

# MOSO® Bamboo X-treme® Outdoor Decking

## installation instructions

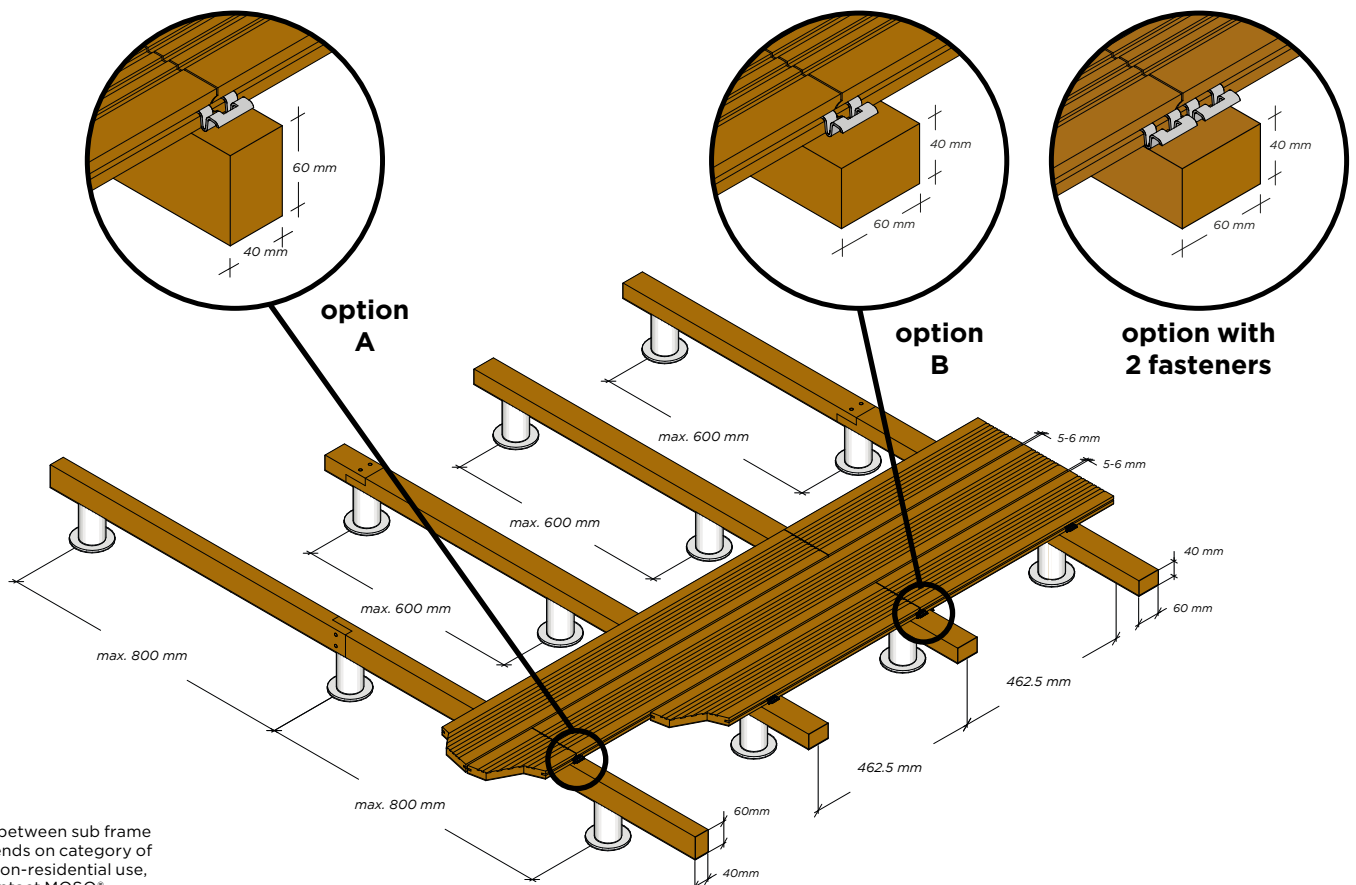
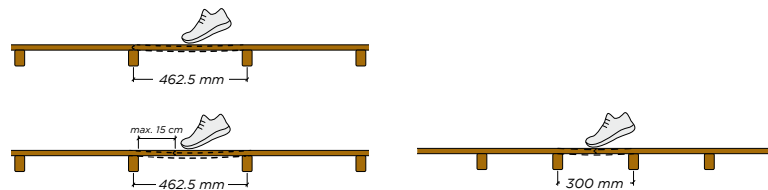
### before installation

- Waterlogging under the decking must be avoided by preparing a water permeable ground structure. This can be achieved by sand layers and gravel dispersion above.
- Use cement/stone tiles 40-50 mm thick or pedestals, to support the sub frame (see drawing).
- Place a root barrier under the tiles and pedestals to prevent weeds growing under the decking.
- Install the decking boards with a slope of 1-2% to enable water to run off the surface. Alternatively, the decking can be installed without a slope, but due to the fact that water stays on the surface longer, it is possible more superficial cracks will develop. If the installation is done without a slope, more cleaning will be required.
- The decking with the curved surface BO-DTHT191G-C-01 can be installed without a slope. Thanks to the curved surface, fast drainage from the boards is guaranteed.
- Ensure good ventilation of the decking by keeping at least 20 mm gap from walls and objects and avoid closing the decking at the sides. The gap between the boards must be open to ensure unrestricted ventilation.
- When the surface / soil underneath the decking is not fast drying, there should be at least 100 mm distance between the decking and the surface underneath.
- Use sub frame joists with the minimum size of 40x60 mm. MOSO® recommends the use of MOSO® Bamboo X-treme® Sub frame joists, which are specifically produced for use in combination with our decking products. Alternatively, suitable joists are those with the same durability class as the decking; aluminum sub frame joists, stable hardwood joists or pine joists. When using hardwood or pine as joists, make sure the moisture content of these joists is below 12%. Avoid direct contact with the soil.
- MOSO® sub frame joists can be installed without gaps, connecting the joists with screws and glue suited for outdoor use. Other sub frame joists should be installed according to the instructions of the supplier.
- In order to create a stable deck frame, the outsides of the frame have to be connected at regular intervals to the ground / structure below. Alternatively cross bracing can be applied.
- Install the boards on sub frame joists with 462.5 mm space between the joists (centre-to-centre) so each board is supported by 5 joists. Always install the ends of the boards exactly on the joist. Distance between sub frame joist depends on category of use. For non-residential use, please contact MOSO®. Other span possibilities see 'Span recommendation' table below.
- If a random installation pattern is preferred, make sure that the sub frame joists (centre-to-centre) are no more than 300 mm apart.
- Always install cut boards on at least 3 sub frame joists.

#### Span recommendation

MOSO® Bamboo X-treme® Decking, with a thickness of 20 mm, can be installed with different span.

Center-to-center span sub frame joists	End-match joint lies	Deflection between joists
462.5 mm	On top of joist	Hardly noticeable
462.5 mm	Between joists, max. 15 cm from one joist	Noticeable
300 mm	Between joists	Hardly noticeable



Distance between sub frame joist depends on category of use. For non-residential use, please contact MOSO®.

# MOSO® Bamboo X-treme® Outdoor Decking

## installation instructions

### the installation

- Keep at least 5-6 mm gap between the boards (in width direction). With MOSO® Bamboo X-treme® Fastener installation this is automatically the case.
- Because of the stability of the boards and the end-match system, no expansion gap is needed on the ends of the boards.
- Every cut end has to be treated with board end sealer, to prevent water penetration. Sikkens Kodrin Sealer WV 456 is available from MOSO.
- Periodic maintenance with Sikkens Cetol WF 771 will be required to maintain the rich brown colour. For decking finished with Sikkens Cetol WF 771 the first maintenance can be performed after one year.

### installation with fasteners

- Determine the surface side of the boards (grooved or flat surface).
- **Use the MOSO® Asymmetric Fasteners in the following sequence:**
  - Press fastener with hooked side in the edge groove of one board.
  - Pre-drill the joist screw holes 30 mm deep. On bamboo joists: use a 3.5 mm wide drill bit 110 mm long.
  - Fully tighten the screw. Always screw vertically to the joist. Apply low torque with slow screwing speed on the screwing machine. Perform some tests for correct torque and speed adjustment before full installation.
  - Install every following board by sliding it under the waved side of the fasteners.
- **Use the MOSO® Symmetric Fasteners in the following sequence:**
  - Press fastener in the edge groove of one board.
  - Pre-drill the joist screw holes 30 mm deep. On bamboo joists: use a 3.5 mm wide drill bit 110 mm long.
  - Tighten the screw about 80%, not fully tight.
  - Place the following board in position with the partly-tightened fastener engaged in the edge groove.
  - Fully tighten the screw in the fastener. Always screw vertically to the joist. Apply low torque with slow screwing speed on the screwing machine. Perform some tests for correct torque and speed adjustment before full installation.
- Use approx. 20/17/14 fasteners per m<sup>2</sup>, this depends on the board width. When the tongue and groove are connected on the joist, use 1 fastener (preferably 2 fasteners) to tighten both boards (see drawing page 9 option A / B).
- Only use the included stainless steel decking screws (4.5 x 30 mm).
- Please watch the installation video [www.moso-bamboo.com/youtube/x-treme](http://www.moso-bamboo.com/youtube/x-treme)

### screw down installation

- Determine the surface side of the boards (grooved or flat surface).
- Pre-drill the screw holes 20 mm from the side of the board. Be sure to pre drill with a large enough drill (80% of screw diameter) to avoid cracking of the decking.
- Always screw both sides (left and right in the width direction) of the board.
- Use at least A2 stainless steel quality decking screws: approx. 5 x 50 mm for 20 mm thickness decking board. Approx. 5 x 70 mm for 30 mm thickness decking board.

### please note

- The MOSO® Bamboo X-treme® Outdoor Decking Board is a natural product, some variation in colour, grain and appearance is normal. Colour can change fast from dark brown to brown or grey, depending on the climatic conditions and maintenance schedule.
- Small cracks and splinters on the surface and on the end of the boards can arise from the different drying characteristics of the surface and cross cut ends. The surface will also get rougher over time. This phenomenon is normal for most wood species and is minimised for this product by its unique 'Thermo-Density®' production method. Cracks on the board ends can be further minimised by applying sealer to the ends of the boards (see 'the installation').
- Splinters and roughness can be removed by cleaning the surface of the decking with the silicon carbide broom or machine disk which MOSO® supplies. The surface will become smoother and splinters are removed.
- Dimensional changes or cupping of the boards can occur after installation. This phenomenon is normal for most wood species and is minimized for this product by its unique Thermo-Density® production process.
- When using the flat side of the boards as top surface please note that deformation under influence of climate may be more visible. Some deformation and/or cupping of the material can occur. This phenomenon is normal for outdoor exposed wood and cannot be grounds for a claim.

### cleaning and maintenance

#### Sikkens Cetol finished version

- The MOSO® Bamboo X-treme® Decking is finished with Sikkens Cetol WF 771 finish (waterbased - lpe color) on all sides.
- It is advisable to keep the deck clear of dust and dirt as much as possible (sweep regularly).
- For annual maintenance: use of Woca exterior cleaner is recommended. If the deck is not grey, but just lightly weathered, it is sufficient to just clean with soap and brush. After drying, again apply Sikkens Cetol WF 771 finish according MOSO® maintenance instructions. Follow the instructions at: [www.moso-bamboo.com/youtube/x-treme](http://www.moso-bamboo.com/youtube/x-treme)
- Apply one layer new Sikkens Cetol WF 771 finish. This maintenance should be undertaken 1-2 times a year to prevent the bamboo becoming grey and losing its characteristic bamboo grain. Follow instructions at: [www.moso-bamboo.com/youtube/x-treme](http://www.moso-bamboo.com/youtube/x-treme)
- After application of the Sikkens Cetol WF 771 finish it is advisable to allow the deck to dry sufficiently before using it again.

#### unfinished version

- You can leave the decking without any maintenance, but take into consideration that without maintenance and oiling the deck will develop a rougher, fissured surface that will lighten quicker and become grey (similar to most timber).
- Application of a waterbased penetrating finish (pigmented) immediately after installation is recommended. The finish Sikkens Cetol WF 771 (lpe colour) is recommended.
- Clean the decking with clean water, soap and a stiff brush. Once dry, apply the Sikkens Cetol WF 771 finish according to MOSO® maintenance instructions. Regular cleaning with a stiff brush is recommended.
- For annual maintenance: Use of Woca Exterior Cleaner is recommended. If the deck is not grey, but just lightly weathered, it is sufficient to just clean with soap and brush. After drying, again apply Sikkens Cetol WF 771 finish according MOSO® maintenance instructions.

### storing

Store in a cool and dry place away from direct sunlight, and protected from weather influences, dirt and dust.

### additional note

Whilst all due care is taken to ensure the accuracy of the installation instructions, individual circumstances (location, sub floor and installation procedures) may vary and are beyond the manufacturer's control. In case of doubt, therefore, consult the distributor. Always follow the local building code.

**These instructions are subject to change. For the latest version visit: [www.moso-bamboo.com/x-treme/decking](http://www.moso-bamboo.com/x-treme/decking)**

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