

Pacific AD300 Acoustic Door Set STC/Rw 40

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DESCRIPTION

The AD300 is a hinged flush panel door that is suitable for interior use, available as a single door or as a pair of doors, acoustic tested and designed to reduce sound transmission within buildings. The AD300 can also be supplied as a Hospital door with features suited to that application.

For further information on this product, visit:

<https://www.pacificdoors.co.nz/products/acoustic/acoustic-doors/ad-300>

PRODUCT FEATURES:

Product features:

- STC 40 acoustic rating
- Single or pair
- 4 leaf facing options
- 9 frame options
- 2 glass options
- Suitable for interior use only
- Compatible with timber stud, steel stud and masonry wall
- Certified acoustic performance to ISO 140-3

PRODUCT OPTIONS

The thickness of the AD300 door leaf is 47mm with an approximate leaf weight of 35kg/m².

Wall Type	Acoustic Rating	Door Application	Max Leaf Height (mm)	Max Leaf Width (mm)
Steel Stud Wall	STC/Rw 40	Single	2700	1200
Timber Stud Wall		Pair	2700	1200
Masonry Wall				

Notes:

1. Please note that the maximum leaf width shown above is measured per door leaf.

Wall Types

Door sets must be installed carefully, with particular attention to sealing gaps, including around the frame-to-wall junction.

Leaf Facings

The facings listed below are available for the AD300 door set

- MDF
- Timber Veneer
- HPL decorative laminate (e.g. Formica)
- Sheet Vinyl

Notes:

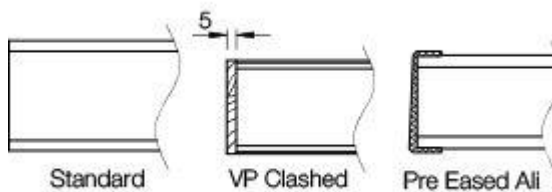
1. Of the above facings only those marked * may extend around the door edge.
2. Other facings may be available, please contact Pacific Doors to discuss further options.

Leaf Edges

Paint quality doors have unclashed edges.

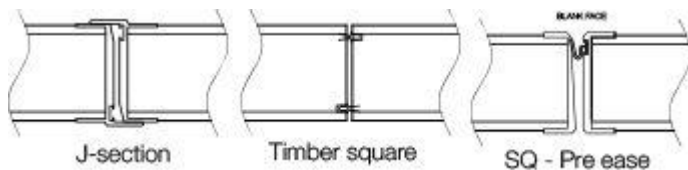
Timber veneer faced doors are clashed on the vertical edges with solid timber.

Doors faced with decorative laminate or vinyl (e.g. Hospital doors) are capped on the vertical edges with an aluminium extrusion capping with natural anodised finish.



Meeting Stiles

The meeting stiles listed below are applicable to pair door sets only.



HARDWARE AND SEALS

Hardware

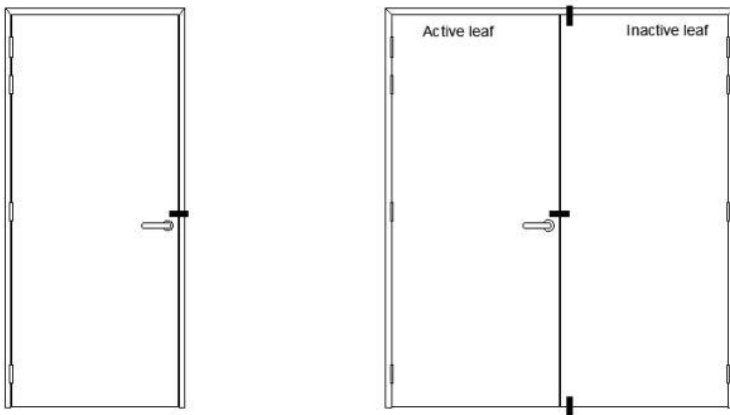
The AD300 requires suitable latching in order for the frame seals to fully seal the gap between door leaf and frame.

Practically any standard door hardware can be used on the AD300, however the proposed hardware must be advised to Pacific Door Systems Ltd to assess the suitability, before manufacture.

Any penetrations through the leaf should be packed with acoustic materials (e.g. batts) wherever possible.

Concealed hinges are not an option on this doorset.

Recommended latching points are shown in the diagram below. Pair doorsets require a designated inactive leaf which is secured top and bottom.

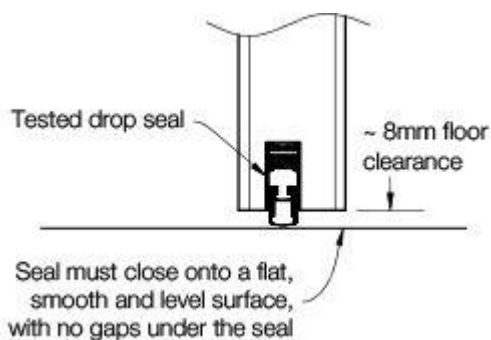


Seals

The perimeter frame seals are self-adhesive seals mounted in the frame rebate, so are hidden when the door is closed.

The bottom seal (Type L) is an automatic door seal that lifts clear of the floor when the door is opened. The seal is fully mortised in a groove in the bottom edge of the door.

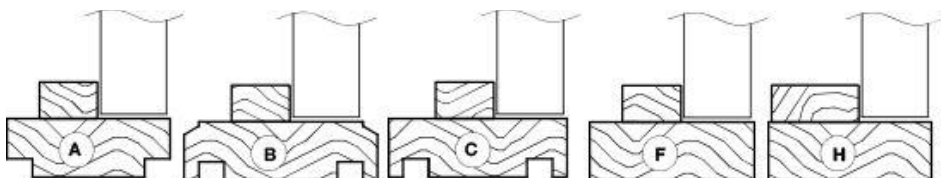
The bottom seal must close onto a smooth, flat and level surface in order to seal as intended.



FRAME TYPES AND PROFILES

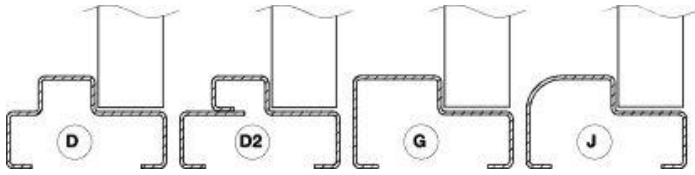
Timber Frame

The timber frame profiles listed below are available for the AD300 door set.



Steel Frame

The steel frame profiles listed below are available for the AD300 door set.



Steel frames require packing of the frame during installation with fibrous insulation material (e.g. fibreglass, mineral wool or polyester batts).

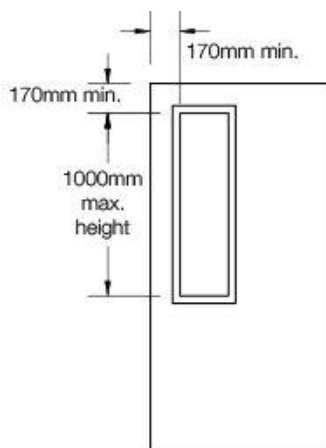
Standard frames are three-sided only with no sill. Four-sided frames and/or custom sills may be available on request. For more in-depth information on frame profiles and sizes, please see our Installation Instructions.

VISION PANEL

Glazing Type	Maximum Glazed Area	Max Height (mm)	Max Width (mm)	Glazing Bead		STC/Rw Rating
				Timber	Aluminium	
Soundstop	0.16m ²	1000	860	✓	✓	40
Soundstop	0.45m ²	1000	860	✓	✓	38

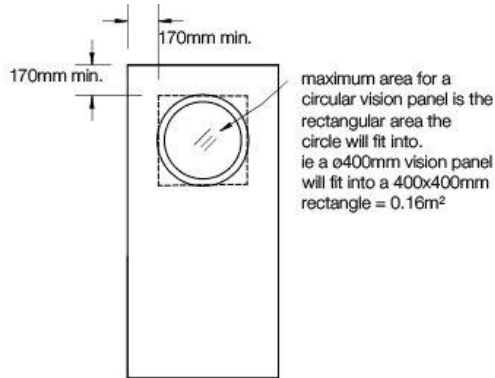
Notes:

1. Please note that the height and width of the vision panel must still fall within the maximum glazed area.
2. Ratings apply to a single vision panel per leaf.
3. Maximum glazed area is measured per door leaf.

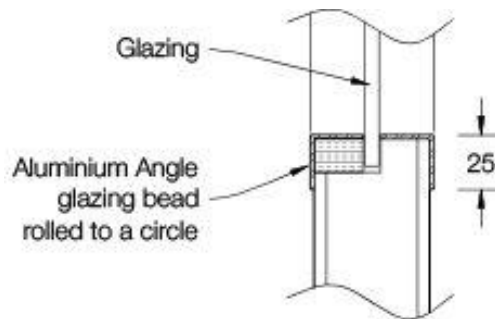


Circular Vision Panels

Size allowance:

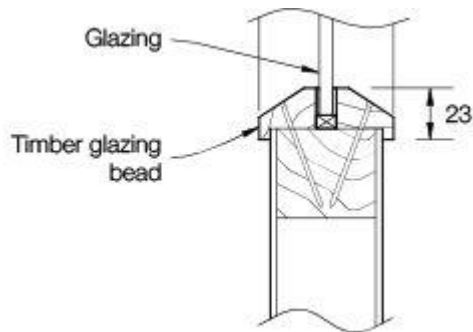


Standard Cross Section:

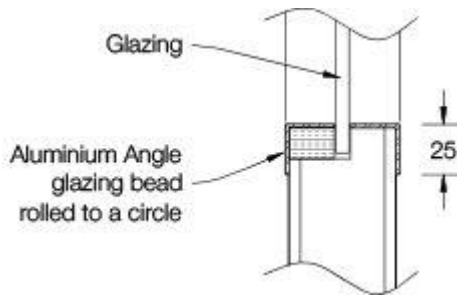


Standard Vision Panel Cross Sections

Timber Bead:



Aluminium Bead:



PERFORMANCE

Smoke control

AD-series acoustic doors are available with a smoke control rating (-/-/- SM). These doors comply with the NZBC C/AS2 C6.1.2 definition of smoke control doors.

Thermal insulation

This door leaf has a thermal insulation rating (R-value) of 0.739 Km²/W.

ACOUSTAL PERFORMANCE GRAPHS

Size of test opening: 1.92 m²
Mass per unit area: 38 kg/m²
Temperature: 18.0 °C
Air humidity: 90 %
Source room volume: 62.3 m³
Receiving room volume: 56.0 m³

Frequency f [Hz]	R 1/3 octave [dB]
50	16.4
63	19.0
80	20.5
100	31.3
125	27.4
160	30.3
200	33.3
250	31.1
315	38.4
400	40.1
500	40.5
630	38.5
800	38.6
1,000	39.3
1,250	43.2
1,600	40.7
2,000	37.5
2,500	39.0
3,150	40.7
4,000	43.3
5,000	44.3



Rating according to ISO 717-1

$R_w(C;C_{tr}) = 40 (-1;-3)$ dB

Evaluation based on laboratory measurement results obtained in one-third-octave bands by an engineering method.

$C_{50-3150} = -2$ dB

$C_{tr,50-3150} = -6$ dB

$C_{50-5000} = -1$ dB

$C_{tr,50-5000} = -6$ dB

$C_{100-5000} = -1$ dB

$C_{tr,100-5000} = -3$ dB