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RAVEN
Door & Window
Sealing Systems

Retrofit/Rectification for Non-Compliant Fire Doors

Solutions for:

Excessive Door Bottom Clearances
Excessive Door Perimeter Clearances

in accordance with AS 1905.1: 2015: - Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets).

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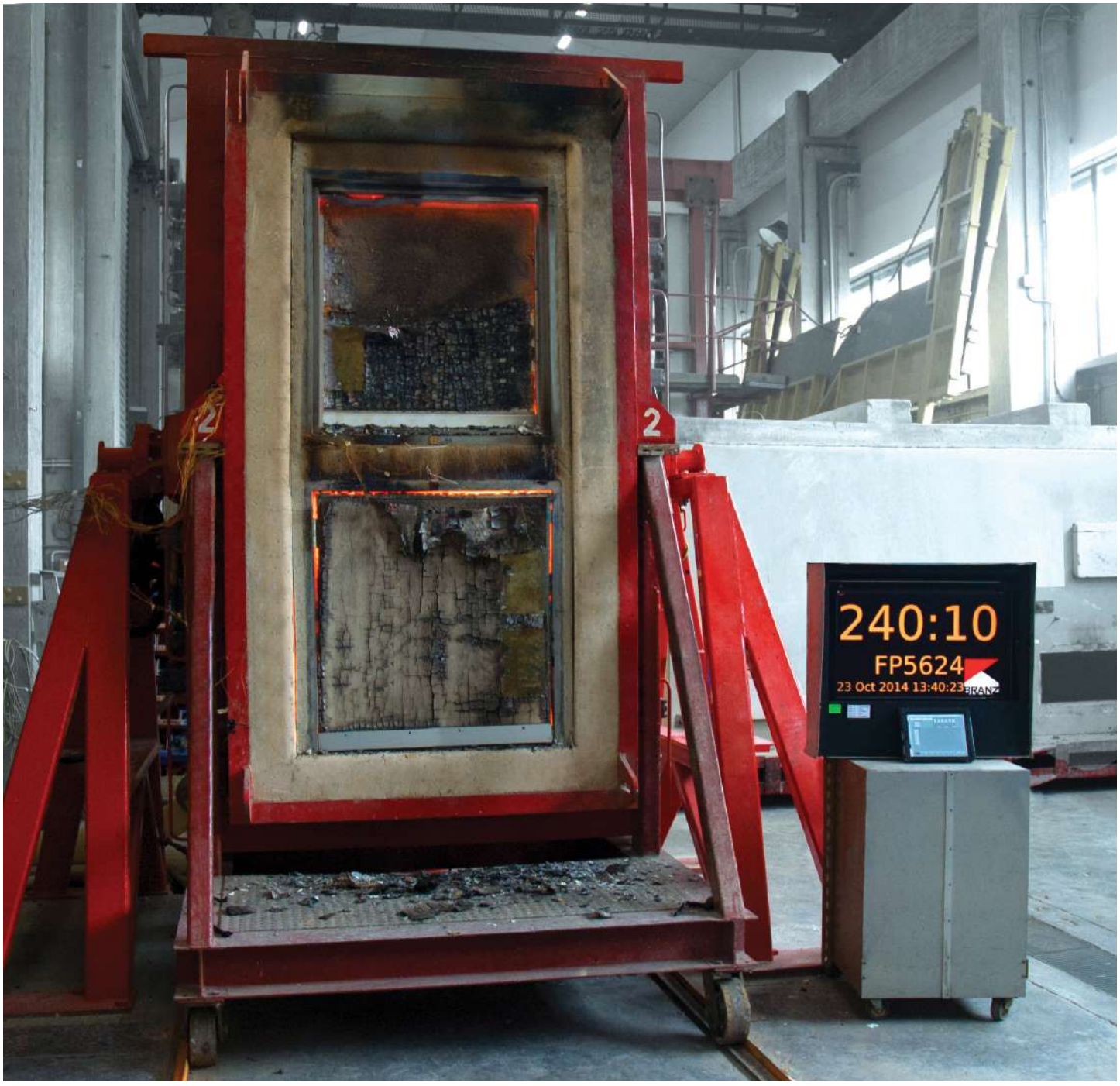
EST. 1950

Retrofit/Rectification for Non-Compliant Fire Doors



About Raven

Established in 1950, Raven Products is an Australian family owned and operated company that pioneered the door and window seal industry in Australasia. Raven has grown to become one of the most trusted brands in the building hardware industry providing innovative, quality tested and certified door and window sealing systems for architects, designers, engineers and builders.

The Raven brand is synonymous with quality, value and service which is why Raven is the brand that is consistently relied on and recommended here in Australia and overseas.

Raven offer a tested and certified range of door and window sealing systems for the containment of energy and the exclusion of noise, fire, smoke, vermin, insects and bushfire embers.

Upgrade Requirements

It is an unfortunate fact that many fire doors installed within Australian buildings are commonly identified as being non-compliant and are subsequently replaced due to their perimeter clearances falling outside the requirements outlined in Fire Door Standard AS 1905.1: 2015: - Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets).

In many instances problems are identified during routine fire door maintenance inspections and may be a result of poor installation, building movement, wear and tear, neglect or wilful abuse. However, once a door is deemed non-compliant it must be either repaired or upgraded in an approved manner or completely replaced and re-tagged.

Raven recognise this common problem and offer a range of approved retro-fit upgrade solutions that may reduce the need for door replacements and associated costs commonly faced by Building Owners, Body Corporate's and Facility Managers alike.

These upgrade solutions assist in salvaging fire doors identified with excessive clearances. They incorporate specialised intumescent materials that expand in volume when exposed to elevated temperatures, assisting in maintaining the performance of the door assembly to which they are applied.

Fire door assemblies can now be quickly and economically upgraded on-site, often without the need to remove the door from its hinges.

Regulatory Requirements

Part C4 of The National Construction Code (NCC) regulates the 'Protection of Openings' and requires that fire doors are installed in accordance with:

AS 1905.1: 2015: - Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets).

Section 5.5 of AS 1905.1: 2015 provides detailed guidance on the allowable clearances around the edges of a fire door as follows:

5.5 Clearances around Door Leaves

5.5.1 Threshold and floor finish

Clearances between the bottom of all door leaves and the floor shall be as follows:

(a) Between the leaf and the top surface of the floor including any floor covering - not less than 3mm and not more than 10mm.

(b) Between the leaf and the top of the non-combustible threshold - not more than 25mm.

NOTE: When the installed doorset is inspected for compliance with Item (b), the clearance should not exceed 25mm for the purpose of certification unless a note providing information on clearances is made in the evidence of compliance.

5.5.2 Side-hung door, leaf-to-frame

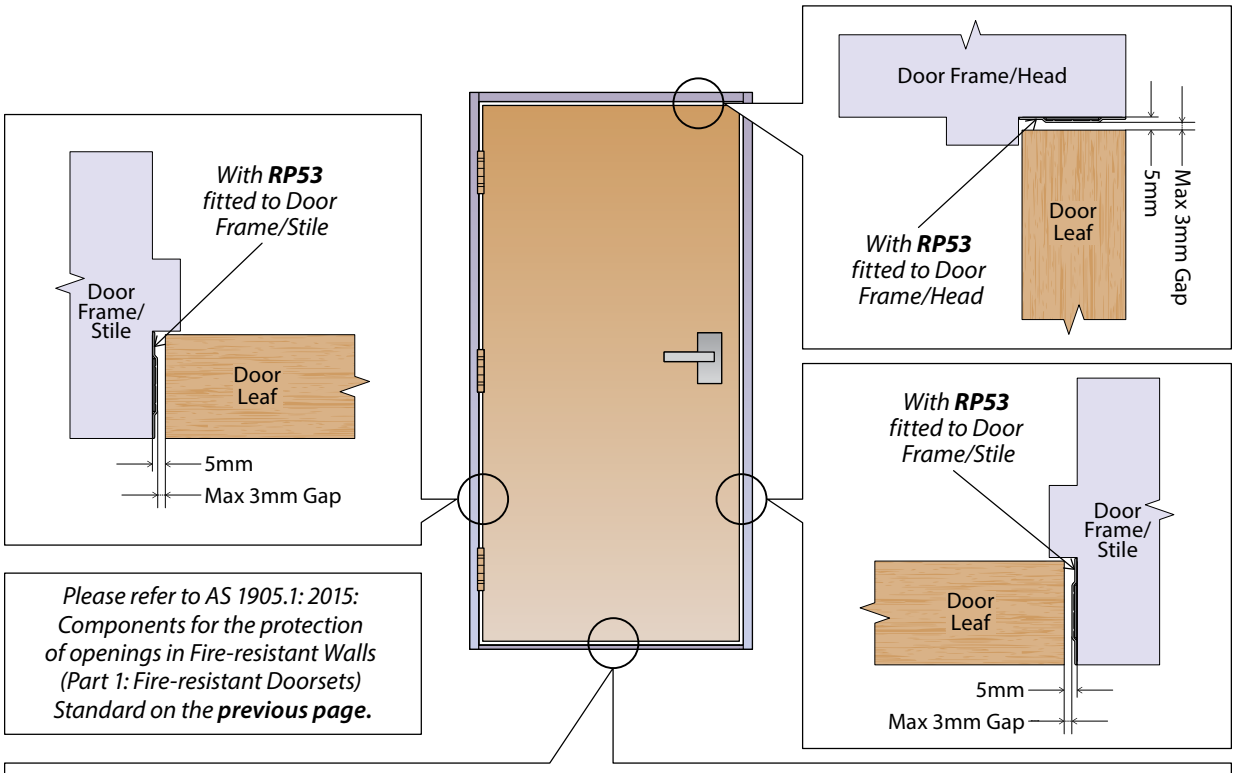
Door leaves side-hung into rebated frames shall be installed to swing clear of the doorframe and shall have mean clearances, in the closed position, between the leaf and the head and between the leaf and each stile, of **not more than 3mm**.

NOTE: Measurements should be taken at intervals of not less than 750mm apart, and there should be a minimum of three measurements to each vertical edge of the leaf and two measurements on the horizontal edge.

The Solution

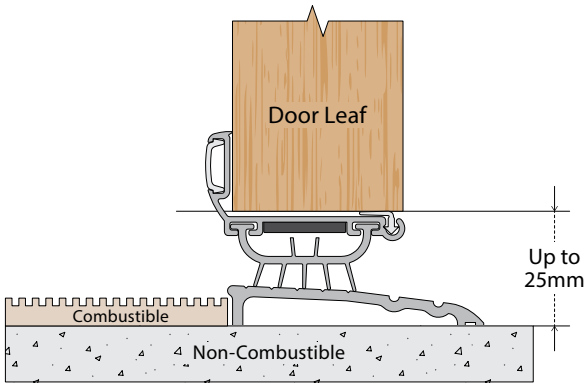
Ensuring doors are installed correctly and remain within these limits can be a challenge for a variety of reasons; inaccurate measurement, poor installation, changes to floor finish materials, building movement or just long term wear and tear can all result in a non-compliant door installation that requires remedial attention.

The **RP114** and **RP53** can be used on proprietary fire doors to reduce these clearances **(refer diagram on the next page)**.

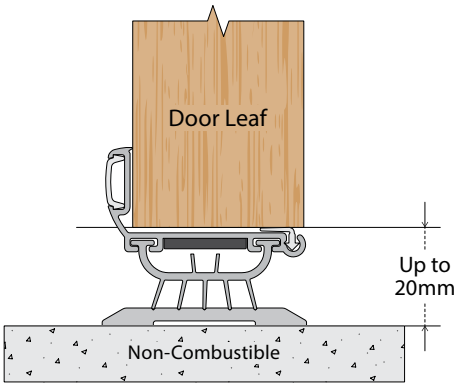


*Please refer to AS 1905.1: 2015: Components for the protection of openings in Fire-resistant Walls (Part 1: Fire-resistant Doorsets) Standard on the **previous page.***

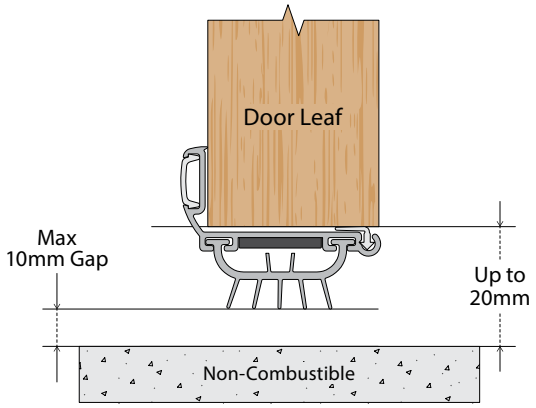
TYPICAL SOLUTIONS



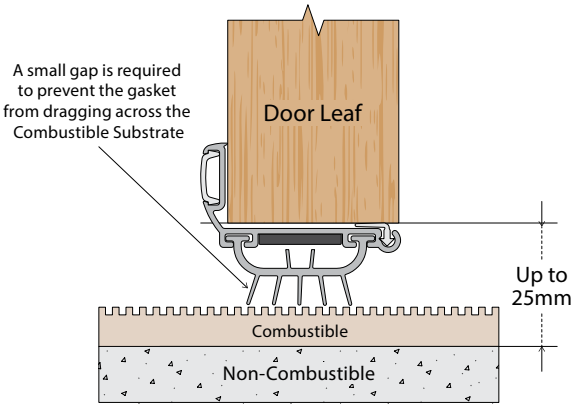
*With **RP114** fitted to Door Leaf and **RP112** Threshold Plate*



*With **RP114** fitted to Door Leaf and **RP96** Threshold Plate*



*With **RP114** fitted to Door Leaf*



*With **RP114** fitted to Door Leaf with Combustible Material underneath*

Non-Combustible Substrates: eg. Concrete, Tiles etc. Combustible Substrates: eg. Approved Carpets

RP53 | Door Perimeter Compliance Solution

Heavy Duty | Fire & Hot Smoke Over 600°C | Fire Approved | Up to BAL-FZ (Flame Zone)

An intumescent seal in a PVC holder which is ideal for upgrading proprietary door perimeter gaps where the clearance exceeds the maximum 3mm as specified by AS 1905.1: 2015.

When exposed to heat, the RP53 intumescent seal expands to fill the gap.

Use in conjunction with Raven Si rated door bottom smoke seals or brush strip seals for pivot doors.

Location: Door or frame stiles and head.

Min/Max Gap: 2mm to 6mm.

Finish:

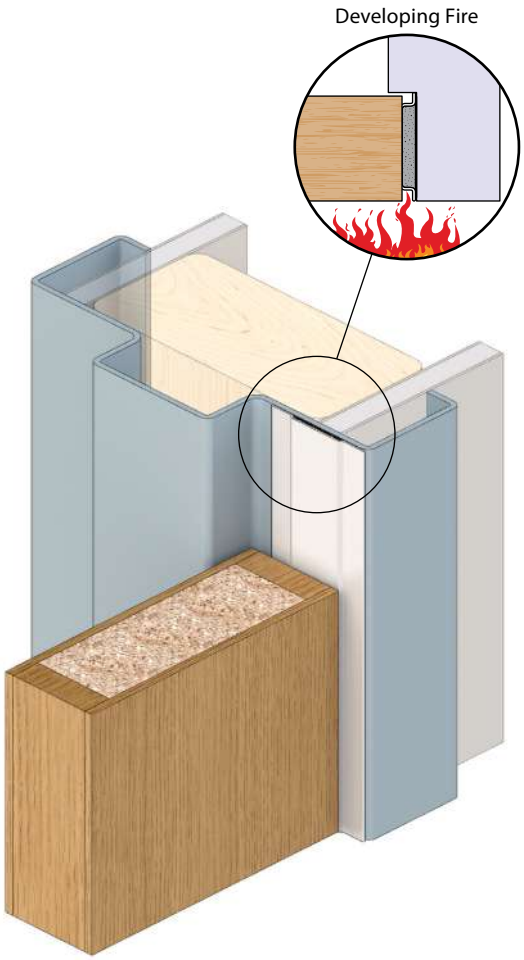
Brown PVC | Grey PVC | White PVC

With intumescent infill. Can be painted.

Fixing: Self adhesive.

Note: Contact surface must be clean, smooth and if painted, well cured. Self adhesive seals will not adhere to oiled or alkyd finishes or to easy clean wash and wear paint surfaces.

Sizes: 3000mm, 2100mm.



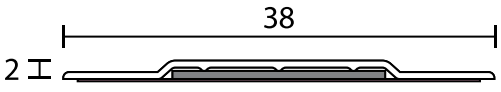
Approvals:

UL R37913.

Fire & Smoke AUS/NZ: NCC Spec.C3.4. AS1530.4:2005 & earlier. NZBC C/AS2 4.16.2(a) & App C6.1.1 & App C6.1.2.

UK/EU: Approved Document B. BS 476 Pt. 20 & 22 (similar to BS EN 1634-1).

Test Reports - E-Core: CSIRO FCO-2931.



Not to scale

Door Type	Single Leaf	Double Leaf	Max Gap Size across Head of Door	Max Gap Size down the Jambs	Fire Resistance Level
AS 1530.4 2005 DOORS & EARLIER (NCC 2019)					
E-Core 35mm Mini	Yes	N/A	5mm	5mm	-/120/30
E-Core 45mm Maxi	Yes	Yes	5mm	5mm	-/240/30

Please note: drawings not to scale

RP114 Door Bottom Compliance Solution

Heavy Duty | Weather | Energy, Draughts and Dust | Light | Insects and Vermin | Ambient (Cold) Smoke up to 70°C | Medium Smoke (200°C for 30 mins) | Fire & Hot Smoke Over 600°C | Fire Approved | Up to BAL-FZ (Flame Zone) | Noise (Acoustic)

RP114 is a door bottom intumescent fire and hot smoke seal that is designed to salvage non-compliant fire doors where clearances exceed 10mm under fire doors as per AS 1905.1: 2015.

The simple retrofit design avoids costly door replacement and the need to remove the door during installation.

RP114 is approved for use on leading proprietary fire doors.

Note: RP114 should just clear the floor during door opening and closing. To avoid the seal fouling on uneven or sloping surfaces, the finned gasket portion should engage an approved Raven threshold plate. This will enhance the other icon sealing functions.

Location: Bottom of fire and smoke doors. Minimum door thickness of 35mm. For garage doors, use two seals.

Min/Max Gap: 14mm to 20mm (without threshold plate).

Finish:

Silver Anodised Aluminium

Bronze Anodised Aluminium

Fixing: Screw fix. Zinc plated, cross recess head S.T. screws supplied.

Seal: Intumescent infill, grey flexible PVC (SE) cover strip and RP304Si finned silicon rubber gasket.

Sizes: 1220mm, 920mm, 820mm.

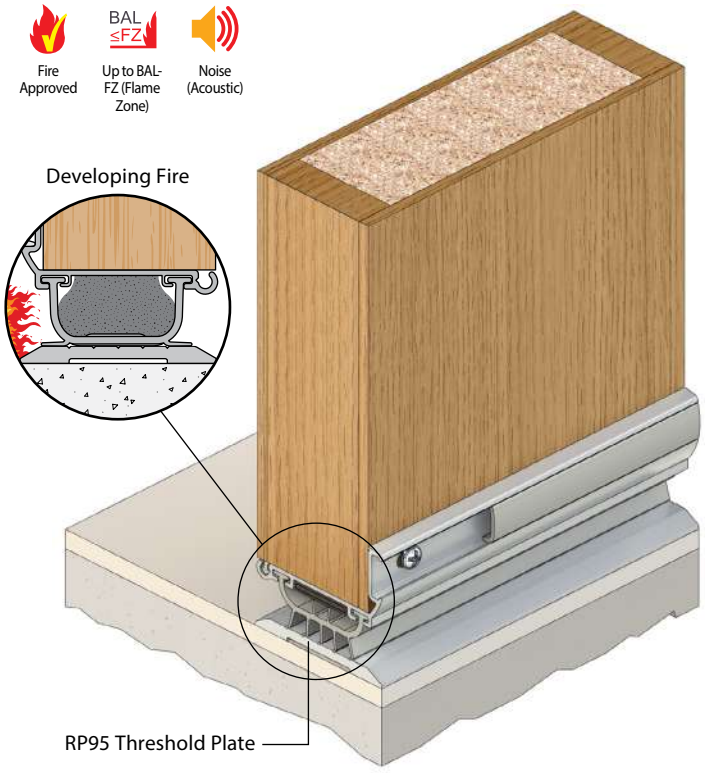
Approvals:

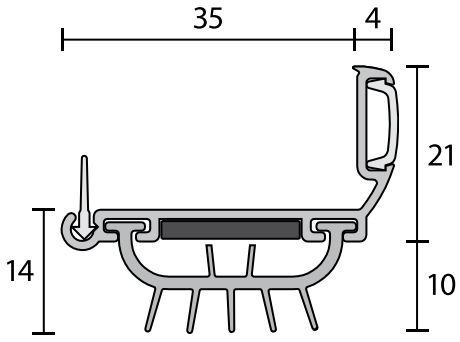
Fire AUS/NZ: NCC S12C2. AS1530.4 & AS 1905.1. NZBC C/AS2 4.16.2(a) & App C6.1.1.

UK/EU: Approved Document B. (Tests above are similar to BS EN 1634-1 & BS 476 Pt. 20 & 22).

Energy: ABCB Housing Provisions Standard 2022 13.4.4 & NCC J5D5.

Test Reports - E-Core, Firecore & Pyropanel: CSIRO FCO-3376 Revision A. CSIRO FCO-3468 Revision B. COA-Number 449. BRANZ Fire Test Certificate 459 Issue 2. BRANZ Fire Test Certificate FC16127-01-C1-1.





Not to scale

Door Type	Single Leaf	Double Leaf	Max Gap Size under door	Fire Resistance Level
AS 1530.4 2005 DOORS & EARLIER (NCC 2019)				
E-Core Mini Single	Yes	Yes	20mm	-/120/30
E-Core Maxi Single	Yes	Yes	20mm	-/120/30
E-Core Maxi Double	Yes	Yes	20mm	-/120/30
Pyropanel FR or Pyrolite 48mm	Yes	Yes	20mm	-/240/30
Pyropanel FR or Pyrolite 38mm	Yes	Yes	20mm	-/120/30
Pandor 38mm/48mm	Yes	Yes	20mm	-/60/30
AS 1530.4 2014 DOORS (NCC 2022)				
E-Core Maxi	Yes	Yes	20mm	-/120/30
Pyropanel FR 38mm/48mm	Yes	Yes	20mm	-/120/30
Pandor 48mm	Yes	Yes	20mm	-/60/30

Please note: drawings not to scale

Suitable Threshold Plates for the RP114

The following Threshold Plates may be used under the **RP114**, providing the maximum gap between the door bottom and the non-combustible Threshold **does not exceed 25mm** and the bottom of the door and top of the Threshold Plate **does not exceed 10mm** *(refer to the diagram on Page 4).*

RP4b

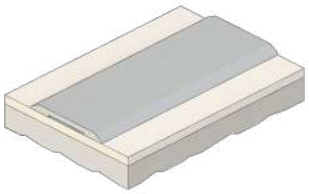
RP19

RP28

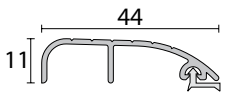
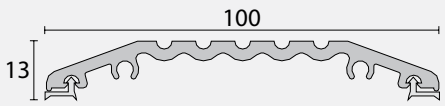
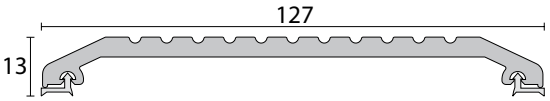
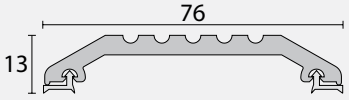
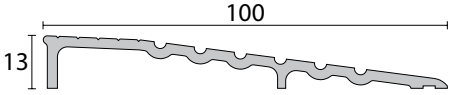
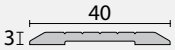
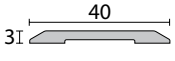
RP29

RP77

RP95



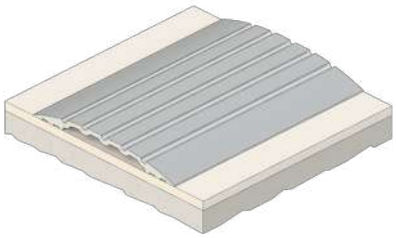
RP96

PRODUCT CODE	APPLICATIONS	DUTY LEVEL	FINISH	PROFILE
RP4b	Fire Approved	M Medium Duty	Satin Clear (Silver); Bronze Anodised	
RP19	Fire Approved	H Heavy Duty	Satin Clear (Silver)	
RP28	Fire Approved	H Heavy Duty	Satin Clear (Silver)	
RP29	Fire Approved	H Heavy Duty	Satin Clear (Silver)	
RP77	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Bronze Anodised; Black Anodised	
RP95	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Bronze Anodised; Black Anodised	
RP96	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Bronze Anodised	

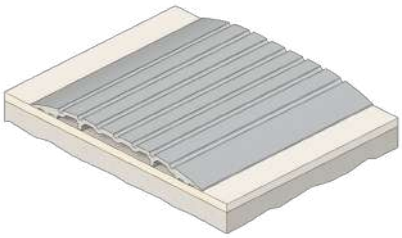
Please note: drawings not to scale

Suitable Threshold Plates for the RP114

RP112



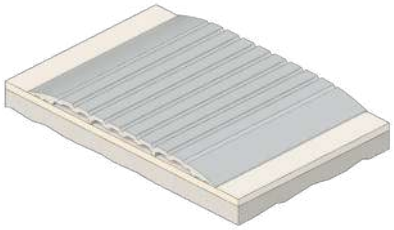
RP115



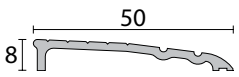
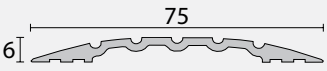
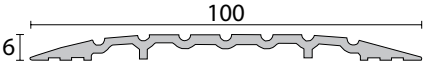
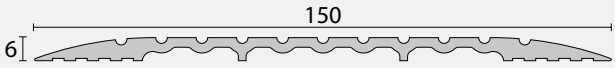
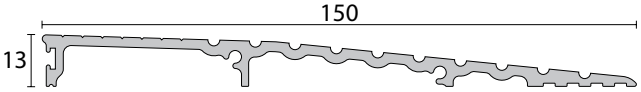
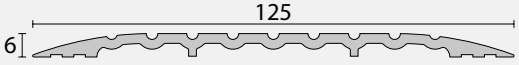
RP116

RP137

RP138



RP151

PRODUCT CODE	APPLICATIONS	DUTY LEVEL	FINISH	PROFILE
RP112	Fire Approved; Access & Mobility	M Medium Duty	Satin Clear (Silver); Bronze Anodised	
RP115	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Bronze Anodised; Black Anodised	
RP116	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Bronze Anodised; Black Anodised	
RP137	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver)	
RP138	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver)	
RP151	Fire Approved; Access & Mobility	H Heavy Duty	Satin Clear (Silver); Black Anodised	

Please note: drawings not to scale

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