45-56 (dB)

Weight:

- 38-60kg/m²

Fire Retartdant:

- Optional

Applicable Height:

- 2m to 20m

Passing door:

- Single & Double
- InBuilt Pass Door

Closure:

- Telescopic
- Expendable Panel
- Std. Hinger Pass Door

Outdoor parking option:

- In-Panel Door (Optional)

Acoustic comfort enhancement option:

- Yes

Acoustic barrier:

- Yes

Insulation Tapes:

- Yes

Monolithic Width Range:

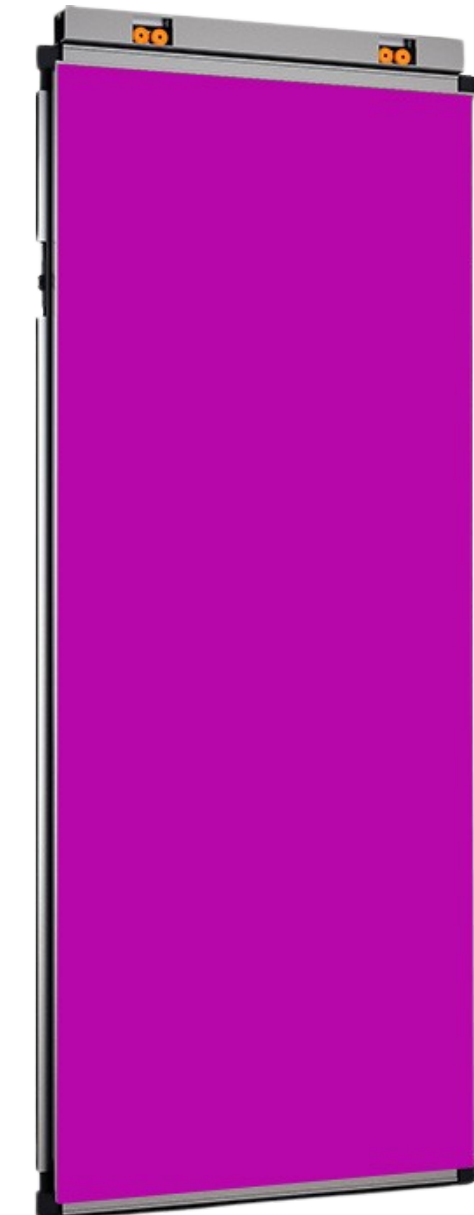
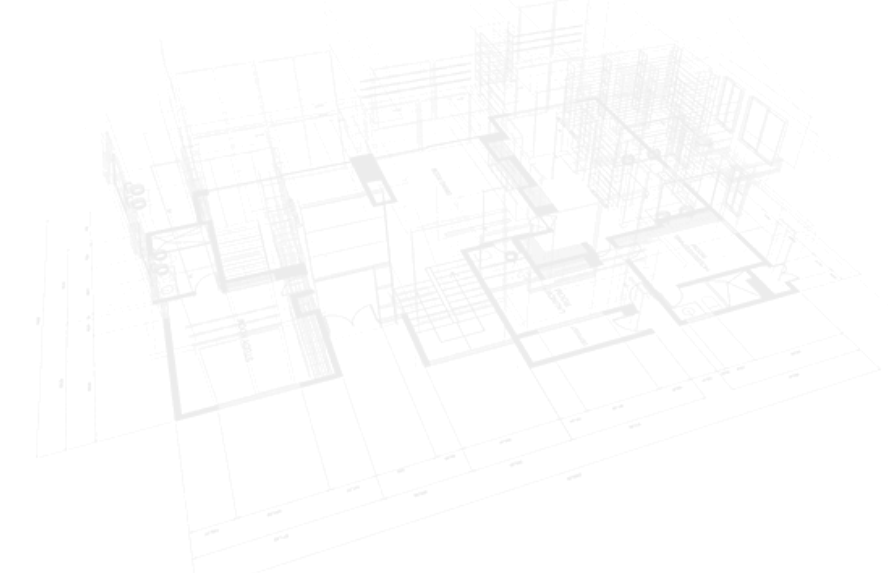
- 800 - 1500mm or Customized

Operating Speed Range:

- 0.10 - 0.20 m/s or customized

Input/Output Voltage:

- 85-264 Volts/24 Volts



ADVANTAGES

1. Horizontal seal

The principle of double-skin construction is applied consistently in the seal area in order to ensure maximum sound insulation. A spindle mechanism extends the spring-loaded, flexible doublechamber seals against the floor and the ceiling track. Any irregularities in the flooring are offset by spring-loaded double-chamber seals. The contact force of the sealing strips does not place excessive strain on screed floors, but does ensure that the Egood system is sufficiently stable to prevent the panels moving.

2. Corner seals

Doormax resolves the technical issue of corner seals with specially designed, elastic corner pieces that also reinforce the stability and sound insulation properties of the system

3. Vertical seals

All Doormax models have flexible, vertical sealing strips to ensure the best possible seal for maximum sound insulation. The strips extend some distance into the panels to ensure positive interlock

4. Magnetic strip

The individual panels are centred via the magnetic strips to guarantee sound, positive locking and sealing

5. Cover panels

The cover panels are clipped on as freely oscillating bodies to ensure optimum sound insulation with minimum system weight. The panels can be replaced without removing the elements. Their surfaces can be coated or covered with any conventional interior design material.

6. Sound insulation material

The various Doormax models can be fitted with additional insulation materials according to the specified acoustic requirements.

7. Operating handle

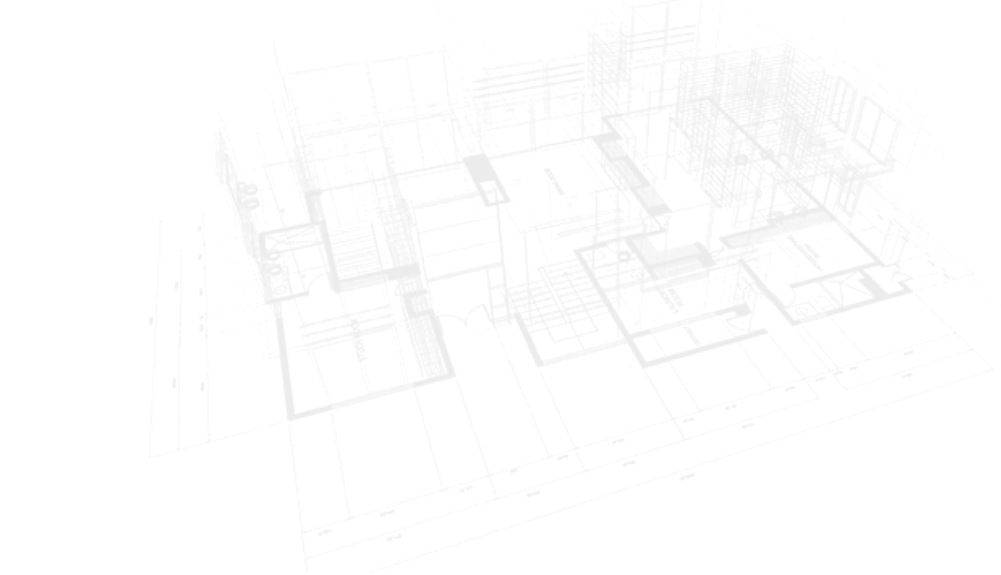
In manual systems, the element sealing strips are operated using a crank. The crank has a captive bayonet fitting to prevent it from being pulled off. The bayonet arrangement is easy to disengage and prevents crank slippage.

8. Frame

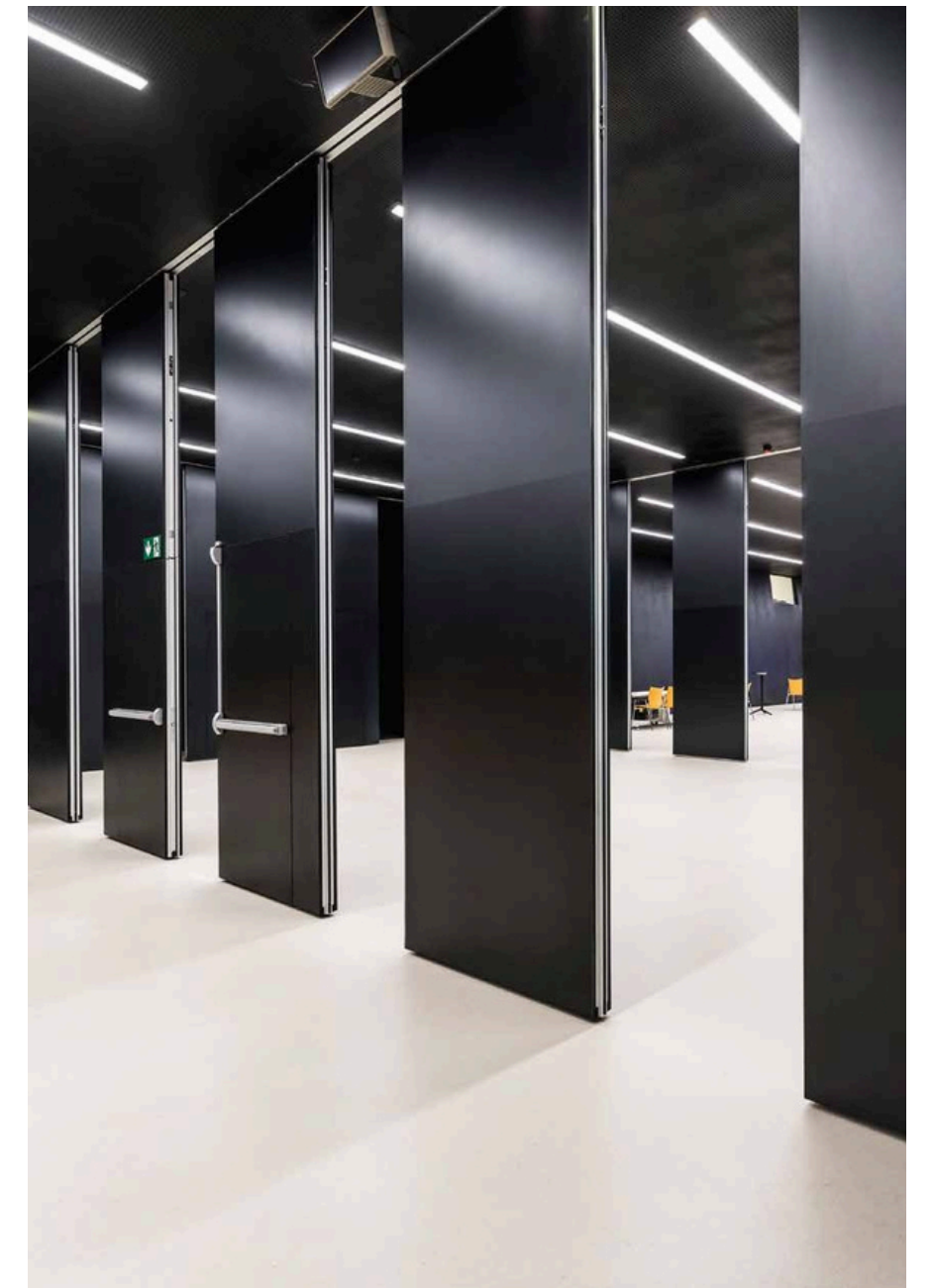
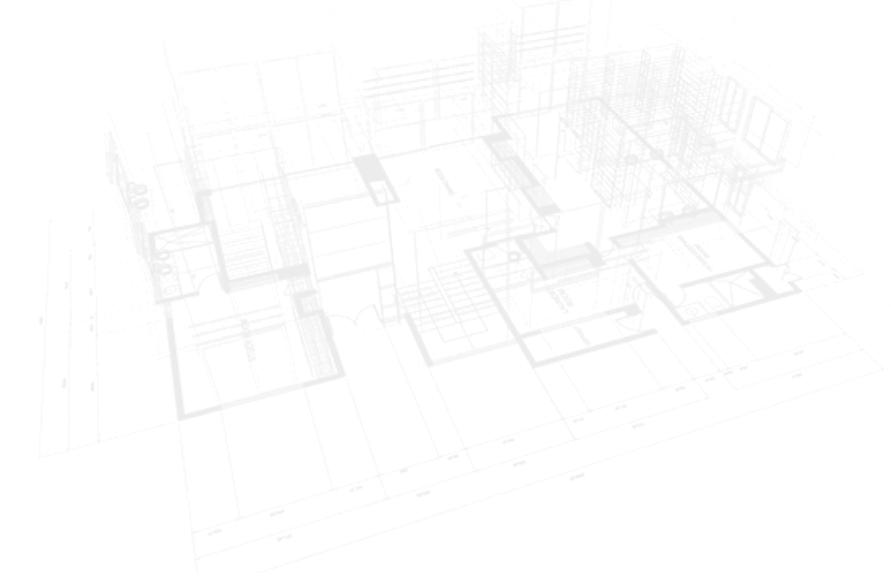
The frame is of torsionally stiff steel and aluminium construction. Transverse forces will not, therefore, cause deformation of the frame. This, combined with the panels mounted in acoustically free suspension, means elements are able to offer both exceptional strength and outstanding sound insulation

9. Roller assemblies

The dampening track roller assemblies prevent the transmission of impact forces and operating noise, so protecting element, track and carrier.



GALLERY



5 Doormax Operable Wall

STACKING

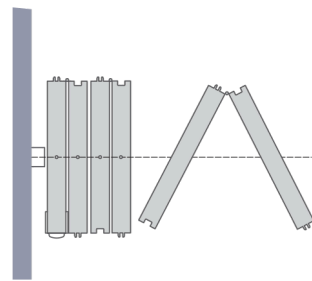
Stacking refers to where and how the panels stack to the side of the opening. There are several choices which will suit different wall types and applications. The three most common are summarised below.

Stacking Specification	Codes
Center Stack	C
Side Stack	S
Remote Stack	R

CENTER STACK

A simple straight track. Each panel is suspended from a central trolley and typically hinged in pairs.

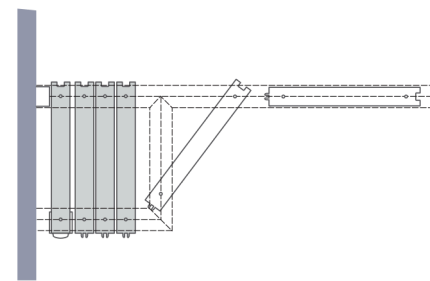
- Pros: Economical, quick to set up. Beam work is straight forward
 Cons: Panels have to remain stacked on the main track.



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

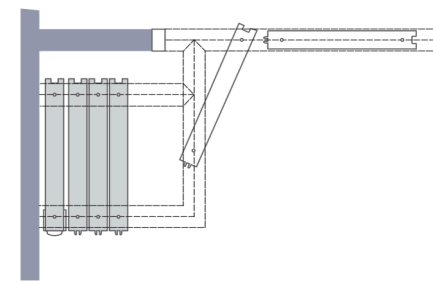
- Pros: Single panels are easier to move. Flexibility to stack to the side of the track and to negotiate junctions.
 Cons: Beam work is needed over the side track.



REMOTE STACK

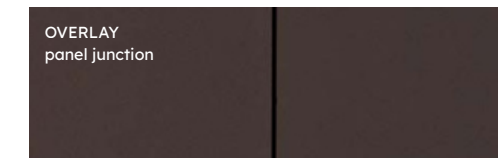
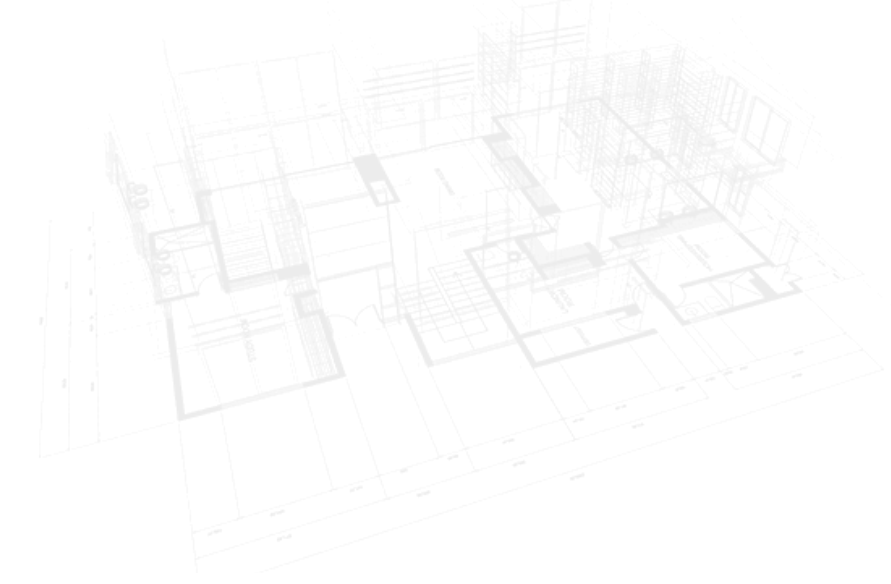
Panels have omni-directional carriers to negotiate L or T junctions and panels are stacked completely away from the main track, sometimes in a cupboard or recess.

- Pros: Panels can be stacked away from the main track, useful in complex layouts.
 Cons: Extra tracking and beamwork required. Inexperienced users can get panels out of order on large installations.



PANELS

The Doormax Acoustic Operable Wall system comes in three models according to the sound rating required (85 and 100 Series). There are three options for the perimeter frame.



STANDARD

An innovation giving you the best of both worlds. Panels are almost frameless with just 4mm of visible vertical trim. Panel corners remain protected.

OVERLAY

Beautiful looking panels with completely concealed perimeter frames. The eye flows across the wall without interruption. Ideal for prestige locations and where careful handling is more likely.

PANEL THICKNESS

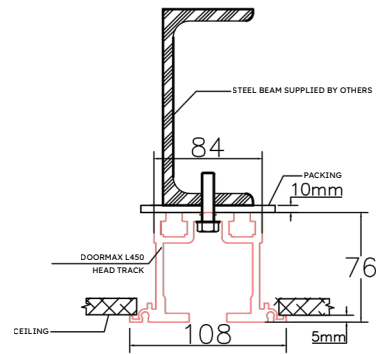
Series	Standard	Overlay	Acoustic Rating
85	90mm	102mm	RW 45-56
100	105mm	117mm	RW 45-56

PANEL SPECIFICATION CODES

Standard	85S	100S
Overlay	85V	100V

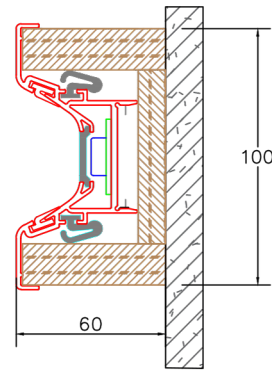
TECHICAL INFORMATION

TRACK TO PFC

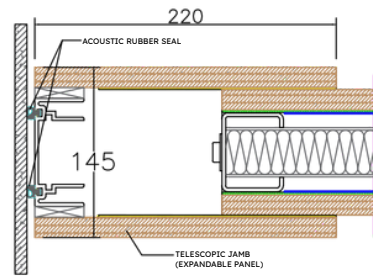


Note:
In most installations it will be necessary to remove the track in order to install wall panels.
Nothing should permanently be fixed to tracks and ceiling tiles

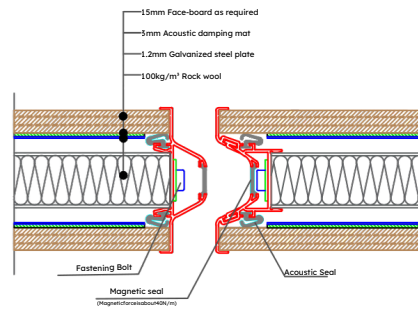
WALL JAMB



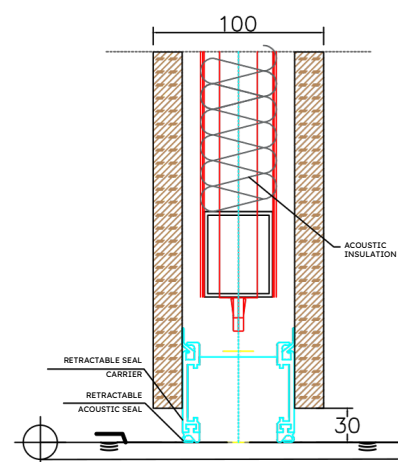
TELESCOPIC JAMB



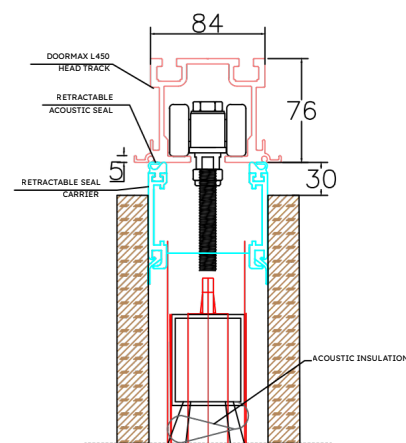
STANDARD PANEL JUNCTION



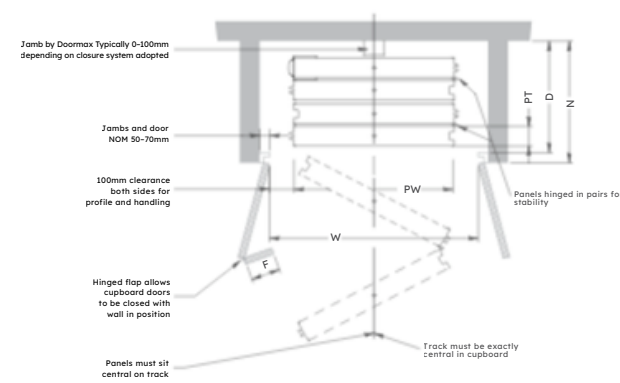
BOTTOM RETRACTABLE SEALS



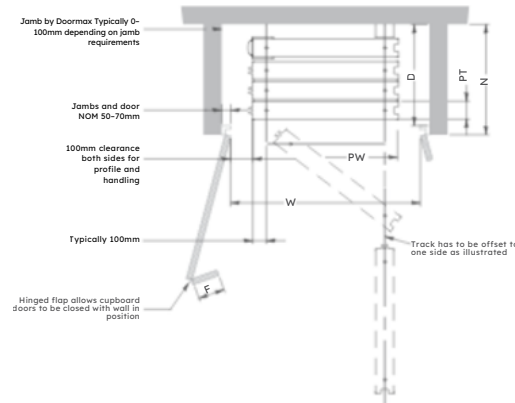
TOP RETRACTABLE SEALS



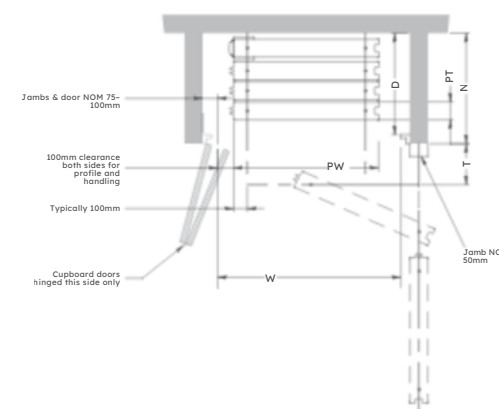
CENTER STACK



SIDE STACK



REMOTE STACK



PANEL THICKNESS

Panel width*	Fineline	Overlay
85 Series	90mm	102mm
100 Series	105mm	117mm

*Normally 1200 max. (note fewer panels = lower cost)

WALL WEIGHTS

Series	85	100
RW	45-52	45-52
Kg/m2	up to 65	

The above weights are for panels up to 5.5m. For weights above this height, please consult Lotus.

STRUCTURAL SUPPORT

Ideal structural support will depend on the application and project specific details. The suggested beams below are a guide only and allow for the weight of the wall alone, and up to 5mm of deflection. All beams will require job specific calculations from a certifying engineer and this table should not be relied upon for construction purposes.

Height	RW	4m span	6m span	8m span	10m span
2.7m	45-49 51-53	150UB14/150PFC 150UB14/150PFC	200UB22/230PFC 250UB26/250PFC	310UB40/300PFC 360UB45/380PFC	410UB60 460UB67
3.0m	45-49 51-53	150UB14/150PFC 150UB14/150PFC	200UB25/230PFC 250UB26/250PFC	310UB40/380PFC 360UB45/380PFC	410UB60 460UB75
3.6m	45-49 51-53	150UB14/150PFC 180UB16/150PFC	250UB26/230PFC 250UB31/250PFC	310UB46/380PFC 360UB51/380PFC	460UB67 530UB82

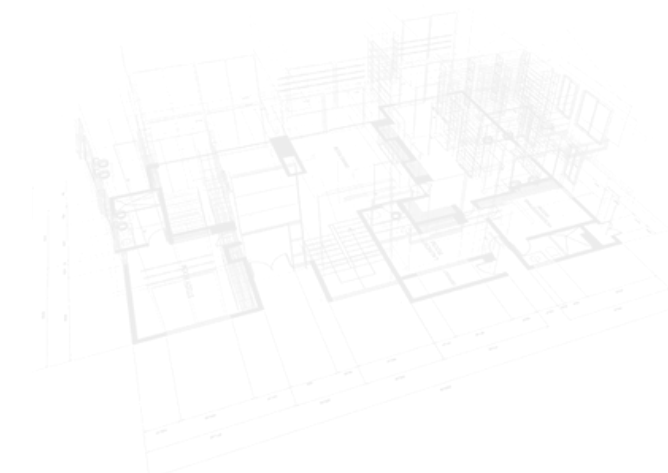
The above weights are for panels up to 5.5m. For weights above this height, please consult Lotus.

FLOOR LEVELS

Floors should be +/- 5mm. Greater tolerances can often be accommodated, particularly if the slope is generally downwards towards the stacking end.

CUPBOARDS

Number of panels		Opening width / 1200 and round up
Panel width	PW	Opening width / Number of panels
Panel thickness	PT	Refer to panel thickness above
Clearance width	CW	PW + 200 (handling clearance) For distance between cupboard interior walls add allowance for cupboard doors and jambs e.g. 100 - 150
Inside depth	D	Number of panels x (PT + 10 for hinges etc) + jamb at rear if required (100 max) + 100 spare for safety
Inside depth	N	D + approximate 100 (for cupboard doors, flap, jamb and bolts etc)
Flap widths	F	Panel thickness + 40mm to allow for customers setting up the wall off-plumb, hinges, clearance etc
Transfer leg stand off	T	Typically 180-300mm depending on design



SPECIFICATION GUIDE

Use this step-by-step guide to specify your Doormax Operable Wall system of body text

STEP 1: INTRO

See page 2 for more information.

Solid Acoustic Operable Walls available in three operation types: Manual Operation, Semi-Automated, and Fully Automated.

- M Manual
- S Semi-Automated
- F Fully-Automated

STEP 2: SPECIFICATIONS

See page 3 for more information.

Track Load:
L450 Center Stacking
L500 Side & Remote Stacking
Panel Type:
90 / 105 mm
Construction:
Aluminium + steel, rockwool core
Sealing:
Automatic top & bottom + magnetic vertical
Operation:
Manual / Semi / Fully Automated

Acoustic (STC):
up to 56 dB
Height:
2-20 m
Finish:
Melamine, HPL, Fabric, Wood, Custom, TBC
Options:
Pass door, Telescopic, Fire-rated, Acoustic upgrade

STEP 3: ADVANTAGES

See page 4 for more information.

High acoustic sealing system
Magnetic panel locking
Replaceable lightweight panels
Enhanced sound insulation

Strong steel-aluminium frame
Smooth, quiet operation
Manual & automated options

STEP 4: STACKING

See page 6 for more information.

Specify how the panels should stack.

- C CENTRE Stack
- S SIDE Stack
- R REMOTE Stack

STEP 4: PANELS

See page 7 for more information.

Specify a Standard or Overlay system.

- 85 Series (RW 45-52)
- 100 Series (RW 45-56)
- S Standard
- V Overlay