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**guide to evolution**  
**bi-metal & stainless steel screws**

# guide to evolution bi-metal & stainless steel screws

Evolution Fasteners (UK) Ltd stock a wide range of high performance bi-metal and stainless steel screws specifically designed for use in a variety of applications where a fastener with a standard coating is not suitable due to the requirement for superior corrosion protection.

This guide outlines key application and product information for our:

- bi-metal composite panel fasteners
- bi-metal hex head tek screws for light and heavy steel
- bi-metal wing-drill tek screws for light and heavy steel
- stainless steel countersunk self-drill screws
- stainless steel wing drill tek screws
- stainless steel stitching screws

## evolution quality

Premium quality is something we take very seriously at Evolution and our ISO 9001 certification demonstrates this. We are dedicated to ensuring quality in everything we do, from our products to our Customer Services and Marketing Support.

We are committed to ensuring the quality of our products at every stage in the production process. From initial product design, to prototype testing, through the manufacturing process to final testing and distribution of approved fasteners.

We believe in the quality of our products but don't just take our word for it!

**If you would like some samples to try them for yourself:  
call +44 (0)141 647 7100 or e-mail [sales@evolutionfasteners.co.uk](mailto:sales@evolutionfasteners.co.uk)**

## evolution technical support



Product technical and performance information is available in our product datasheets which are downloadable from the Tech Support area of our website [www.evolutionfasteners.co.uk](http://www.evolutionfasteners.co.uk)

The qualified engineers in our in-house Technical Department are available to:

- provide technical advice and calculations
- carry out in-situ testing to support our products
- discuss your requirements for individual projects
- design and manufacture bespoke fasteners

**For further technical information or specific queries about the use of our products, please contact our Technical Department:  
call +44 (0)141 647 7100 or e-mail [technical@evolutionfasteners.co.uk](mailto:technical@evolutionfasteners.co.uk)**

# why choose bi-metal screws?

## bi-metal screws, the best of both worlds.

Evolution bi-metal screws have a stainless steel shank which is married to a super sharp carbon steel drill point before being bright zinc plated.

**Stainless  
steel  
shank**



**Carbon  
steel  
drill point**



**Ultimate  
corrosion  
protection**

**and**

**Superior  
drilling  
performance**

# evolution bi-metal composite panel fasteners



## designed for:

fixing steel channel into stud or cladding/roofing sandwich panels with build up range 23.0mm - 110.0mm into 1.2mm - 3.5mm thick steel.

## key product features:

- Aggressive 6.3mm buttress thread securely clamps panel surface against washer
- Unthreaded section on shank ensures panel surfaces are not deformed
- Super hard, super sharp carbon steel drill tip
- The best of both worlds: superior drilling performance without sacrificing corrosion protection

## range information:

Product Code	Size	Box Qty	Carton Qty	Build Up Range
BMTSBWHT5.5-60-3	5.5mm x 60mm	100	1,000	23.0mm - 40.0mm
BMTSBWHT5.5-80-3	5.5mm x 80mm	100	1,000	23.0mm - 60.0mm
BMTSBWHT5.5-105-3	5.5mm x 105mm	100	1,000	55.0mm - 85.0mm
BMTSBWHT5.5-135-3	5.5mm x 135mm	100	1,000	70.0mm - 110.0mm

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## bi-metal hex head tek screws



### designed for:

use with systems containing aluminium sheeting/panelling.

### key product features:

- ✓ Available with (16mm bonded EPDM washer) or without washer.
- ✓ Washer acts as isolation between substrate and fixture and as a weatherseal
- ✓ Super hard, super sharp carbon steel drill tip will self-drill through 1.2mm - 12.5mm thick steel
- ✓ Aggressive thread form design ensures consistent tapping and superb holding power
- ✓ Stainless steel shank married to carbon steel drill point then bright zinc plated
- ✓ The best of both worlds: superior drilling performance without sacrificing corrosion protection

### range information:

#### Bi-metal Tek Screw - For Light Steel

Product Code	Size	Box Qty	Carton Qty	Washer Ø	Recommended Drill Speed	Effective Thread Length	Drill Capacity
BMHH5.5-25-3	5.5mm x 25mm	200	2,000	N/A	1,500 - 2,500 RPM	14mm	1.2mm - 3.5mm
BMHH5.5-38-3	5.5mm x 38mm	200	2,000	N/A	1,500 - 2,500 RPM	27mm	1.2mm - 3.5mm
BMHH5.5-50-3	5.5mm x 50mm	100	1,000	N/A	1,500 - 2,500 RPM	38mm	1.2mm - 3.5mm
BMHH5.5-65-3	5.5mm x 65mm	100	1,000	N/A	1,500 - 2,500 RPM	55mm	1.2mm - 3.5mm
BMHH5.5-80-3	5.5mm x 80mm	100	1,000	N/A	1,500 - 2,500 RPM	68mm	1.2mm - 3.5mm
BMHH5.5-100-3	5.5mm x 100mm	100	1,000	N/A	1,500 - 2,500 RPM	88mm	1.2mm - 3.5mm
BMBW5.5-25-3	5.5mm x 25mm	200	2,000	16mm	1,500 - 2,500 RPM	11mm	1.2mm - 3.5mm
BMBW5.5-38-3	5.5mm x 38mm	200	2,000	16mm	1,500 - 2,500 RPM	24mm	1.2mm - 3.5mm
BMBW5.5-50-3	5.5mm x 50mm	100	1,000	16mm	1,500 - 2,500 RPM	35mm	1.2mm - 3.5mm
BMBW5.5-135-3	5.5mm x 135mm	100	1,000	16mm	1,500 - 2,500 RPM	118mm	1.2mm - 3.5mm

#### Bi-metal Tek Screw - For Heavy Steel

Product Code	Size	Box Qty	Carton Qty	Washer Ø	Recommended Drill Speed	Effective Thread Length	Drill Capacity
BMHH5.5-38-5	5.5mm x 38mm	200	2,000	N/A	1,500 - 2,500 RPM	15mm	4.0mm - 12.5mm
BMHH5.5-50-5	5.5mm x 50mm	100	1,000	N/A	1,500 - 2,500 RPM	30mm	4.0mm - 12.5mm
BMBW5.5-38-5	5.5mm x 38mm	200	2,000	16mm	1,500 - 2,500 RPM	12mm	4.0mm - 12.5mm
BMBW5.5-65-5	5.5mm x 65mm	100	1,000	16mm	1,500 - 2,500 RPM	42mm	4.0mm - 12.5mm
BMBW5.5-100-5	5.5mm x 100mm	100	1,000	16mm	1,500 - 2,500 RPM	80mm	4.0mm - 12.5mm

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## bi-metal wing-drill tek screws



### designed for:

use in aggressive timber treatments e.g. ACQ or salt based. Also suitable for use in hardwoods with high tannin content.

### key product features:

- ✓ Precision formed reamer wings prevent timber jacking during use
- ✓ Super hard, super sharp carbon steel drill tip will self-drill through up to 100.0mm timber into 4.0mm - 12.5mm steel
- ✓ Stick fit recess ensures stable driving characteristics
- ✓ Stainless steel shank married to carbon steel drill point then bright zinc plated
- ✓ The best of both worlds: superior drilling performance without sacrificing corrosion protection

### range information:

Bi-metal Wing-Drill Tek Screw - For Light Steel						
Product Code	Size	Box Qty	Carton Qty	Effective Thread Length	Recommended Drill Speed	Timber Thickness
BMWD5.5-62-3	5.5mm x 62mm	100	1,000	40mm	1,500 - 2,500 RPM	13.0 - 40.0mm

Bi-metal Wing-Drill Tek Screw - For Heavy Steel						
Product Code	Size	Box Qty	Carton Qty	Effective Thread Length	Recommended Drill Speed	Timber Thickness
BMWD5.5-65-5	5.5mm x 65mm	100	1,000	36mm	1,500 - 2,500 RPM	10.0 - 28.0mm
BMWD5.5-85-5	5.5mm x 85mm	100	1,000	50mm	1,500 - 2,500 RPM	30.0 - 50.0mm
BMWD5.5-135-5	5.5mm x 135mm	100	1,000	110mm	1,500 - 2,500 RPM	45.0 - 100.0mm

# why choose stainless steel screws?

## ultimate corrosion protection

The chromium content in stainless steel gives the material its unique corrosion resistant properties. The chromium means that an invisible, corrosion-resistant chromium oxide film forms on the surface of the steel. Providing there is oxygen present, this film will 'self-heal' if mechanically or chemically damaged to preserve the corrosion resistance of the steel.

The corrosion resistant properties of stainless steel make it ideal for use in a range of a variety of applications where a fastener with a standard coating is not suitable due to the requirement for ultimate corrosion protection e.g.

- in aggressive ACQ or salt-based timber treatments
- in hardwoods with a high tannin content
- in coastal environments
- around swimming pools
- in internal atmospheres prone to humidity

## often the best value option

Despite the higher initial cost of stainless steel, over the total life of the project stainless steel fasteners often represent the best value option.

## hygiene

Stainless steel is easily cleaned making it ideally suited for use in environments with more stringent hygiene conditions e.g. hospitals, kitchens and food processing plants.

## aesthetic appearance

The bright silver surface of stainless steel fasteners provides a contemporary and attractive appearance which is easily maintained.

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# stainless steel countersunk self-drill screws



### designed for:

fixing boards to aluminium frames and sections.

### key product features:

- AISI 410 grade stainless steel for superior heat resistance and ultimate corrosion protection
- Perfect for use in aluminium framing systems
- Stick fit recess ensures stable driving characteristics

Product Code	Size	Box Qty	Carton Qty	Effective Thread Length	Drilling Capacity
SSCSK4.8-38-3	4.8mm x 38mm	500	7,000	24mm	1.2mm - 2.5mm

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## stainless steel wing-drill tek screws



### designed for:

use in aggressive timber treatments e.g. ACQ or salt based. Also suitable for use in hardwoods with high tannin content.

### key product features:

- Precision formed reamer wings prevent timber jacking during use
- Super hard, super sharp drill tip will self-drill through up to 60.0mm timber into 1.2mm - 3.5mm steel
- Stick fit recess ensures stable driving characteristics
- Stainless steel for ultimate corrosion protection

Product Code	Size	Box Qty	Carton Qty	Effective Thread Length	Timber Thickness
SSWD38-3	4.2 x 38mm	100	2,400	24mm	6.0mm - 22.0mm
SSWD80-3	5.5 x 80mm	100	1,400	60mm	25.0mm - 60.0mm

# evolution

## stainless steel stitching tek screws



Hex Head

### designed for:

stitching aluminium cladding panels.



Pancake Head

use in roofing systems.



With Washer

use in cladding systems.

fixing steel to steel 1.2mm - 3.5mm thick in e.g. coastal environments, swimming pools, or other internal atmospheres prone to humidity where ultimate corrosion protection is essential.

### key product features:

- 16mm bonded EPDM washer acts as isolation between substrate and fixture and as a weatherseal
- Available with pancake head where more flush finish is required
- Super hard, super sharp drill point
- Stainless steel for ultimate corrosion protection

Product Code	Size	Washer Ø	Box Qty	Carton Qty	Drill Point	Effective Thread Length	Steel Thickness
SSHW4.8-16-3	4.8mm x 16mm	N/A	1,000	10,000	Tek 3	10mm	1.2mm - 3.5mm
SSPH5.5-19-3	5.5mm x 19mm	N/A	200	5,000	Tek 3	14mm	1.2mm - 3.5mm
SSS6.3-22-2	6.3mm x 22mm	16mm	100	8,000	Tek 2	15mm	Up to 2.5mm



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