Resysta®
THE BETTER WOOD

DECKING SYSTEM
INSTALLATION INSTRUCTIONS

www.falconpp.co.uk

FALCON
PANEL PRODUCTS LTD

THE LATEST TEST RESULT - classification C to DIN 51097: Resysta outdoor profiles achieve the 'least slippery' classification, making them particularly suitable for walking on with bare feet in wet areas.

Contents

Resysta® THE BETTER WOOD

FALCON PANEL PRODUCTS LTD

Benefits

The added plus for your decking

- Easy installation using timber tools and techniques
- Easy aftercare
- No defects
- Weather resistant
- Water resistant ~ resistant to rain, sea water and chlorinated water
- UV resistant so no greying
- Dimensionally stable
- Bare feet friendly ~ no splintering, cracking or flaking
- Durability Class 1 to fungal attack i.e. rot
- Fire protection Class E (B2) ~ Class E (B1) available
- Wide range of colourfast colours
- Recyclable
- Made from Resysta® THE BETTER WOOD

15 YEAR GUARANTEE

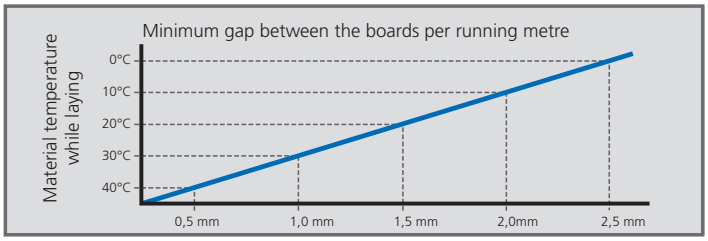
- swell-free
- crack-free
- splinter-free
- rot-free

Resysta® THE BETTER WOOD

Basics

Allowing for dimensional change

- Resysta only expands and contracts due to temperature. Unlike other materials, Resysta does not swell and shrink due to air humidity or direct contact with water. Resysta only expands along its length.
- Thermal expansion must be considered when installing your Resysta product. Expansion is allowed for by using appropriate fixings (see Fixings) and expansion gaps (see table below).
- When cutting to length, Resysta must be kept at a constant temperature, ideally in the shade. Exposure to direct sunlight will result in an increased change in length.
- When installing, appropriate expansion gaps should be allowed for lengthways between boards or between the end of a board and a fixed structure, like a wall. Please use the table below to calculate the gap you need. This is calculated at 1mm gap per 1m length of Resysta per 10 degree Celsius (°C) change in temperature.



- Waste pieces and dust should be disposed of in compliance with the regulations of your waste management authority. Please do not burn Resysta.

Fixings

When applying a screw directly to Resysta, the lineal thermal expansion of Resysta must be allowed for (see table above).
To do this, you must;

- Use screws with a smooth underside to the head (ideally flat underside).
- Ensure that the pilot hole is a minimum 1-2mm larger than the screw shaft.
- Tighten screws carefully. Do not overtighten, to allow the movement of Resysta and to avoid any damage.

Preservation

Due to the unique properties of Resysta, the following will not occur;

- Discolouration or greying
- Cracking due to swelling and shrinking
- Splinters
- Ingress of water and rotting
- Cupping
- Resin discharge

Storage

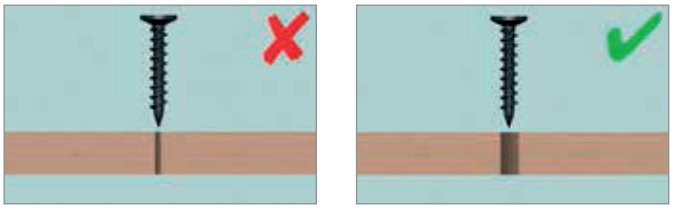
- Please store products made of Resysta material horizontally on a level surface.
- If storing Resysta on beams, the beams should not be more than 30cm apart.
- The profiles should never be covered with plastic or foil – either before or after installation. Condensation and accumulated water can cause staining.

Installation tips

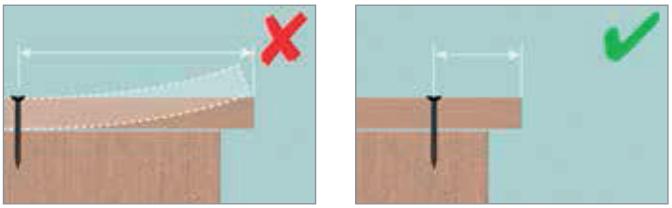
General application instructions

Some basic considerations should be given when working with Resysta. Greater detail can be found on the following pages.

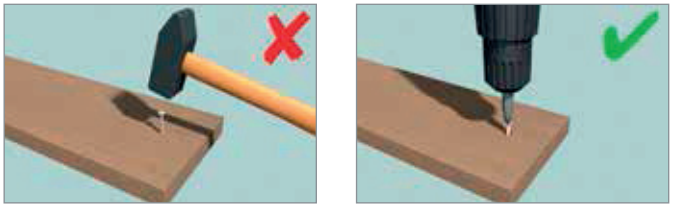
Adequate pre-drilling



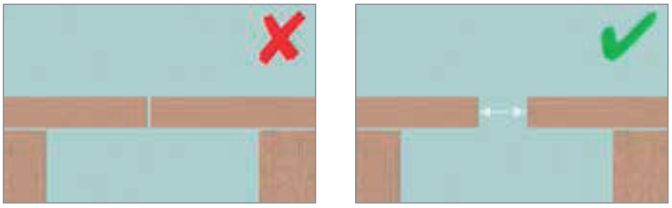
Reduce projecting



Use screws to fasten



Sufficient spacing for thermal expansion



Tools

Standard woodworking tools can be used to install Resysta.
You will need;

- Saw
- Drill
- Screwdriver
- Spacers
- Spirit level
- Mitre block

Sawing

Profiles made of Resysta may be cut longitudinally and laterally with customary saws.

Milling

Any profiles can be milled easily by means of customary woodworking tools.

Please note

Resysta is not a structural material. The products should not be used for supporting or structural purposes. Local building regulations should be followed along with any laying instructions and technical information.

Sanding

Profiles made of Resysta should be sanded in longitudinal direction only. Depending on the required finish, we recommend the use of sand paper with grit of 60 – 80. Fine-grit sand paper should only be employed for the removal of dirt.

Drilling

Can be performed using ordinary woodworking drills.

Screws

Due to Resysta's high density, the use of nails is not recommended. Screws should be used and should be appropriate for outdoor use, ideally stainless steel. The screw penetration depth should be three times its diameter. Pilot holes should be 1 – 2 mm larger than the screw shaft to allow movement.

Bonding

Profiles made of Resysta may be glued with standard PUR-adhesives or other appropriate plastic adhesives. The surface must be cleaned and be free of loose particles and dirt to ensure optimal bonding.

Colour Glaze (FVG)

1. Application

- To obtain a uniform and optimal colour result, the glaze should be applied in constant weather conditions.
- Ideal application conditions are 5 – 25 degrees Celsius (°C) temperature and 50 – 60% relative air humidity.
- Glaze should be applied to individual profiles before installation.

2. Care

- Care on a regular basis is not required.

3. Cleaning

- Dirt may be removed with a gentle jet wash or with a soft brush.
- More stubborn items may be removed with a stiffer brush or gentle sanding with a fine grit sandpaper (120 grit plus).

4. Maintenance

- Glaze may wear or dull over the course of time. It may be reinvigorated by diluting 3 parts water to 1 part glaze and applying with a paint brush or a gentle jet wash.
- Before application, the surface should be thoroughly cleaned to achieve a consistent finish.

- Please do not apply in direct sunlight or if there is any likelihood of rain.

Sealing (RFS)

The sealer (RFS) seals the surface and any small gaps. This makes the surface more hardwearing and does not allow dirt particles to adhere, making the surface easier to clean. The ingress of moisture is also prevented.

1. Application

- The sealer consists of 2 components which must be applied within 30 minutes of mixing, with a flat brush.
- The sealer should be applied in consistent conditions.

- Avoid application in direct sunlight.
- Application instructions are available – please ask.

2. Care

- Care on a regular basis is not required.

3. Cleaning

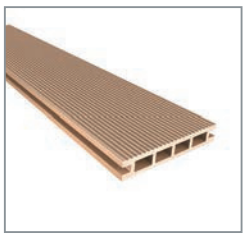
- Dirt may be removed with a gentle jet wash or with a soft brush.
- More stubborn items may be removed with a stiffer brush or gentle sanding with a fine grit sandpaper (120 grit plus).

4. Maintenance

- Maintenance should not normally be required.
- In areas of high traffic, wearing may occur. To renew, the original sealer must be removed by sanding (as with paint or varnish on wood) and a new coat applied.
- Scratches will not affect the durability of your Resysta product. They do not need to be refinished as with other materials.

Product range

DECKING PROFILE RE1001



Product	Corrugated / Smooth with groove
Material	Resysta
Colour	Natural
Size	125 x 22 mm

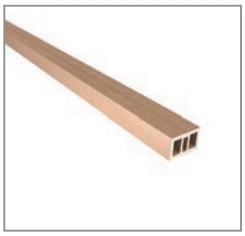
DECKING PROFILE RE1033

Product	Smooth 2 sides with groove
Material	Resysta
Colour	Natural
Size	140 x 20 mm

DECKING PROFILE RE1043

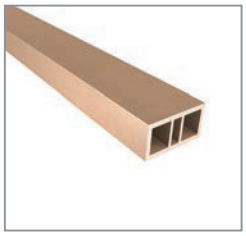
Product	Smooth 2 sides with groove
Material	Resysta
Colour	Natural
Size	200 x 20 mm

JOIST RE1010



Product	Hollow Profile
Material	Resysta
Colour	Natural
Size	38 x 25 mm

JOIST RE1020



Product	Hollow Profile
Material	Resysta
Colour	Natural
Size	70 x 38 mm

END BATTEN RE2000

Product	Rhombus Hollow Profile
Material	Resysta
Colour	Natural
Size	105 x 20 mm

END BATTEN RE2010

Product	Hollow Profile
Material	Resysta
Colour	Natural
Size	70 x 20 mm

END BATTEN RE2030

Product	Solid Profile
Material	Resysta
Colour	Natural
Size	70 x 12 mm

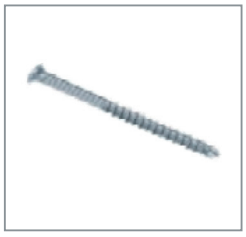
BOARD CONNECTOR RE5140

Product	Board Connector
Set	60 Connectors 165 Screws 1 Drill Bit

CLIP SYSTEM RE5590

Product	Deck Clip
Set	100 Clips 100 Screws

DECK SCREW RE5150

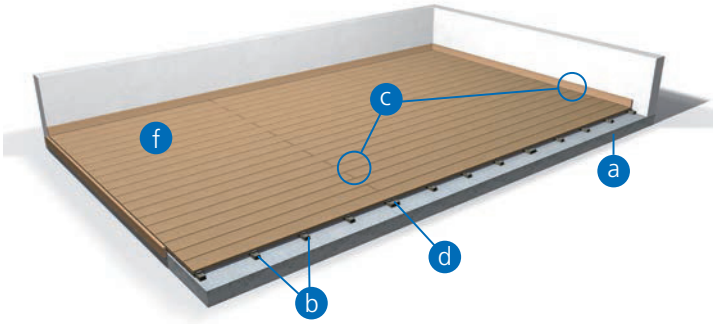


Product	Stainless Steel Deck Screw
Size	5.5 x 40 mm
Set	250 per box

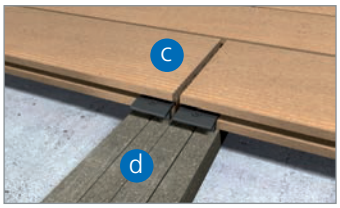
For notes and information on surface teatment with stain and 2-component vanish, please contact your supplier.

Special wide brush for evenly distributing the stain acoss the entire width of the board.

Key principles



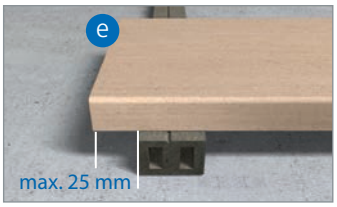
Laying system 1



Traditional clip system

Laying system 2

Rear board connector



a Supporting surface

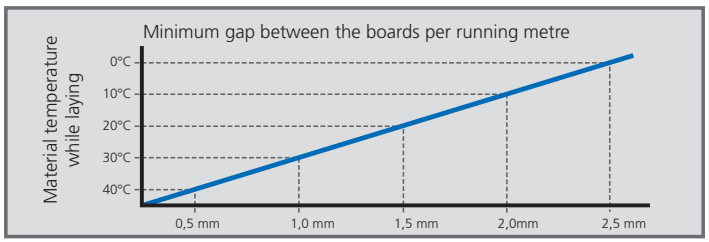
- The base must be solid and capable of supporting the weight of the deck.
- Ensure adequate water run-off (at least 2°) or drainage.

b Joists

- Fix the joists to the supporting ground.
- Ensure the correct distance between joists (see pages 9 and 10).

c Expansion joint

- Ensure a gap is left to allow for lineal expansion of the deck boards which is due to temperature changes from when laid. (Please see table below).
- Boards will not expand across the width or in the depth.



d Support

- A minimum of 30 mm of the end of the deck board must rest on the supporting joist.
- Use 2 joists to support an end joint.
- The ends of each board must be fixed with a clip.

e Overhang

- Maximum overhang of the end of a deckboard should not exceed 25 mm.

f Laying pattern

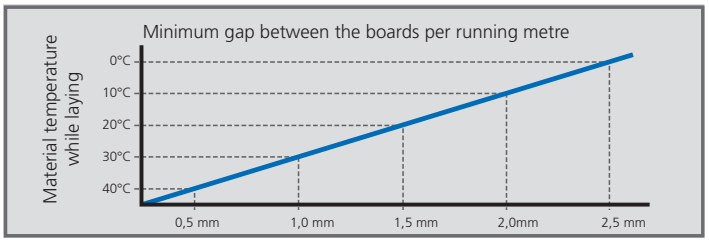
- Decide on the pattern of your deck boards first - this will determine the layout of the substructure.

Installation guide

1. General installation instructions

- Ensure there is good water run-off during installation to avoid puddles and standing water on the terrace. We therefore recommend a fall of 2 degrees. Water should not be allowed to accumulate in the hollow profiles.
- Use fixing materials suitable for outdoor applications (e.g. stainless steel screws).

- Always allow for linear expansion of Resysta outdoor profiles. This occurs solely due to temperature, and not the atmospheric humidity, as is the case with wood.
- Please use the chart below to calculate a suitable expansion gap.



- The board ends may be chamfered to 45°. This will conceal the expansion joints.

2. Laying options

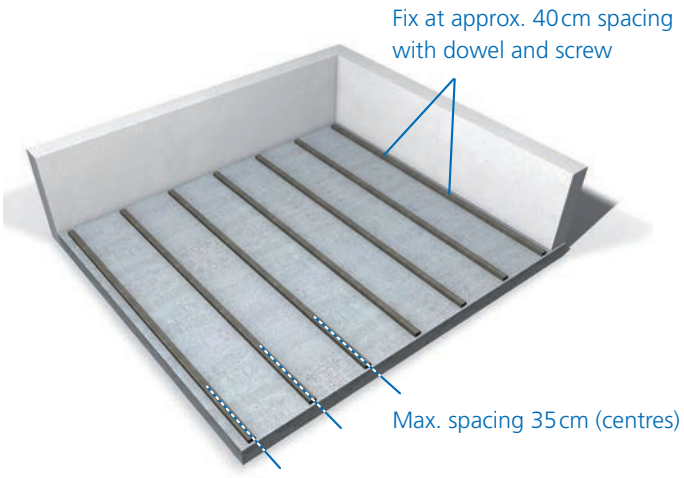
- Decide on your laying pattern in advance, so you can plan how to lay your substructure.

Laying examples

3. Substructure

a) Joist RE 1010 (38 x 25 mm)

Use joist RE 1010 on solid, supporting surfaces, e.g. concrete:



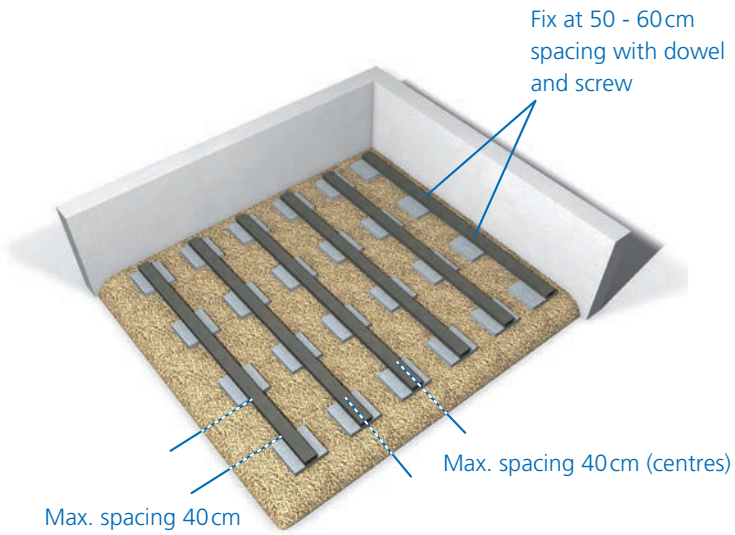
As a general rule for any supporting structure, e.g. wooden beam:

- Ensure there is adequate water run-off / drainage.
- Screw the joists firmly to the supporting surface.
- If the joists cannot be screwed firmly to the supporting surface (due to roof insulation, for example), we recommend the use of aluminium-subconstruction for floating installations.

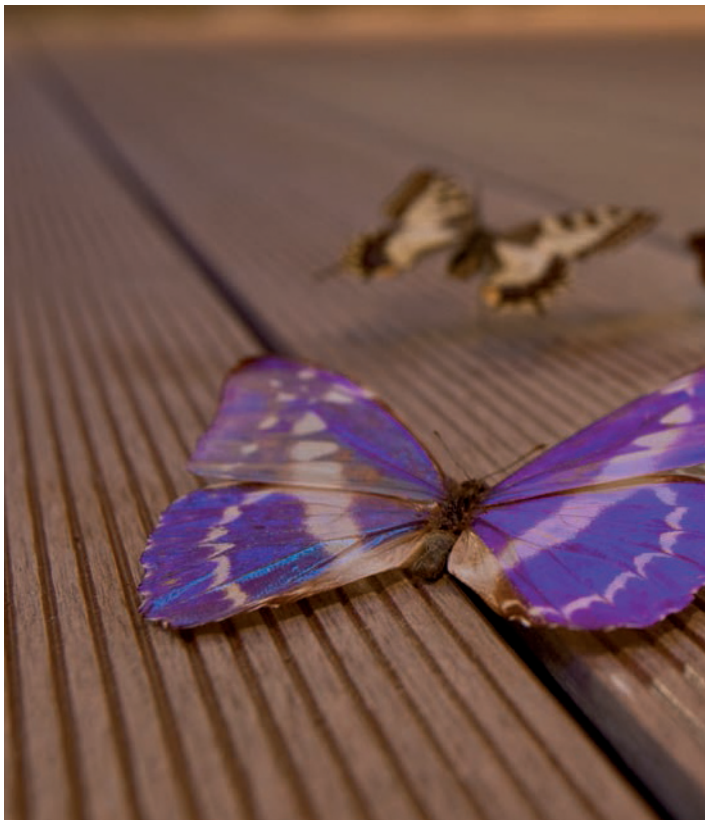
Installation guide

b) Joist RE1020 (70 x 38 mm)

Use joist RE1020 for non-fixed surfaces, e.g. exposed aggregate slabs, in a gravel bed.



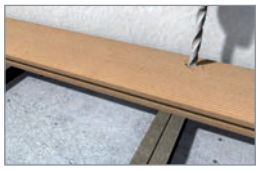
Other supporting members may also be used (e.g. wooden beams). Please ensure that they are suitable for the ground supporting them and can carry the weight of your deck.



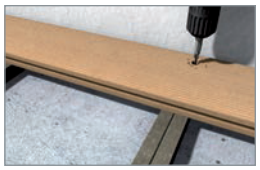
4. Installation with Clip System

Laying the first board

- Drill the board ø 2 mm.



- Drill a hole ø 12 mm, roughly 1 cm deep (through the first wall only).



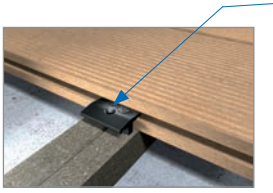
- Screw in the stainless steel screw.

- Cut a plug from waste material.
- Put adhesive in the hole and insert the plug.
- Sand flush with surface if necessary.

- Sand smooth and apply the stain to the plug.

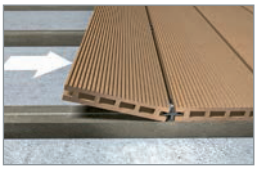
Installation guide

Installing subsequent boards with clip RE5590

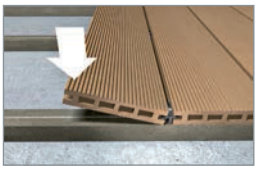


- Attach the clip.
  IMPORTANT: The Resysta Logo must be next to the board.

- Screw the clip into place.
  Caution: When setting the torque, make sure that the screw is not overtightened.

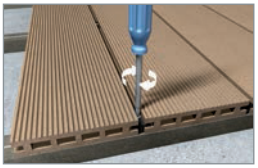


- Insert the board at an angle.



- Press the board down.

- Carefully tap the board fully into place.



- Then tighten the clip slightly.

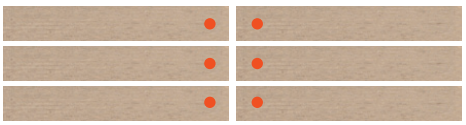
Fixing

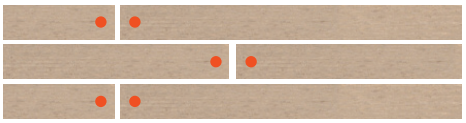
Ensure a uniform joint pattern and direction of expansion by fixing every board the same. This can be done at the start, middle or end of the board.

Alternative A = Fixing at the end

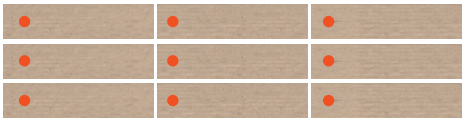
Alternative B = Fixing in the middle

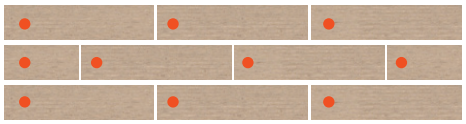
Fixing of two boards in the lengthwise direction:

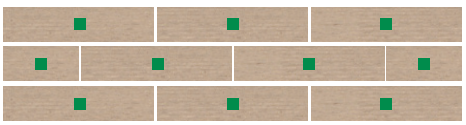




Fixing of more than two boards in the lengthwise direction:

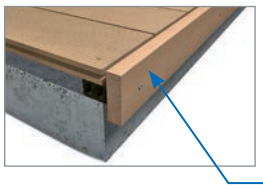






Installation guide

Fixing the end batten



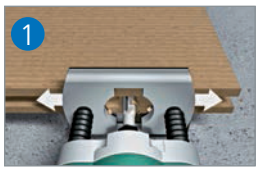
- Screw the end batten directly to the supporting joist using the deck screws.
- Screw heads may be hidden using plugs (see p.10).

IMPORTANT: Provide a 3 - 4mm expansion joint between the end of the board and the end batten.

- If the hollow profile RE2010 is used as the end batten, an open mitre will hide the hollow section.
- Always take the thermal expansion into account when spacing the profiles.

Finishing your deck

To finish exposed sides of your deck:



- Mill a groove to accept the batten.

- Apply the adhesive.

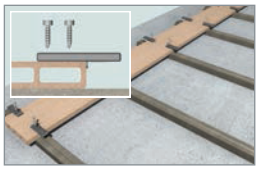
- Press in the batten. Suitable strips can be cut from a solid profile.

- Tap the batten firmly into place.

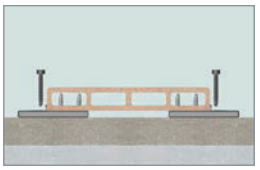
5 Then sand the strip flush with the board.

5. Installing with Board Connectors

Option 1 Board Connectors RE 5140

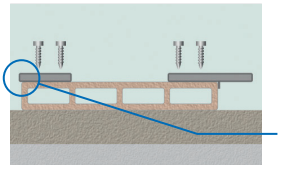


- Attach 1 board connector either side of the back face of the deck board in line with the supporting structure (see p.13 for more detail).

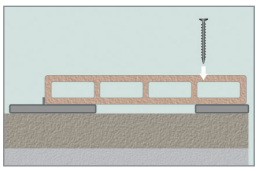


- Screw the board connectors firmly to the supporting structure. Maintain a gap of approximately 25mm from any wall or solid structure.

Option 2 Visible Deck Screws RE 5150



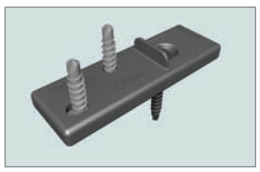
- Where a board is laid parallel to a solid structure, board connectors should be attached as shown.
- Snap off the connector flush with the edge of the deck board on the solid structure side.



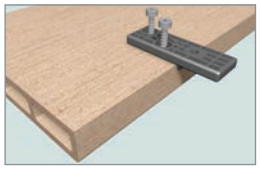
- Screw the first board through the face of the deck board and plug if preferred (see Laying the first board p.10).

Installation guide

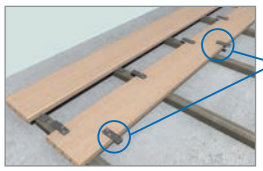
Installing subsequent boards with board connectors RE 5140



- The board connector is fixed to the underside of the board using 2 screws.
- The board connector is fixed to the substructure using a 3rd screw.

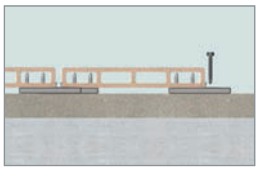


- The board connectors should be attached in line with the substructure.



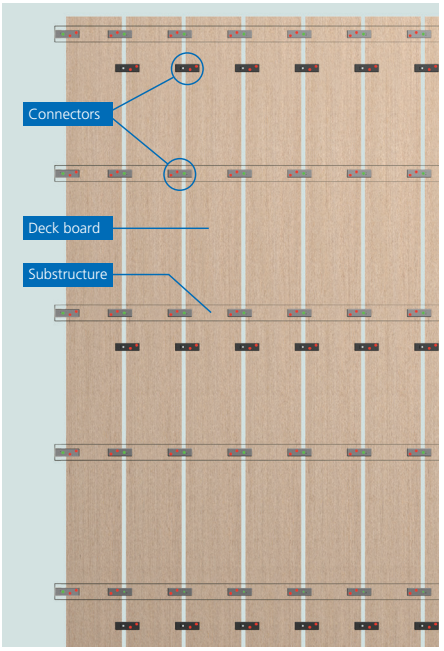
- Screw a connector into every 2nd gap between the substructure.
- Then push it beneath the board that is already fixed in place.

- Press down over the entire length of the board.
- The gap can be changed as required using spacers.

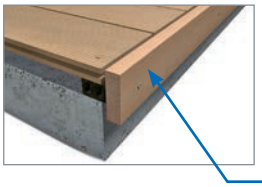


- Then use screws to fix the side that is still free to the supporting structure.

Laying diagram



Fixing the end batten



- Screw the end batten directly to the supporting joist using the deck screws.
- Screw heads may be hidden using plugs (see p. 10).

IMPORTANT: Provide a 3 - 4 mm expansion joint between the end of the board and the end batten.

- If the hollow profile RE 2010 is used as the end batten, an open mitre will hide the hollow section.
- Always take the thermal expansion into account when spacing the profiles.

Finishing your deck

Finish by staining any drill holes, plugs and intersections that are made after installation.
If you spot any scratches or damage, apply a little stain with a cloth to touch up.

Technical data

Density	ASTM D2395:2002	Approx. 1.46 g/cm^3
Coefficient of Linear Thermal Expansion	ASTM D696	3,6x10(-5) m/mC
Water Absorption and Air Humidity Behaviour	ASTM D1037:2006a	None or very low water absorption (only surface wetting)
Weathering and UV Resistance	QUV Test	Resysta surfaces treated with glaze show extremely high resistance
Skid Resistance	DIN 51097	C Rating (highest rating)
Fire Behaviour (British Standard)	EN ISO 11925-2	B2, normal flammability (by adding flame retardants, a higher rating of B1 can be reached)
Fire Behaviour (US Standard)	NFPA	A Rating (flame propagation 25, smoke emission 450)
Fire Behaviour (British Standard)	BS 476 Part 6&7	Rating 1
Durability (Resistance to Wood-Destructive Fungi)	DINV ENV 12038:2002	The material has not been affected, highest durability – Class 1
Emission	DIN EB ISO 9001/14001	Passed
Brinell Hardness (HB)	EN 1534	81,1 N/mm^2
Friction Coefficient μ untreated	EN 13893	0,46
Friction Coefficient μ with 2K	EN 13894	0,52
Screw Withdrawal Resistance	EN 320.2011-07	5777 N
Heat conductivity (λ)	EN 12664	0.199 W/(mK)
Water vapour permeability	DIN EN ISO 12572	μ=1300 -> sd 7.22m diffusion inhibiting
Bending Strength	ISO 178	46 N/mm^2
Bending Modulus	ISO 178	3850 N/mm^2
Tensile Strength	ISO 527	21,8 N/mm^2
Tensile Modulus	ISO 527	2340 N/mm^2
Shearing Strength	EN 392	16,8 N/mm^2
Resistance to Mould Fungal Decay	CEN/TS 15083-2	The material features almost no mass loss, highest durability classification 1 (very durable)
Resistance to termites	ASTM D3345-08	Resistant to termite infestation (coptotermes curvignathus), very little loss of mass - very high durability

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January 2019

CTH A Consolidated Timber Holdings Group Company