



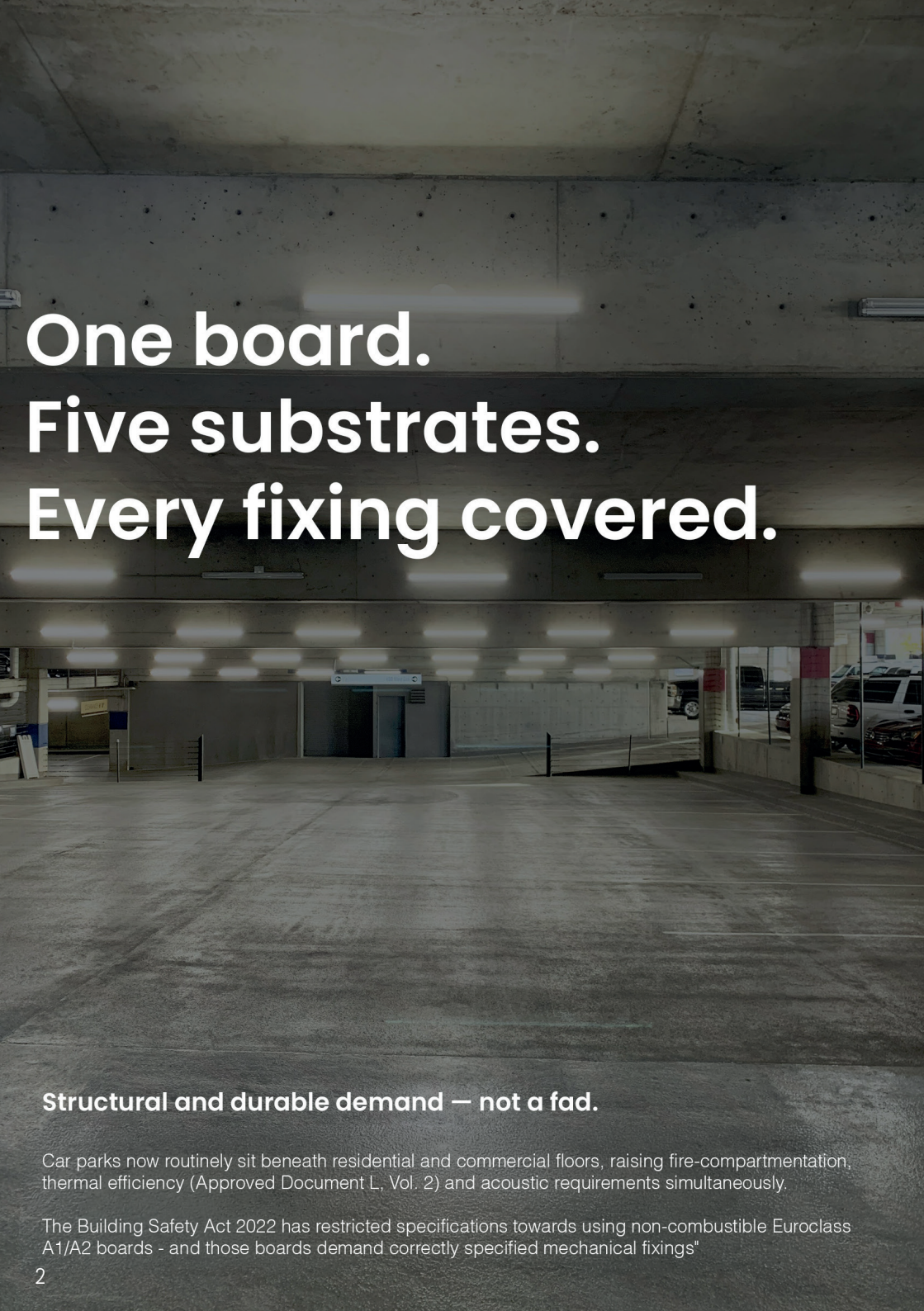
Soffit Insulation Fixings.

Engineered fastening solutions for soffit liner boards and soffit slabs — fixed to concrete, steel, timber and masonry substrates.

evofas.com

0141 647 7100

sales@evofas.com



One board. Five substrates. Every fixing covered.

Structural and durable demand — not a fad.

Car parks now routinely sit beneath residential and commercial floors, raising fire-compartmentation, thermal efficiency (Approved Document L, Vol. 2) and acoustic requirements simultaneously.

The Building Safety Act 2022 has restricted specifications towards using non-combustible Euroclass A1/A2 boards - and those boards demand correctly specified mechanical fixings"

Why Choose Us?



Engineered Solutions



ISO 9001 Certified.



Technical Expertise



Tested & Certified¹

This guide provides product selection and specification guidance for Evolution Fasteners fixing systems used to install non-combustible soffit liner boards and soffit slabs.

Each section identifies the correct product range and installation notes for the applicable substrate — covering direct fixation to concrete soffits, MF top hat systems, SFS, purlin and infill steels, timber and masonry.

Every solution pairs an engineered fastener with a large spreader washer, retaining the insulation board securely without crushing the insulation or pulling the insulation over the fasteners — with carbon steel and stainless steel options for internal, semi-exposed and external environments.

Specification nuances matter. Board thickness, facing type, substrate condition, environment and proximity can all change the correct fixing selection. Always confirm project-specific requirements with our technical team.

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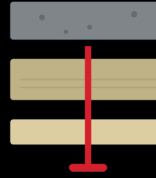
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¹ Tested to various standards, and certified by various bodies as detailed in specific notes further within this document

01

Application Scenarios

THE BUILD-UP



- 1 Concrete soffit
- 2 Insulation board
- 3 Soffit liner board
- 4 Shallow-embedment fastener with spreader washer

Typical fixing solutions for soffit liner boards and soffit slabs.

READING THE CODES

Each scenario lists the fixings that suit it. Pick the option whose **grade matches your environment** — every code is one of three grades:

CARBON

Internal & dry — no exposure or condensation risk

A2

Semi-exposed — car parks, open soffits, unheated

A4

Coastal / saline — aggressively saline or polluted

Codes prefixed **A2** or **A4** are the stainless / bi-metal grades. Each fixing pairs with its matched spreader plate (**SPR** carbon · **SSPR** stainless).

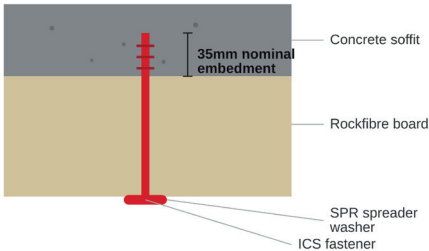


Not sure which fixing?

Send us the **substrate** and the **environment**, and our technical team will specify the correct fixing, grade and length for your build-up.

technical@evofas.com
0141 647 7100

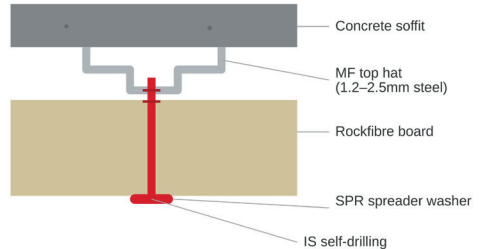
SCENARIO 01: Concrete Soffit — Direct Fixation



Shallow-embedment concrete / insulation Fastener with a large spreader washer. 35mm nominal embedment into the concrete.

ICS w/ SPR · A4HH w/ SSPR

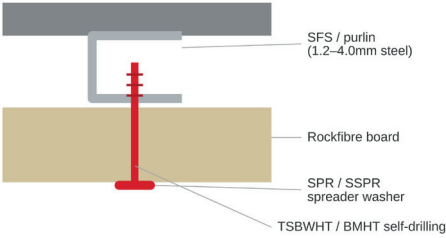
SCENARIO 02: MF Top Hat — (steel 1.2 -2.5mm)



Self-drilling screw with a large spreader washer. Board fixed at right angles to top hat sections at nominal 600mm centres.

IS w/ SPR · A4IS w/ SSPR

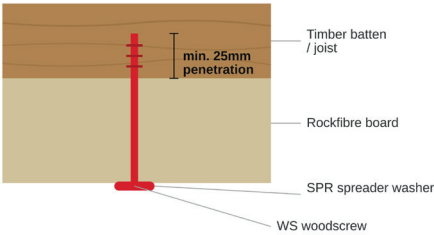
SCENARIO 03: SFS / Purlin / Infill Steels (1.2 - 4.0mm)



Self-drilling screw with a large spreader washer for heavier steel sections.
Bi-metal options give enhanced corrosion resistance compared to galvanised or organic coated options.

TSBWHT w/ SPR · BMHT w/ SSPR ·
A4BMHT w/ SSPR

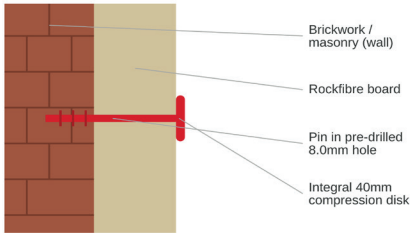
SCENARIO 04: Timber — (min. 25mm penetration)



Woodscrew or insulation screw with a large spreader washer.
Battens at max. 600mm centres with all four board edges supported.

WS w/ SPR · A2WS/A4WS w/ SSPR ·
IS w/ SPR · A4IS w/ SSPR

SCENARIO 05: Brickwork or Masonry— (retrofit, EWI, etc)



Hammer-in light duty insulation fixing, used with or without a spreader washer depending on the board facing. Ideal for retrofit and external wall insulation applications, with a stainless pin option for enhanced design life.

GIA w/ GIW80 · A2GIA w/ A2PIW80

WHICH GRADE?

Match the fixing to the environment.



INTERNAL / DRY

Heated internal areas with no condensation risk.

CARBON STEEL

ICS · IS · TSBWHT · WS · GIA



SEMI-EXPOSED

Car parks, open soffits, unheated and condensation-prone areas.

A2 STAINLESS

BMHT · A2WS · A2GIA



COASTAL / SALINE

Aggressively saline or polluted environments.

A4 STAINLESS

A4IS · A4BMHT · A4WS · A4HH

FIXING LENGTH

Board thickness +
embedment = required fixing
length

Timber: min. 25mm

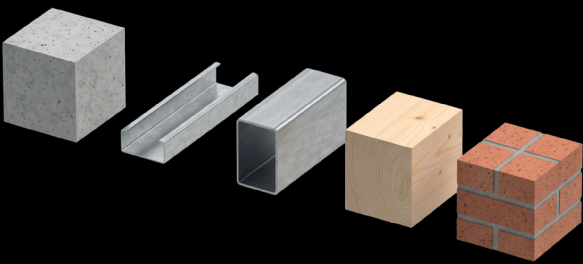
Concrete: 35mm nominal

Light steel: full penetration + ~6mm

Environment classifications are indicative
— confirm project-specific selection with
our technical team.

02

Fixing Selector



Example scenarios and typical fixings to suffice them.

Application Scenario

Specification Requirements

Fixing Specification



Direct fixation of the soffit liner board to concrete soffit.

Shallow-embedment concrete /insulation fastener with a large spreader washer.

ICS w/ SPR; or A4HH w/ SSPR.



Direct fixation of the soffit liner board to MF top hat (steel 1.2mm to 2.5mm).

Self-drilling screw with a large spreader washer.

IS w/ SPR; or A4IS w/ SSPR.



Direct fixation of the soffit liner board to SFS / Purlin / Infill steels (steel 1.2mm to 4.0mm).

Self-drilling screw with a large spreader washer.

TSBWHT w/ SPR; or BMHT w/ SSPR; or A4BMHT w/ SSPR.



Direct fixation of the soffit liner board to timber (min. 25mm penetration).

Woodscrew or insulation screw with a large spreader washer.

WS w/ SPR; or A2WS w/ SSPR; or A4WS w/ SSPR; or IS w/ SPR; or A4IS w/ SSPR.



Direct fixation of the soffit liner board to brickwork or masonry (retrofit, EWI, etc).

Hammer-in light duty fixing (with or without spreader washer).

GIA w/ GIW80; or A2GIA w/ A2PIW80.

Fixing Length

Required fixing length = insulation board thickness+ minimum embedment into the substrate.

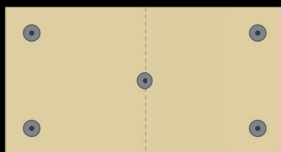
Boards are available up to 300mm thick, and thicker builds may be installed in multiple layers fixed separately— our team can advise the correct length for every build-up.

Specification Nuances

These are typical solutions. Nuances from specification to specification mean the correct answer may change — pattern changes, environment, exposure, other conditions or proximities.

Always confirm the fixing selection for your specific project with Evolution Fasteners technical support.

03 Installation Guidance



Fixing patterns and installation principles for soffit insulation boards.



Fixing Patterns

Boards are fixed on a domino-five, domino-six or two-edges-and-centre pattern as specified for the project — see patterns opposite. Fixing positions and edge distances per the project specification.



Board Pattern & Joints

Boards are tightly butted at every joint, with end joints staggered column — adjacent columns offset by half a board.



Embedment & Drive Depth

35mm nominal embedment into concrete and masonry; minimum 25mm penetration into timber. Drive until the spreader washer sits snug against the board face — do not over-drive, which compresses the insulation and can pull the insulation over the fastener.



MF System Framing

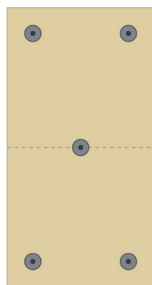
Fix the frame to the soffit per the system manufacturer's recommendations, then fix the board at right angles to the MF top hat sections using the specified fixing pattern.



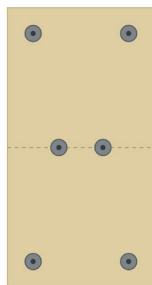
Timber Battens

Battens at maximum 600mm centres, with all four edges of the board supported. Fixings must penetrate a minimum of 25mm into the timber.

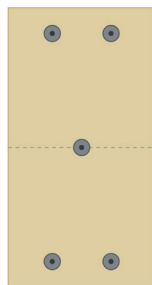
FIXING PATTERNS Per board — metal fixings throughout, as specified by our technical team.



DOMINO-5



DOMINO-6

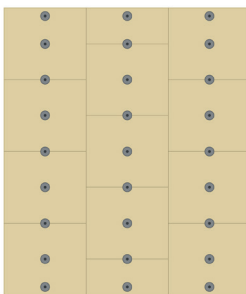


TWO EDGES + CENTRE

① Metal fixing with spreader plate — all positions

Pattern & count vary with board size and specification — confirm with technical. Corner fixings 100–150mm from the corner.

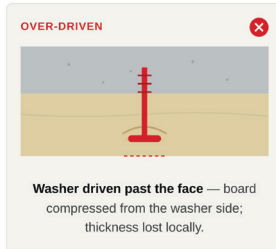
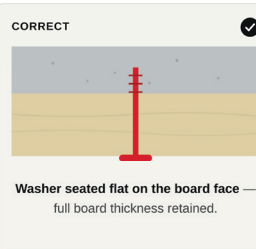
FIELD LAYOUT Metal fixings at board centres, corners & joints.



① Metal fixing with spreader plate (centres, corners & joints)

200mm*
200mm*
100–150mm*
100mm corner

DRIVE DEPTH Washer snug — never over-driven.



Services & Penetrations

Cable trays, pipework, lighting and containment all still need to hang from an insulated soffit. Here's how they coexist with the board, and what fixes them.

The board insulates. The concrete carries.

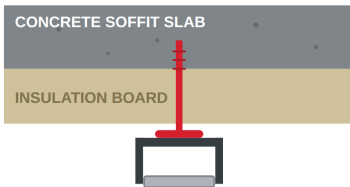
SUPPORTING SERVICES Anchor to structure — never to the board.



The board has no structural function.

The insulation board must **not** support any M&E structure — no exceptions. Every rod, tray and bracket fixes through the board and into the **concrete soffit slab** behind it.

WHERE THE LOAD GOES



A4HH fixes direct to the slab

bracket & tray carried by the structure, not the board

The fixing passes **through** the board and carries into the slab. The board stays purely thermal and acoustic.

One ceiling. Two orders.

Every rod, tray and bracket needs its own fixing into the concrete — and **that's us too**.

A4HH Multi-Fix Screw

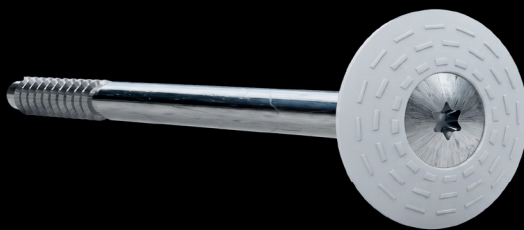
A4 STAINLESS STEEL

- Fixes cable tray, trapeze brackets, pipe supports & containment direct to the soffit
- Direct replacement for drop-in anchors & through-bolts
- No plugs, no resin — one operation

Specify the board fixings and the A4HH together — every fixing on the ceiling from one supplier.

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05 Carbon Range



Our fasteners for internal and standard-environment applications.

Each fastener pairs with the correct spreader washer for the board build-up, distributing clamping load across the insulation face without crushing the insulation or pulling the insulation over the fasteners.

ICS

Insulation Concrete Screw

UV-stabilised 25mm nylon-head concrete screw for fixing insulation direct to concrete ceilings and soffits.
7 SKU range.
Lengths up to 350mm.

Pairs with: SPR70 spreader plate



TSBWHT

Self-Drilling TEK®

Hex head (5/16") composite panel fastener with high-low coarse thread, TEK 3 drill point and integral bonded EPDM washer (12mm, 16mm or 19mm).

Drilling capacity 1.2–4.0mm steel.
Lengths 80mm–300mm, insulation capacity up to 285mm.
Carbon steel, EvoShield® 500HR.

Pairs with: SPR spreader plates



MSHH

Self-Tapping Masonry Screw, Hex Head

Self-tapping masonry screw with 5/16" hex head and nail point, fixing timber battens, track, trunking and general components to concrete and masonry.
EvoShield® 500HR.
6.3mm diameter, lengths 32mm–254mm, 25mm nominal embedment through a 5.15mm drill hole.

MSHH8.0 = 8.0mm diameter range.

Pairs with: SPR70 / SPR8.2–70 spreader plates



IS

Self-drilling insulation screw.

Self-drilling insulation screw with a bugle head that pulls the board down without crushing it. Phillips No.2 drive, coarse thread, TEK 2 drill point, 4.8mm diameter, lengths 60mm–300mm, EvoShield® 500HR coating. 18 SKU range

Pairs with: SPR70 & SPR90 spreader plates



WS

Woodscrew

Universal woodscrew for timber, chip-board, MDF and composites. Double countersunk head with nibs, Pozzi No.2/No.3 drive, reduced tip for fast starting. Electroplated zinc coated carbon steel.

Diameters 3.5–6.0mm, lengths 16mm–200mm (milling thread on longer sizes). Minimum 25mm penetration into the timber.

Pairs with: SPR spreader plates



GIA

Galvanised Insulation Anchor

Galvanised (Z140) hammer-in insulation anchor with integral 40mm compression disk, fixing mineral wool, glass wool, EPS and PU boards to concrete, blockwork and brick through an 8.0mm pilot hole. 8.0mm diameter, lengths 80mm–240mm, embedment 35–45mm. Light duty.

7 SKU range

Pairs with: GIW80 stress plates (80mm) where a larger spread is required



SPR/GIW80

Stress Plates

Galvalume-coated steel plates that distribute load and stop insulation pulling over the fastener head. SPR50/70/90 round (50/70/90mm dia), SPR8.2-70 (70mm for 8.0 fasteners), SPO82 oval lap plate (82×40mm). Designed to FLEX if a fastener is overdriven, protecting the board

For use with: ICS, IS, MSHH, TSBWHT, WS and GIA ranges (official companions: masonry MSHH/A4HH · steel 0.6–2.5 IS/A4IS · steel 1.2–3.5 TSBWHT TEK3 · steel 4.0–12.5 TSBWHT TEK5)



06

Bi-Metal Range



Our A2 & A4 grade options for semi-exposed and aggressively saline environments.

Bi-Metal / stainless steel. variations of every soffit fixing solution. Specified where corrosion resistance and design life are critical, with the complete fixing assembly (fastener and plate) in Bi-Metal / stainless steel.

BMHT

A2 Bi-Metal™ Composite Panel Fastener

A2 (304) stainless shank and head with a hardened carbon steel TEK 3 drill point. 5/16" hex head, coarse thread, integral 12mm washer.

Drilling capacity 1.2–4.0mm steel. 5.5mm diameter, lengths 105mm–350mm, insulation capacity 50mm–325mm across the range. 13 SKU range.

Pairs with: SSPR stainless spreader plates



A4IS

A4 Self-Drilling Insulation Screw

Bi-metal insulation screw: A4 (316) stainless shank and head with a hardened carbon TEK 2 drill point. Bugle head that pulls the board down without crushing it, Phillips No.2 drive, coarse thread.

Drilling capacity 0.6–2.0mm steel; also for timber. 4.8mm diameter, lengths 45mm–360mm. 15 SKU range.

Pairs with: SSSPR70 stainless spreader plates



A4BMHT

A4 Bi-Metal™ Composite Panel Fastener

A4 (316) stainless body with hardened carbon TEK 3 drill point. 5/16" hex head, twin high thread, integral bonded EPDM washer (12mm, 16mm or 19mm by SKU).

Drilling capacity 1.2–4.0mm steel. 5.5mm diameter, lengths 105mm–250mm, insulation capacity 50mm–230mm. 7 SKU range.

Pairs with: SSPR stainless spreader plates



A2WS / A4WS

Woodmaster® Super Cutter Stainless Woodscrews

Stainless steel version of the Woodmaster woodscrew — A2 (304) and A4 (316) grades. Double countersunk head with nibs, for timber, chipboard, MDF and composites. Minimum 25mm penetration into the timber.

*Diameters 4.0–6.0mm, lengths 40mm–100mm.

Pairs with: SSPR stainless spreader plates



*Stainless woodscrews max out at 100mm — for board build-ups over ~75mm on timber in stainless, specify A4IS (lengths to 360mm).

A2GIA

A2 Stainless-Steel Insulation Anchor

A2 (304 / A2-70) stainless hammer-in insulation anchor with integral 40mm compression disk, fixing mineral wool, glass wool, EPS and PU boards to concrete, blockwork and brick through an 8.0mm pilot hole.

8.0mm diameter, lengths 110mm–200mm, embedment 35–45mm. Light duty. 4 SKU range.

Pairs with: A2PIW80 stress plates



A4HH

A4 Stainless Steel Multi-Fix Screw

Bi-metal multi-fix screw: A4 (316) stainless thread and head with a hardened carbon gash point. Fixes timber battens, track, trunking and general components direct into concrete, masonry and timber — no plugs. 5/16" flanged hex head.

6.3mm diameter, lengths 32mm–250mm, 35mm nominal embedment (data from 25mm). 13 SKU range.

A4HH8.0 = 8.0mm diameter range.

Pairs with: SSSPR70 (6.3) / SSSPR8.2-70 (8.0)



SSSPR / SSPR / A2PIW80

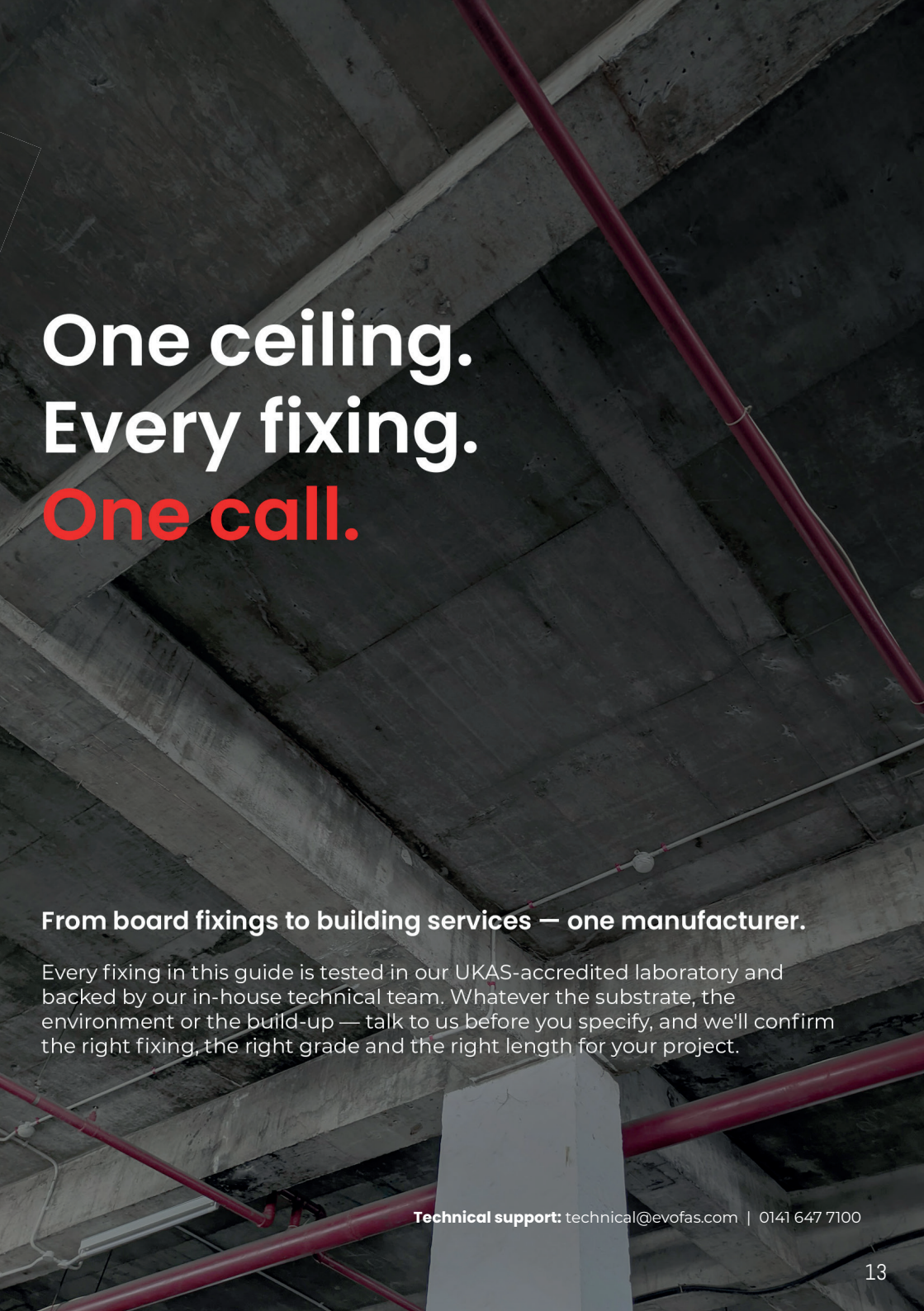
Stainless Steel Stress Plates

Stainless round stress plates, 0.7mm thick, that distribute load and stop insulation pulling over the fastener head — designed to flex if a fastener is overdriven, protecting the board.

SSSPR70 (70mm dia, 6.5mm hole), SSSPR8.2-70 (70mm dia, 8.2mm hole for 8.0 fasteners). SSSPR50 coming soon.



For use with: A4HH, A4IS, BMHT, A4BMHT, A2WS/A4WS ranges



One ceiling. Every fixing. One call.

From board fixings to building services — one manufacturer.

Every fixing in this guide is tested in our UKAS-accredited laboratory and backed by our in-house technical team. Whatever the substrate, the environment or the build-up — talk to us before you specify, and we'll confirm the right fixing, the right grade and the right length for your project.

Technical support: technical@evofas.com | 0141 647 7100



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Technical Support.

Our engineering team is on hand to support you with product selection, fixing length calculations, pull-out data and application guidance for every soffit insulation build-up.

Get in touch:

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Fixing specifications shown in this guide are typical solutions for the applications described. Specification-to-specification nuances—including board thickness, facing type, substrate condition, environment and proximities—may change the correct fixing selection. Always confirm project-specific requirements with Evolution Fasteners technical support before specification or installation. Evolution Fasteners (UK) Ltd, Clyde Gateway Trade Park, Dalmarnock Road, Rutherglen, Glasgow, G73 1AN.