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RAVEN®
Door & Window
Sealing Systems

## Acoustic Sealing Systems

Butt Hinged Doors
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Interconnecting Doors
Sliding Doors
Pivot Doors

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RAVEN®

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**Accredited**

IDWL INTERNATIONAL DOOR & WINDOW LABORATORIES

NATA Accreditation No. 16929

ilac-MRA

International Door and Window laboratories Pty Ltd is NATA accredited for weather testing and smoke testing of doors and windows, and slip and luminance testing.

**Associated Memberships / Certified with**

ISO 9001 SGS Cert. No. AU96/678

Global GreenTag CERTIFIED

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Sedex Member

NATSPEC ProductPartner

FPA AUSTRALIA GOLD MEMBER Fire Protection Association Australia

ADHA Architectural Door Hardware Association

A family owned Australian business

# General



# Rw30 - 33 Acoustic Sealing Systems for Solid Core Timber Doors



# Rw34 - 40 Acoustic Sealing Systems for Proprietary Doors



# Rw41 - 50+ Acoustic Sealing Systems for Proprietary Doors



# Acoustic Sealing Systems for Bulkhead, Interconnecting, Sliding and Pivot Doors

# About Raven

## Service and Advice You Can Trust

When architects, engineers and builders are faced with door and window sealing challenges in design, compliance or function, they turn to Raven.

With a long list of patents and design registrations, Raven has developed much of the technology and led many of the advances in weather, acoustic, fire and smoke sealing systems. This is why you can rely on Raven for the best advice – after all, this is how many of our innovative products were born.

We have a team of specialists on-hand to provide expert advice to assist with developing the most suitable and cost-effective solutions to even the most challenging problems. With over 70 years in manufacturing and supporting the building industry, Raven remains at the forefront; Raven understands the complexities, challenges and creative requirements.

For informative and professional support, please telephone 1800 888 123 or email our technical assistance team at: tech.advice@raven.com.au.

## Solutions on Your Doorstep

With modern despatch centres in Australia and Asia, we can deliver tailored sealing systems around the corner or across the globe. Raven's advanced ISO 9001 quality management production systems can build and deliver colour matched products weeks ahead of other manufacturers.

Our network of distributors and transport systems can deliver anywhere in the world from desert mining sites in outback Australia, mid ocean oil and gas rigs, Antarctic research stations to the bustling cities of London, Dubai or Shanghai.

So when you call on Raven to deliver the ideal sealing system – you can be sure that's exactly what we will do.

## Our Name is Your Guarantee

We will never put our name to a product until we are fully satisfied that it is not just easy to fit and highly durable, but it can withstand the appropriate extremes and complies with the latest building code regulations and standards.

Our name and 70+ year reputation is your guarantee of reliability and quality.

## Raven Architectural Catalogue

Visit raven.com.au to download the latest Raven architectural product catalogue

## Quality Control That Sets New Standards

Our commitment to quality extends from research, development and testing through to manufacture, delivery, ease of application, durability and after sales service regardless of the project size or complexity.

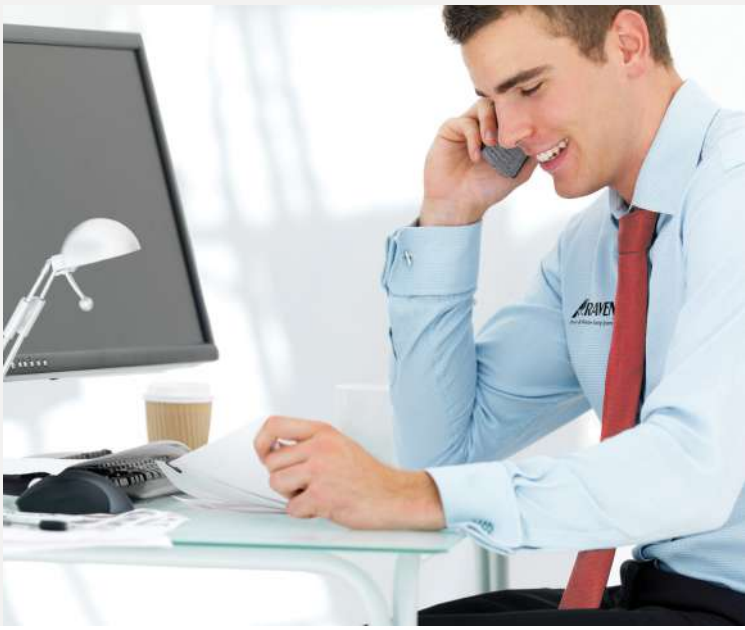
With a professional team of engineers, designers and international certified testing facilities; Raven is the brand that architects, designers, engineers and builders can rely on.

Every Raven seal is rigorously assessed and tested to meet the most demanding Australian and international standards, including life cycle performance from the prototype phase and construction through to batch testing of the final manufactured product. Raven maintains control over every aspect of its range carefully selecting materials and suppliers to ensure a superior end product. We also take our environmental responsibility just as seriously, operating to environmental ISO 14001 standards.

Raven's focus on innovation has provided sealing solutions for the building industry for decades. Our commitment to our products has meant the development of:

- NATA accredited laboratory testing facilities to Australian and international standards
- ISO 9001 Quality Management System accreditation
- Operates to ISO 45001 OHS Management
- Operates to ISO 14001 EMS
- Global GreenTag$^{CertTM}$ verified and certified
- Australian design awards
- A library of patents and design registrations.

Cert. No. AU96/678



# Certified Acoustic Testing

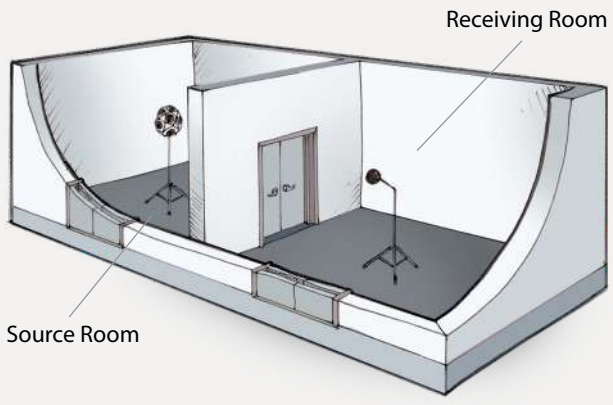
## State of the Art Acoustics Laboratory

Internationally recognised laboratories test Raven sealed door assemblies to AS 1191, ISO 140-3 or ISO 10140 series standards with ratings to ISO 717-1.

The test methods used to establish the sound attenuation ability of a door set is AS 1191, ISO 140 series and recently EN ISO 10140 series standards. Test data from any one of these test methods can be used in EN ISO 717-1 which provides a single number rating across a spectrum of frequencies for the sound attenuation performance of the building element. Typically $R_W$ is used for door sets that cover frequencies from 100Hz to 3150Hz.

Test methods involve constructing two rooms separated with an acoustically isolated wall and a Raven sealed door set. Sound waves are generated on one side (the source room) and measurements of the sound pressure levels are taken in both rooms. This acoustic test is performed with an unsealed door set, fully caulked and then tested with Raven seals. The sound transmission loss for each frequency is measured and from this, the $R_W$ is derived. The $R_W$ is an expression of the sound insulation performance or sound transmission loss. The higher the $R_W$ rating the more sound energy is stopped by the Raven sealed door set.

Perimeter seals, meeting stile seals, door bottom seals and threshold plates are tested as applicable to reflect real world practice. Raven has included tabulated data results at varying levels for a range of door types with each Raven sealing configuration. This will assist correct seal and door type selection ensuring a predictable acoustic performance of the door assembly.




## Raven Acoustic Sealing Systems

Reducing the amount of sound that passes through a door set is a common application for Raven seals. Sealing door gaps is of prime importance when helping to reduce the amount of sound entering or leaving a room or building. Small unsealed gaps around doors will significantly reduce the acoustic performance of the door assembly. A Raven door sealing system is proven to help doors perform at their acoustic best while the doors remain fully operational.

Raven acoustic seals help protect buildings from external noise, such as traffic noise from roads, railways or airports. They also help protect rooms from airborne noise generated within a building. Such as, hotel passageways, theatres, cinemas, crèches and patient surgeries, stairwells, inter-connect rooms, adjoining apartments, plant and machinery.

# Selecting an Acoustic Sealing System

## Improving $R_W$ Ratings

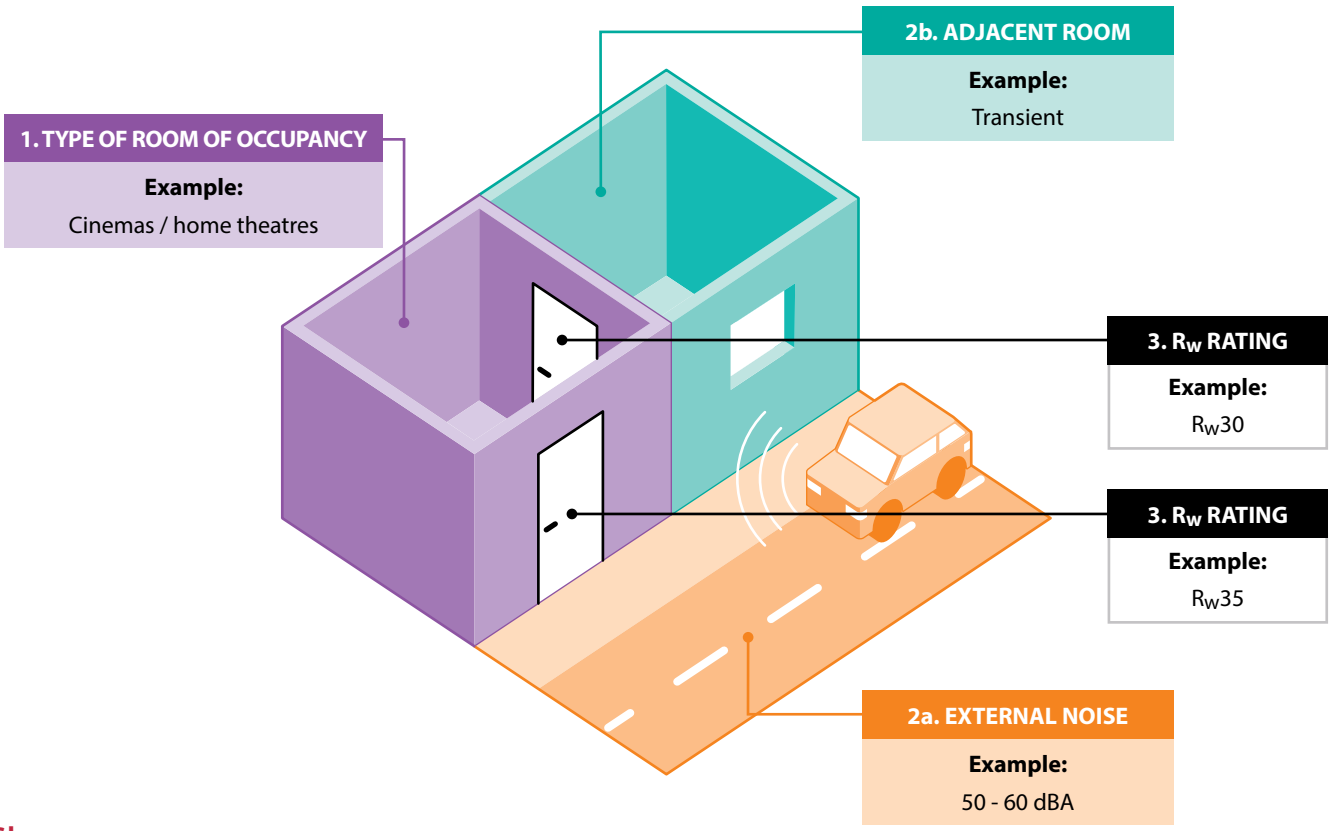
It should be considered that the $R_W$ rating of a door set is only as good as the sum of its parts, i.e. the $R_W$ value of the door set, fitted with Raven acoustic seals and the wall in which the door assembly is fitted. The use of soft absorbent furnishings within a room will also help absorb unwanted noise. All these measures will improve the acoustic attenuation of the room.

Typically, when Raven acoustic seals are fitted to timber solid core doors the $R_W$ rating of the door assembly is increased from around $R_W16$ up to $R_W32$. When the assembly is placed into an $R_W55$ wall, the overall rating of the door assembly and wall combination drops as a ratio to area. The larger the wall area the less the combined $R_W$ rating will drop.

## Make the Right Selection

This selection guide is to aid architects, engineers and builders in making the right choice of door and Raven sealing system to suit the room. The selection of the **$R_W$ rating** of the door sealing system is based on achieving the design sound level (LAeq) in the room as recommended in AS/NZS 2107:2016. Visit go.raven.au/acoustic-selector to view the interactive selection guide on our new website.

1. Select the **TYPE OF ROOM OF OCCUPANCY** from the table opposite.
2. Find at the top of the table, the level of either:
   - **2a. EXTERNAL NOISE**, **OR**
   - **2b. ADJACENT ROOM**
3. Both of these criteria will then find the required **$R_W$** rating for the door sealing system.
4. Select a sealing system with the same or next highest **$R_W$** rating from page 8 - 9.




## Glossary

**LAeq** LAeq is the A-weighted equivalent continuous sound level in decibels measured over a stated period of time.

**dB** Decibels are a unit used to measure the intensity of a sound by comparing it with a given level on a logarithmic scale.

**dBA** A-weighted decibels are an expression of the relative loudness of sounds in air as perceived by the human ear.

**$R_W$** The $R_W$ is a single number quantity in decibels of an assembly's ability to resist airborne sound transfer at the frequencies of 100Hz to 3150Hz. The higher the $R_W$ rating the more sound energy is stopped by the Raven sealed door set.

# Selecting an Acoustic Sealing System

| 1. TYPE OF ROOM OF OCCUPANCY | 2a. EXTERNAL NOISE | | |
|---|---|---|---|
| | **40 - 50 dBA**<br>*e.g. Quiet residential area with distant traffic noise / rainfall / creeks* | **50 - 60 dBA**<br>*e.g. Urban area with traffic noise / distant train noise / quiet restaurants* | **60 - 70 dBA**<br>*e.g. Urban area with significant traffic noise / retail activity / busy restaurants / industrial noise* |
| | **2b. ADJACENT ROOM** | | |
| | **40 - 50 dBA**<br>**Transient**<br>*e.g. Corridors* | **50 - 60 dBA**<br>**Occupied**<br>*e.g. Offices / Classrooms* | **60 - 70 dBA**<br>**Occupied / Unoccupied**<br>*e.g. Music / Factories* |
| | **3. REQUIRED $R_W$ RATING OF DOOR SEALING SYSTEM** | | |
| • Carparks<br>• Control rooms<br>• Factories | **$R_W$22** | **$R_W$25** | **$R_W$28** |
| • Bars and lounges<br>• Corridors and lobbies<br>• Food courts<br>• Service areas / utility rooms<br>• Shopping malls / supermarkets<br>• Stores | **$R_W$25** | **$R_W$28** | **$R_W$30** |
| • Airports<br>• Apartments[1]<br>• Art studios<br>• Boarding house rooms[1]<br>• Cafés<br>• Guest house rooms[1]<br>• Gyms<br>• Hotel rooms / motel rooms[1]<br>• Intensive care wards<br>• Laboratories<br>• Libraries<br>• Computer rooms<br>• Living areas[1]<br>• Meeting rooms<br>• Offices<br>• Recovery rooms | **$R_W$30** | **$R_W$30** | **$R_W$35** |
| • Auditoriums<br>• Bedrooms / sleeping areas[1]<br>• Board rooms<br>• Cinemas / home theatres<br>• Classrooms<br>• Consulting rooms<br>• Convention centres<br>• Court rooms<br>• Delivery suites<br>• Drama studios<br>• Executive offices<br>• Places of worship<br>• Procedure rooms | **$R_W$30** | **$R_W$35** | **$R_W$40** |
| • Drama studios[2]<br>• Film or television studios[2]<br>• Music practice / studio rooms[2]<br>• Music recording studios[2]<br>• Sound stages[2]<br>• Voice over booth[2] | **$R_W$35+** | **$R_W$40** | **$R_W$43 - 45** |

[1] To be used with this guide for external door sealing solutions only. Refer NCC F7D6 (2) page 52.

[2] Rating of acoustic door to be acoustically designed by a suitably qualified acoustic engineer.

It must be noted that this table does not calculate the end design sound level (LAeq,t), but only the minimum required Rw rating of a door set.

It must also be noted that this table is a guide only and is not to take precedence over local building codes or standards. Consultation with an acoustic engineer should be considered when specifying solutions for noise problems.

# Selecting an Acoustic Sealing System

| | $R_W$ | RAVEN SEALING SYSTEMS | DOOR | | | PAGE | RAVEN SEALING SYSTEM NO. |
|---|---|---|---|---|---|---|---|
| | | | Type | Configuration | Thickness | | |
| $R_W$30 - 33 Acoustic Sealing Systems | 30 | RP10 RP99Si | Butt Hinged | Single | 37mm | 12 | **RSS-002-A** |
| | | RP10Si RP8Si | Butt Hinged | Single | 40mm | 12 | **RSS-014-C** |
| | | RP78Si RP8Si | Butt Hinged | Single | 37mm | 13 | **RSS-080-E** |
| | | RP78Si RP35Si | Butt Hinged | Single | 35mm | 13 | **RSS-073-C** |
| | | RP94Si RP8Si | Butt Hinged | Single | 46mm | 14 | **RSS-103-A** |
| | | RP94Si RP99Si | Butt Hinged | Single | 46mm | 14 | **RSS-104-A** |
| | | RP10Si RP126Si RP16Si | Butt Hinged | Double | 45mm | 21 | **RSS-009-A** |
| | | RP10Si RP128Si RP71Si | Butt Hinged | Double | 45mm | 21 | **RSS-012-A** |
| | | RP24 RP38 RP71 | Butt Hinged | Double | 45mm | 22 | **RSS-039-A** |
| | | RP24Si RP38Si RP16Si | Butt Hinged | Double | 45mm | 22 | **RSS-045-A** |
| | | RP44Si RP127Si RP71Si | Butt Hinged | Double | 45mm | 23 | **RSS-049-A** |
| | | RP84Si RP126Si RP16Si | Butt Hinged | Double | 45mm | 23 | **RSS-085-A** |
| | | RP84Si RP128Si RP71Si | Butt Hinged | Double | 45mm | 24 | **RSS-088-A** |
| | | RP84Si RP8Si RP71 | Butt Hinged | Double | 45mm | 24 | **RSS-091-A** |
| | | RP87HSi RP126Si RP16Si | Butt Hinged | Double | 45mm | 25 | **RSS-094-A** |
| | 31 | RP120 RP8Si | Butt Hinged | Single | 44mm | 15 | **RSS-022-C** |
| | | RP84Si RP127Si RP71Si | Butt Hinged | Double | 45mm | 25 | **RSS-087-A** |
| | 32 | RP10 RP99Si | Butt Hinged | Single | 46mm | 15 | **RSS-002-B** |
| | | RP10 RP99Si | Butt Hinged | Single | 46mm | 16 | **RSS-002-C** |
| | | RP24 RP38 | Butt Hinged | Single | 46mm | 17 | **RSS-038-A** |
| | | RP24 RP70 | Butt Hinged | Single | 46mm | 17 | **RSS-040-A** |
| | | RP47Si RP38 | Butt Hinged | Single | 46mm | 18 | **RSS-051-A** |
| | | RP47Si RP70 | Butt Hinged | Single | 46mm | 18 | **RSS-052-A** |
| | | RP93Si RP99Si | Butt Hinged | Single | 46mm | 19 | **RSS-101-B** |
| | | RP120 RP38 | Butt Hinged | Single | 44mm | 19 | **RSS-019-A** |
| | | RP10Si RP127Si | Butt Hinged | Single | 48mm | 16 | **RSS-010-B** |
| | | RP10 RP99Si RP16Si | Butt Hinged | Double | 46mm | 26 | **RSS-003-A** |
| | | RP10 RP99Si RP71Si | Butt Hinged | Double | 46mm | 26 | **RSS-004-A** |
| | | RP10 RP99Si RP85 | Butt Hinged | Double | 46mm | 27 | **RSS-005-A** |
| | 33 | RP78Si RP8Si | Butt Hinged | Single | 40mm | 20 | **RSS-080-A** |
| $R_W$34 - 40 Acoustic Sealing Systems | 36 | RP78Si RP124 RP8Si | Butt Hinged | Single | 35mm | 31 | **RSS-069-A** |
| | | RP120 RP520 RP8Si RP99Si | Butt Hinged | Single | 44mm | 30 | **RSS-021-A** |
| | | RP10Si RP127Si | Butt Hinged | Single | 68mm | 30 | **RSS-010-A** |
| | 37 | RP10Si RP128Si | Butt Hinged | Single | 35mm | 31 | **RSS-011-A** |
| | | RP24Si RP38Si | Butt Hinged | Single | 35mm | 33 | **RSS-044-A** |
| | | RP78Si RP8Si | Butt Hinged | Single | 35mm | 33 | **RSS-080-B** |
| | | RP120 RP520 RP38 RP99Si | Butt Hinged | Single | 44mm | 32 | **RSS-020-A** |
| | | RP24Si RP127Si RP126Si | Butt Hinged | Single | 48mm | 32 | **RSS-043-A** |
| | 38 | RP120 RP127Si | Butt Hinged | Single | 48mm | 34 | **RSS-018-A** |
| | 40 | RP124 RP127Si | Butt Hinged | Single | 48mm | 34 | **RSS-025-A** |

# Selecting an Acoustic Sealing System

| | $R_W$ | RAVEN SEALING SYSTEMS | DOOR | | | PAGE | RAVEN SEALING SYSTEM NO. |
|---|---|---|---|---|---|---|---|
| | | | Type | Configuration | Thickness | | |
| $R_W$41 - 50+ Acoustic Sealing Systems | 42 | RP24Si RP124 RP8Si RP38Si | Butt Hinged | Single | 35mm | 38 | **RSS-042-A** |
| | | RP87Si RP124 RP8Si RP128Si | Butt Hinged | Single | 35mm | 39 | **RSS-096-A** |
| | | RP10Si RP124 RP127Si | Butt Hinged | Single | 68mm | 38 | **RSS-006-A** |
| | | RP24Si RP127Si RP126Si | Butt Hinged | Single | 68mm | 39 | **RSS-043-B** |
| | 43 | RP10Si RP124 RP8Si RP128Si | Butt Hinged | Single | 35mm | 40 | **RSS-008-A** |
| | | RP78Si RP124 RP8Si RP128Si | Butt Hinged | Single | 35mm | 41 | **RSS-070-A** |
| | | RP10Si RP124 RP127Si | Butt Hinged | Single | 48mm | 40 | **RSS-006-B** |
| | 45 | RP10Si RP124 RP127Si RP126Si | Butt Hinged | Single | 48mm | 41 | **RSS-007-A** |
| | | RP24Si RP124 RP127Si RP126Si | Butt Hinged | Single | 68mm | 42 | **RSS-041-A** |
| | 46 | RP85 RP124 RP127Si RP126Si | Butt Hinged | Single | 68mm | 42 | **RSS-092-A** |
| Bulkhead, Interconnecting, Sliding, Pivot | 30 | RP47Si | Broad Butt Hinged | Single | 37mm | 46 | **RSS-050-A** |
| | | RP118Si RP8Si RP16Si | Broad Butt Hinged | Double | 45mm | 47 | **RSS-017-A** |
| | | RP118Si RP71Si RP117Si | Butt Hinged | Double | 45mm | 47 | **RSS-016-A** |
| | 31 | RP84Si RP51F RP52F | Sliding | Single | 35mm | 50 | **RSS-089-A** |
| | | RP93Si RP71Si RP97Si | Butt Hinged | Double | 45mm | 48 | **RSS-100-A** |
| | 32 | RP47Si | Broad Butt Hinged | Single | 46mm | 46 | **RSS-050-B** |
| | 34 | RP10Si RP51F RP52F | Sliding | Single | 35mm | 50 | **RSS-013-A** |
| | 35 | RP71Si RP71Si RP96 | Pivot | Single | 50mm | 51 | **RSS-061-A** |
| | 38 | RP94Si RP8Si | Butt Hinged | Interconnecting | 40mm | 49 | **RSS-103-B** |

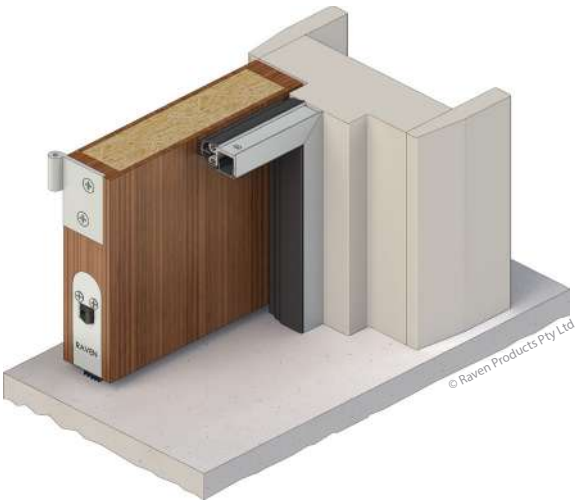
# $R_w$30 - 33 Acoustic Sealing Systems for Solid Core Timber Doors

Doors tested were standard solid core timber doors.

# $R_w$30 - 33 Sealing Systems - Single Doors

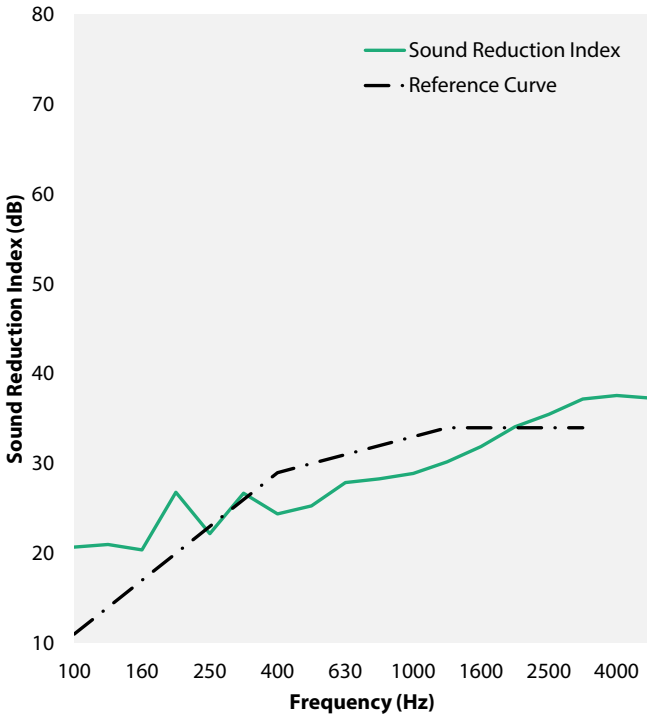
## RAVEN SEALING SYSTEM NO.

**RSS-002-A**




## Products used in this System

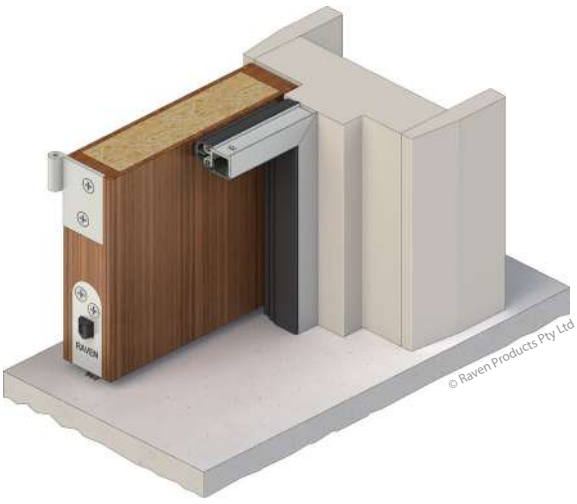
**RP10** **RP99Si**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 37mm | 367.6 kg/m³ | 30 | 30 | 20.7 | 21.0 | 20.4 | 26.8 | 22.2 | 26.7 | 24.4 | 25.3 | 27.9 | 28.4 | 28.9 | 30.2 | 31.9 | 34.1 | 35.5 | 37.2 | 37.6 | 37.3 |

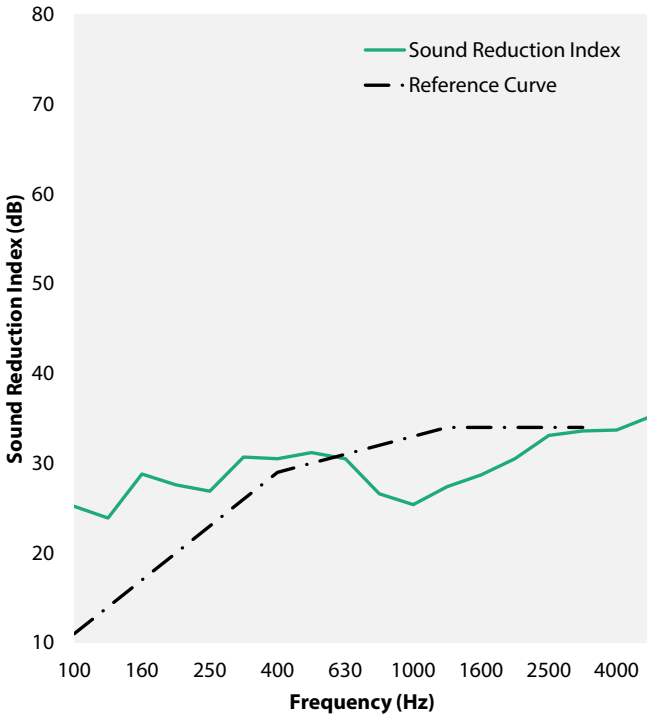
## RAVEN SEALING SYSTEM NO.

**RSS-014-C**




## Products used in this System

**RP10Si** **RP8Si**

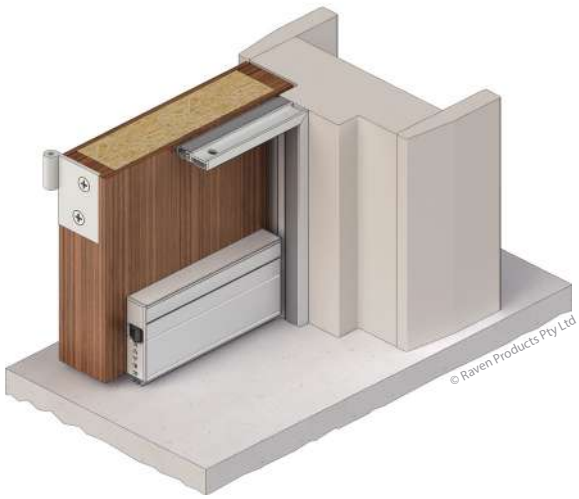



| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 40mm | 632.1 kg/m³ | 30 | 30 | 25.2 | 23.9 | 28.8 | 27.6 | 26.9 | 30.7 | 30.5 | 31.2 | 30.5 | 26.6 | 25.4 | 27.4 | 28.7 | 30.5 | 33.1 | 33.6 | 33.7 | 35.2 |

# $R_w$30 - 33 Sealing Systems - Single Doors

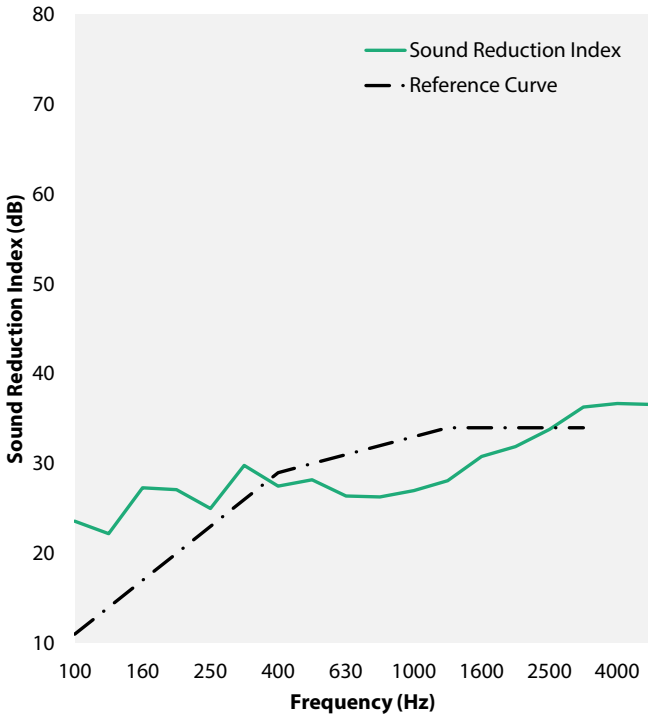
## RAVEN SEALING SYSTEM NO.

**RSS-073-C**




## Products used in this System

**RP78Si** **RP35Si**



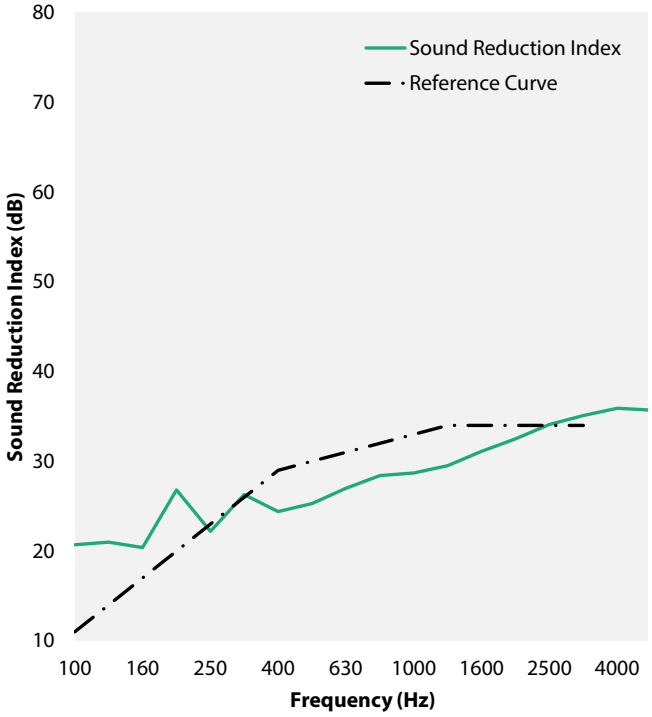

| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 581.4 kg/m³ | 30 | 30 | 23.6 | 22.2 | 27.3 | 27.1 | 25.0 | 29.8 | 27.5 | 28.2 | 26.4 | 26.3 | 27.0 | 28.1 | 30.8 | 31.9 | 33.8 | 36.3 | 36.7 | 36.6 |

## RAVEN SEALING SYSTEM NO.

**RSS-080-E**


## Products used in this System

**RP78Si** **RP8Si**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 37mm | 367.6 kg/m³ | 30 | 30 | 20.7 | 21.0 | 20.4 | 26.8 | 22.2 | 26.3 | 24.4 | 25.3 | 27.0 | 28.4 | 28.7 | 29.5 | 31.1 | 32.5 | 34.1 | 35.1 | 35.9 | 35.7 |

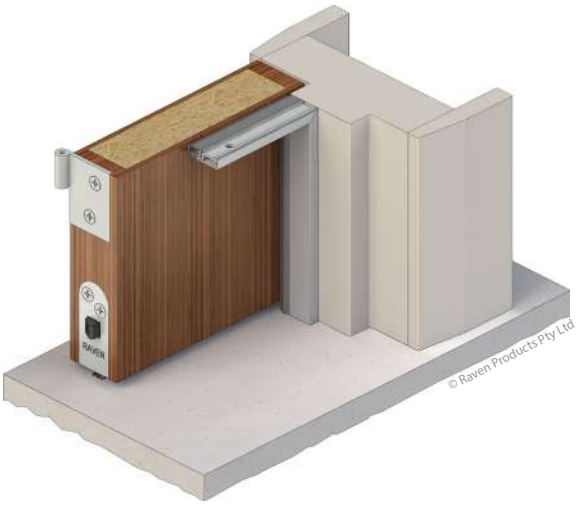
# $R_W$30 - 33 Sealing Systems - Single Doors

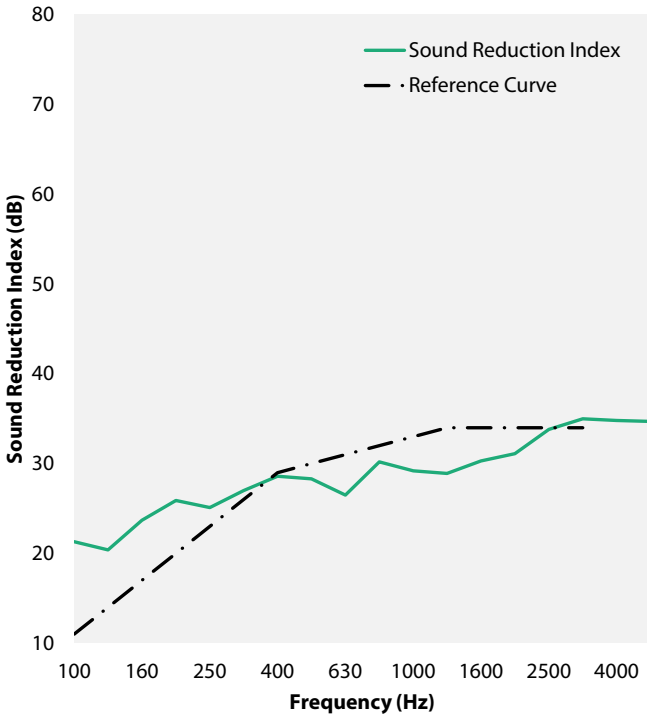
## RAVEN SEALING SYSTEM NO.

**RSS-103-A**

### Products used in this System

**RP94Si** **RP8Si**



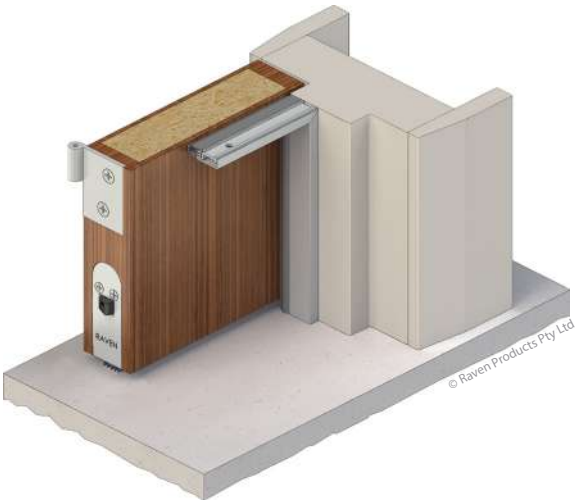

| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 30 | 30 | 21.3 | 20.4 | 23.7 | 25.9 | 25.1 | 27.0 | 28.6 | 28.3 | 26.5 | 30.2 | 29.2 | 28.9 | 30.3 | 31.1 | 33.8 | 35.0 | 34.8 | 34.7 |

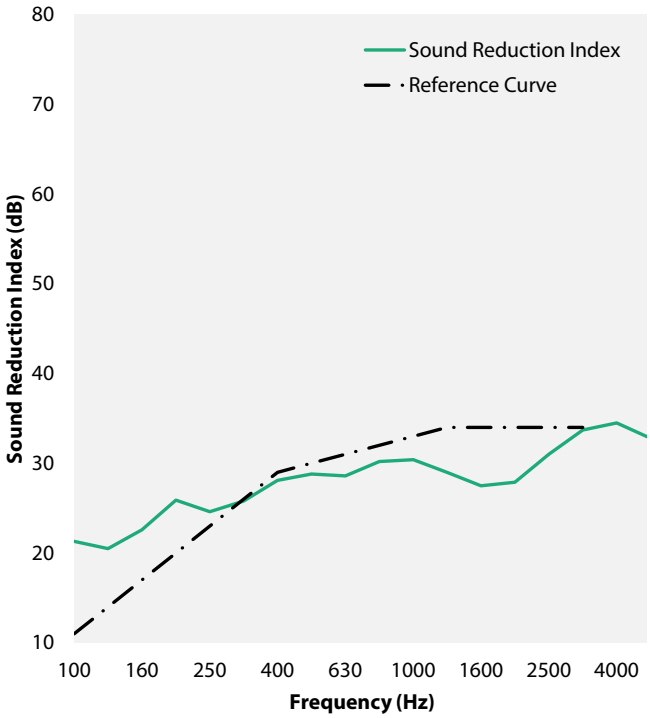
## RAVEN SEALING SYSTEM NO.

**RSS-104-A**

### Products used in this System

**RP94Si** **RP99Si**

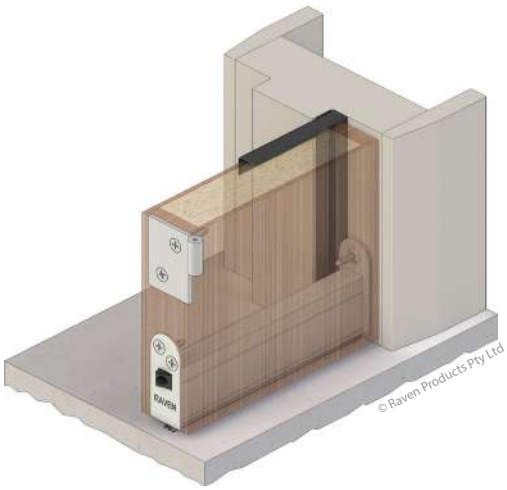



| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 30 | 30 | 21.3 | 20.5 | 22.6 | 25.9 | 24.6 | 25.8 | 28.1 | 28.8 | 28.6 | 30.2 | 30.4 | 29.0 | 27.5 | 27.9 | 31.0 | 33.7 | 34.5 | 32.8 |

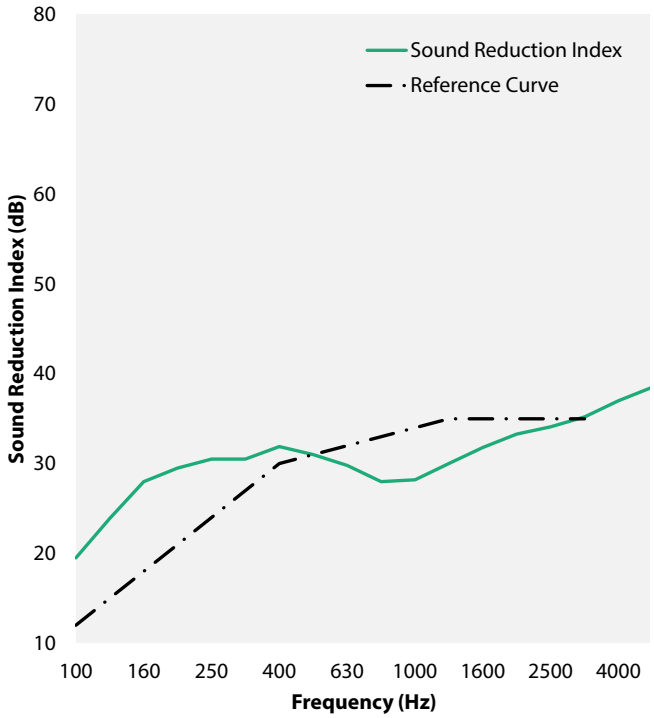
## RAVEN SEALING SYSTEM NO.

**RSS-022-C**




## Products used in this System

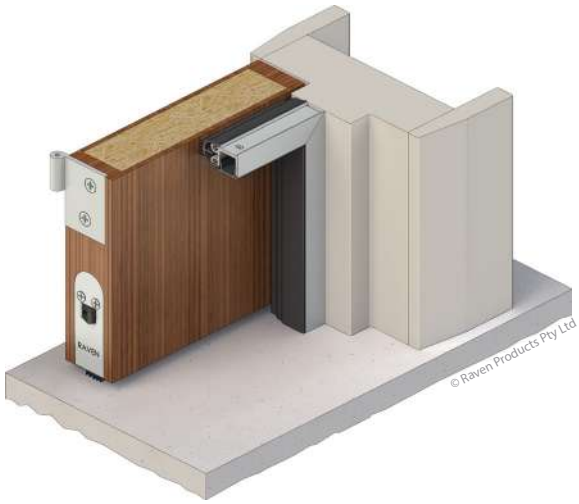
**RP120** **RP8Si**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 630.0 kg/m³ | 31 | 31 | 19.5 | 23.9 | 28.0 | 29.5 | 30.5 | 30.5 | 31.9 | 31.0 | 29.8 | 28.0 | 28.2 | 30.0 | 31.8 | 33.3 | 34.1 | 35.2 | 37.0 | 38.5 |

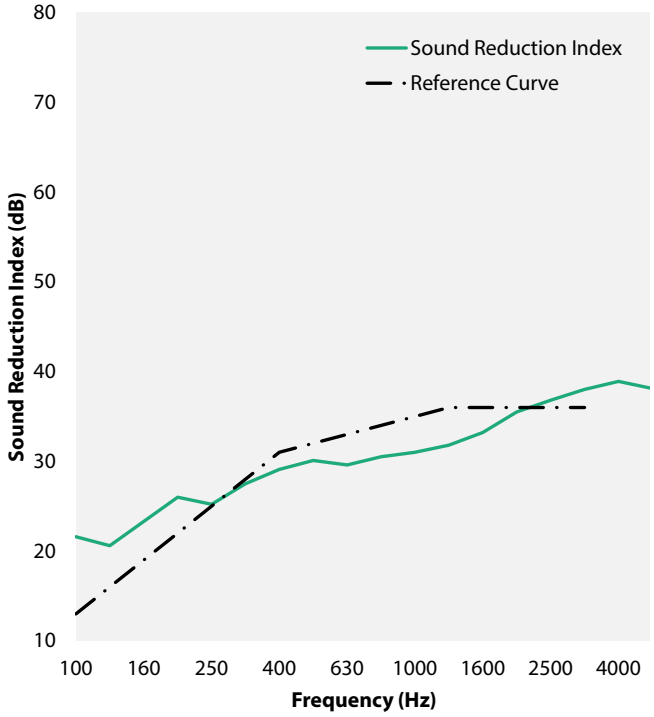
## RAVEN SEALING SYSTEM NO.

**RSS-002-B**




## Products used in this System

**RP10** **RP99Si**

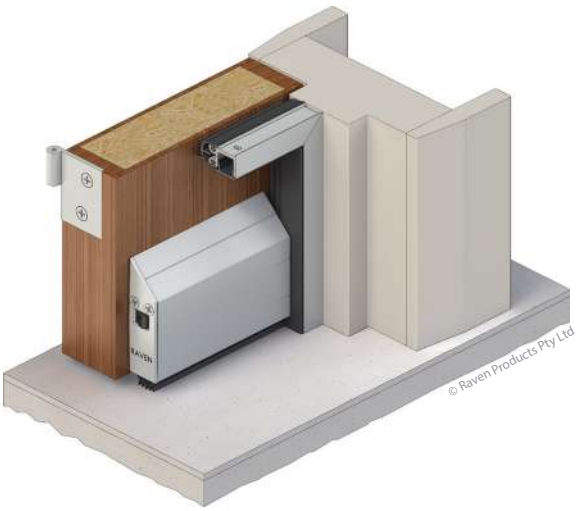



| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.6 | 20.6 | 23.3 | 26.0 | 25.2 | 27.5 | 29.1 | 30.1 | 29.6 | 30.5 | 31.0 | 31.8 | 33.2 | 35.5 | 36.8 | 38.0 | 38.9 | 38.1 |

# $R_W$30 - 33 Sealing Systems - Single Doors

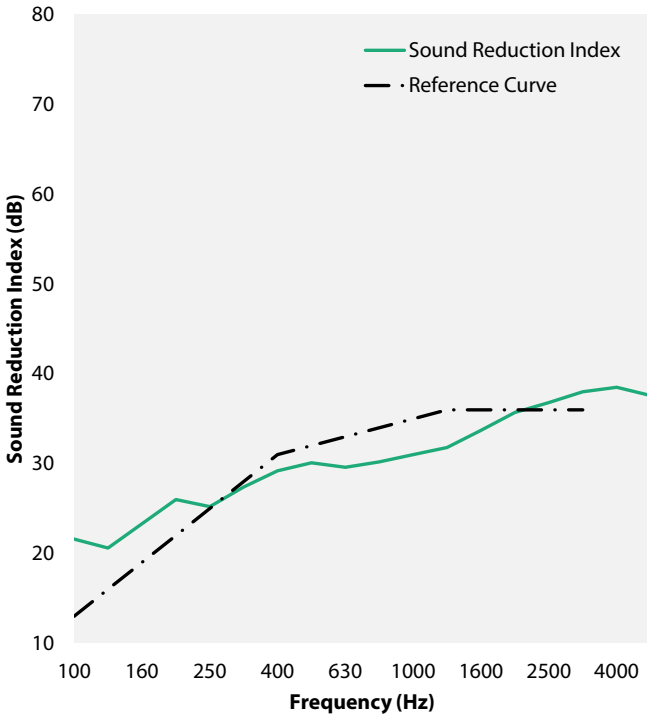
## RAVEN SEALING SYSTEM NO.

**RSS-002-C**




## Products used in this System

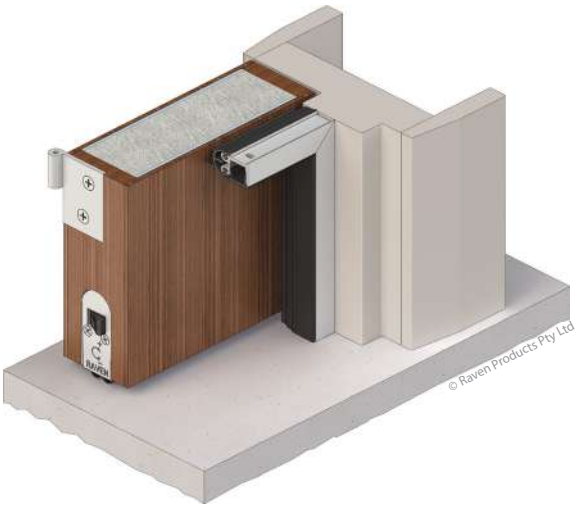
**RP10** **RP99Si**




| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 44mm | 367.6 kg/m³ | 33 | 32 | 21.6 | 20.6 | 23.3 | 26.0 | 25.2 | 27.4 | 29.2 | 30.1 | 29.6 | 30.2 | 31.0 | 31.8 | 33.7 | 35.7 | 36.8 | 38.0 | 38.5 | 37.6 |

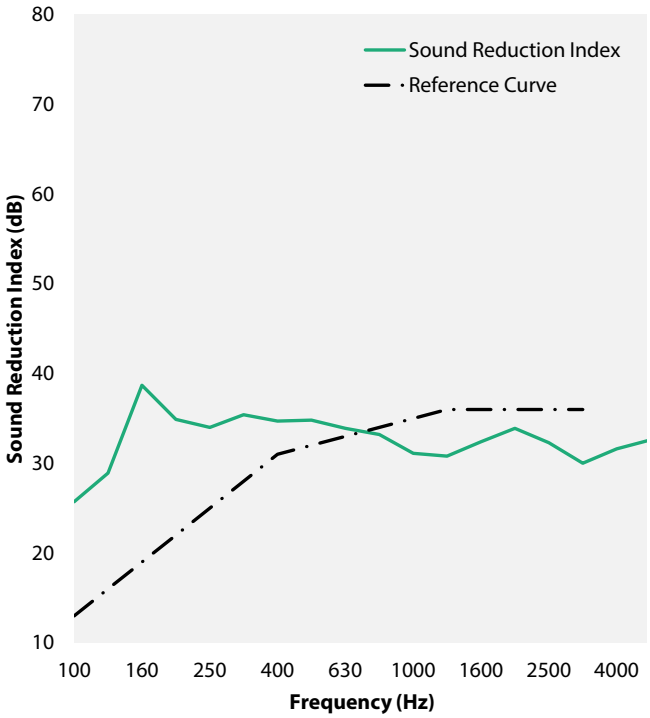
## RAVEN SEALING SYSTEM NO.

**RSS-010-B**




## Products used in this System

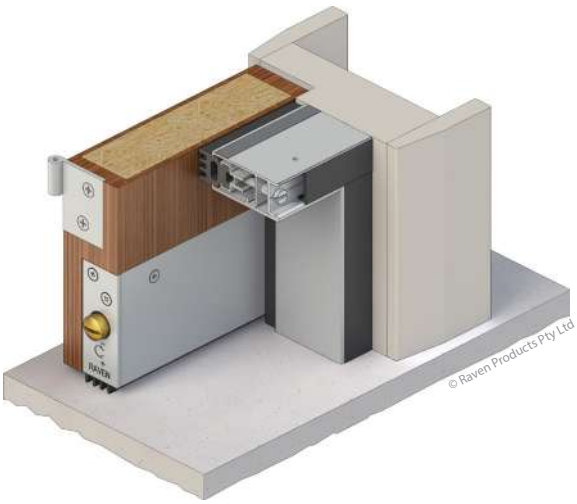
**RP10Si** **RP127Si**




| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 32 | 32 | 25.7 | 28.9 | 38.7 | 34.9 | 34.0 | 35.4 | 34.7 | 34.8 | 33.9 | 33.2 | 31.1 | 30.8 | 32.4 | 33.9 | 32.3 | 30.0 | 31.6 | 32.6 |

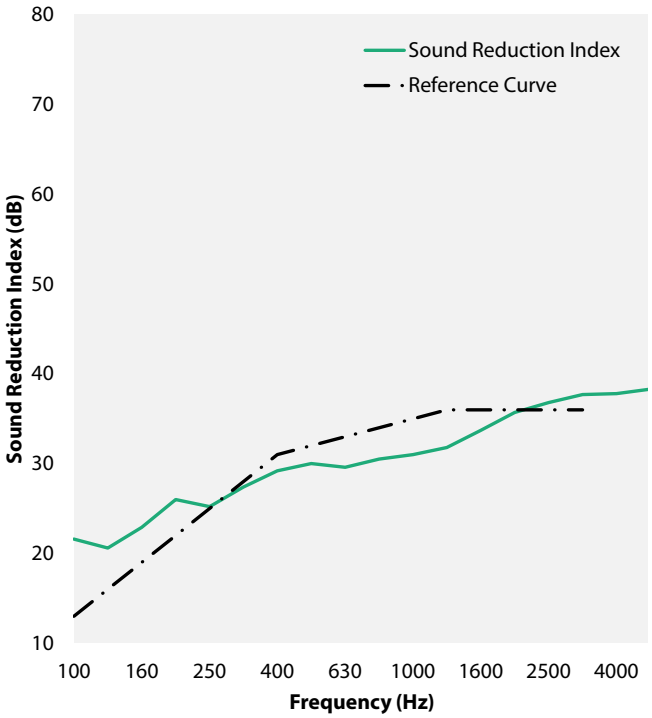
## RAVEN SEALING SYSTEM NO.

**RSS-038-A**




## Products used in this System

**RP24** **RP38**

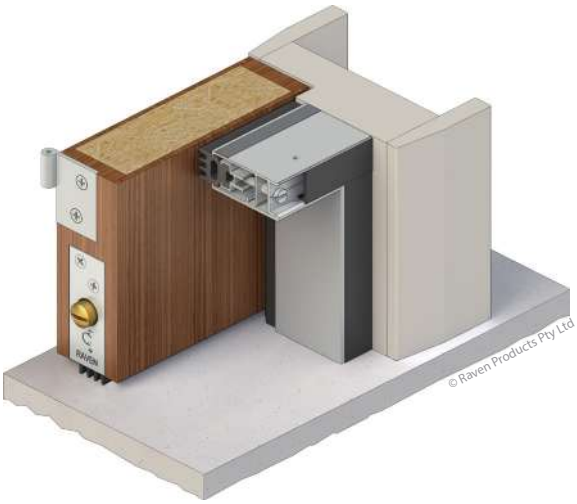



Perimeter seal adjustment independent of fixings

| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 33 | 32 | 21.6 | 20.6 | 22.9 | 26.0 | 25.2 | 27.4 | 29.2 | 30.0 | 29.6 | 30.5 | 31.0 | 31.8 | 33.7 | 35.7 | 36.8 | 37.7 | 37.8 | 38.3 |

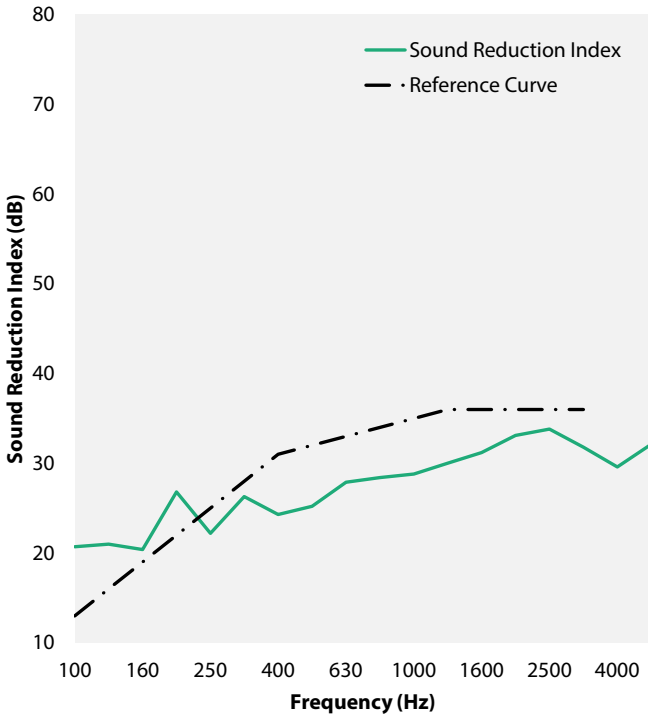
## RAVEN SEALING SYSTEM NO.

**RSS-040-A**




## Products used in this System

**RP24** **RP70**



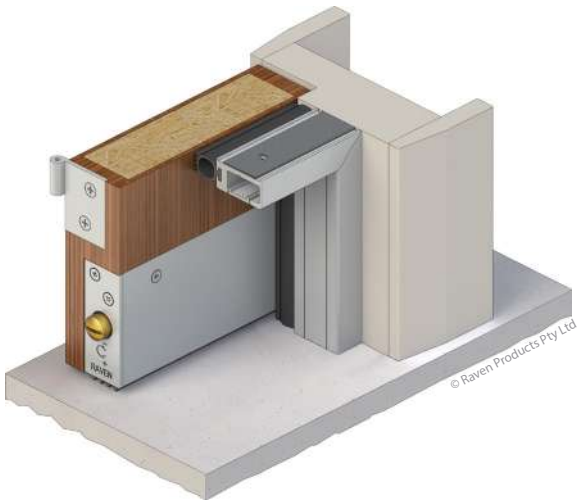

Perimeter seal adjustment independent of fixings

| SOLID CORE DOOR | | STC | $R_W$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 31 | 32 | 21.6 | 20.6 | 23.2 | 26.0 | 25.2 | 27.0 | 28.8 | 29.9 | 29.6 | 30.5 | 31.0 | 31.6 | 32.3 | 34.0 | 34.6 | 32.0 | 29.8 | 32.4 |

# $R_w$30 - 33 Sealing Systems - Single Doors

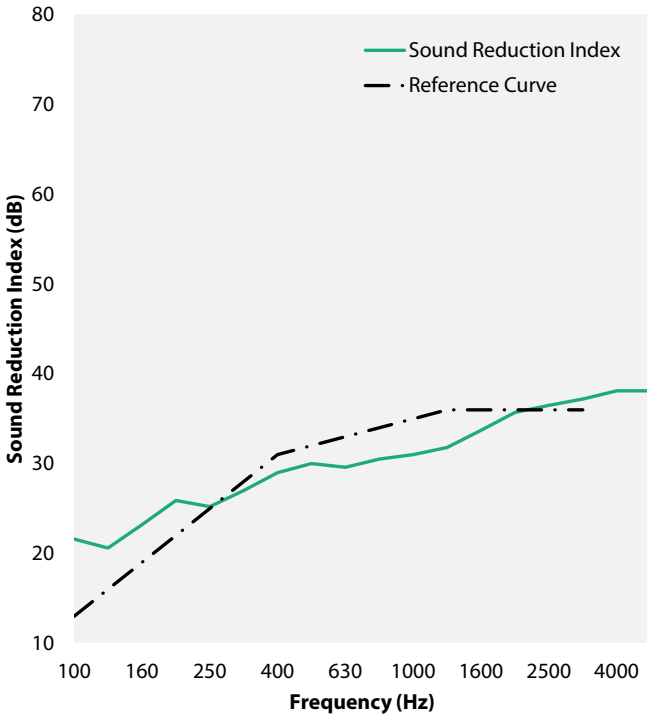
## RAVEN SEALING SYSTEM NO.

**RSS-051-A**




## Products used in this System

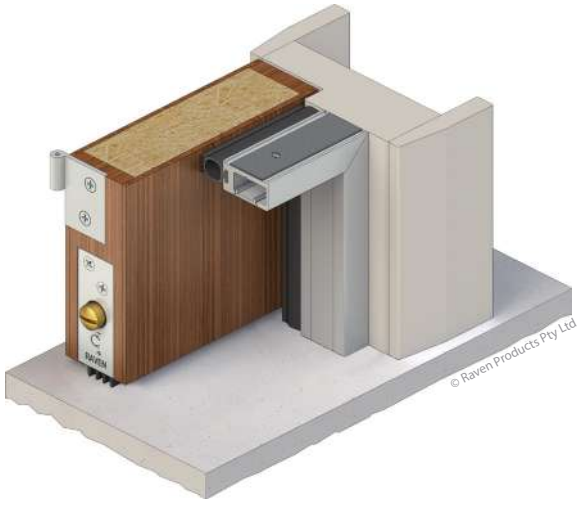
**RP47Si** **RP38**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 44mm | 367.6 kg/m³ | 32 | 32 | 21.5 | 20.6 | 23.2 | 25.9 | 25.2 | 27.0 | 29.0 | 30.0 | 29.6 | 30.5 | 31.0 | 31.8 | 33.7 | 35.7 | 36.5 | 37.2 | 38.1 | 38.1 |

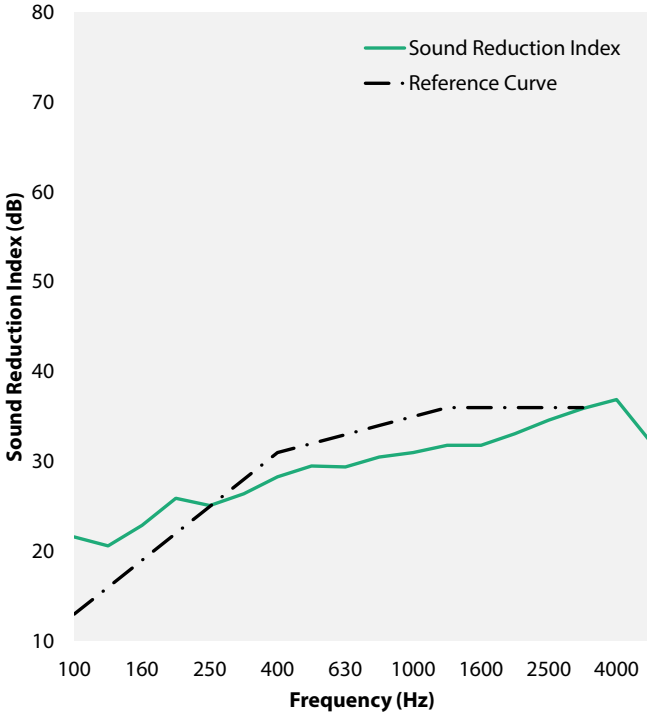
## RAVEN SEALING SYSTEM NO.

**RSS-052-A**




## Products used in this System

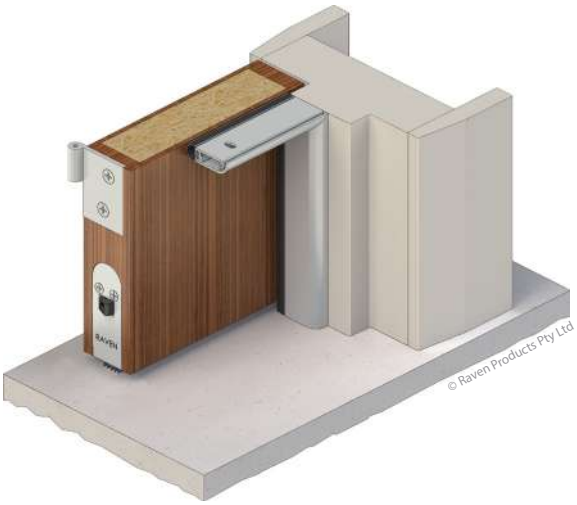
**RP47Si** **RP70**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.6 | 20.6 | 22.9 | 25.9 | 25.1 | 26.4 | 28.3 | 29.5 | 29.4 | 30.5 | 31.0 | 31.8 | 31.8 | 33.1 | 34.6 | 35.9 | 36.9 | 32.2 |

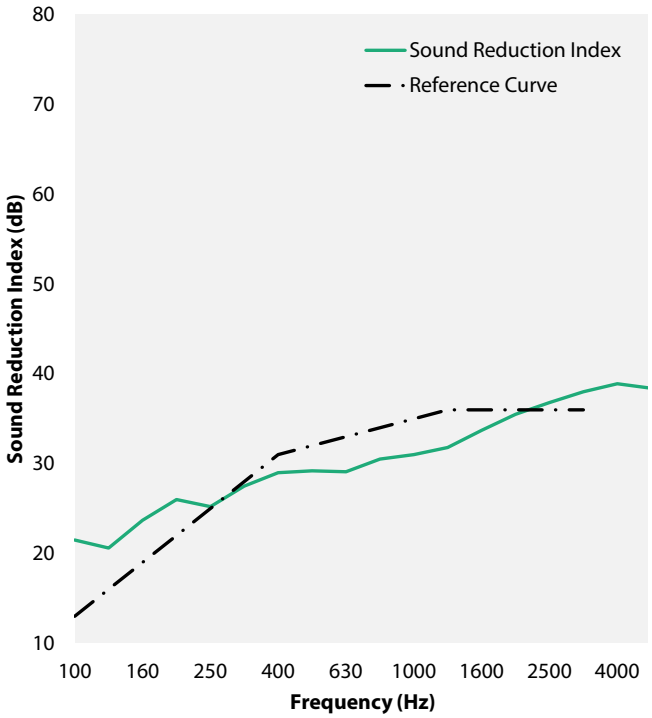
## RAVEN SEALING SYSTEM NO.

**RSS-101-B**




## Products used in this System

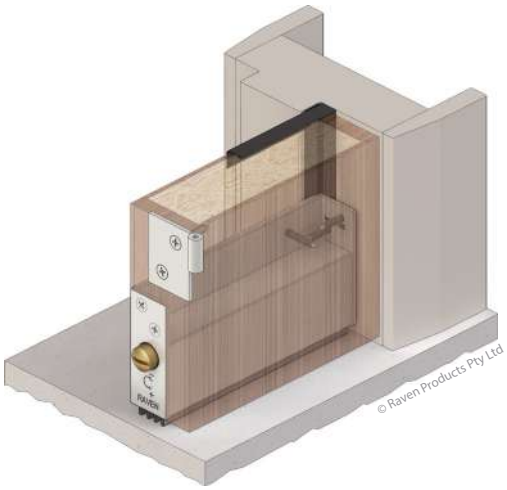
**RP93Si** **RP99Si**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.5 | 20.6 | 23.7 | 26.0 | 25.2 | 27.5 | 29.0 | 29.2 | 29.1 | 30.5 | 31.0 | 31.8 | 33.7 | 35.5 | 36.8 | 38.0 | 38.9 | 38.4 |

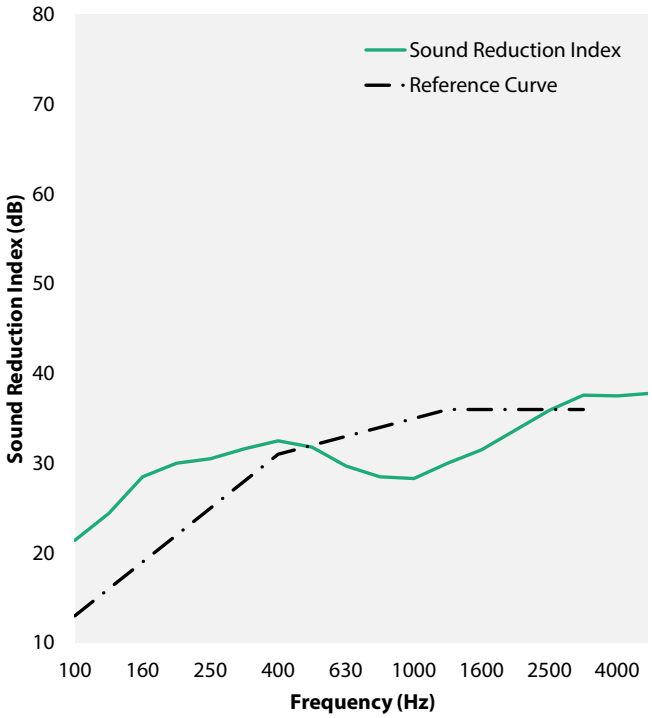
## RAVEN SEALING SYSTEM NO.

**RSS-019-A**




## Products used in this System

**RP120** **RP38**




*STC estimation

| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 44mm | 630.0 kg/m³ | 32* | 32 | 21.4 | 24.4 | 28.5 | 30.0 | 30.5 | 31.6 | 32.5 | 31.8 | 29.7 | 28.5 | 28.3 | 30.0 | 31.5 | 33.7 | 35.9 | 37.6 | 37.5 | 37.8 |

# $R_w$30 - 33 Sealing Systems - Single Doors

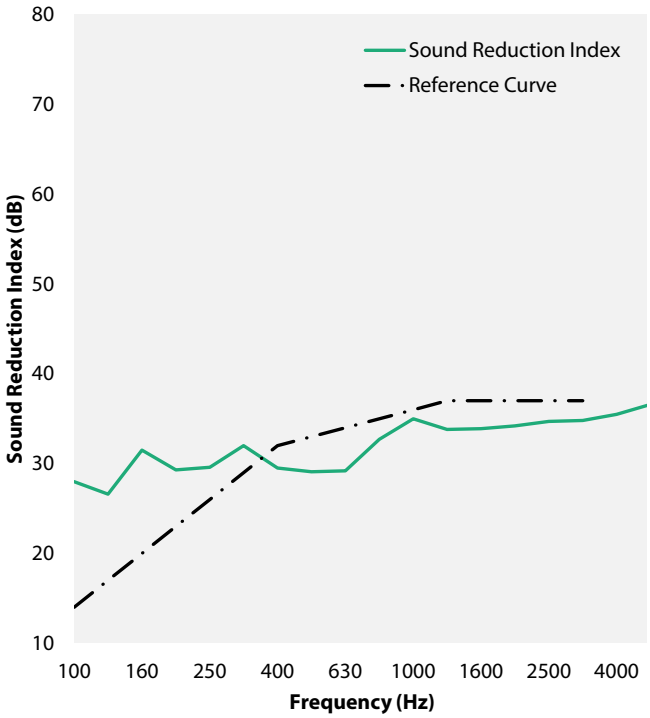


## RAVEN SEALING SYSTEM NO.

**RSS-080-A**


## Products used in this System

**RP78Si** **RP8Si**




| PROPRIETARY ACOUSTIC DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 40mm | 1023.2 kg/m³ | 33 | 33 | 28.0 | 26.6 | 31.5 | 29.3 | 29.6 | 32.0 | 29.5 | 29.1 | 29.2 | 32.7 | 35.0 | 33.8 | 33.9 | 34.2 | 34.7 | 34.8 | 35.5 | 36.6 |

# Flinders Uni Celebrates 50 years with new Plaza and Student Hub

Flinders University recently celebrated 50 years with the opening of the new Plaza and Student Hub in March 2016. The building is the University's biggest redevelopment to date and part of its progression for the next 50 years.

The new Plaza and Student Hub redevelopment was designed to accommodate the ever-changing needs of the university's students, teachers, and staff. It includes spaces for study, recreation and socialisation, and teaching and learning facilities. It also features collaborative group lounges, conference facilities, and food and beverage outlets.

To accommodate the mandatory NCC requirements for the new Student Hub, Raven Products supplied door sealing systems for acoustic separation in quiet spaces for study and learning.

In addition, Raven sealing systems significantly reduce energy loss from rooms and prevent toxic smoke infiltration in a fire emergency.

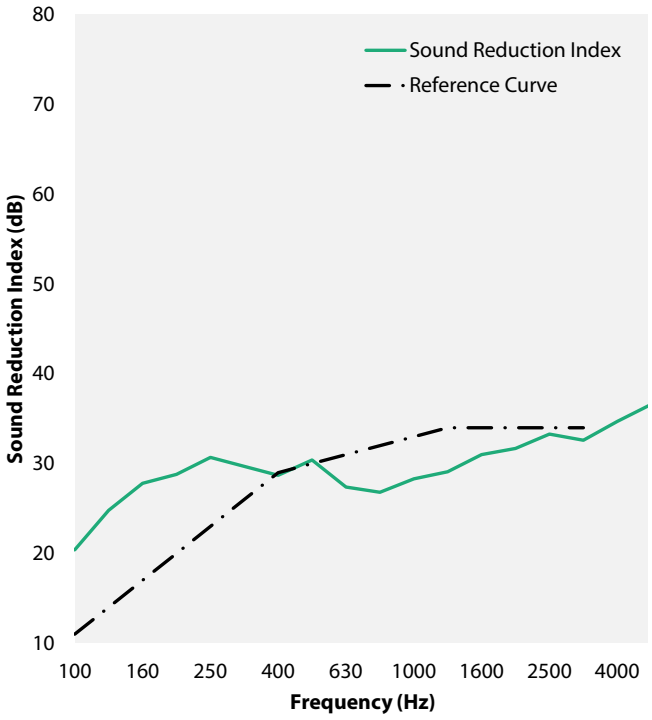
# $R_w$30 - 33 Sealing Systems - Double Doors

## RAVEN SEALING SYSTEM NO.

**RSS-009-A**


## Products used in this System

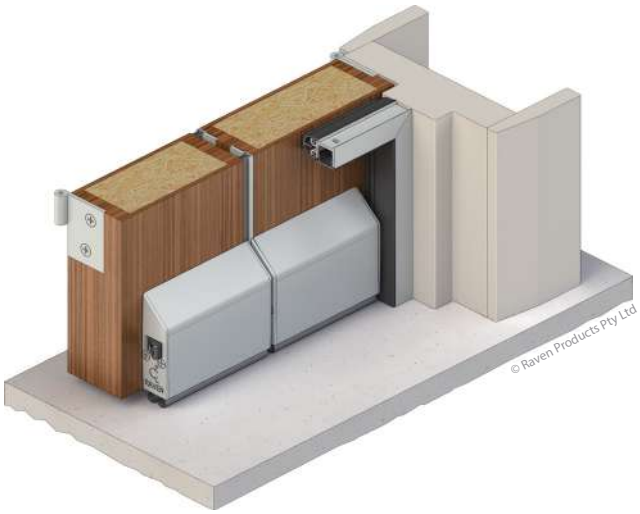
**RP10Si** **RP126Si** **RP16Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 20.4 | 24.8 | 27.8 | 28.8 | 30.7 | 29.7 | 28.7 | 30.4 | 27.4 | 26.8 | 28.3 | 29.1 | 31.0 | 31.7 | 33.3 | 32.6 | 34.7 | 36.6 |

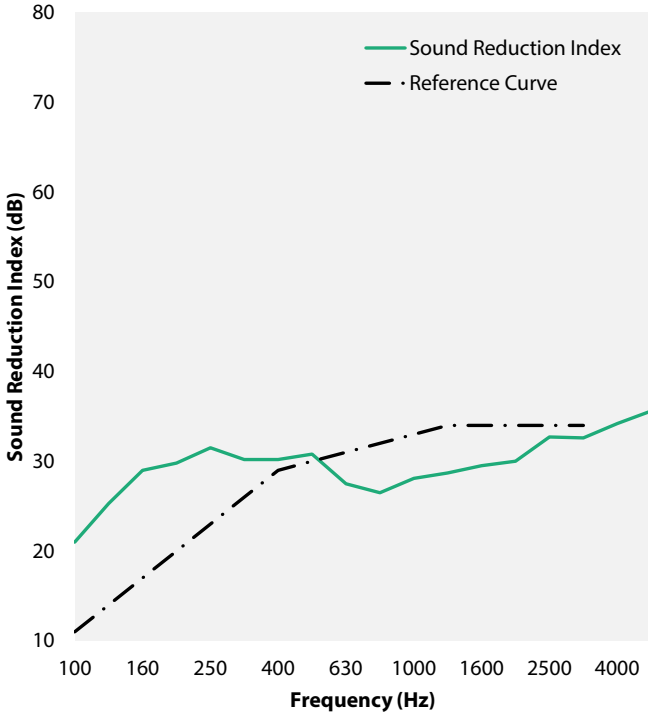
## RAVEN SEALING SYSTEM NO.

**RSS-012-A**




## Products used in this System

**RP10Si** **RP128Si** **RP71Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 21.0 | 25.3 | 29.0 | 29.8 | 31.5 | 30.2 | 30.2 | 30.8 | 27.5 | 26.5 | 28.1 | 28.7 | 29.5 | 30.0 | 32.7 | 32.6 | 34.2 | 35.6 |

# $R_w$30 - 33 Sealing Systems - Double Doors

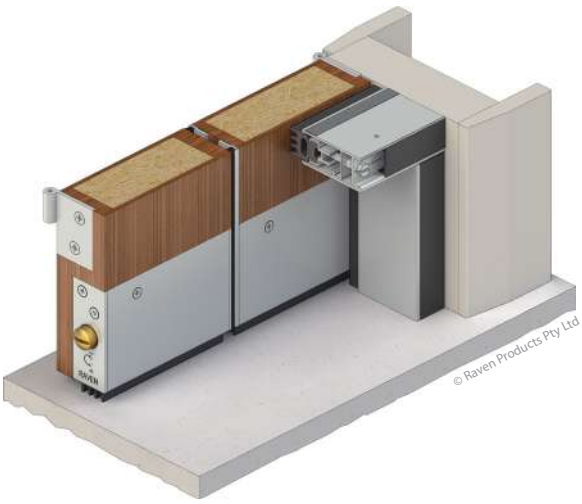


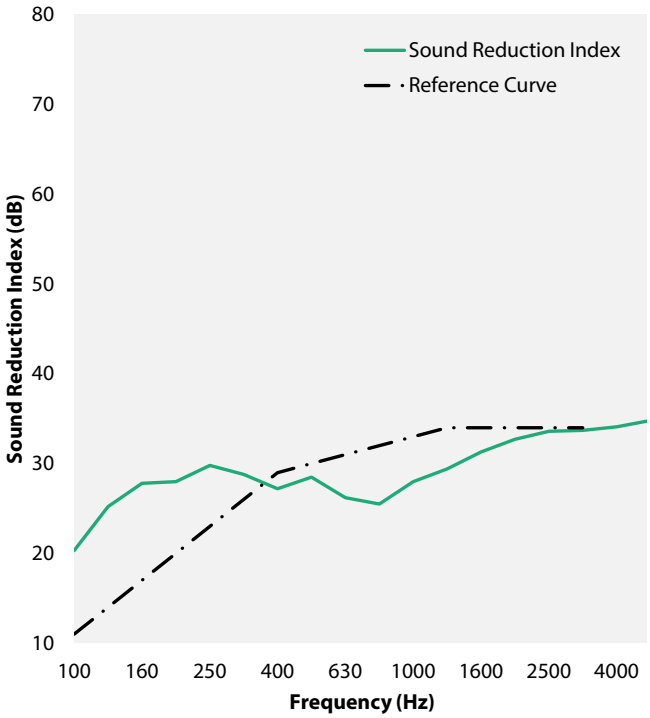
## RAVEN SEALING SYSTEM NO.

**RSS-039-A**

**Products used in this System**

**RP24** **RP38** **RP71**




Perimeter seal adjustment independent of fixings

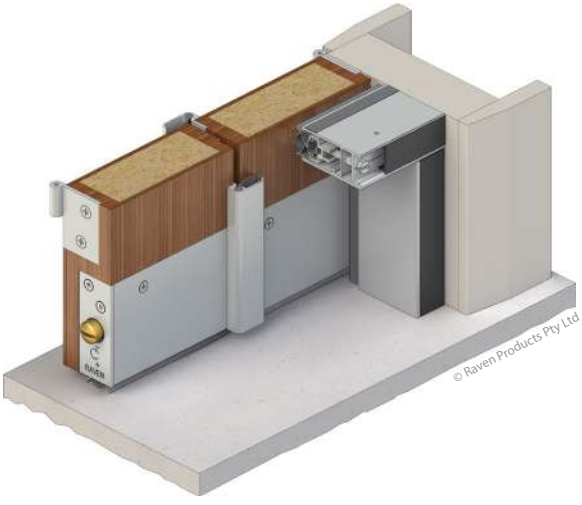
| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 20.3 | 25.2 | 27.8 | 28.0 | 29.8 | 28.8 | 27.2 | 28.5 | 26.2 | 25.5 | 28.0 | 29.4 | 31.3 | 32.7 | 33.6 | 33.7 | 34.1 | 34.8 |

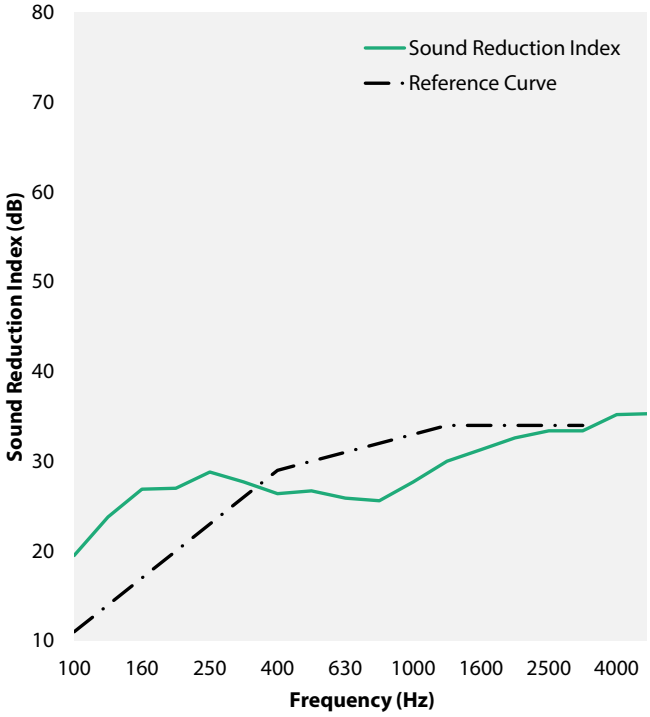
## RAVEN SEALING SYSTEM NO.

**RSS-045-A**

**Products used in this System**

**RP24Si** **RP38Si** **RP16Si**



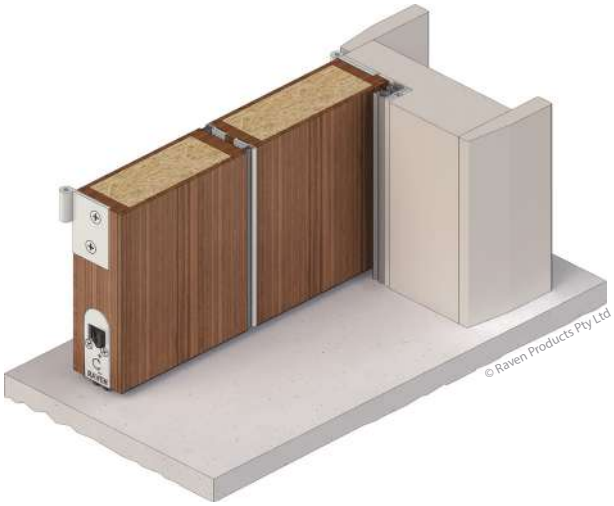

Perimeter seal adjustment independent of fixings

| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 19.5 | 23.8 | 26.9 | 27.0 | 28.8 | 27.7 | 26.4 | 26.7 | 25.9 | 25.6 | 27.7 | 30.0 | 31.3 | 32.6 | 33.4 | 33.4 | 35.2 | 35.3 |

# $R_w$30 - 33 Sealing Systems - Double Doors

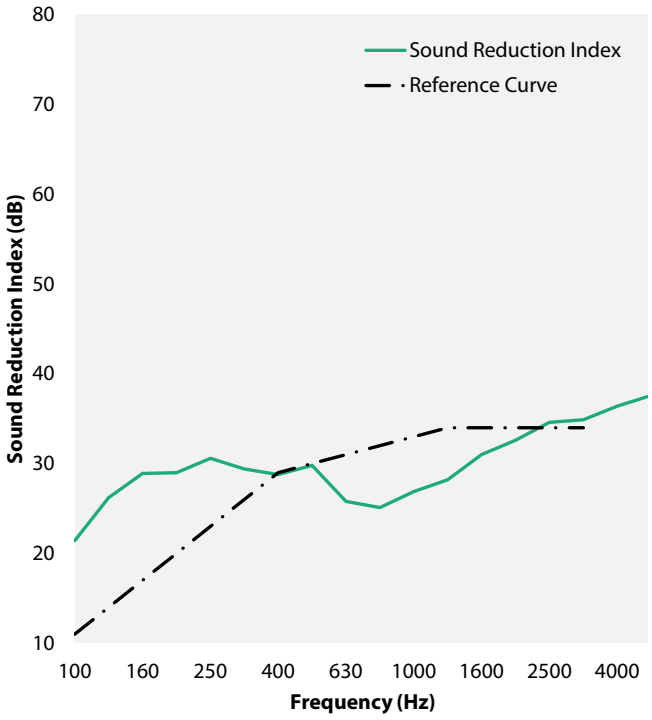
## RAVEN SEALING SYSTEM NO.

**RSS-049-A**




## Products used in this System

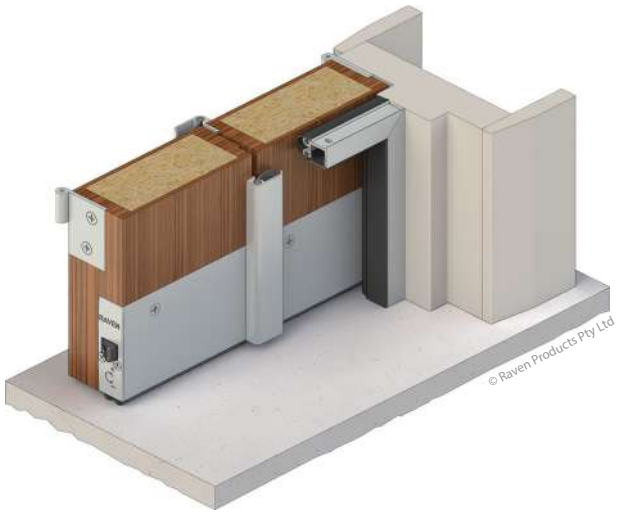
**RP44Si** **RP127Si** **RP71Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 21.4 | 26.2 | 28.9 | 29.0 | 30.6 | 29.4 | 28.7 | 29.8 | 25.8 | 25.1 | 26.9 | 28.2 | 31.0 | 32.6 | 34.6 | 34.9 | 36.4 | 37.6 |

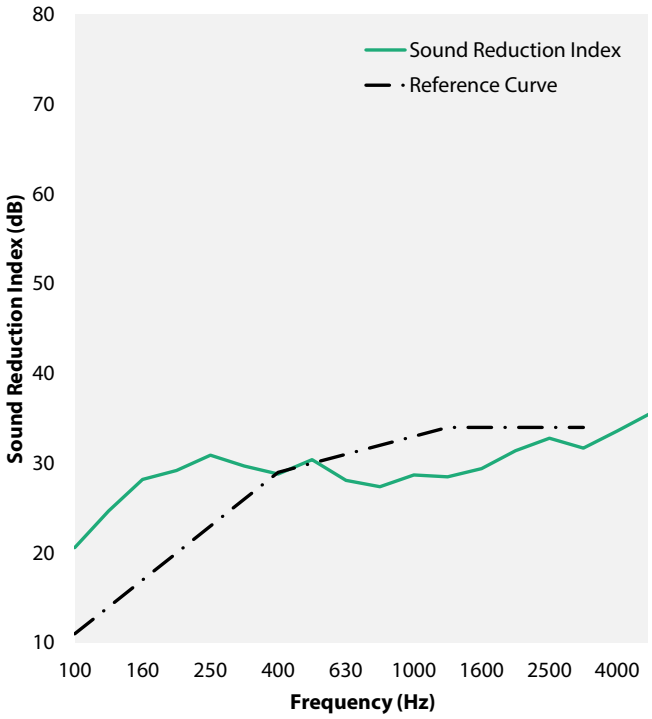
## RAVEN SEALING SYSTEM NO.

**RSS-085-A**




## Products used in this System

**RP84Si** **RP126Si** **RP16Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 20.6 | 24.7 | 28.2 | 29.2 | 30.9 | 29.7 | 28.8 | 30.4 | 28.1 | 27.4 | 28.7 | 28.5 | 29.4 | 31.4 | 32.8 | 31.7 | 33.6 | 35.6 |

# $R_w$30 - 33 Sealing Systems - Double Doors

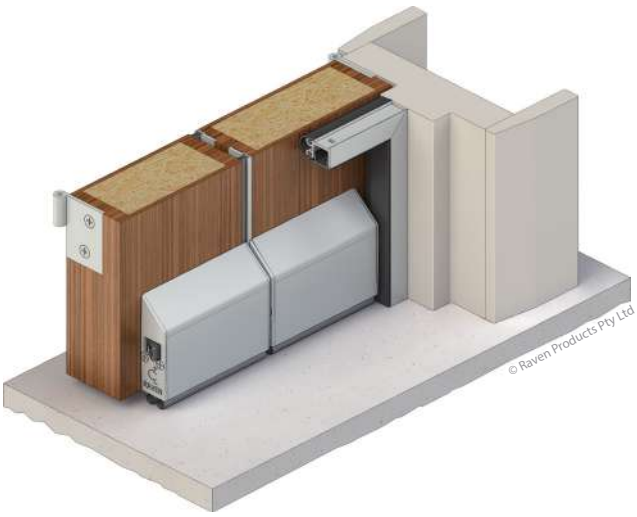


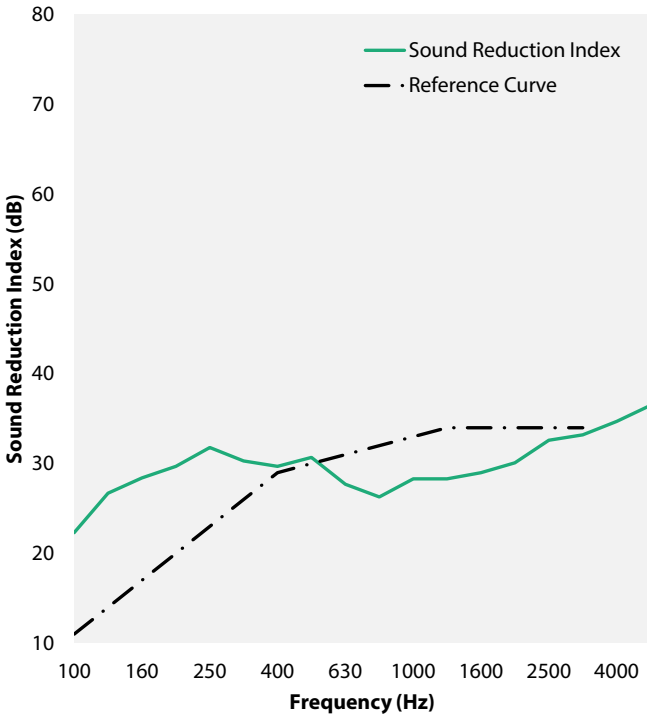
## RAVEN SEALING SYSTEM NO.

**RSS-088-A**

**Products used in this System**

**RP84Si** **RP128Si** **RP71Si**



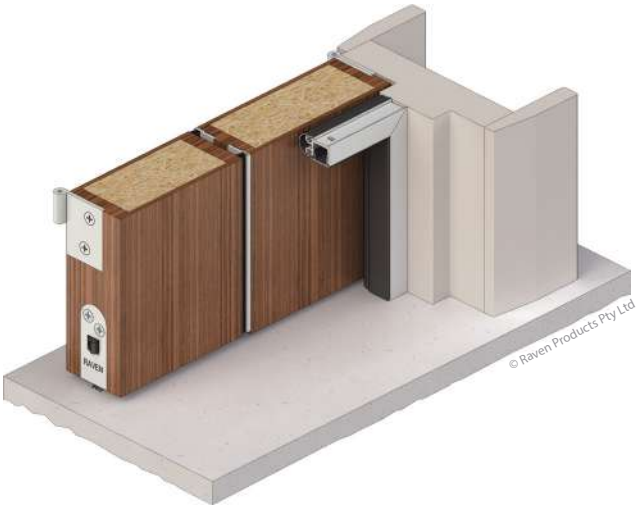

| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 22.3 | 26.7 | 28.4 | 29.7 | 31.8 | 30.3 | 29.7 | 30.7 | 27.7 | 26.3 | 28.3 | 28.3 | 29.0 | 30.1 | 32.6 | 33.2 | 34.7 | 36.5 |

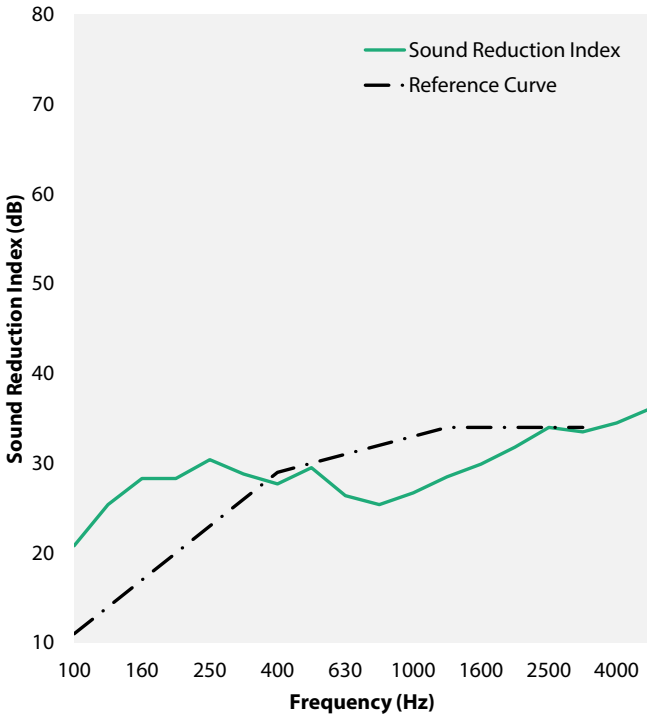
## RAVEN SEALING SYSTEM NO.

**RSS-091-A**

**Products used in this System**

**RP84Si** **RP8Si** **RP71**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 20.8 | 25.4 | 28.3 | 28.3 | 30.4 | 28.8 | 27.7 | 29.5 | 26.4 | 25.4 | 26.7 | 28.5 | 29.9 | 31.8 | 34.0 | 33.5 | 34.5 | 36.1 |

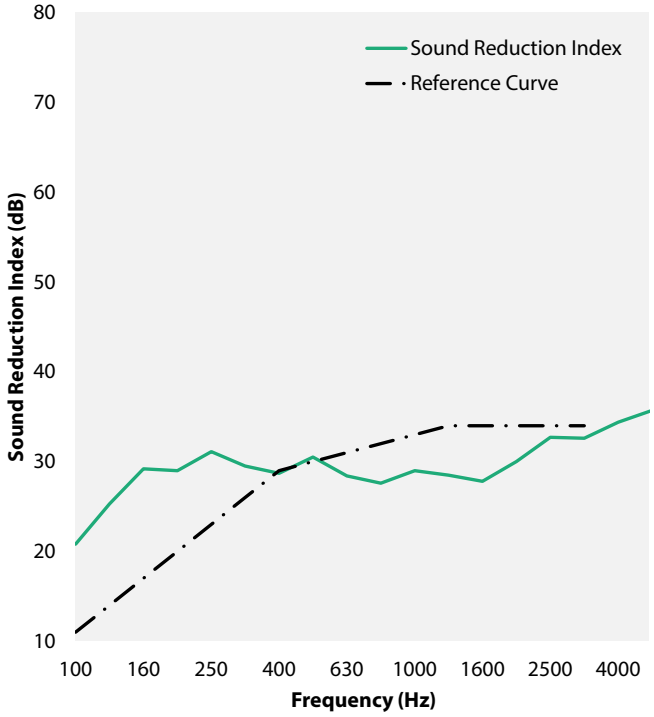
# $R_w$30 - 33 Sealing Systems - Double Doors

## RAVEN SEALING SYSTEM NO.

**RSS-094-A**


## Products used in this System

**RP87HSi** **RP126Si** **RP16Si**

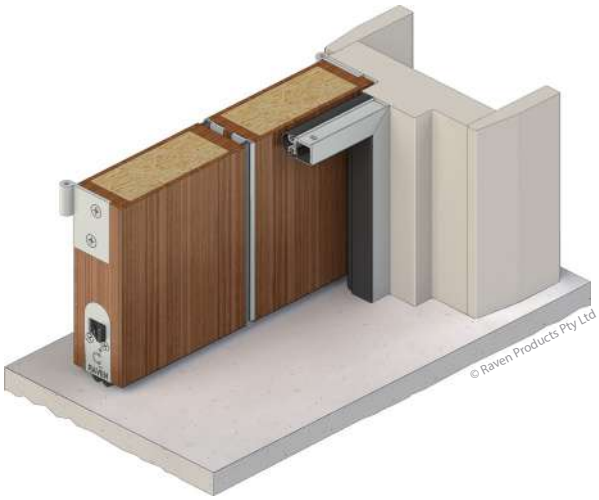



Perimeter seal adjustment independent of fixings

| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 20.8 | 25.3 | 29.2 | 29.9 | 31.1 | 29.5 | 28.7 | 30.5 | 28.4 | 27.6 | 29.0 | 28.5 | 27.8 | 30.0 | 32.7 | 32.6 | 34.4 | 35.7 |

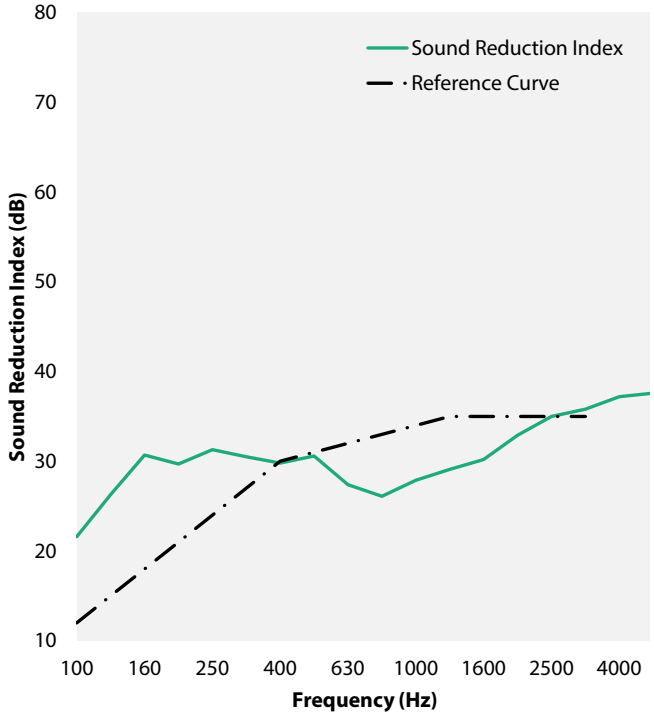
## RAVEN SEALING SYSTEM NO.

**RSS-087-A**




## Products used in this System

**RP84Si** **RP127Si** **RP71Si**



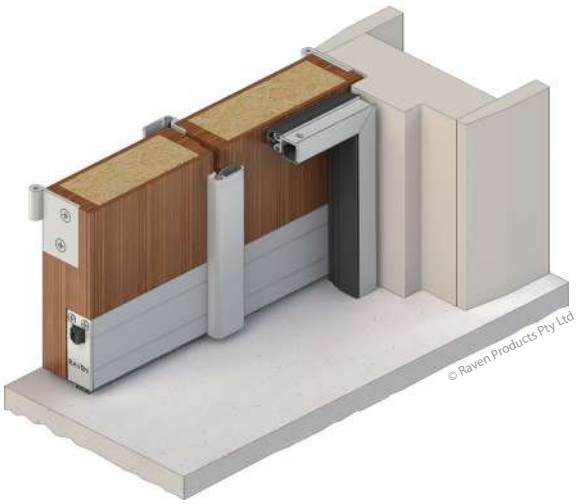

| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 31 | 31 | 21.6 | 26.3 | 30.7 | 29.7 | 31.3 | 30.5 | 29.8 | 30.6 | 27.4 | 26.1 | 27.9 | 29.1 | 30.2 | 32.9 | 35.0 | 35.8 | 37.2 | 37.6 |

# $R_w$30 - 33 Sealing Systems - Double Doors



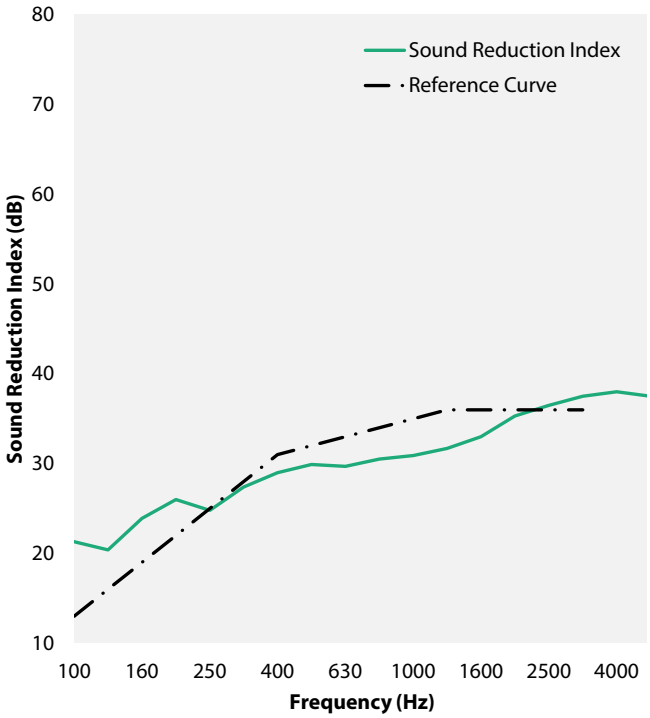
## RAVEN SEALING SYSTEM NO.

**RSS-003-A**




## Products used in this System

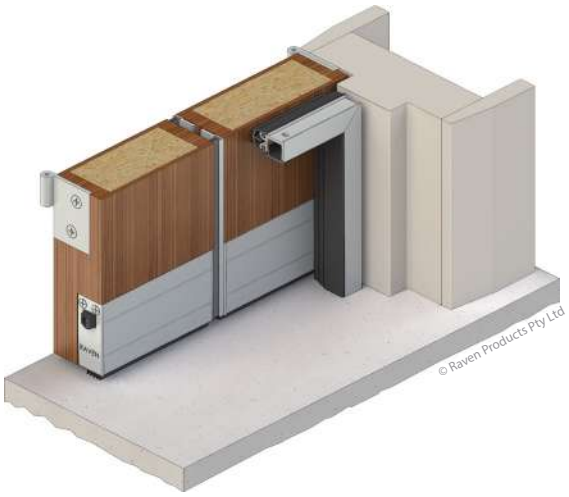
**RP10** **RP99Si** **RP16Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.3 | 20.4 | 23.9 | 26.0 | 24.8 | 27.4 | 29.0 | 29.9 | 29.7 | 30.5 | 30.9 | 31.7 | 33.0 | 35.3 | 36.5 | 37.5 | 38.0 | 37.5 |

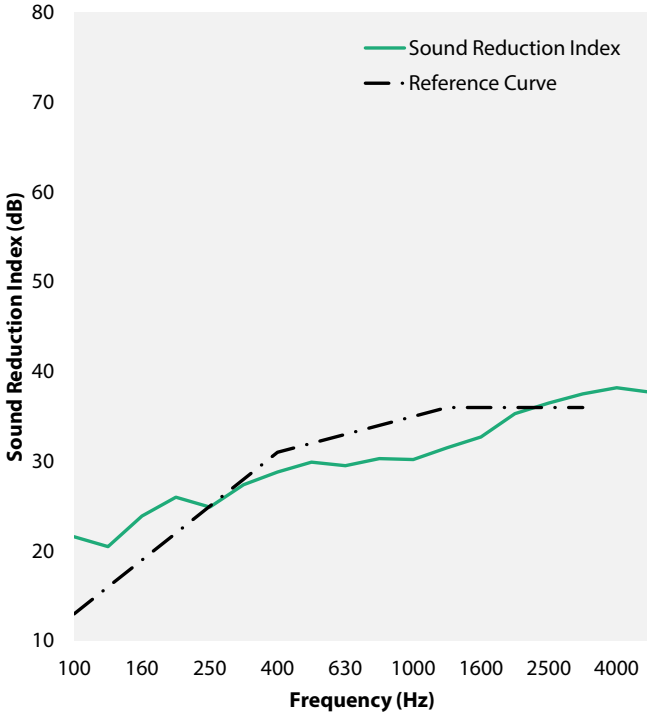
## RAVEN SEALING SYSTEM NO.

**RSS-004-A**




## Products used in this System

**RP10** **RP99Si** **RP71Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.6 | 20.5 | 23.9 | 26.0 | 24.9 | 27.4 | 28.8 | 29.9 | 29.5 | 30.3 | 30.2 | 31.5 | 32.7 | 35.3 | 36.5 | 37.5 | 38.2 | 37.7 |

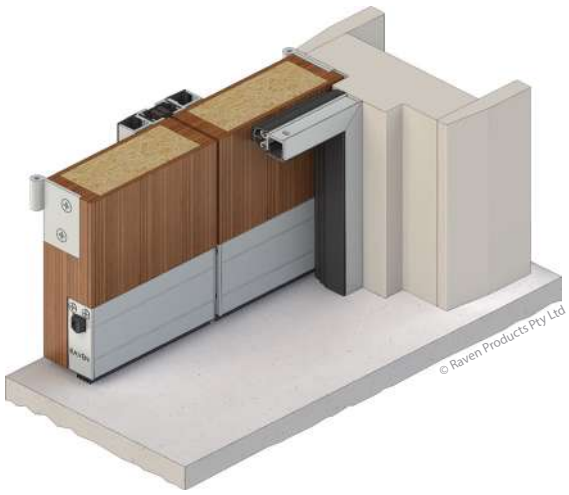


Automatic Door Bottom Seal | Door Bottom Sweep Seal | Door Frame / Perimeter Seal | Meeting Stile Seal | Threshold Plate Seal | Threshold Plate

# $R_w$30 - 33 Sealing Systems - Double Doors

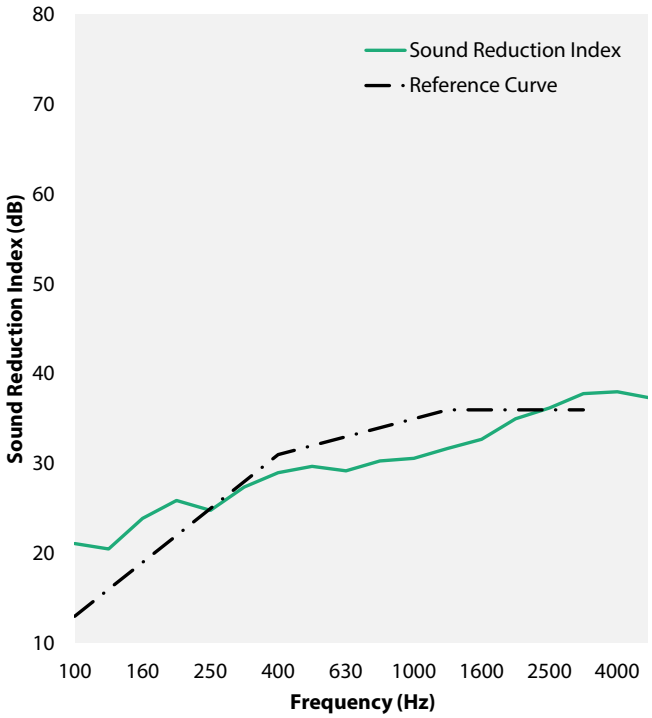
**RAVEN SEALING SYSTEM NO.**

**RSS-005-A**




**Products used in this System**

**RP10** **RP99Si** **RP85**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.1 | 20.5 | 23.9 | 25.9 | 24.8 | 27.4 | 29.0 | 29.7 | 29.2 | 30.3 | 30.6 | 31.7 | 32.7 | 35.0 | 36.2 | 37.8 | 38.0 | 37.3 |

## Adelaide Health and Medical Sciences building

Situated alongside the SAHMRI in the heart of Adelaide's BioMed City, sits the new Adelaide Health and Medical Sciences (AHMS) building. Featuring the latest state-of-the art cutting-edge technology, the AHMS was designed to integrate skills-based student learning with The University of Adelaide and a network of industry experts and health researchers.

Standing 14 floors high, the AHMS contains 4 floors of laboratories, 3 lecture theatres, 24 simulation suites, a dental hospital and student study spaces, eateries and amenities.

In order to meet the various mandated regulations and standards as required of the healthcare industry, Raven supplied a range of door bottom seals, perimeter seals and threshold plates to the AHMS building providing integrated door sealing systems, designed to meet a variety of complex sealing requirements. Raven sealing systems were required to perform across multiple levels from the exclusion of smoke, fire and weather through to acoustic attenuation and the containment of energy.

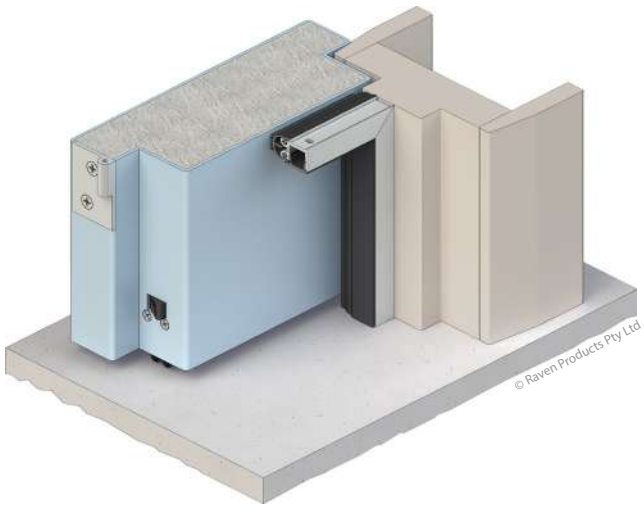
# $R_w$34 - 40 Acoustic Sealing Systems for Proprietary Doors

Doors tested were proprietary brand acoustic doors.

# $R_w$34 - 40 Sealing Systems - Single Doors

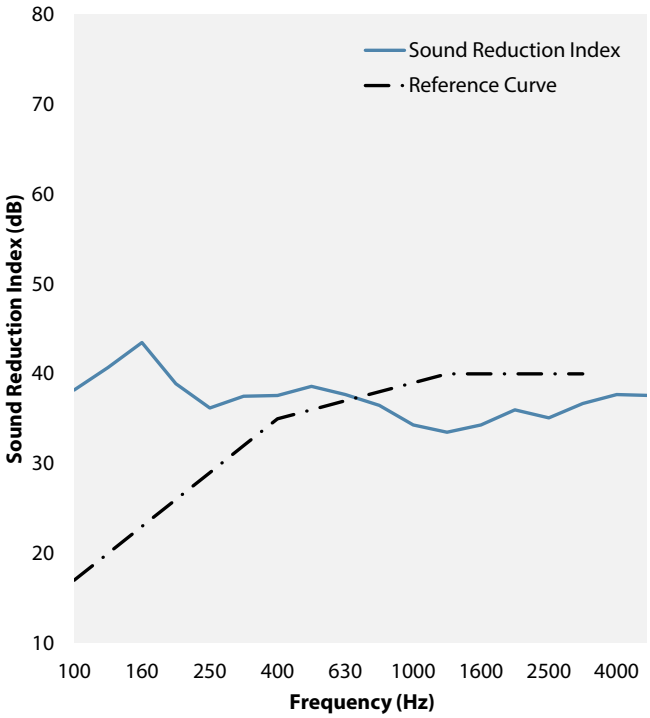
## RAVEN SEALING SYSTEM NO.

**RSS-010-A**




## Products used in this System

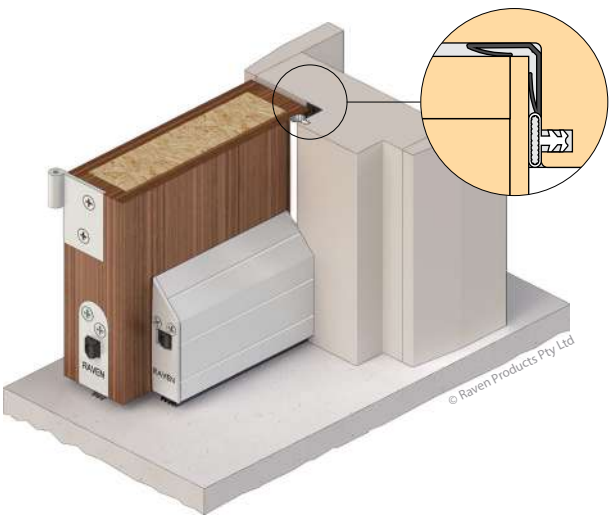
**RP10Si** **RP127Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 68mm | 1276.2 kg/m³ | 35 | 36 | 38.2 | 40.7 | 43.5 | 38.9 | 36.2 | 37.5 | 37.6 | 38.6 | 37.7 | 36.5 | 34.3 | 33.5 | 34.3 | 36.0 | 35.1 | 36.7 | 37.7 | 37.6 |

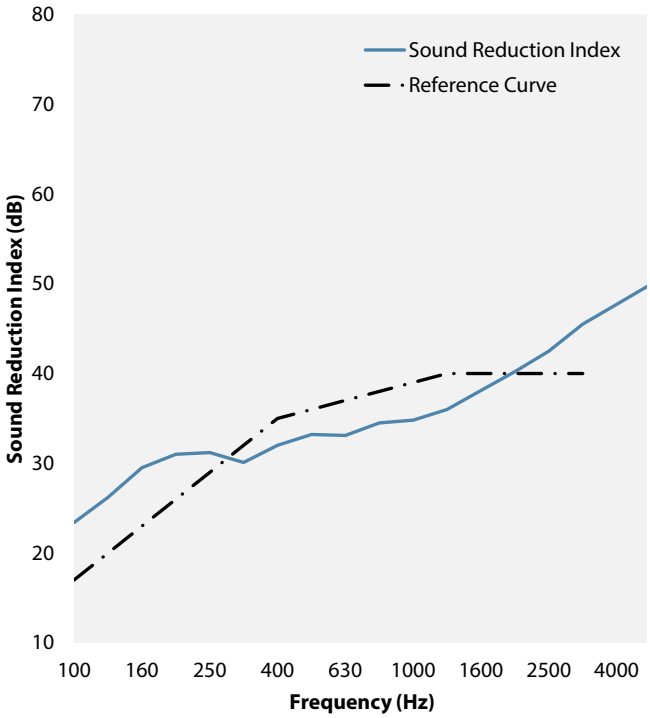
## RAVEN SEALING SYSTEM NO.

**RSS-021-A**




## Products used in this System

**RP120** **RP520** **RP8Si** **RP99Si**

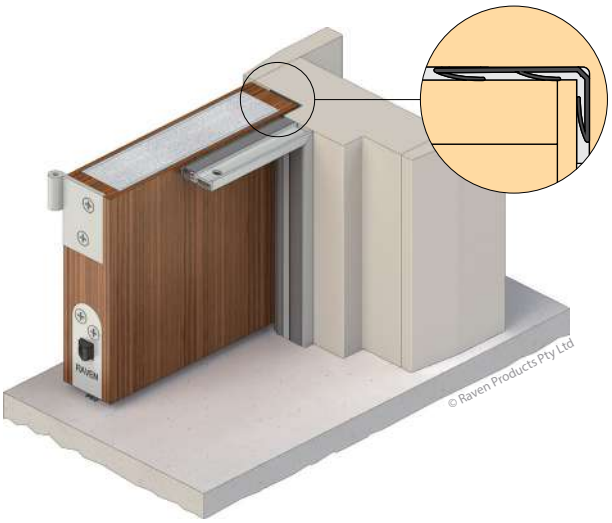



*STC estimation

| PROPRIETARY ACOUSTIC DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 44mm | 630.0 kg/m³ | 36* | 36 | 23.4 | 26.2 | 29.5 | 31.0 | 31.2 | 30.1 | 32.0 | 33.2 | 33.1 | 34.5 | 34.8 | 36.0 | 38.1 | 40.2 | 42.5 | 45.5 | 47.7 | 49.9 |

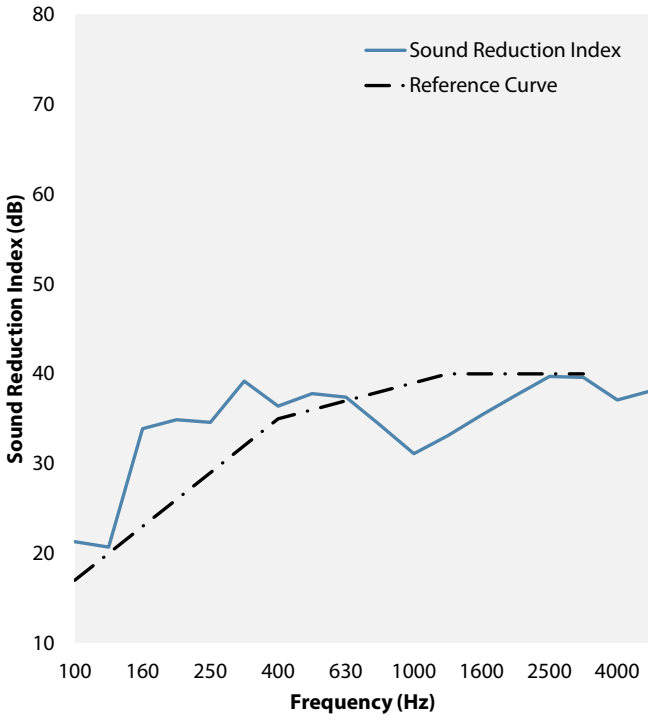
## RAVEN SEALING SYSTEM NO.

**RSS-069-A**


## Products used in this System

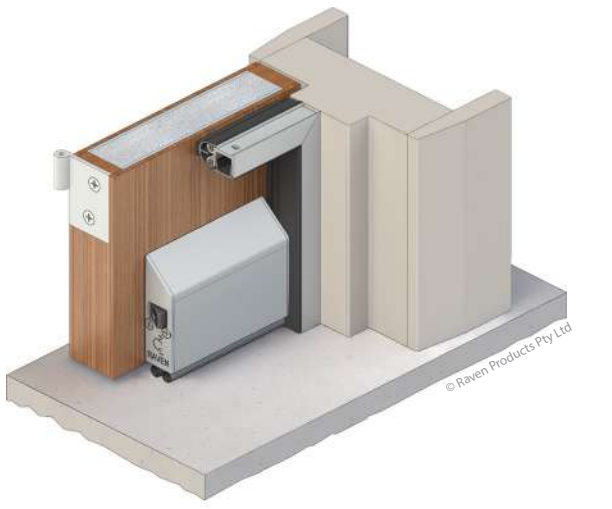
**RP78Si** **RP124** **RP8Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 36 | 36 | 21.3 | 20.7 | 33.9 | 34.9 | 34.6 | 39.2 | 36.4 | 37.8 | 37.4 | 34.3 | 31.1 | 33.1 | 35.4 | 37.6 | 39.7 | 39.6 | 37.1 | 38.1 |

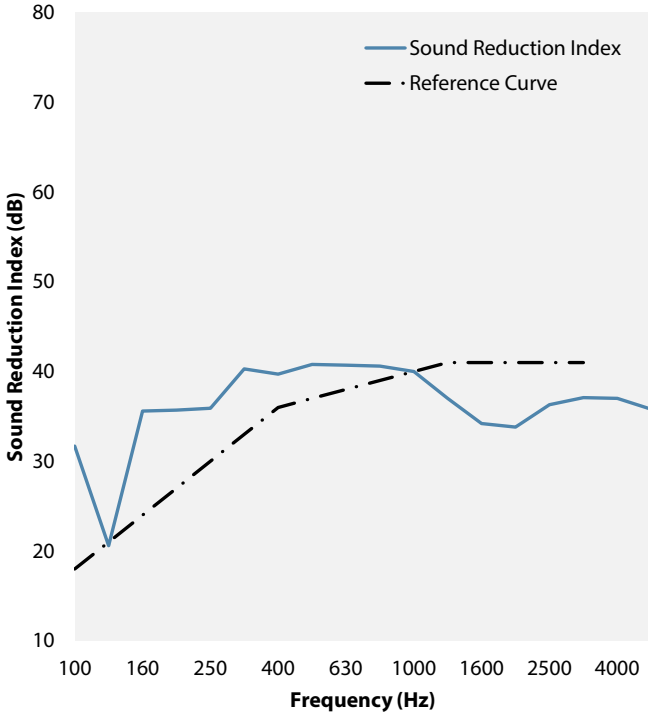
## RAVEN SEALING SYSTEM NO.

**RSS-011-A**


## Products used in this System

**RP10Si** **RP128Si**



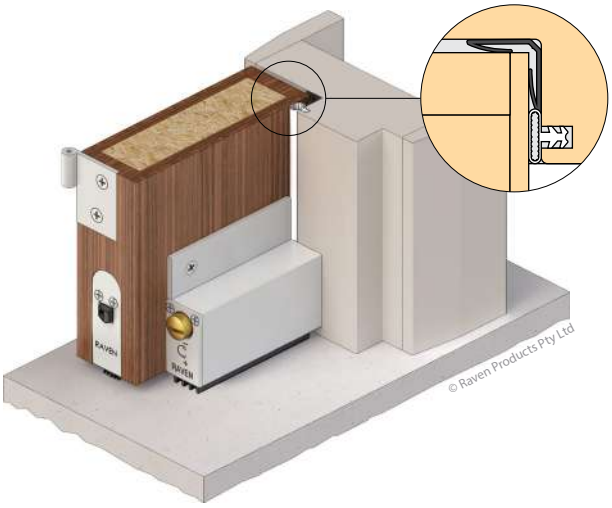

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 37 | 37 | 21.7 | 20.6 | 35.6 | 35.7 | 35.9 | 40.3 | 39.7 | 40.8 | 40.7 | 40.6 | 40.0 | 37.0 | 34.2 | 33.8 | 36.3 | 37.1 | 37.0 | 35.8 |

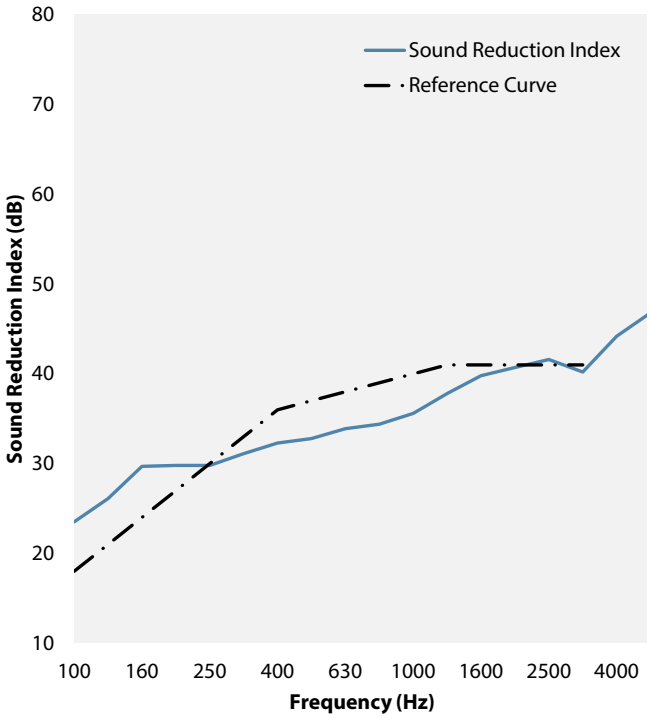
## RAVEN SEALING SYSTEM NO.

**RSS-020-A**

### Products used in this System

**RP120** **RP520** **RP38** **RP99Si**




*STC estimation

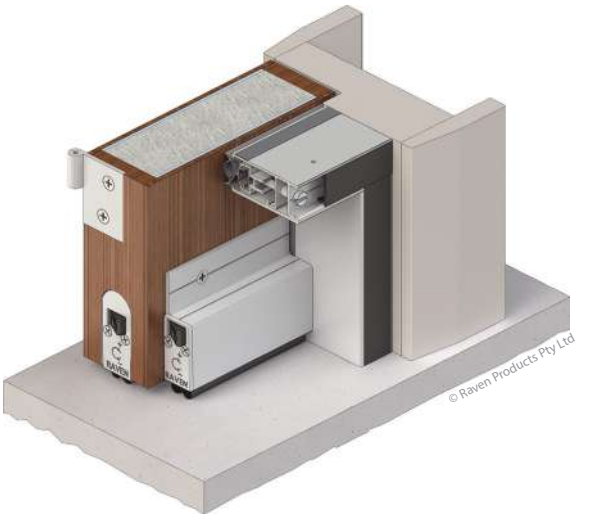
| PROPRIETARY ACOUSTIC DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 44mm | 630.0 kg/m³ | 37* | 37 | 23.5 | 26.1 | 29.7 | 29.8 | 29.8 | 31.1 | 32.3 | 32.8 | 33.9 | 34.4 | 35.6 | 37.8 | 39.8 | 40.7 | 41.6 | 40.2 | 44.2 | 46.8 |

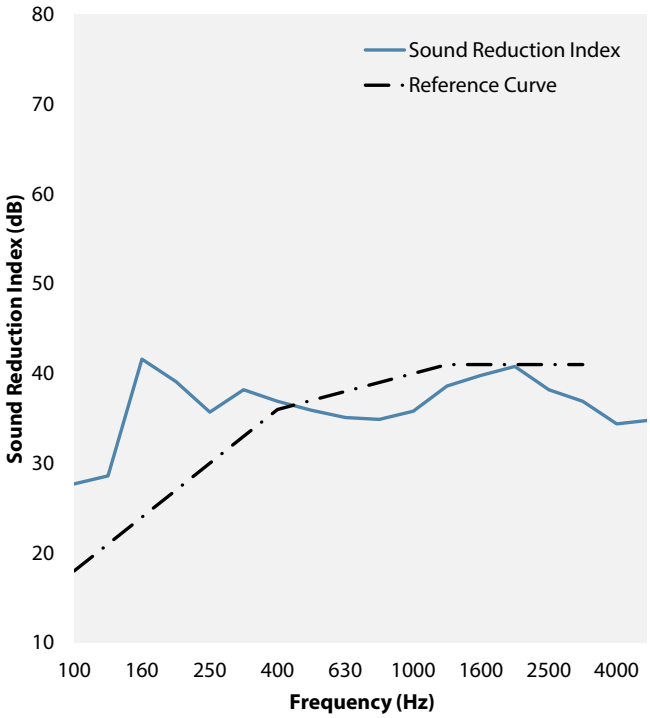
## RAVEN SEALING SYSTEM NO.

**RSS-043-A**

### Products used in this System

**RP24Si** **RP127Si** **RP126Si**



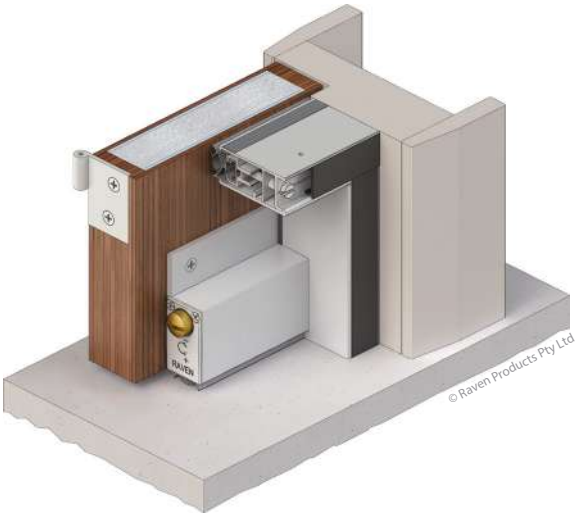




Perimeter seal adjustment independent of fixings

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 37 | 37 | 27.7 | 28.6 | 41.6 | 39.1 | 35.7 | 38.2 | 36.9 | 35.9 | 35.1 | 34.9 | 35.8 | 38.6 | 39.8 | 40.8 | 38.2 | 36.9 | 34.4 | 34.8 |

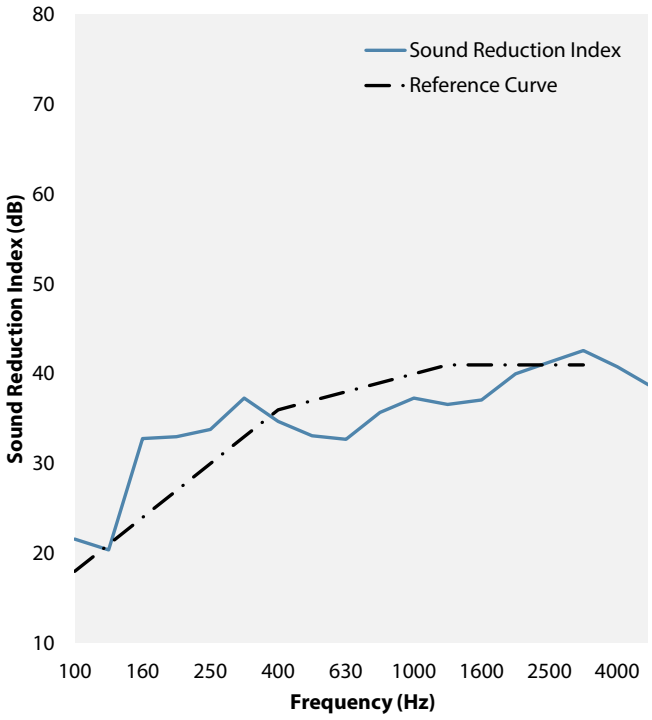
## RAVEN SEALING SYSTEM NO.

**RSS-044-A**




## Products used in this System

**RP24Si** **RP38Si**




Perimeter seal adjustment independent of fixings

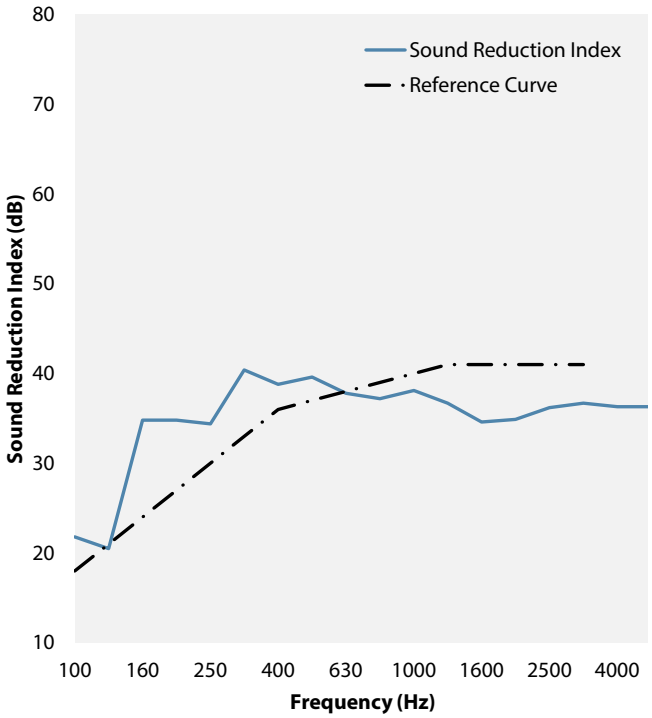
| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 37 | 37 | 21.6 | 20.4 | 32.8 | 33.0 | 33.8 | 37.3 | 34.7 | 33.1 | 32.7 | 35.7 | 37.3 | 36.6 | 37.1 | 40.3 | 41.3 | 42.6 | 40.8 | 38.6 |

## RAVEN SEALING SYSTEM NO.

**RSS-080-B**


## Products used in this System

**RP78Si** **RP8Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 36 | 37 | 21.8 | 20.5 | 34.8 | 34.8 | 34.4 | 40.4 | 38.8 | 39.6 | 37.8 | 37.2 | 38.1 | 36.7 | 34.6 | 34.9 | 36.2 | 36.7 | 36.3 | 36.3 |

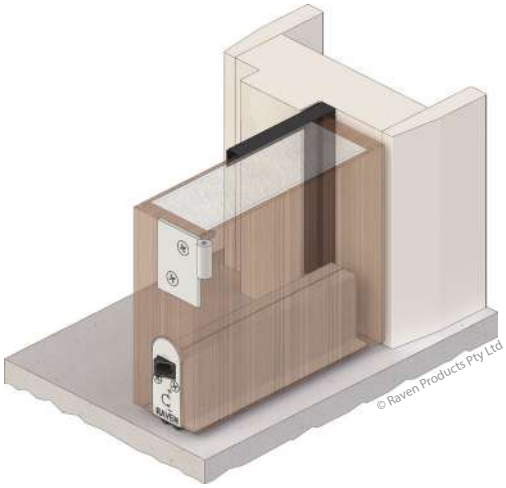
# $R_w$34 - 40 Sealing Systems - Single Doors

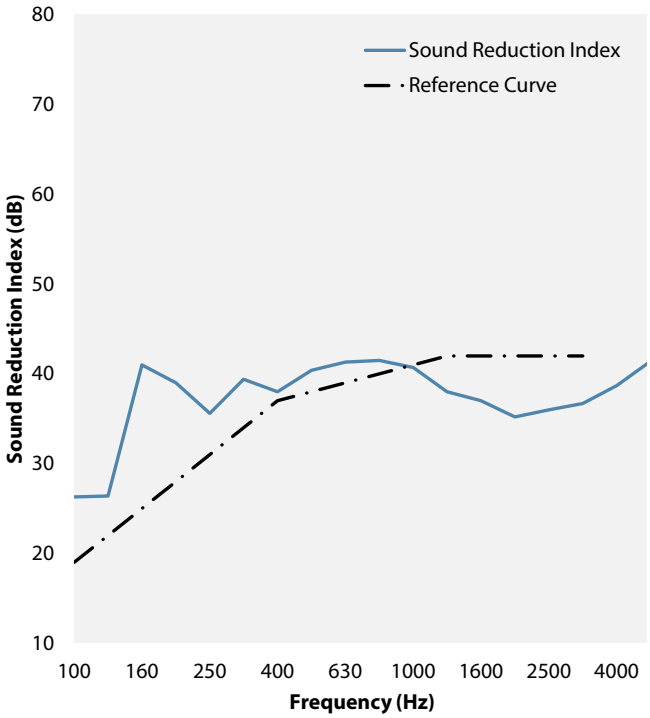
## RAVEN SEALING SYSTEM NO.

**RSS-018-A**

### Products used in this System

**RP120** **RP127Si**



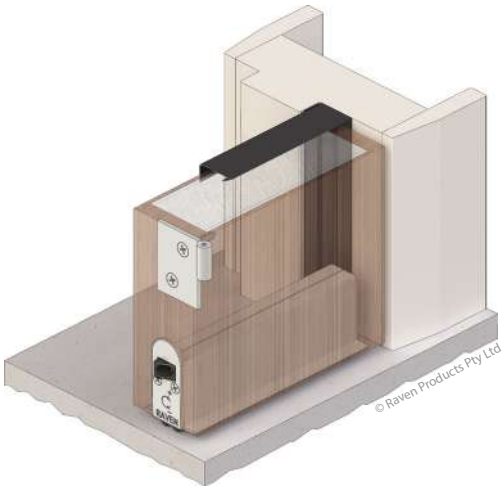

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 38 | 38 | 26.3 | 26.4 | 41.0 | 39.0 | 35.6 | 39.4 | 38.0 | 40.4 | 41.3 | 41.5 | 40.7 | 38.0 | 37.0 | 35.2 | 36.0 | 36.7 | 38.7 | 41.4 |

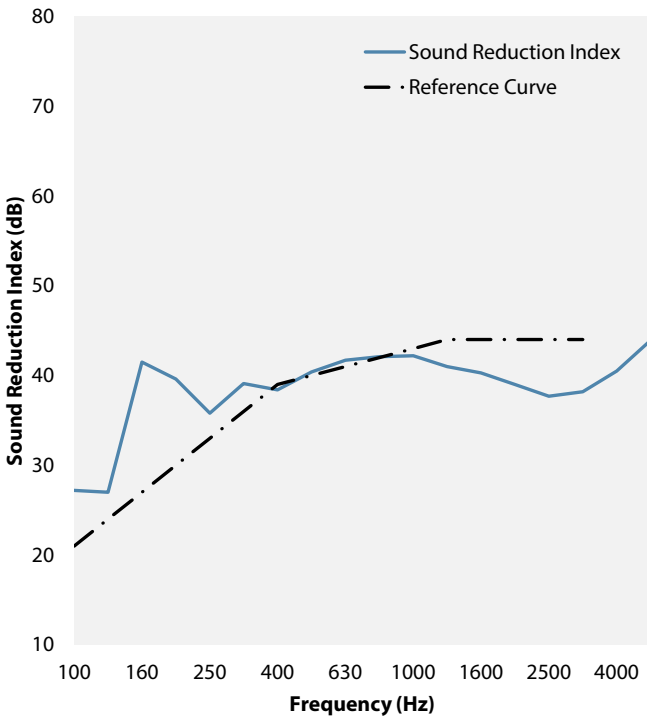
## RAVEN SEALING SYSTEM NO.

**RSS-025-A**

### Products used in this System

**RP124** **RP127Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 40 | 40 | 27.2 | 27.0 | 41.5 | 39.6 | 35.8 | 39.1 | 38.4 | 40.4 | 41.7 | 42.1 | 42.2 | 41.0 | 40.3 | 39.0 | 37.7 | 38.2 | 40.5 | 43.9 |

# $R_w$41 - 50+ Acoustic Sealing Systems for Proprietary Doors

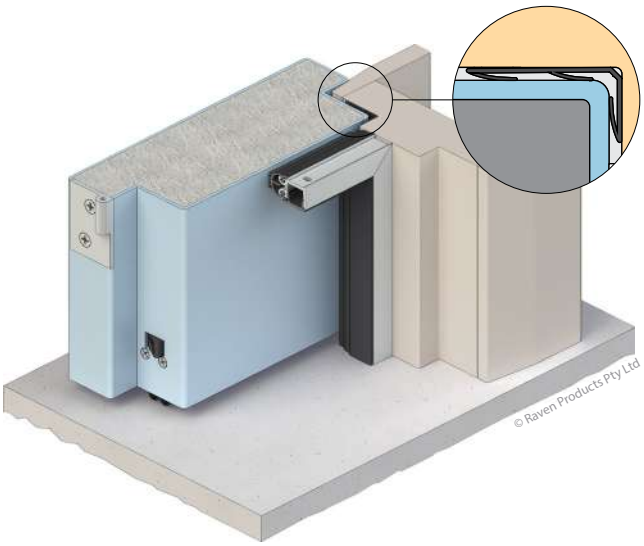
Doors tested were proprietary brand acoustic doors.

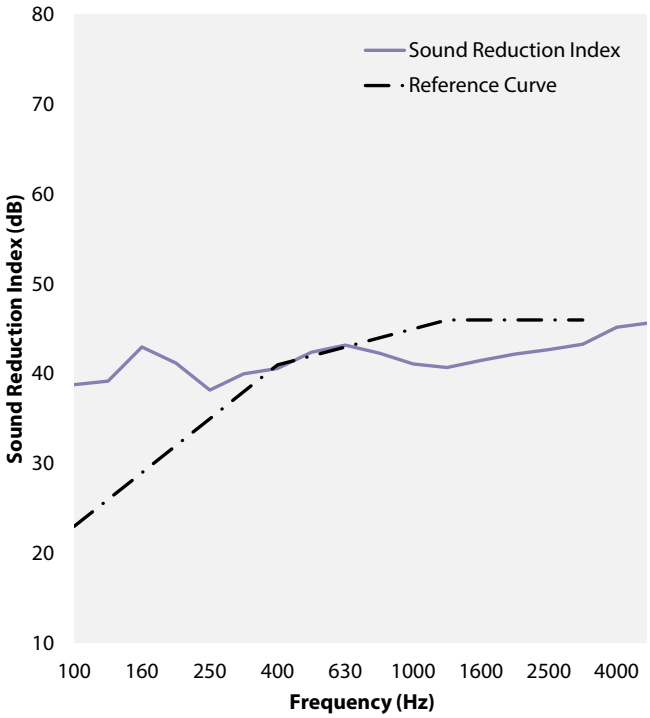
## RAVEN SEALING SYSTEM NO.

**RSS-006-A**

**Products used in this System**

**RP10Si** **RP124** **RP127Si**



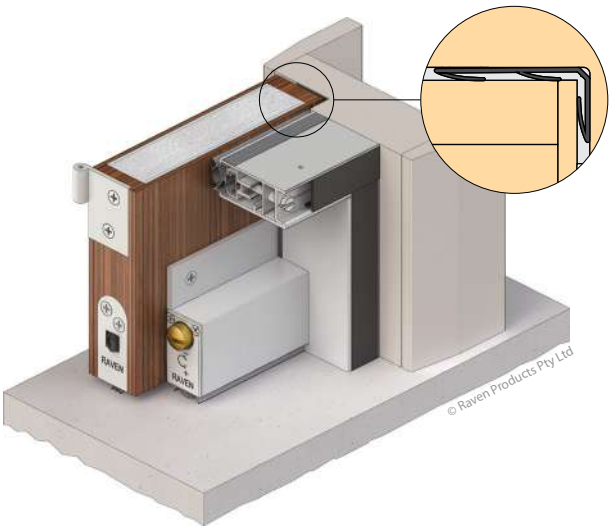

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 68mm | 1276.2 kg/m³ | 42 | 42 | 38.8 | 39.2 | 43.0 | 41.2 | 38.2 | 40.0 | 40.6 | 42.4 | 43.2 | 42.3 | 41.1 | 40.7 | 41.5 | 42.2 | 42.7 | 43.3 | 45.2 | 45.7 |

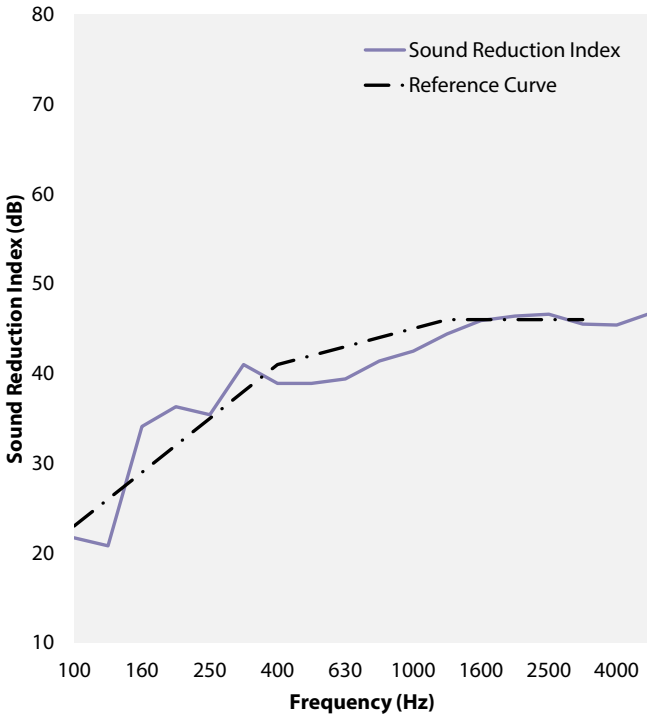
## RAVEN SEALING SYSTEM NO.

**RSS-042-A**

**Products used in this System**

**RP24Si** **RP124** **RP8Si** **RP38Si**



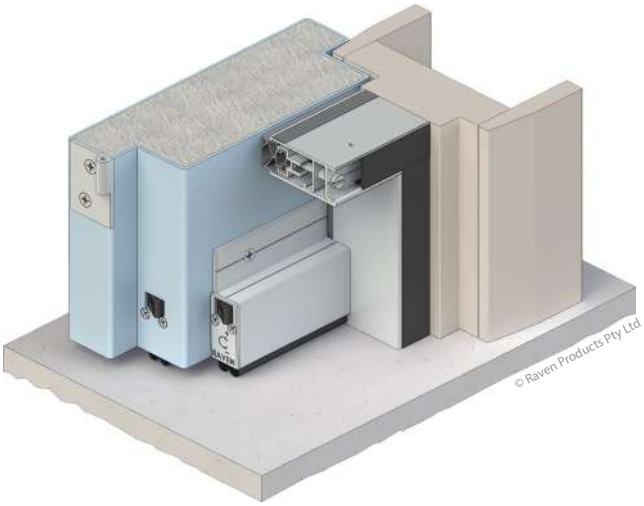




Perimeter seal adjustment independent of fixings

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 42 | 42 | 21.7 | 20.8 | 34.1 | 36.3 | 35.4 | 41.0 | 38.9 | 38.9 | 39.4 | 41.4 | 42.5 | 44.4 | 45.9 | 46.4 | 46.6 | 45.5 | 45.4 | 46.7 |

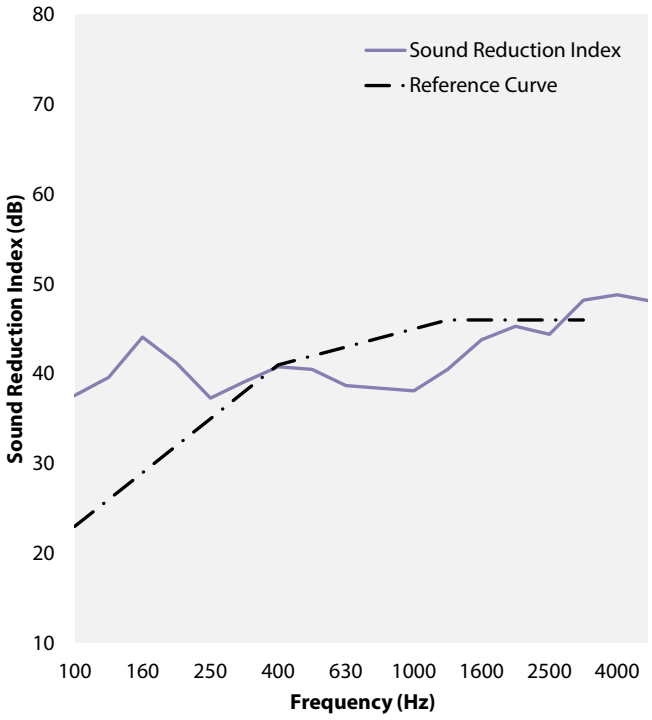
## RAVEN SEALING SYSTEM NO.

**RSS-043-B**




### Products used in this System

**RP24Si** **RP127Si** **RP126Si**

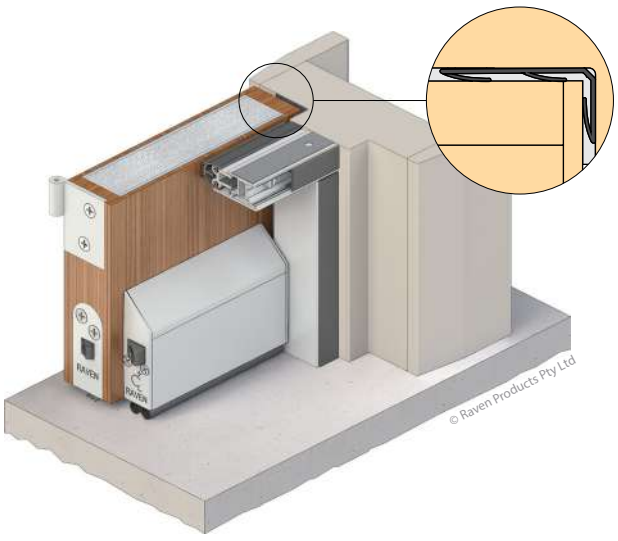



Perimeter seal adjustment independent of fixings

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 68mm | 1276.2 kg/m³ | 42 | 42 | 37.6 | 39.6 | 44.1 | 41.2 | 37.3 | 39.1 | 40.7 | 40.5 | 38.7 | 38.4 | 38.1 | 40.5 | 43.8 | 45.3 | 44.4 | 48.2 | 48.8 | 48.1 |

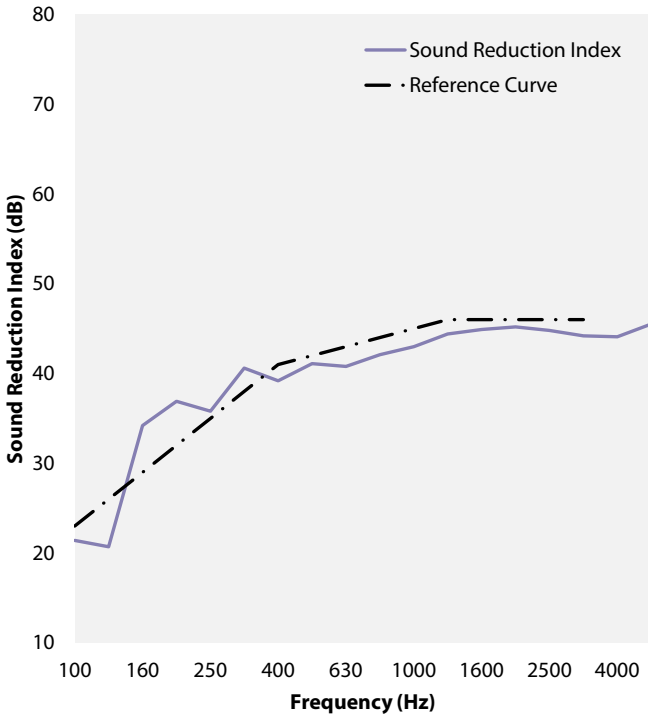
## RAVEN SEALING SYSTEM NO.

**RSS-096-A**




### Products used in this System

**RP87Si** **RP124** **RP8Si** **RP128Si**




Perimeter seal adjustment independent of fixings

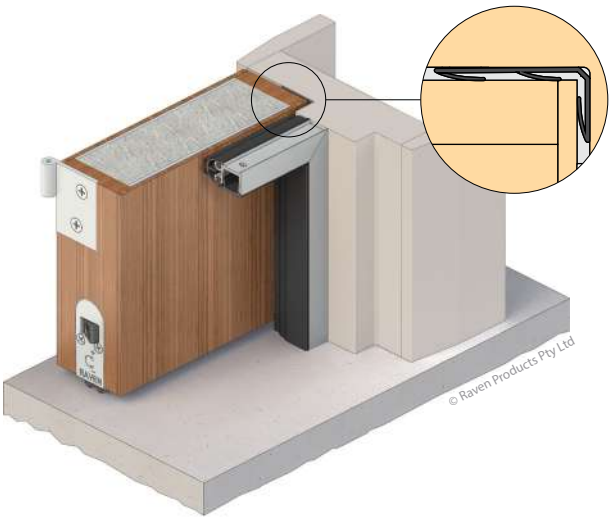
| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 42 | 42 | 21.4 | 20.7 | 34.2 | 36.9 | 35.8 | 40.6 | 39.2 | 41.1 | 40.8 | 42.1 | 43.0 | 44.4 | 44.9 | 45.2 | 44.8 | 44.2 | 44.1 | 45.5 |

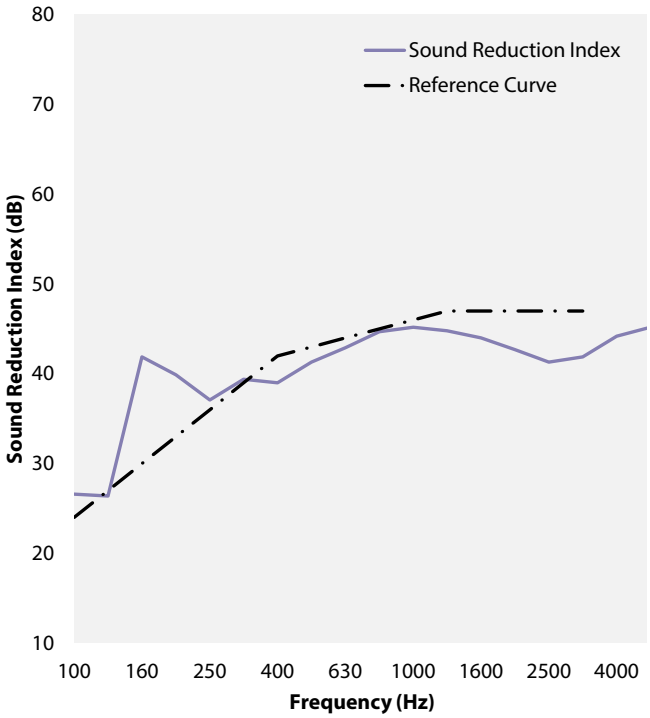
## RAVEN SEALING SYSTEM NO.

**RSS-006-B**

**Products used in this System**

**RP10Si** **RP124** **RP127Si**



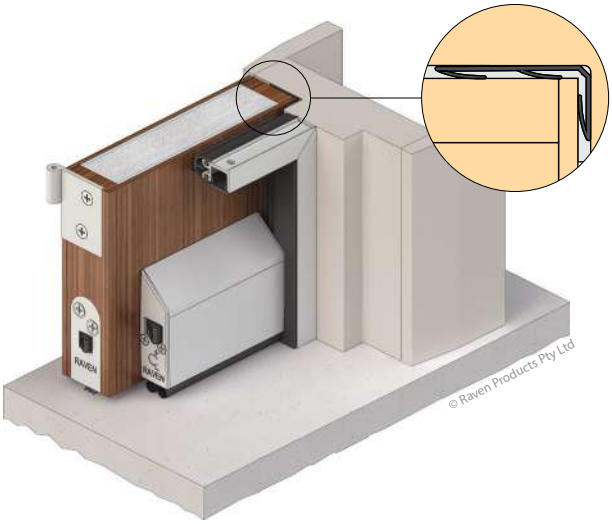

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 43 | 43 | 26.6 | 26.4 | 41.9 | 39.9 | 37.1 | 39.4 | 39.0 | 41.3 | 42.9 | 44.7 | 45.2 | 44.8 | 44.0 | 42.7 | 41.3 | 41.9 | 44.2 | 45.2 |

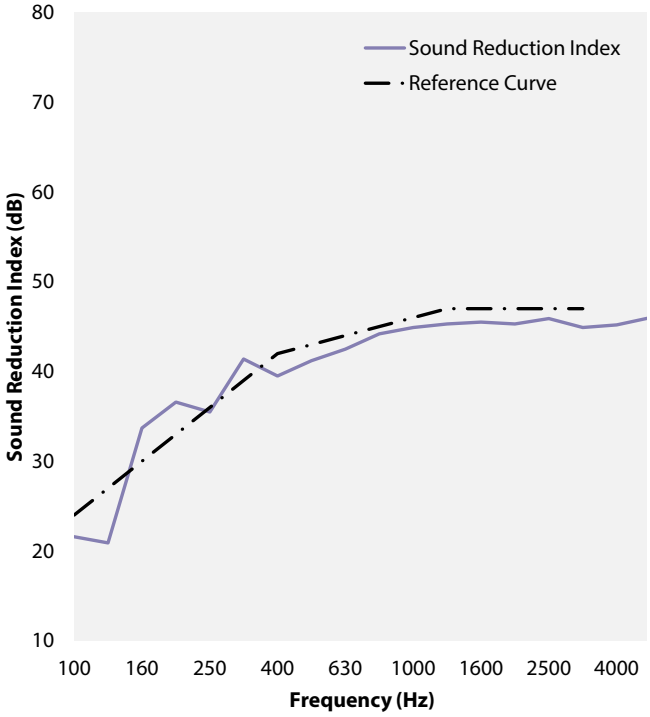
## RAVEN SEALING SYSTEM NO.

**RSS-008-A**

**Products used in this System**

**RP10Si** **RP124** **RP8Si** **RP128Si**

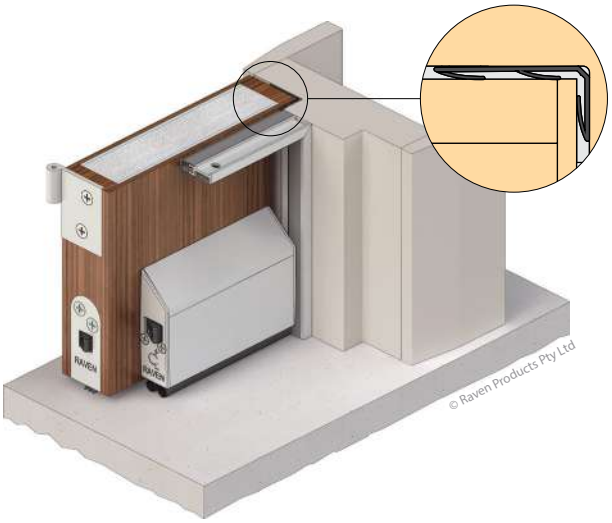



| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 43 | 43 | 21.6 | 20.9 | 33.7 | 36.6 | 35.5 | 41.4 | 39.5 | 41.2 | 42.5 | 44.2 | 44.9 | 45.3 | 45.5 | 45.3 | 45.9 | 44.9 | 45.2 | 46.0 |

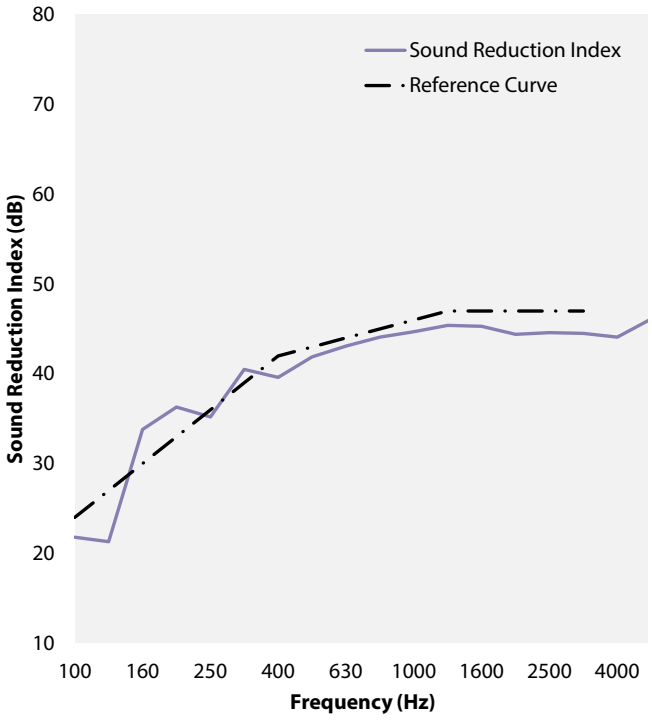
## RAVEN SEALING SYSTEM NO.

**RSS-070-A**




### Products used in this System

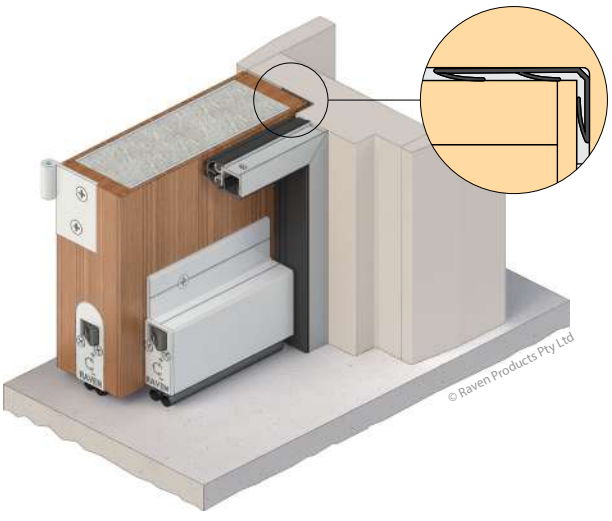
**RP78Si** **RP124** **RP8Si** **RP128Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1102.9 kg/m³ | 43 | 43 | 21.8 | 21.3 | 33.8 | 36.3 | 35.2 | 40.5 | 39.6 | 41.9 | 43.1 | 44.1 | 44.7 | 45.4 | 45.3 | 44.4 | 44.6 | 44.5 | 44.1 | 46.1 |

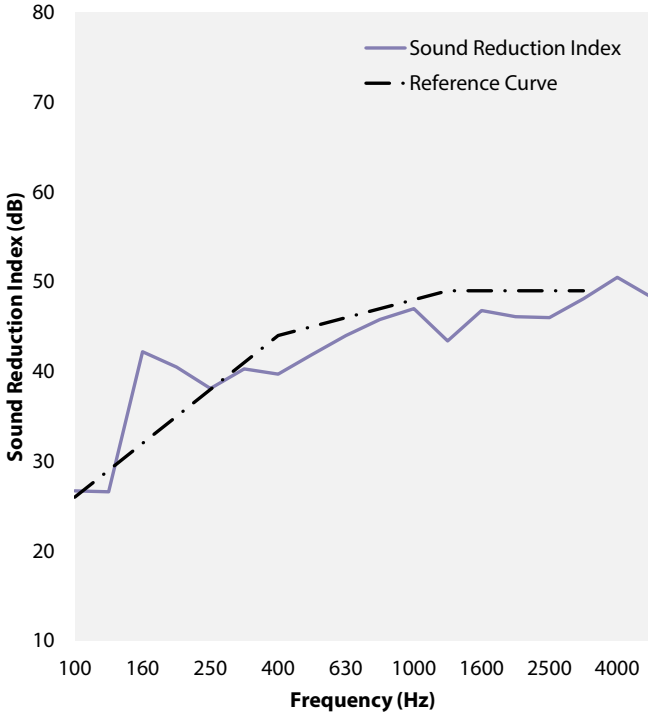
## RAVEN SEALING SYSTEM NO.

**RSS-007-A**




### Products used in this System

**RP10Si** **RP124** **RP127Si** **RP126Si**



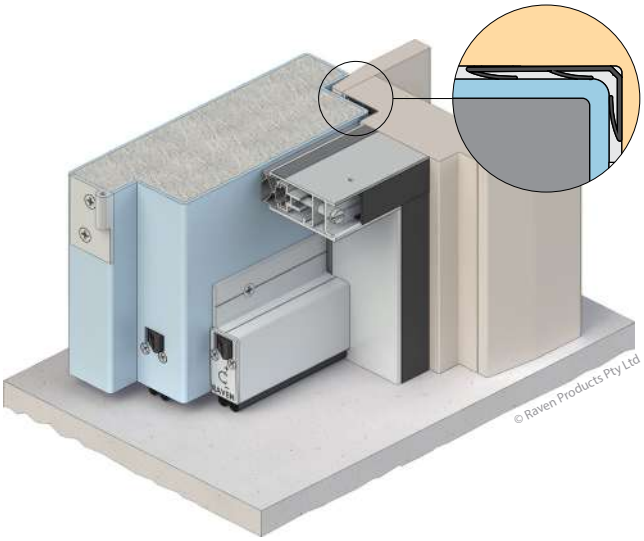

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 48mm | 916.9 kg/m³ | 45 | 45 | 26.7 | 26.6 | 42.2 | 40.5 | 38.1 | 40.3 | 39.7 | 41.9 | 44.0 | 45.8 | 47.0 | 46.4 | 46.8 | 46.1 | 46.0 | 48.1 | 50.5 | 48.3 |

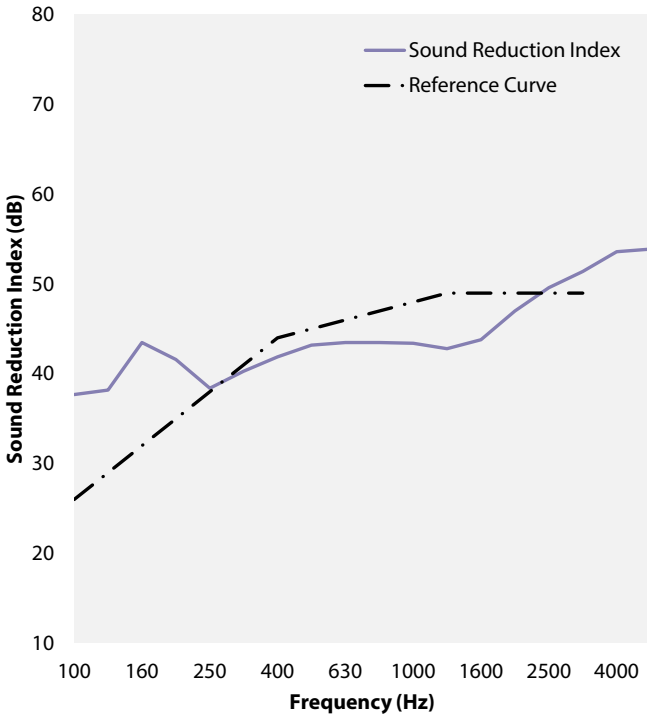
## RAVEN SEALING SYSTEM NO.

**RSS-041-A**

**Products used in this System**

**RP24Si** **RP124** **RP127Si** **RP126Si**




Perimeter seal adjustment independent of fixings

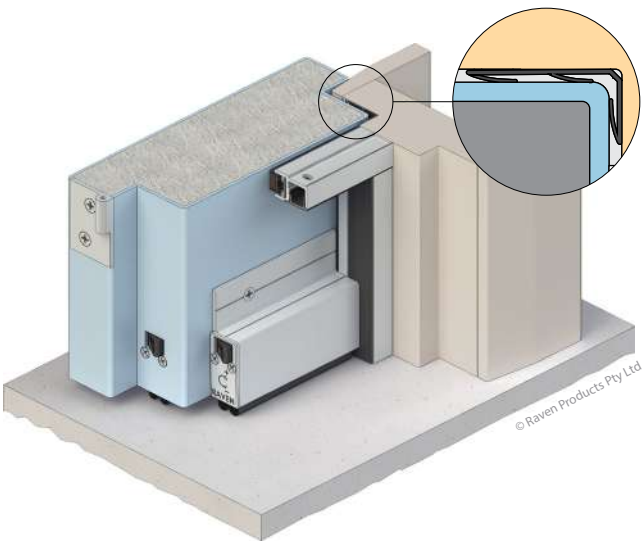
| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 68mm | 1276.2 kg/m³ | 45 | 45 | 37.7 | 38.2 | 43.5 | 41.6 | 38.4 | 40.3 | 41.9 | 43.2 | 43.5 | 43.5 | 43.4 | 42.8 | 43.8 | 47.0 | 49.6 | 51.4 | 53.6 | 53.9 |

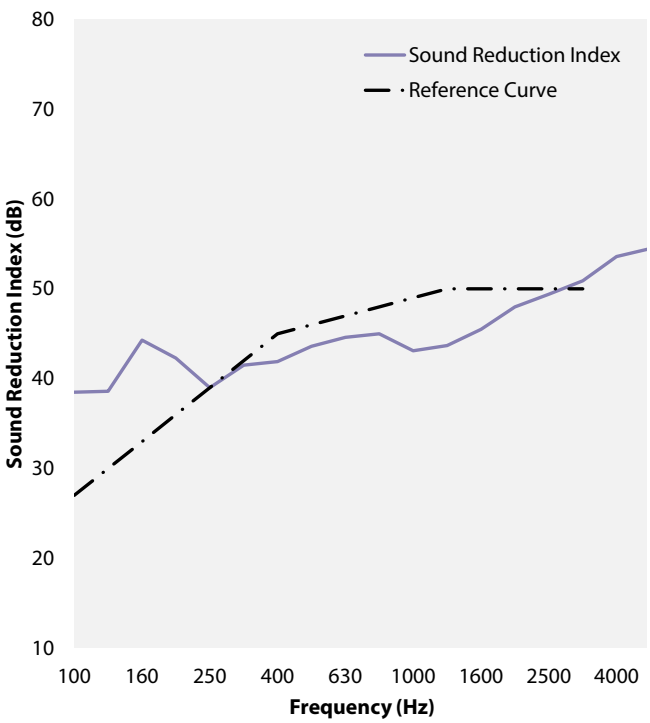
## RAVEN SEALING SYSTEM NO.

**RSS-092-A**

**Products used in this System**

**RP85** **RP124** **RP127Si** **RP126Si**




| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 68mm | 1276.2 kg/m³ | 46 | 46 | 38.5 | 38.6 | 44.3 | 42.3 | 39.0 | 41.5 | 41.9 | 43.6 | 44.6 | 45.0 | 43.1 | 43.7 | 45.5 | 48.0 | 49.4 | 50.9 | 53.6 | 54.5 |

# Acoustic Sealing Systems for Bulkhead, Interconnecting, Sliding and Pivot doors

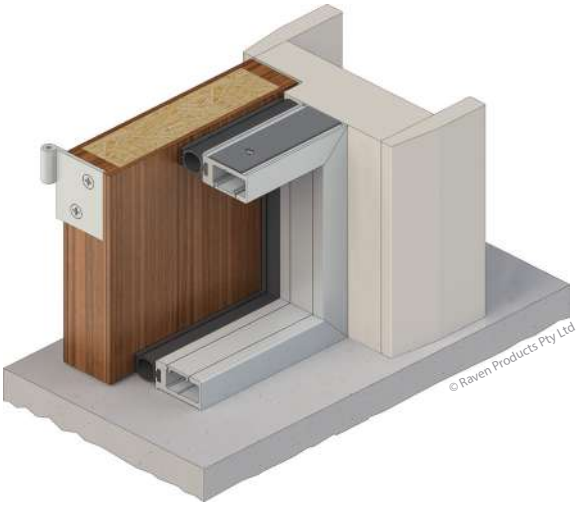
Doors tested were standard solid core timber doors and proprietary brand acoustic doors.

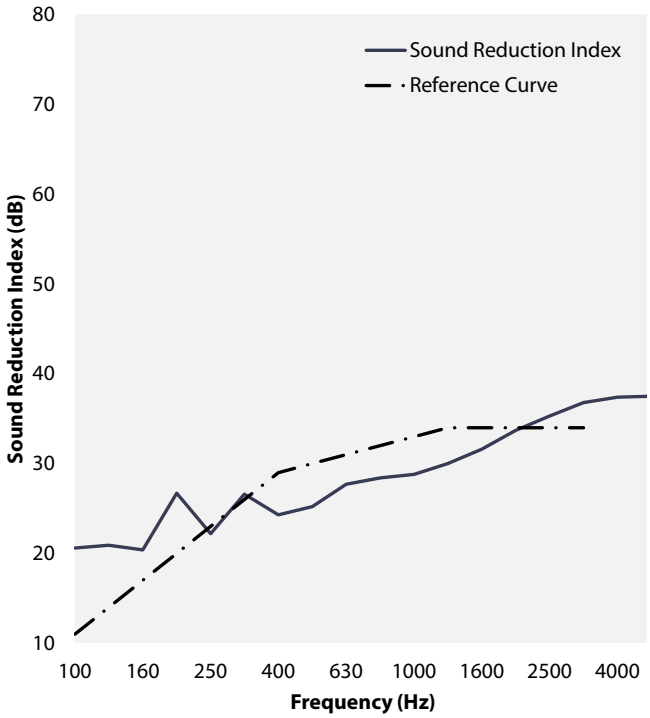
## RAVEN SEALING SYSTEM NO.

**RSS-050-A**

### Products used in this System

**RP47Si**



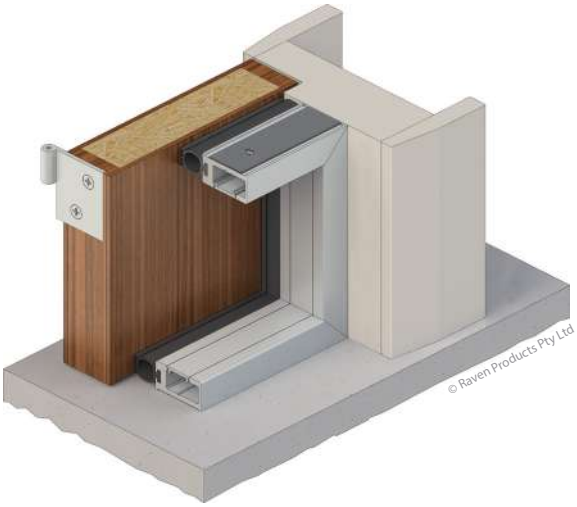

| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 37mm | 367.6 kg/m³ | 30 | 30 | 20.6 | 20.9 | 20.4 | 26.7 | 22.2 | 26.6 | 24.3 | 25.2 | 27.7 | 28.4 | 28.8 | 30.0 | 31.6 | 33.7 | 35.3 | 36.8 | 37.5 | 37.5 |

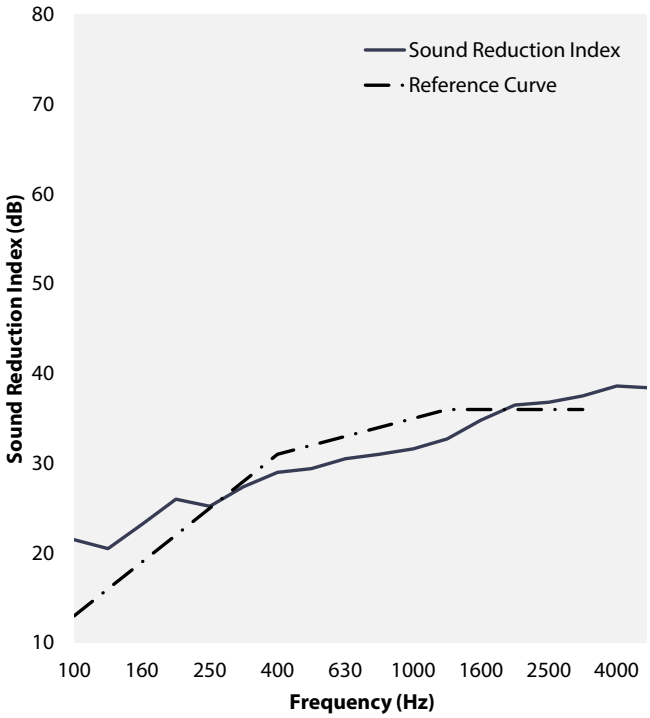
## RAVEN SEALING SYSTEM NO.

**RSS-050-B**

### Products used in this System

**RP47Si**




| SOLID CORE DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 46mm | 367.6 kg/m³ | 32 | 32 | 21.5 | 20.5 | 23.2 | 26.0 | 25.2 | 27.4 | 29.0 | 29.9 | 29.4 | 30.5 | 31.0 | 31.6 | 32.7 | 34.8 | 36.5 | 37.5 | 38.6 | 38.4 |

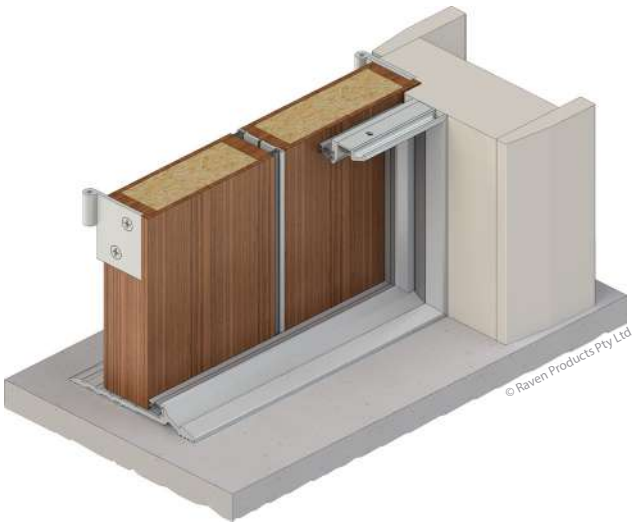




Automatic Door Bottom Seal | Door Bottom Sweep Seal | Door Frame / Perimeter Seal | Meeting Stile Seal | Threshold Plate Seal | Threshold Plate

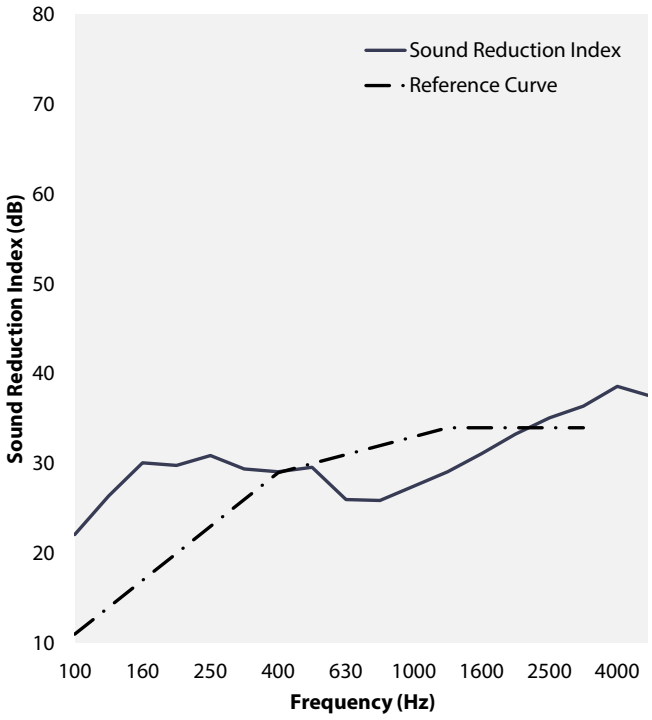
## RAVEN SEALING SYSTEM NO.

**RSS-016-A**




### Products used in this System

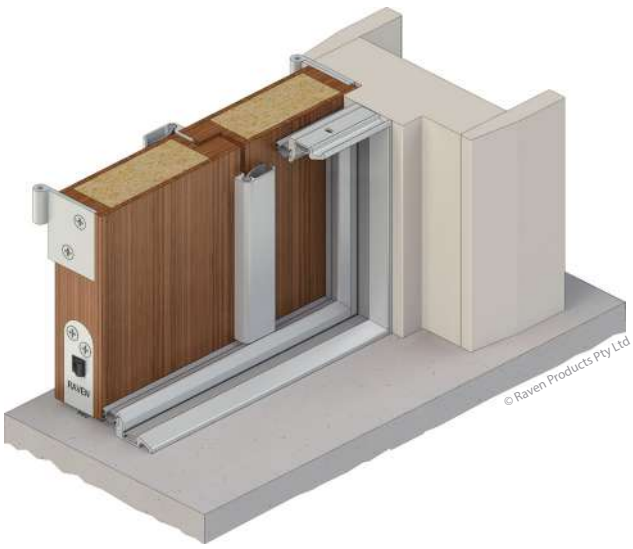
**RP118Si** **RP71Si** **RP117Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 30 | 30 | 22.1 | 26.4 | 30.1 | 29.8 | 30.9 | 29.4 | 29.1 | 29.6 | 26.0 | 25.9 | 27.5 | 29.1 | 31.7 | 33.3 | 35.1 | 36.9 | 38.6 | 37.5 |

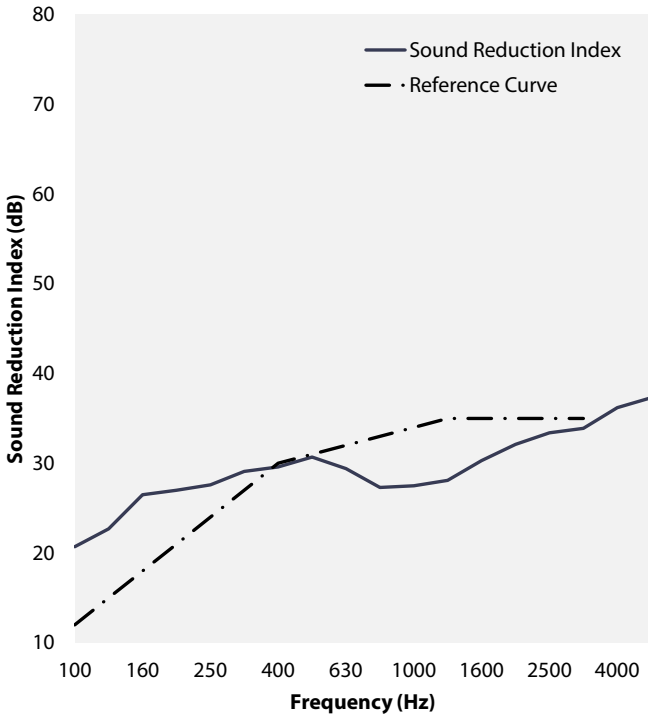
## RAVEN SEALING SYSTEM NO.

**RSS-017-A**




### Products used in this System

**RP118Si** **RP8Si** **RP16Si**



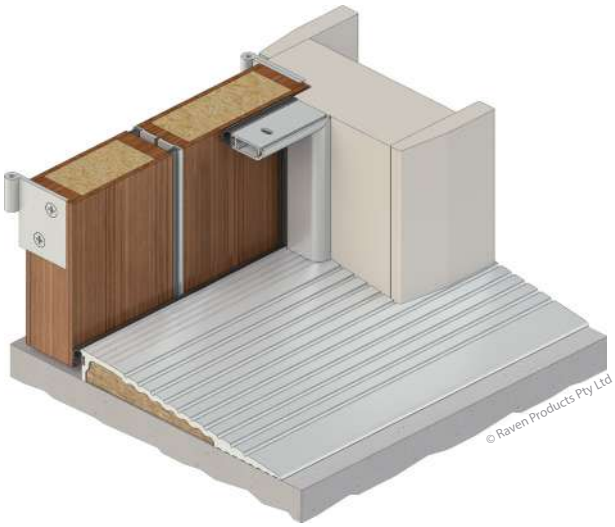

| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | N/A | 30 | 30 | 20.7 | 22.7 | 26.5 | 27.0 | 27.6 | 29.1 | 29.6 | 30.7 | 29.4 | 27.3 | 27.5 | 28.1 | 30.3 | 32.1 | 33.4 | 33.9 | 36.2 | 37.3 |

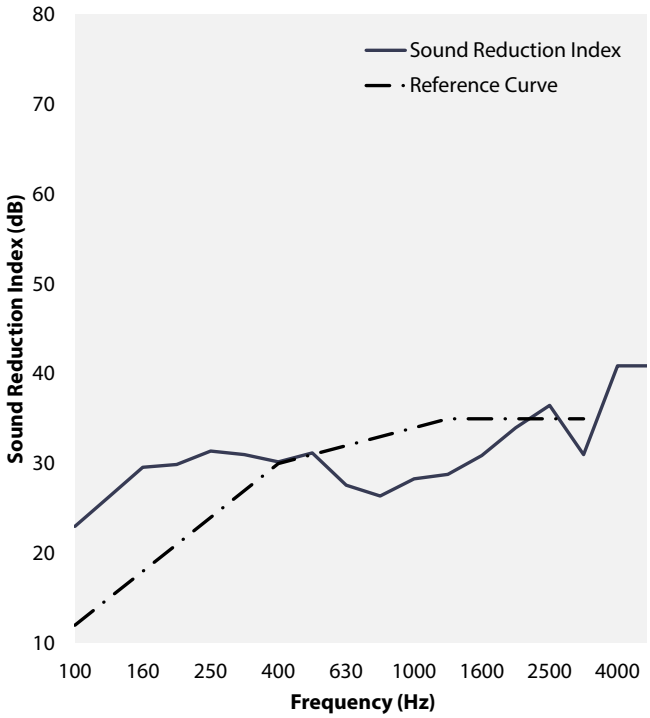
**RAVEN SEALING SYSTEM NO.**

**RSS-100-A**

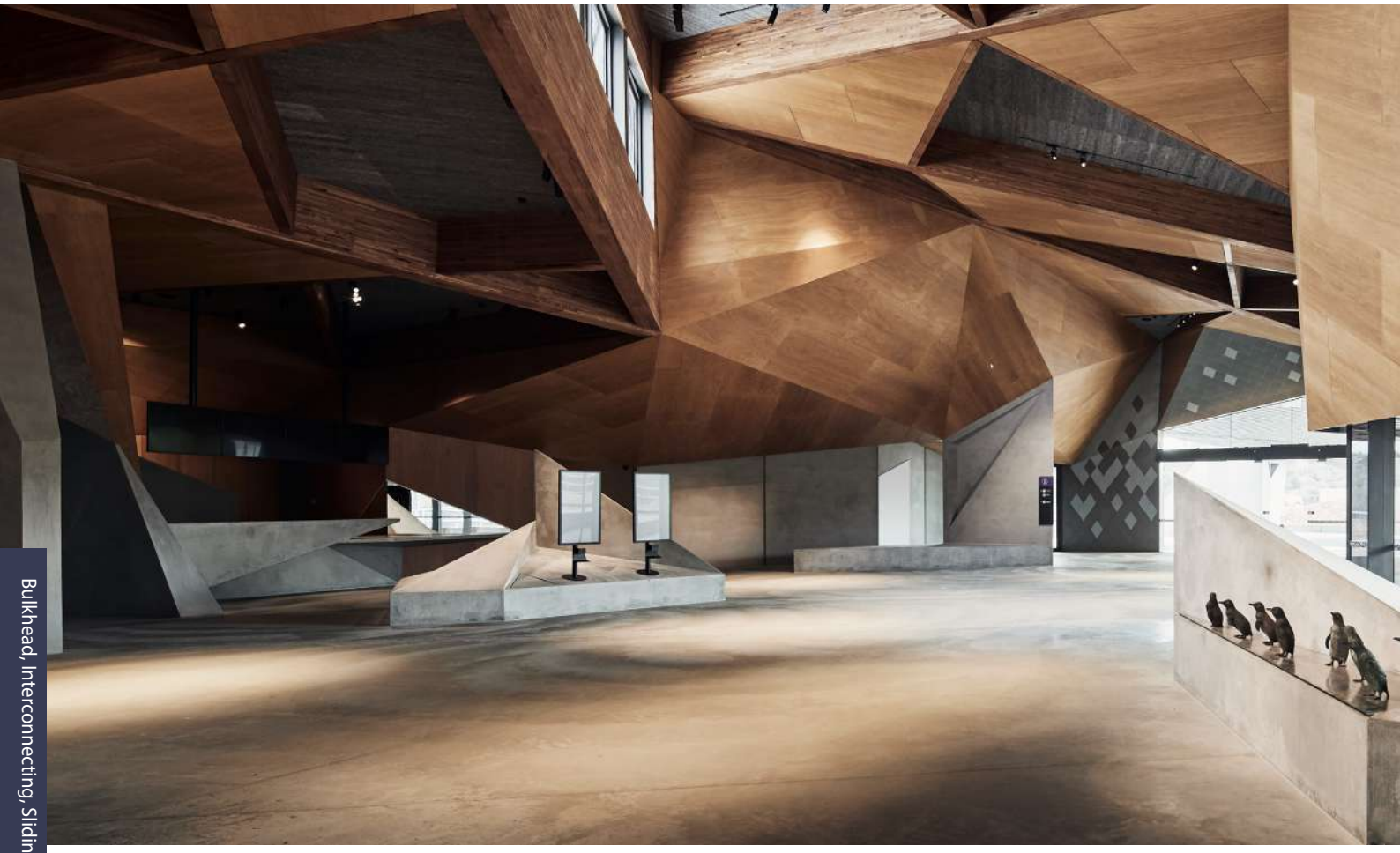
**Products used in this System**

**RP93Si** **RP71Si** **RP97Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 45mm | 735.9 kg/m³ | 31 | 31 | 23.0 | 26.3 | 29.6 | 29.9 | 31.4 | 31.0 | 30.2 | 31.2 | 27.6 | 26.4 | 28.3 | 29.8 | 30.9 | 34.0 | 36.5 | 39.0 | 40.9 | 40.9 |

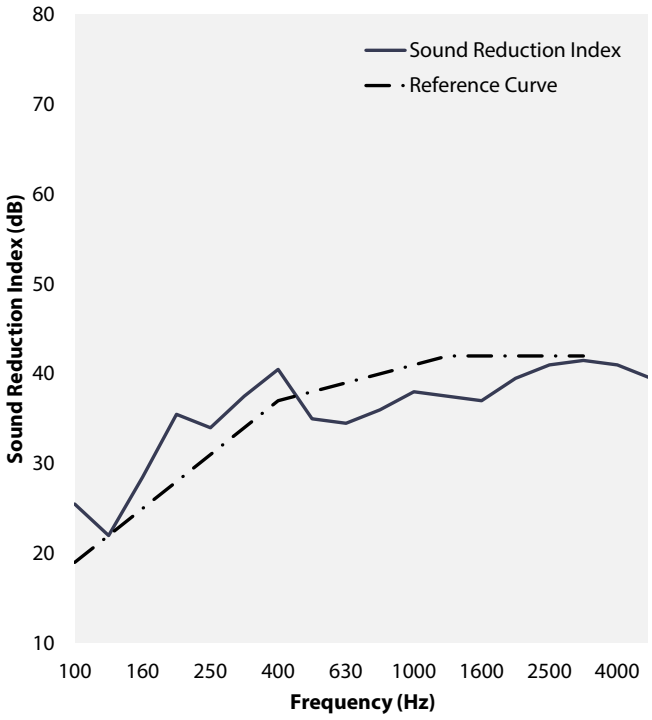


## RAVEN SEALING SYSTEM NO.

**RSS-103-B**


## Products used in this System

**RP94Si** **RP8Si**




| SOLID CORE DOORS | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 40mm | N/A | 38 | 38 | 25.5 | 22.0 | 28.5 | 35.5 | 34.0 | 37.5 | 40.5 | 35.0 | 34.5 | 36.0 | 38.0 | - | 37.0 | 39.5 | 41.0 | 41.5 | 41.0 | 39.5 |

# Penguin Parade Visitor Centre, Victoria

Raven proudly contributed to the refurbishment of the Penguin Parade Visitor Centre in Phillip Island, Victoria, a renowned international landmark.

The primary challenge was enhancing energy efficiency and reducing noise transmission through unsealed door gaps. The existing doors were ineffective in retaining energy and preventing noise, impacting visitor comfort and disturbing the sensitive penguin population.

The solution involved implementing Raven's RP8Si and RP120 door sealing system, which proved to be a cost-effective retrofit solution, enhancing acoustic, weather, and energy performance.

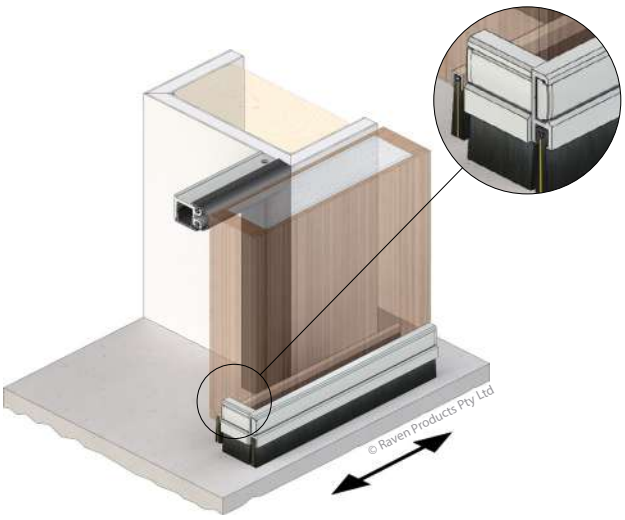
This selection significantly improved the building's energy efficiency and comfort for both visitors and penguins. Raven Sealing Systems align with proposed changes to the NCC, offering architects and builders cost-effective solutions that contribute to achieving the 7 Star energy rating in Australian buildings.

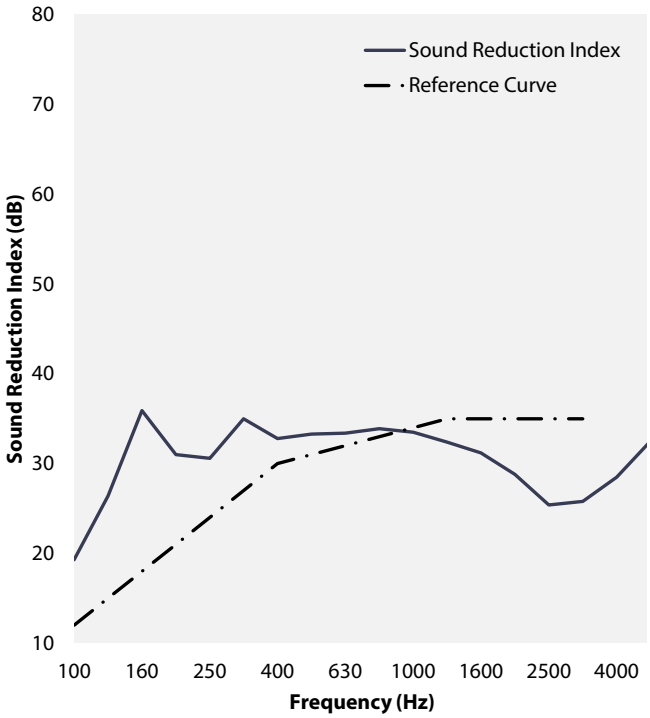
## RAVEN SEALING SYSTEM NO.

**RSS-089-A**

### Products used in this System

**RP84Si** **RP51F** **RP52F**




Refer Raven sliding door instructions for fitment

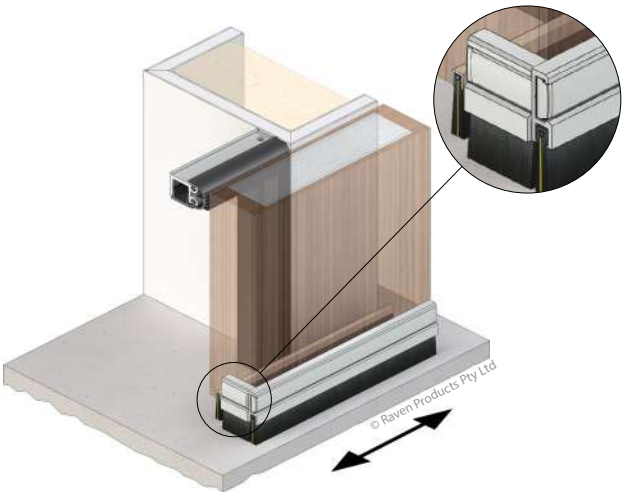
| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1036.6 kg/m³ | 29 | 31 | 19.3 | 26.4 | 35.9 | 31.0 | 30.6 | 35.0 | 32.8 | 33.3 | 33.4 | 33.9 | 33.5 | 32.4 | 31.2 | 28.8 | 25.4 | 25.8 | 28.5 | 32.5 |

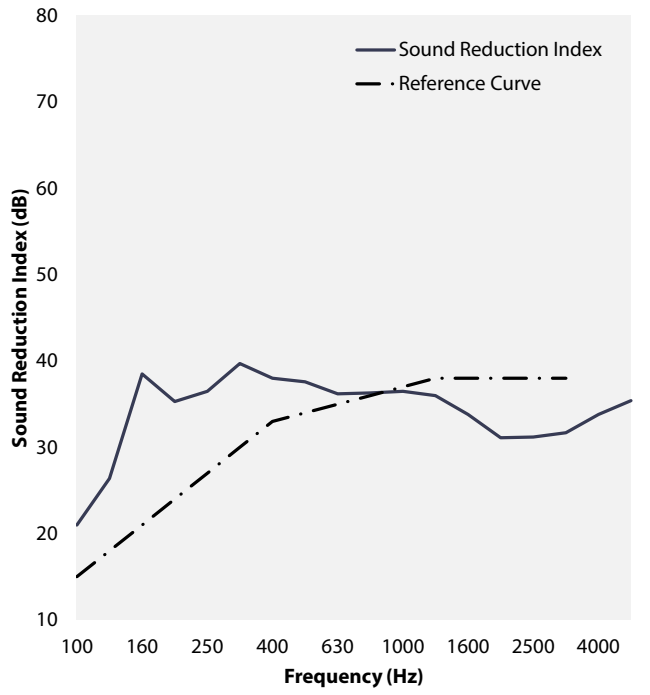
## RAVEN SEALING SYSTEM NO.

**RSS-013-A**

### Products used in this System

**RP10Si** **RP51F** **RP52F**



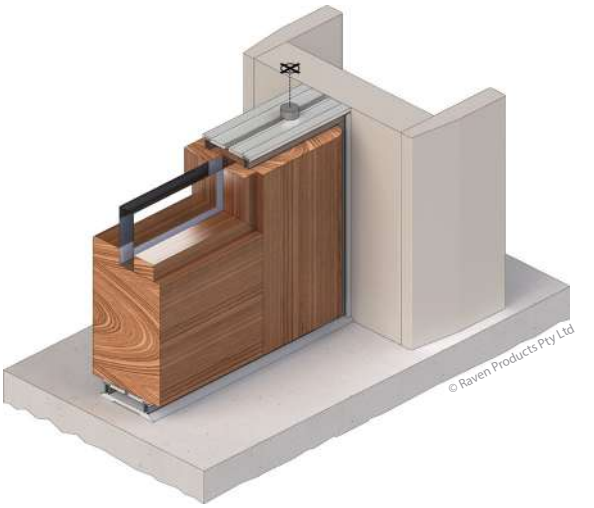




Refer Raven sliding door instructions for fitment

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 35mm | 1036.6 kg/m³ | 17 | 17 | 13.6 | 13.0 | 17.7 | 15.9 | 14.8 | 17.8 | 17.1 | 17.9 | 18.1 | 18.8 | 18.9 | 18.3 | 17.2 | 16.1 | 14.8 | 15.6 | 15.0 | 14.6 |
| 35mm | 1036.6 kg/m³ | 34 | 34 | 21.0 | 26.4 | 38.5 | 35.3 | 36.5 | 39.7 | 38.0 | 37.6 | 36.2 | 36.3 | 36.5 | 36.0 | 33.8 | 31.1 | 31.2 | 31.7 | 33.8 | 35.4 |

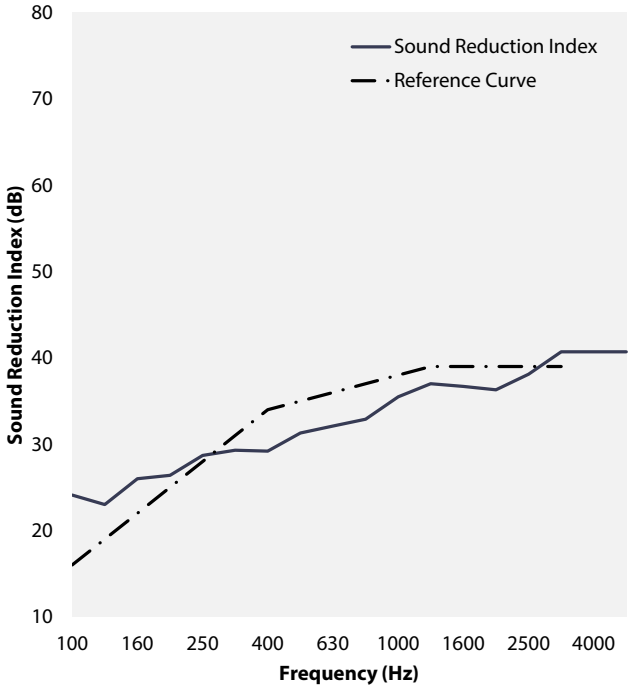
## RAVEN SEALING SYSTEM NO.

**RSS-061-A**




## Products used in this System

**RP71Si** **RP71Si** **RP96**




*STC estimation

| DOORCRAFT DOOR | | STC | $R_w$ | FREQUENCY (Hz) vs. SOUND REDUCTION INDEX (dB) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness | Density | | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| 50mm | 505.8 kg/m³ | 13* | 13 | 12.6 | 10.4 | 12.3 | 11.9 | 13.5 | 12.7 | 12.0 | 12.2 | 13.1 | 13.7 | 15.3 | 15.1 | 14.6 | 12.8 | 11.2 | 10.8 | - | - |
| 50mm | 505.8 kg/m³ | 35* | 35 | 24.1 | 23.0 | 26.0 | 26.4 | 28.7 | 29.3 | 29.2 | 31.3 | 32.1 | 32.9 | 35.5 | 37.0 | 36.7 | 36.3 | 38.1 | 40.7 | - | - |

# Building Code Regulations

In Australia, the NCC F7D6 Sound insulation rating of walls states that Class 2 buildings; typically apartments and multi-residential, and class 3 buildings; hotels and motels, have entry doors with a minimum sound insulation rating of Rw30. The UK Building Approved Document E states a minimum Rw29 is required.

Raven acoustic seals are used in airports, hotels, offices, hospitals, homes and anywhere noise infiltration occurs through doors. Their effectiveness is best illustrated by the repeated use of Raven seals by architects, acoustic engineers, door fabricators, and project builders.

Raven, the industry leader in door sealing systems, pioneered baseline acoustic testing, utilising "off the shelf" doors and ironmongery to give specifiers proven, cost effective solutions to the growing problem of noise in living and workplace environments.

Acoustic door manufacturers increasingly incorporate Raven door sealing systems with acoustically engineered doors to achieve and maintain the highest Rw ratings up to Rw46.

## Australian National Construction Code (NCC)

*Class 2 to Class 9 buildings*

**F7D6 Sound insulation rating of walls**

(1) A wall in a Class 2 or 3 building must—

(b) have an $R_W + C_{tr}$ (airborne) not less than 50, if it separates s*ole-occupancy units*; and

(c) have an $R_W$ (airborne) not less than 50, if it separates a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification; and

(d) comply with **F7D4(2)** if it separates—

(i) a bathroom, *sanitary compartment*, laundry or kitchen in one *sole-occupancy unit* from a *habitable room* (other than a kitchen) in an adjoining unit; or

(ii) a *sole-occupancy unit* from a plant room or lift *shaft*.

**(2) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an $R_w$ not less than 30.**

## Good Design Practices

Listed below are good design practices as outlined by the ABCB Sound Transmission and Insulation in Buildings 2018 handbook 3rd Edition.

- Use full perimeter acoustic seals on doors and sensitive windows.
- Allow for the adjustment and maintenance of acoustic seals on doors and windows.
- Doors may be either thick solid-core doors or proprietary systems. Most sound-rated doors require full acoustic seals around the head, jamb and threshold to limit flanking.
- Acoustic seals do not provide suitable performance if they are not properly adjusted. Seals should be selected based on their performance, simplicity of use, and they should be low maintenance and durable.
- Seals should not be removed from sound-rated doors or windows.
- Acoustic seals on all sound-rated doors should be properly adjusted and operational.

# Related Building Codes and Standards

Raven seals are designed to meet the most rigorous International Standards and Building Codes. Raven seals, in the main, have been tested to Australian, New Zealand, British, ISO and EN standards. In many cases they are the same or similar to US standards and Chinese building code requirements. Specifiers should determine the suitability of products shown or contact Raven's Technical Department for assistance.

## AUS/NZ

**NCC 2022**

**Sound Transmission & Insulation;** Section F F7D6 (2).
**Part H4 Health and Amenity:** H406.
**Sound Insulation:** H4F6, H4P6, H4V4, H4D8.

**AS 1191 (ISO 140-3)** Measurements of airborne sound transmission loss etc.
**AS/NZS 1276:** Rating of sound insulation in buildings etc. (ISO 717-1).
**AS 2253:** Field measurement of the reduction in airborne sound transmission in buildings.

**ISO 717-1:** Rating of sound insulation in buildings.

**NZBC G6 (Airborne & Impact Sound) - 1995**

**ASTM E 336, ASTM E 413.**

## UK/EU

Building Regulations **Approved Document E.**
**Building Bulletin 93:** Special acoustic conditions for schools.
**BS EN ISO 140-3:** Acoustics - Measurement of sound insulation in buildings and of building elements (previous BS 2750).
**BS 5821:** Rating the sound insulation in buildings and building elements (same as **ISO 717-1**).
**BS EN 10140:** Series Standards - Laboratory measurement of sound insulation

## USA

**IBC** International Building Code.

**ASTM E 90:** Standard method for laboratory measurement of airborne sound transmission loss of door panels and door systems.

**ASTM E 413:** Classification for rating sound insulation.

**ASTM E 336:** Standard test for measurement of airborne sound insulation in buildings.

## CHINA

**GB 50118-2010IBC** International Building Code, Residential Code & ADAAG.
**ANSI 117:** Building access for people with disability.
**ANSI/BHMA A156.21:** American National standard for Thresholds.
**GB/T50087-2013**《工業企業噪音控制設計規範》
**GB/T 8485-2008**《建築外窗空氣隔聲性能分級及其檢測方法》
**JGJ 57-2000**《劇場建築設計規範》
**JGJ 58-2008**《電影院建築設計規範》
**JGJ 67-2006**《辦公建築設計規範》
**JGJ 62-2014**《旅館建築設計規範》
**GB 50096-2011**《住宅 設計規範》
**GB 50073-2013**《潔淨廠房設計規範》

## Applications

Icons have been used to help identify appropriate seals for various applications to make product selection easier. All seals are designed to meet most standards and in most cases, perform more than one function.

**Noise – Acoustic**

**Ambient (cold) Smoke**
Temperatures up to 70°C.

**Medium Temperature Smoke (NCC S12C4)**
Temperatures of 200°C for 30 minutes (smoke doors).

**Weather**

**Energy, Draughts & Dust**

**Light**

**Insects and Vermin**

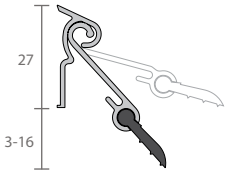
**Antimicrobial**
Raven gaskets and cover strips contain antimicrobial compounds. Independently tested against E. Coli, Strep and MRSA.

**Access and Mobility**

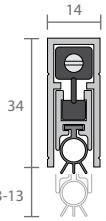
# Quick Product Reference

For detailed product specifications, colour finishes and ordering information go to raven.com.au.

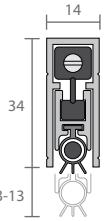
## Door Bottom Seals



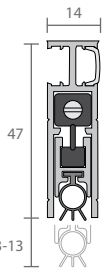

RP3



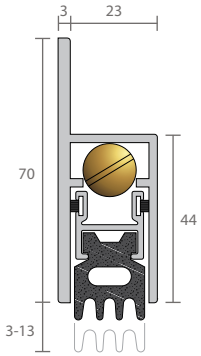

RP8Si




NEW RP8FZ




RP35Si

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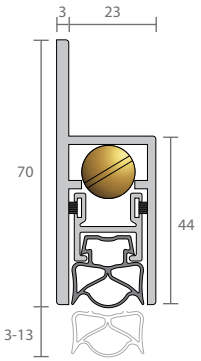


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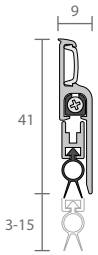


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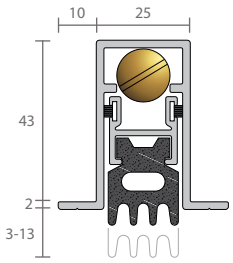


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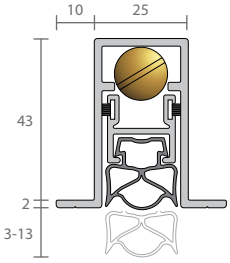


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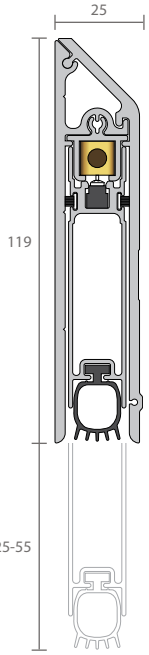


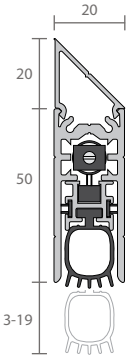


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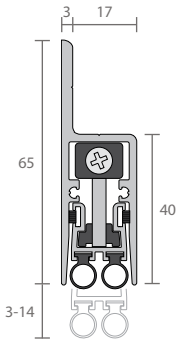


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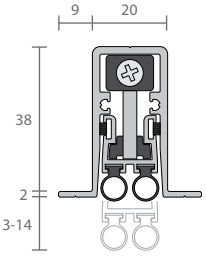


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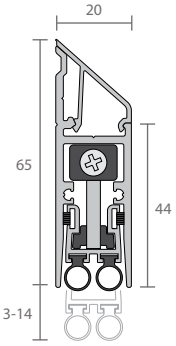


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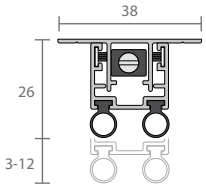
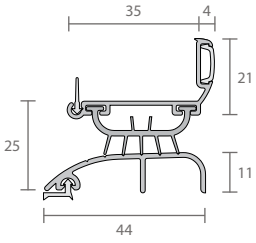



RP144Si

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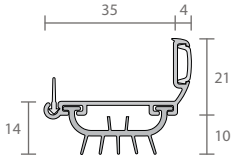


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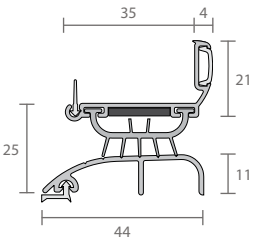


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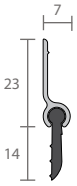


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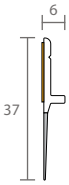
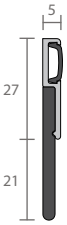
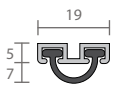



RP17b RP26

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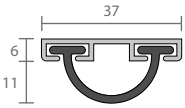
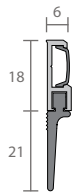
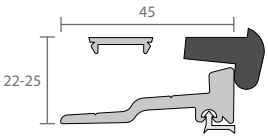



RP31 RP51Si

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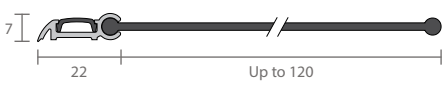


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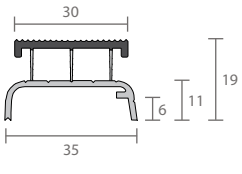
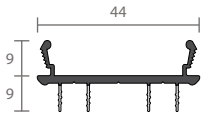



RP86

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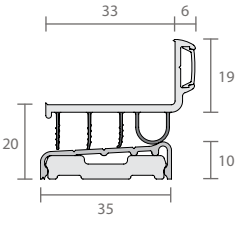
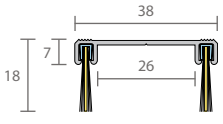
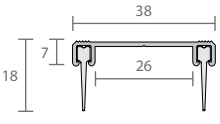



RP123




RP129F

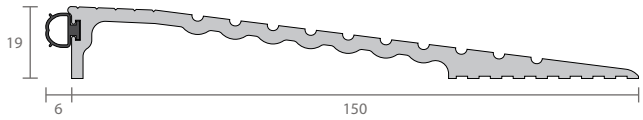



RP129Si

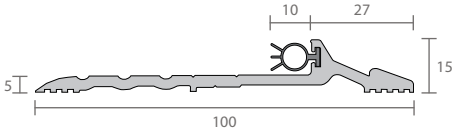
# Quick Product Reference

For detailed product specifications, colour finishes and ordering information go to raven.com.au.

## Threshold Plate Seals

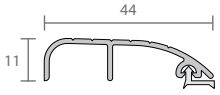



**RP97Si**

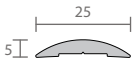



**RP117Si**

## Threshold Plates




**RP4b**

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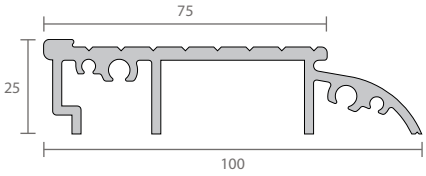


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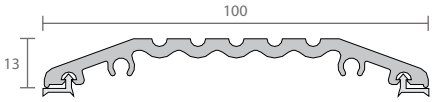


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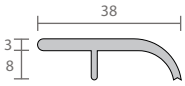


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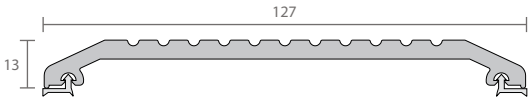


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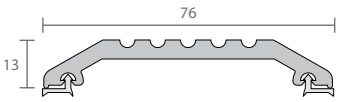


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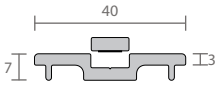


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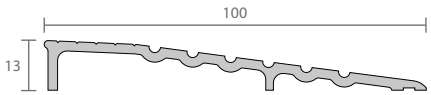


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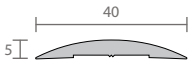


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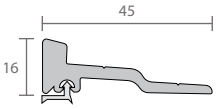


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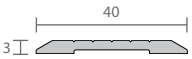


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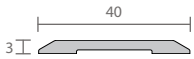


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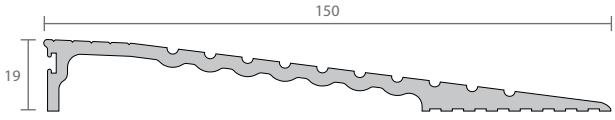


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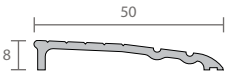


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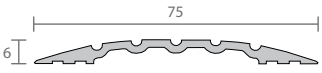


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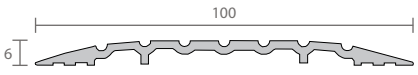


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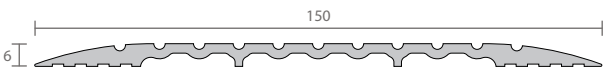


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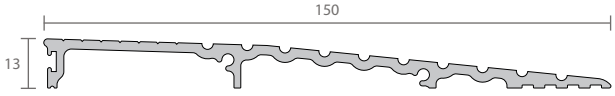


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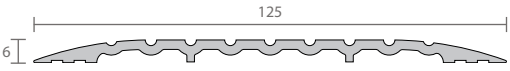
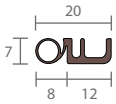



NEW **RP151**

# Quick Product Reference

For detailed product specifications, colour finishes and ordering information go to raven.com.au.

## Door Frame / Perimeter Seals



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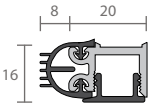

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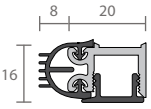
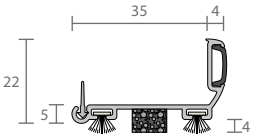


RP10Si



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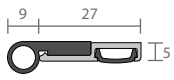

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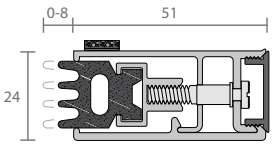

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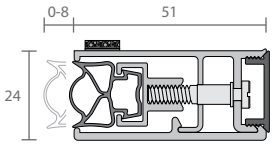

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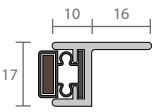

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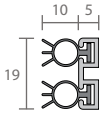
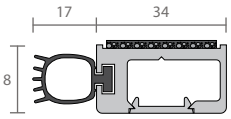


RP44Si



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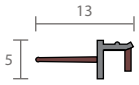
RP56

RP69



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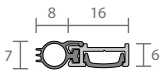

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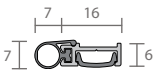

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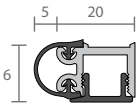

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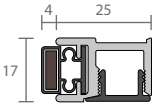

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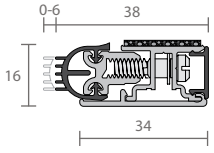

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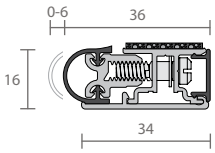

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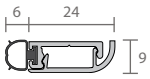

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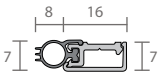

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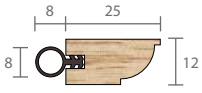

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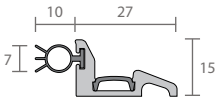

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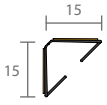

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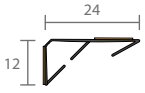
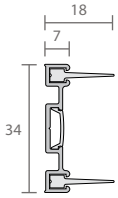


RP124

## Meeting Stiles Seals (Astragals)



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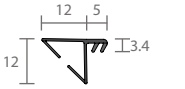

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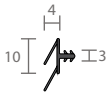

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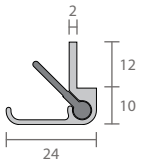

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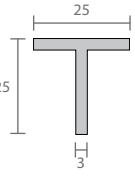

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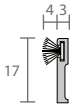

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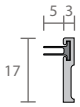

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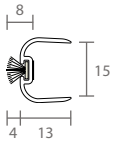

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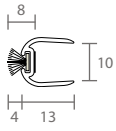

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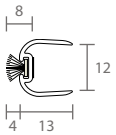

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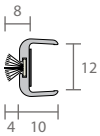

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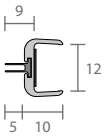

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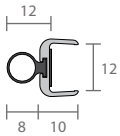

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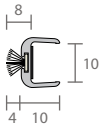

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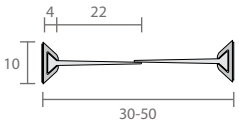

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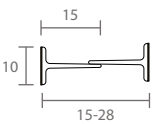

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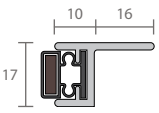

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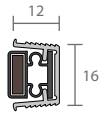
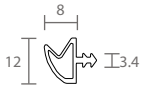


RP65

## Weather Stripping - Silicon RP500 Series and TPE RP600 Series



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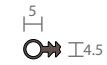

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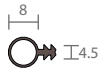

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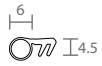

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RP540

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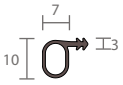

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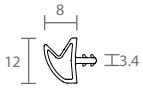

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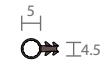

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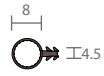

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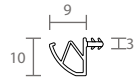
RP630

RP640



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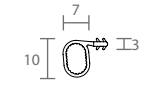

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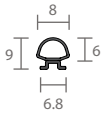
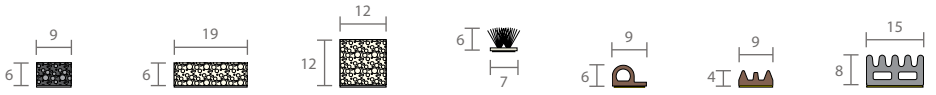


RP680

# Quick Product Reference

For detailed product specifications, colour finishes and ordering information go to raven.com.au.

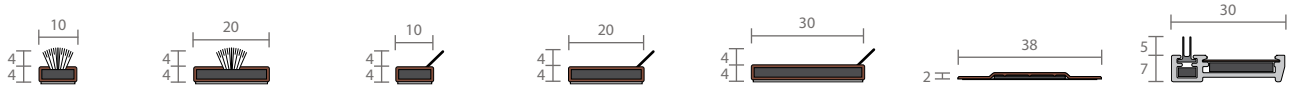
## Self-adhesive Seals



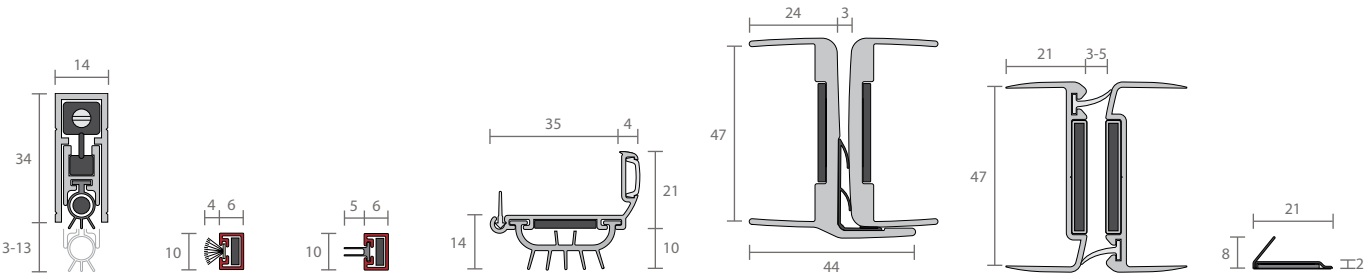

RP14 RP14a RP14b RP61 RP48 RP59 RP108

## Intumescent Fire Seals


RP1004 RP1504 RP2004 RP2504 RP3004 RP1004F RP2004F

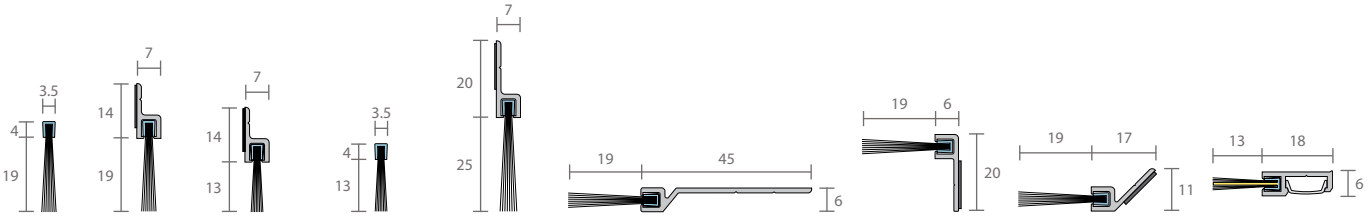



RP1004S RP2004S RP1004SA RP2004SA RP3004SA RP53 RP63

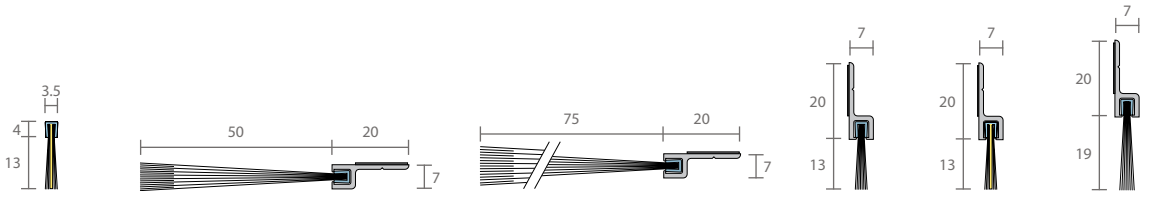



NEW RP8FZ RP76 RP76Si RP114 RP121 NEW RP122 NEW RP160

## Brush Strip Seals

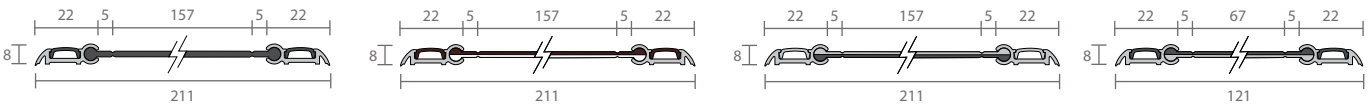



RP2 RP2a RP2b RP2b (bo) RP15 RP41 RP49 RP50 RP51F

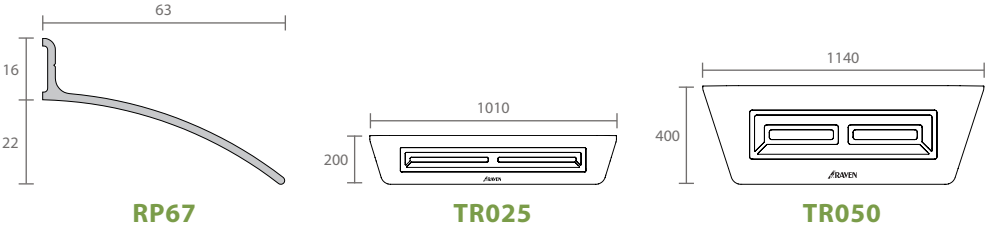



RP52F RP57 RP58 RP74 RP74F RP75

## Replacement Components




RP62 RP62BW RP62LGBK NEW RP62s




RP67 TR025 TR050

# Notes

# Notes

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## By Product Code



## By System Number

## Guarantee

Raven seals are guaranteed for 2 years against defects in materials and workmanship, provided seals are fitted in accordance with manufacturer's specifications. Defective goods identified by Raven will be replaced. However, NO claim for work done thereon or damage incurred will be allowed.

Self-adhesive backed; closed cell and open cell foam tape seals are not guaranteed. Defective goods identified by Raven may be replaced. Experience has shown that even for one and the same objective, the exact requirements may vary due to site and environmental conditions that are outside Raven Products control; this includes the surfaces to which self-adhesive products are being installed.

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Sealing Systems


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