

# Pacific AD100 Acoustic Door Set STC/Rw 35

Issue date: 6/26/25

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## DESCRIPTION

The AD100 is a lightweight, low-cost alternative with improved performance compared to standard doors fitted with proprietary seals. It is available as a single or pair of doors. This door is a tested acoustic door set designed to reduce sound transmission within buildings.

**For further information on this product, visit:**

<https://www.pacificdoors.co.nz/products/acoustic/acoustic-doors/ad-100>

## PRODUCT FEATURES:

### Product features:

- STC 35 acoustic rating
- Single or pair
- 9 frame options
- Optional vision panel
- 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 AD100 door leaf is 43mm with an approximate leaf weight of 17kg/m2.

| Wall Type        | Acoustic Rating | Door Application | Max Leaf Height (mm) | Max Leaf Width (mm) |
|------------------|-----------------|------------------|----------------------|---------------------|
| Steel Stud Wall  | STC/Rw 35       | 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 AD100 door set:

- MDF
- Timber Veneer

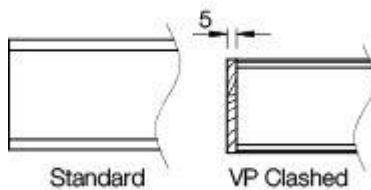
Notes:

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

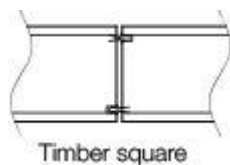
Paint quality doors have unclashed edges.

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



## Meeting Stiles

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



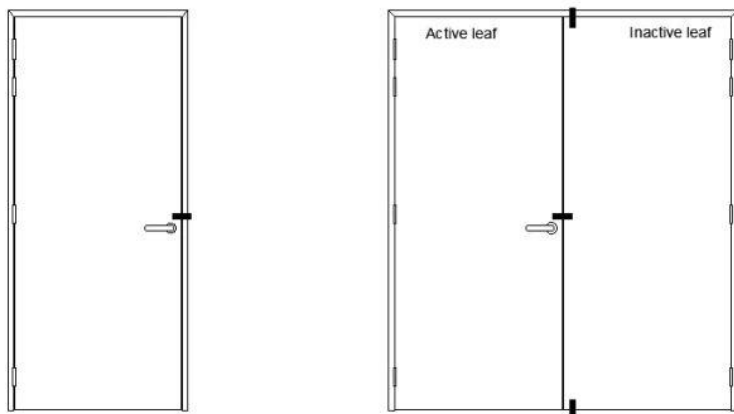
## HARDWARE AND SEALS

### Hardware

The AD100 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 AD100, 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.

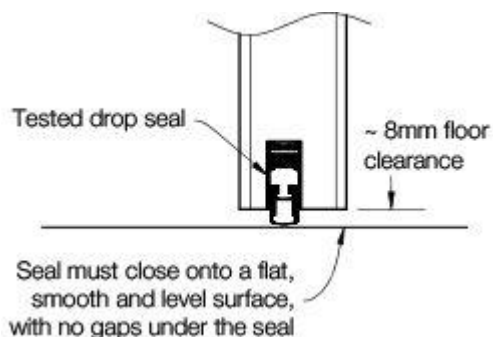
Recommended latching points are shown in the below diagram. Pair doorsets require a designated inactive leaf which is secured top and bottom.

## 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.

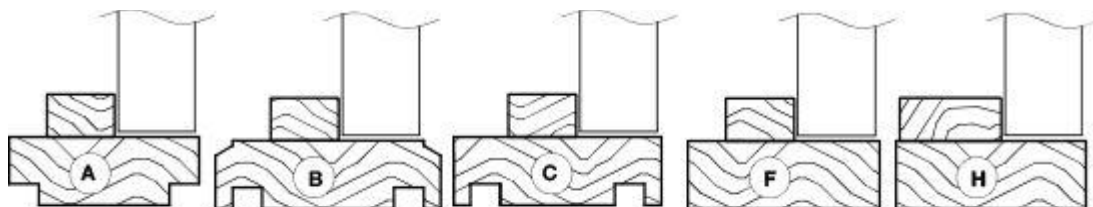
The bottom seal must close onto a smooth, flat and level surface in order to seal as intended.



## FRAME TYPES AND PROFILES

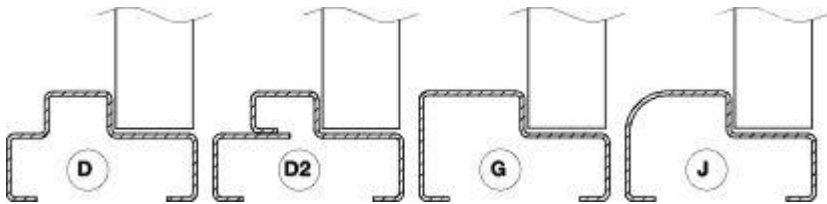
### Timber Frame

The timber frame profiles listed below are available for the AD100 door set



### Steel Frame

The steel frame profiles listed below are available for the AD100 door set



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

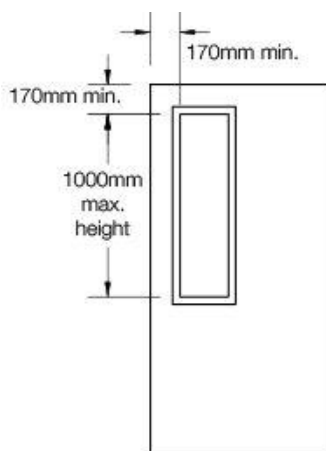
Standard frames are three-sided only with no sill. Four-sided frames and/or custom sills may be available on request. For more in-depth information on frame profiles and sizes, please see our Installation Instructions.

## VISION PANEL

| Glazing Type   | Maximum Glazed Area | Max Height (mm) | Max Width (mm) | Glazing Bead |           | STC/Rw Rating |
|----------------|---------------------|-----------------|----------------|--------------|-----------|---------------|
|                |                     |                 |                | Timber       | Aluminium |               |
| 6.38 Clear Lam | 0.45m2              | 1000            | 860            | ✓            | ✓         | 35            |

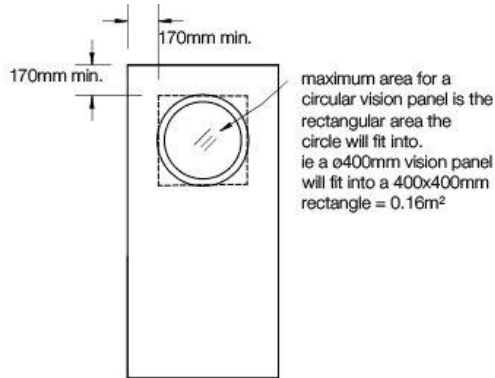
### Notes:

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

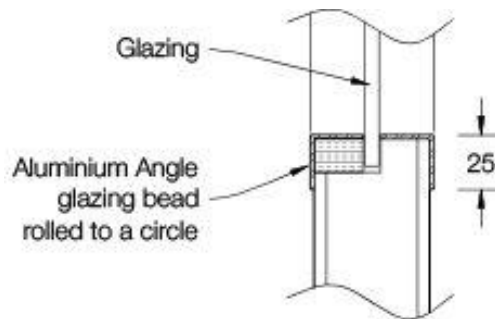


## Circular Vision Panels

Size allowance:

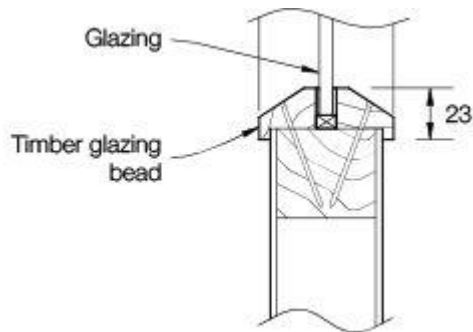


Standard Cross Section:

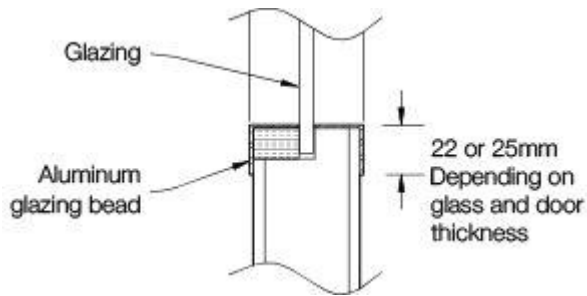


## Standard Vision Panel Cross Sections

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 Km<sup>2</sup>/W.

## ACOUSTAL PERFORMANCE GRAPHS

Size of test opening: 1.92 m<sup>2</sup>  
Mass per unit area: 17 kg/m<sup>2</sup>  
Temperature: 18.0 °C  
Air humidity: 40 %  
Source room volume: 62.3 m<sup>3</sup>  
Receiving room volume: 56.0 m<sup>3</sup>

| Frequency<br>f<br>[Hz] | R<br>1/3 octave<br>[dB] |
|------------------------|-------------------------|
| 50                     | 12.6                    |
| 63                     | 18.5                    |
| 80                     | 17.8                    |
| 100                    | 24.7                    |
| 125                    | 18.8                    |
| 160                    | 22.3                    |
| 200                    | 18.0                    |
| 250                    | 21.9                    |
| 315                    | 30.0                    |
| 400                    | 34.8                    |
| 500                    | 36.5                    |
| 630                    | 34.9                    |
| 800                    | 36.0                    |
| 1,000                  | 36.2                    |
| 1,250                  | 40.5                    |
| 1,600                  | 39.9                    |
| 2,000                  | 38.1                    |
| 2,500                  | 38.2                    |
| 3,150                  | 36.7                    |
| 4,000                  | 34.2                    |
| 5,000                  | 39.0                    |



### Rating according to ISO 717-1

$R_w(C;C_{tr}) = 35 (-2; -5)$  dB

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

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

$C_{tr,50-3150} = -7$  dB

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

$C_{tr,50-5000} = -7$  dB

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

$C_{tr,100-5000} = -5$  dB