

NAP SILENTFLO

*Timber*

**Acoustic Doors**



**NAP SILENTFLO**   
THE EXPERTS IN NOISE CONTROL

## Acoustic Doors

### Introduction

The increasing awareness in our community of the effect of excessive noise levels on worker health and efficiency, has resulted in more stringent legislation and local standards being introduced to control noise.

In response to this demand, NAP Silentflo has developed a range of timber acoustic doors which combines excellent acoustical performance with attractive finish and ease of installation.

The NAP range of timber acoustic doors is the result of extensive laboratory testing, backed up with over 25 years practical experience in the acoustic industry. With many proven standard and special applications throughout the world, NAP Silentflo are the leaders in the field of timber acoustic doors.

### Applications

#### Typical applications include

- Board Rooms
- Schools
- Concert Halls
- Theatres
- Control Rooms
- Office Buildings
- Cinemas
- Medical Centres
- Plant Rooms
- Radio and Television Studios

### Door Construction

#### Single Leaf Doors

The door leaves consist of an internal perimeter frame with a selected range of timber facings over a composite internal construction.

The doors leaves are normally supplied with a three sided steel or timber door frame, hinges and include acoustic perimeter and threshold seals.

#### Double Leaf (Bi-Parting) Doors

The doors are identical in construction to the single leaf doors, except that they include acoustic seals on both the front and reverse face of the meeting stile.

Double doors are used where wider than normal access is required, whilst still achieving excellent noise reductions, e.g. Theatres, Hospital Passageways, Operating Theatres, Machine Rooms, etc.



NAP timber acoustic doors installed in an executive office.



NAP acoustic doors have been supplied to large commercial building projects including Parliament House.

## Hardware

Most standard hardware is suitable for NAP Timber Acoustic doors.

The main requirement is that the door is latched adequately to ensure that the acoustic rating is maintained. However, if in doubt please contact your NAP representative to discuss your particular requirements.

Please note that extended backsets and cylinders for locks will be required for most NAP doors.



A typical NAP double leaf door supplied to a Music Conservatorium.

## Acoustic Performance

NAP Timber Acoustic Doors are manufactured in several standard acoustic ratings to give a broad range of high performance for all applications.

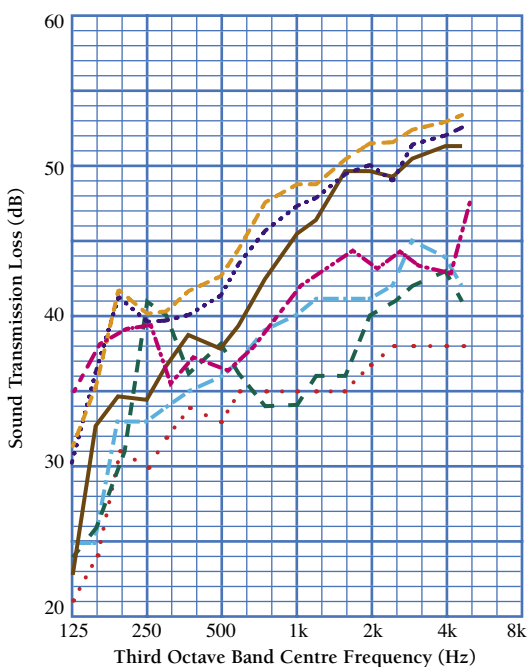
### Transmission Loss @ Octave Band Centre Frequency (Hz)

Thickness	STC	Rw	ASD*	125	250	500	1k	2k	4k
50	36	36	18	21	31	34	35	36	38
46	38	37	53	25	35	37	35	38	42
70	40	39	29	23	33	36	40	41	43
70	41	41	22	36	38	38	41	44	44
80	43	43	65	24	35	38	44	49	51
77	46	46	94	32	40	42	47	50	52
77	48	48	94	33	31	43	48	51	53

\*Approximate Surface Density (kg/m<sup>2</sup>)

An approximate guide to the weight of the NAP range of timber acoustic doors is tabulated above.

### Third Octave Band Centre Frequency vs Sound Transmission loss (dB)



- STC36: NAP 50mm Timber Door
- STC38: NAP 46mm Timber Door
- STC40: NAP 70mm Timber Door
- STC41: NAP 70mm Timber Door
- STC43: NAP 80mm Timber Door
- STC46: NAP 77mm Timber Door
- STC48: NAP 77mm Timber Door

N.B. The acoustic tests on the left have been carried out in an Australian laboratory registered by the National Association of Testing Authorities. The acoustic tests have been conducted to AS1191-1976/AS1191-1985 to which the laboratory is registered, in accordance with the terms of N.A.T.A.

## Fire Rating

Fire rated acoustic doors are available upon request. Note that this option is not available for all acoustic ratings.

## Additional Features

- Special Veneers
- Highlights and Sidelights
- Kick Plates
- Viewing Panels
- Metal Sheeting
- Mouldings

## Specification

### General

Timber acoustic doors shall be of NAP Silentflo manufacture comprising a flush panel timber door leaf in a suitable designed three sided steel or timber frame. The door frame shall be fitted with specialised acoustic edge seals and all hardware and furniture as described in the door schedule. The door leaves shall be hung on stainless steel butt hinges.

### Performance

The manufacturer shall submit a certificate showing that a prototype door, when tested in a N.A.T.A. registered laboratory in accordance with Australian Standard AS1190-1976/AS1190-1985 has a sound transmission loss tabled below.

**Transmission Loss @  
Octave Band Centre Frequency (Hz)**

Thickness	STC	Rw	125	250	500	1k	2k	4k
50	36	36	21	31	34	35	36	38
46	38	37	25	35	37	35	38	42
70	40	39	23	33	36	40	41	43
70	41	41	36	38	38	41	44	44
80	43	43	24	35	38	44	49	51
77	46	46	32	40	42	47	50	52
77	48	48	33	31	43	48	51	53

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