CIRQLAR

DECKING SYSTEM
INSTALLATION INSTRUCTIONS

www.cirqlarconstruct.com

CONTENTS

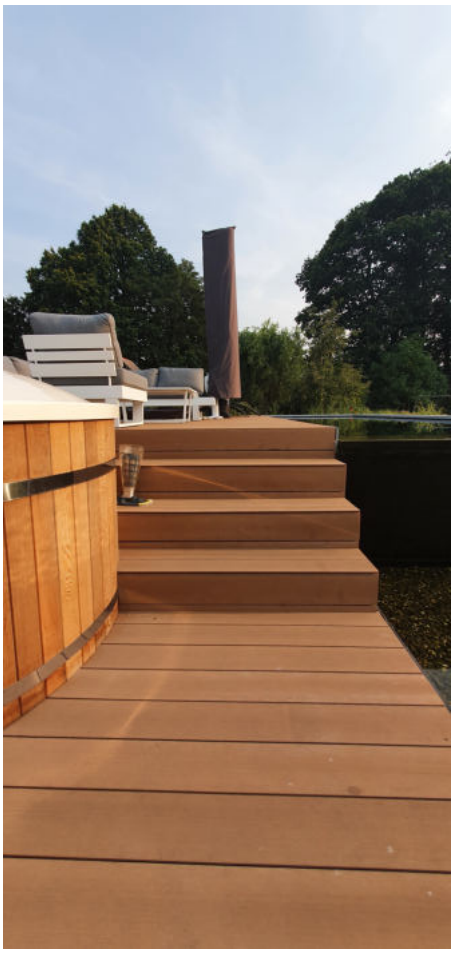
The added plus for your decking

- 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 class E until maximum fire class B available
- Wide range of colourfast colours
- Recyclable
- Cirqlar made of Resysta

15 YEAR GUARANTEE

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

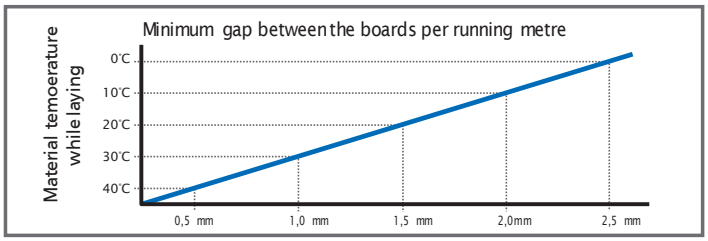
CIRQLAR



CIRQLAR

Allowing for dimensional change

- Cirqlar only expands and contracts due to temperature. Unlike other materials, Cirqlar does not swell and shrink due to air humidity or direct contact with water. Cirqlar only expands along its length.
- Thermal expansion must be considered when installing your Cirqlar product. Expansion is allowed for by using appropriate fixings (see Fixings) and expansion gaps (see table below).
- When cutting to length, Cirqlar 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 1 mm gap per 1 m length of Cirqlar 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 Cirqlar.

Fixings

When applying a screw directly to Cirqlar, the lineal thermal expansion of Cirqlar 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 of 1.8 x Ø of the screw.
- Tighten screws carefully. Do not overtighten, to allow the movement of Cirqlar and to avoid any damage.

Preservation

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

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

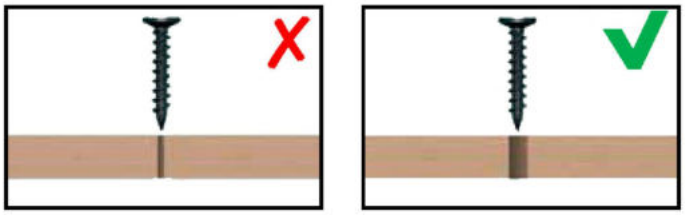
Storage

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

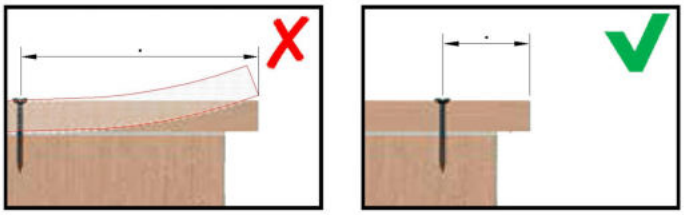
General application instructions

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

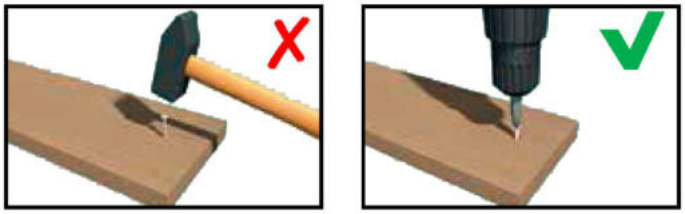
Adequate pre-drilling



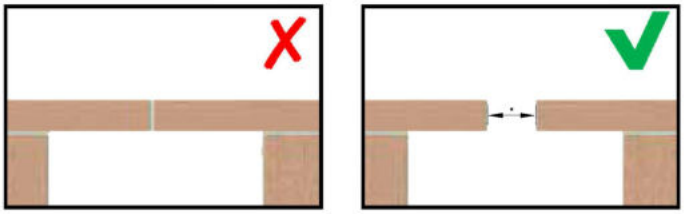
Reduce projecting



Use screws to fasten



Sufficient spacing for thermal expansion



Tools

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

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

Sawing

Cirqlar 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

Cirqlar 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

Cirqlar 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 Cirqlar´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 1.8 x Ø of the screw.

Bonding

Cirqlar 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.

Please note

Cirqlar decking could be pre colored and lacquered in the factory on request

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.

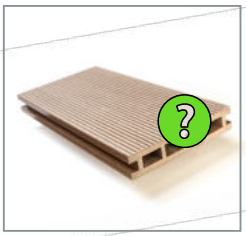
3. Cleaning

- 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

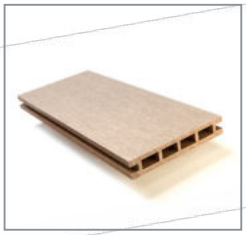
- Maintenance should not normally be required.
- In areas of high traffic, wearing may occur. To renew, the original sealer must be removed by sanding (as with paint or varnish on wood) and a new coat applied.
- Scratches will not affect the durability of your Cirqlar product. They do not need to be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

DECKING PROFILE CDP 20140R



Product	Corrugated with groove
Brand	Cirqlar
Colour	On request
Size	20 mm x 140 mm

DECKING PROFILE CDP 20140S

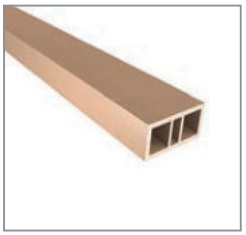


Product	Smooth with groove
Brand	Cirqlar
Colour	On request
Size	20 mm x 140 mm

JOIST CJP 2538

Product	Hollow Profile
Brand	Cirqlar
Colour	Natural
Size	25 mm x 38 mm

JOIST CHP 3870



Product	Hollow Profile
Brand	Cirqlar
Colour	Natural
Size	38 mm x 70 mm

END BATTEN CHP 2070

Product	Hollow Profile
Brand	Cirqlar
Colour	On request
Size	20 mm x 70 mm

DECKING PROFILE CDP 20140C

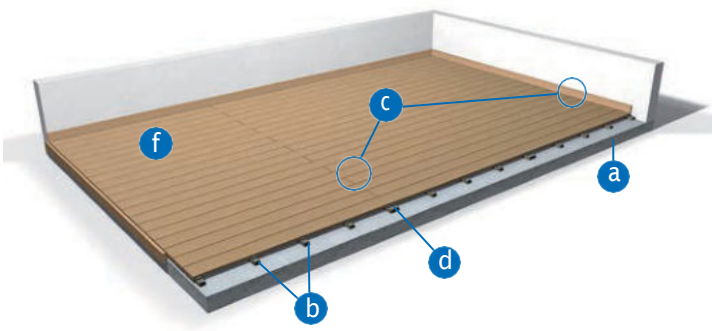
Product	Corrugated /Smooth without groove/
Brand	Cirqlar
Colour	On request
Size	20 mm x 140 mm

BOARD CONNECTOR CCL120

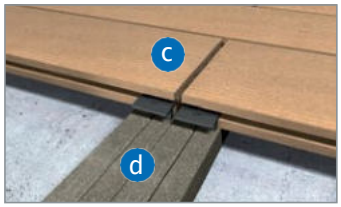
Product	Board Connector
Set	6 x starting screw 4,5 mm x50 mm 240 x Screws 4,2 mm x 17 mm 65 x Screws 4,2 mm x 28 mm 120 x Connector , 1 x Bit

CLIP SYSTEM CCL 100

Product	Deck Clip
Set	100 Clips 100 Screws



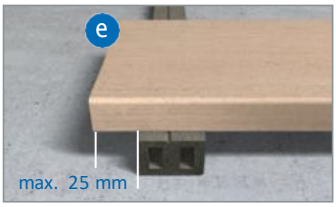
Laying system 1



Traditional clip system

Laying system 2

Rear board connector



a Supporting surface

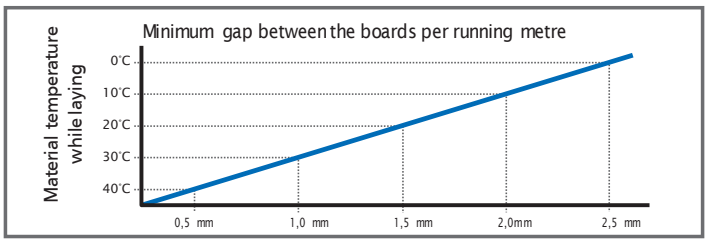
- The base must be solid and capable of supporting the weight of the deck.
- Ensure adequate water run-off (at least 2°) or drainage.

b Joists

- 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

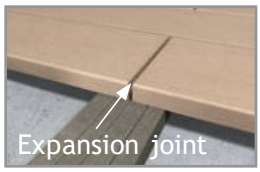
- Maximum overhang of the end of a deckboard should not exceed 25 mm.

f Laying pattern

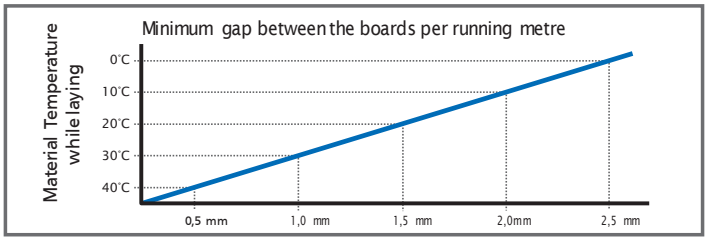
- Decide on the pattern of your deck boards first - this will determine the layout of the substructure.

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 Cirqlar 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.

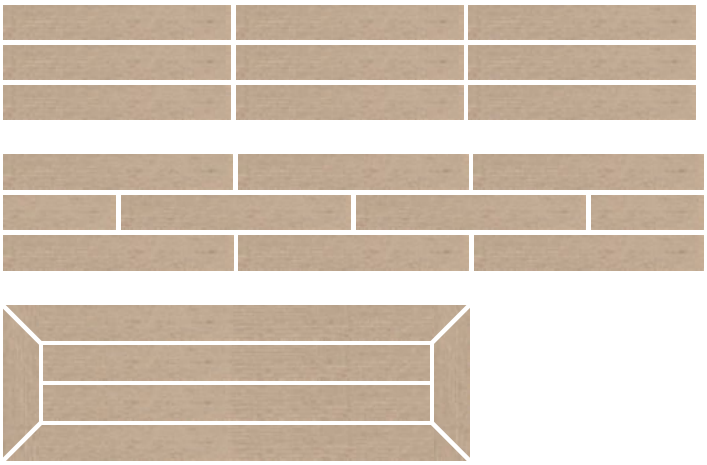


- The board ends may be chamfered to 45°. This will conceal the expansion joints.

2. Laying options

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

Laying examples

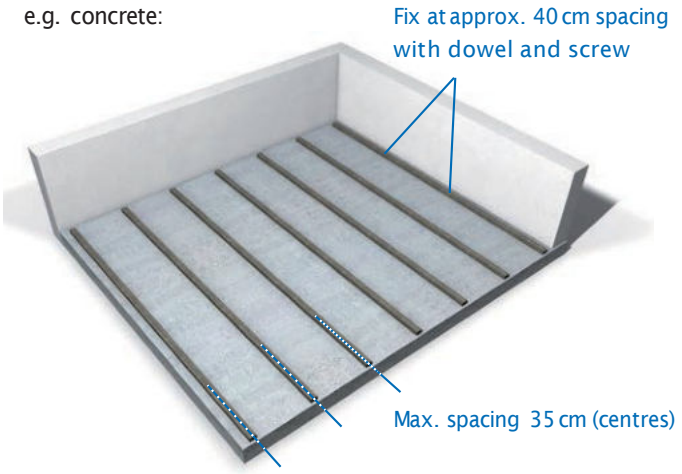


3. Substructure

a) CJP 2538 (25 mm x 38 mm)

Use joist CJP 25 x38 on solid, supporting surfaces,

e.g. concrete:

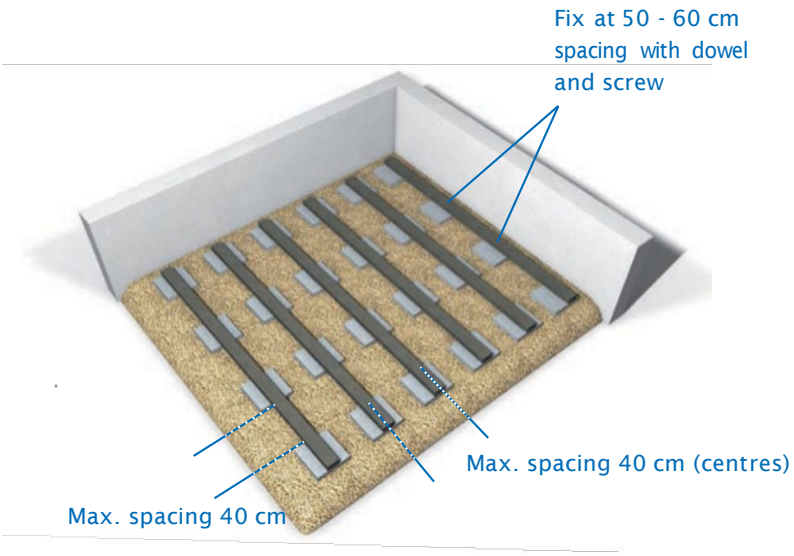


As a general rule for any supporting structure:

- Ensure there is adequate water run-off / drainage.

b) CJP 3879 (38 mm x70 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

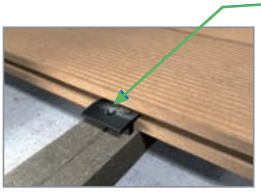
Laying the first board

- Drill the board ø 2 mm.

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

Screw in the stainless steel screw.

Installing subsequent boards with clip CCL 100



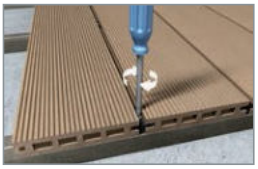
- Attach the clip.
  IMPORTANT: The CirqlarLogo must be next to the board.

- 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.

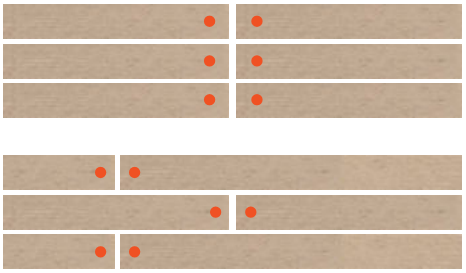
Fixing

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.

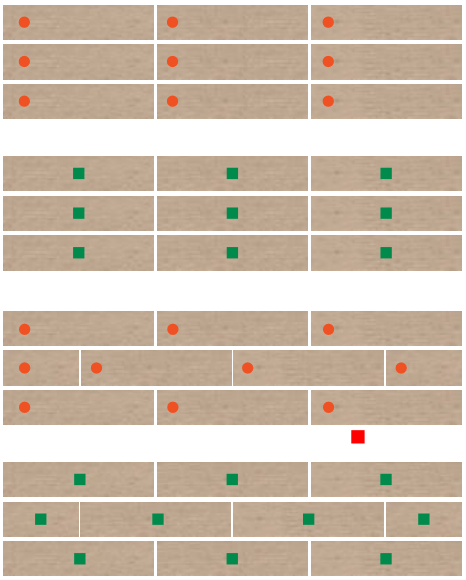
Alternative A = Fixing at the end

Alternative B = Fixing in the middle

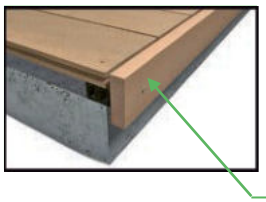
Fixing of two boards in the lengthwise direction:



Fixing of more than two boards in the lengthwise direction:



Fixing the end batten



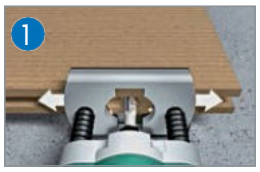
- Screw the end batten directly to the supporting joist using the deck screws.
- Screw heads may be hidden using plugs (see p.10).

IMPORTANT: Provide aprox. 4 -7,5 mm expansion joint between the end of the board and the end batten.

- If the hollow profile CHP 2070 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.

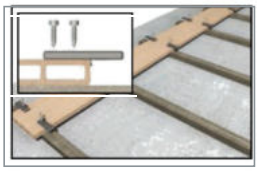
- Press in the batten. Suitable strips can be cut from a solid profile.

- Tap the batten firmly into place.

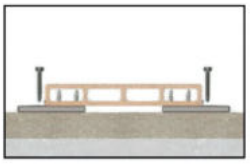
5 Then sand the strip flush with the board.

5. Installing with Board Connectors

Option 1 Board Connectors CCL 120

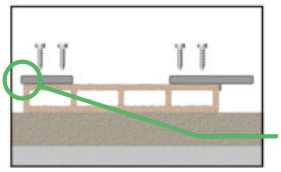


- Attach 1 board connector either side of the back face of the deck board in line with the supporting structure (see p.13 for more detail).

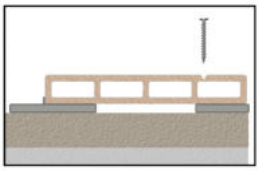


- Screw the board connectors firmly to the supporting structure. Maintain a gap of approximately 25mm from any wall or solid structure.

Option 2 Visible Deck Screws CCL 120



- 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.

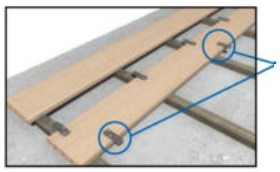


- Screw the first board through the face of the deck board and plug if preferred (see Laying the first board p.10).

Installing subsequent boards with board connectors CCL 120

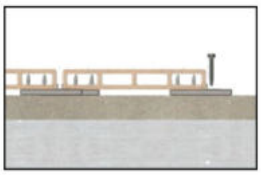
- The board connector is fixed to the underside of the board using 2 screws.
- The board connector is fixed to the substructure using a 3rd screw.

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



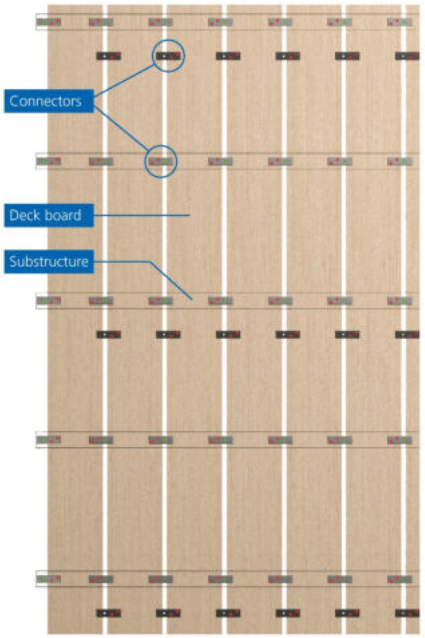
- Screw a connector into every 2nd gap between the substructure.
- Then push it beneath the board that is already fixed in place.

- 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.

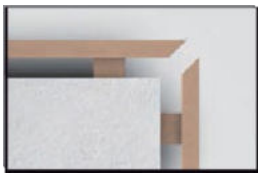
Laying diagram



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 approx. 4 - 7.5 mm expansion joint between the end of the board and the end batten, this is depending on the length of the applied profile.



- If the hollow profile CHP 2070 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.

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.

Density	ASTM D2395:2002	approx. 1.46 g/cm^3
Coefficient of Linear Thermal Expansion	ASTM D696	3.6x10(-5) mC
Weathering and UV Resistance	QUV Test	Resysta surfaces treated with glaze show extremely high resistance
Skid Resistance	DIN 51097	C Rating (highest rating)
European fire standards and national legislation	EN13501-1	This is depending on the length of the applied profile.
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	EN 12664	0.199 W/(mK)
water vapor permeability	DIN EN ISO 12572	μ=1300 -> sd 7.22m diffusion inhibiting
Water Absorption at 100% ambient air humidity	ISO 62	0,31%
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

Contact us for more information

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