

DEGMEDA

INSTALLATION, STORAGE AND MAINTENANCE GUIDE

For charred and thermally modified timber

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1. FACADE CONSTRUCTION AND VENTILATION

Degmeda charred and thermally modified timber cladding boards must be installed as part of a ventilated facade. A continuous ventilation cavity must be provided between the external wall structure and the cladding, allowing air to move freely from the bottom to the top of the facade and allowing water and moisture that enter behind the facade to escape.

Key requirements

- Minimum ventilation gap: 25 mm.
- Recommended ventilation gap: approximately 40 mm, particularly in damp environments or areas exposed to heavy rainfall.
- A vapour-permeable membrane suitable for facades must be used behind the cladding where required by the wall construction.
- The ventilation cavity must be continuous.
- Air entry and drainage must be provided at the bottom of the facade.
- Air exit must be provided at the top of the facade.
- Ventilation openings must not be blocked by insulation, sealants, flashings or other elements.
- Preservative-treated or naturally durable timber battens suitable for exterior use are recommended.
- Cladding boards are fixed with A2 stainless steel screws; A4 is recommended in aggressive, coastal or chloride environments.
- The facade system must be designed to prevent water from accumulating behind the cladding and to allow it to drain freely.

Batten arrangement

The first layer of battens against the wall must allow vertical airflow. Vertical battens are usually sufficient for horizontal cladding. For vertical cladding, use cross-battening: a first vertical layer for ventilation and a second horizontal layer for fixing the cladding. Batten / fixing support spacing must not exceed 600 mm centres. In practice, 500–600 mm centres are recommended.

Bottom of the facade

A clearance of at least 300 mm between the cladding and finished ground level is recommended. Where the construction makes this impossible, suitable drainage and protection against rainwater splashback must be provided.

Responsibility for the construction

The building designer and installer must assess the wall construction, moisture conditions, wind loads, fire safety and other local building requirements for the specific project. This guide sets out installation principles for Degmeda timber products but does not replace the structural design for the particular building.

2. HORIZONTAL FACADE INSTALLATION

Degmeda charred and thermally modified timber cladding installed horizontally is fixed to vertical battens. This construction must provide continuous airflow and drainage behind the cladding.

Batten spacing

Battens are installed at no more than 600 mm centres. In practice, 500–600 mm centres are recommended. Board end joints must be positioned over supporting battens.

Ventilation

The ventilation gap behind the cladding must be at least 25 mm as specified in section 1; approximately 40 mm is recommended. Air entry and drainage must be provided at the bottom of the facade, with unobstructed air exit at the top. Structural elements must not block the ventilation cavity.

Board end joints

The joint between two boards must be positioned over a supporting batten. A board end must not remain unsupported between two battens. When fixing close to a board end, pre-drilling the fixing holes is recommended to reduce the risk of splitting.

Fixing

Charred timber cladding is face-fixed. Use two A2 stainless steel screws at each board-to-batten intersection. A4 screws are recommended in coastal, swimming pool, chloride or other aggressive environments. Position the screws symmetrically, with an indicative distance of approximately 25 mm from the board edge.

Screw head position

The screw head must be flush with the cladding surface. It must neither be driven below the timber surface nor left protruding. Overdriving can damage the timber and finished surface.

Inspection

- check that the boards are straight
- check that the boards are not compressed together and have room for natural dimensional movement
- check that all end joints are positioned over supports
- check that screw heads are flush with the cladding surface
- check that the ventilation cavity and drainage path are unobstructed

3. VERTICAL FACADE INSTALLATION

Degmeda charred and thermally modified timber cladding installed vertically must be fixed so that continuous vertical airflow is maintained behind the cladding from the bottom to the top of the facade.

Batten arrangement

Horizontal battens alone are insufficient for vertical cladding because they may block airflow. Cross-battening is therefore recommended: the first layer of battens against the wall is installed vertically to form the ventilation cavity, and the second layer is installed horizontally to support the vertical cladding.

Batten spacing

Horizontal fixing battens are installed at no more than 600 mm centres. In practice, 500–600 mm centres are recommended.

Ventilation

The ventilation gap behind the cladding must be at least 25 mm as specified in section 1; approximately 40 mm is recommended. The construction must allow air to enter freely at the bottom of the facade and exit at the top, and allow any water behind the cladding to drain freely. Horizontal fixing battens must not close off the ventilation cavity between separate facade areas.

Position of board ends

The lower and upper ends of vertical cladding boards must not be installed in a way that allows water to accumulate at them. Lower ends must be raised above surfaces where moisture may accumulate, and construction details must allow the timber to dry. Cutting the lower ends of boards at an angle of 25–30 degrees is recommended.

Fixing

Charred timber cladding is face-fixed. Use two A2 stainless steel screws at each intersection of a board and a horizontal batten; A4 is recommended in aggressive environments. Position the screws symmetrically, with an indicative distance of approximately 25 mm from the board edge.

Bottom of the facade and inspection

A clearance of at least 300 mm between the cladding and finished ground level is recommended. After installing the first part of the facade, it is recommended to check that the air path is continuous, horizontal battens have not blocked ventilation, boards are vertical and straight, screw heads are flush with the surface, board ends are protected from persistent wetting and water can drain freely.

4. TIMBER MOVEMENT

Timber is a natural hygroscopic material, so its dimensions may change slightly with changes in ambient humidity and temperature. Timber generally shrinks in drier conditions and expands when moisture levels increase. This natural movement must be allowed for during installation.

During installation, it is important to leave room for the boards to change dimensions naturally. Particularly dry boards must not be fitted so tightly that, when they become damp, they press against each other and deform. Gap size depends on board width, timber species and moisture content at installation, so a single gap in millimetres does not apply to all facades. Gaps must also allow water to drain and the timber to dry. Recommended decking gaps are given in section 9.

Installation considerations

- do not compress boards together or force them into one another by hammering; fix them securely while allowing natural timber movement

5. FIXINGS AND SCREWS

Degmeda charred and thermally modified timber cladding must be fixed in a way that provides secure mechanical attachment, avoids damage to the timber surface and allows natural timber movement.

Screw type

Only corrosion-resistant stainless steel screws are used for exterior facades. A2 stainless steel screws are used in normal conditions. A4 screws are recommended in coastal, swimming pool, chloride or other aggressive environments.

Face fixing

Charred timber cladding is face-fixed. Use two screws at each intersection of a board and a supporting batten.

Screw position in the board

Position screws symmetrically across the board width. The indicative distance from the longitudinal board edge is approximately 25 mm. A screw must not be installed too close to an edge or board end if this increases the risk of splitting.

Fixing near board ends

When fixing close to a board end, pre-drilling the fixing hole is recommended. This is particularly important for thermally modified timber and in other cases where there is a greater risk of splitting at an edge or end. The end joint between two boards must be positioned over a supporting batten; each end must have sufficient bearing area and a safe screw position.

Screw head depth

The screw head must be flush with the cladding surface. A screw must not be driven below the timber surface or left protruding above it. An overdriven head may damage the timber and surface structure and create a place where moisture can accumulate.

Screw length and driving torque

Screw length must be selected according to the cladding thickness, supporting batten thickness and substrate construction to provide sufficient mechanical anchorage. Screws must be driven with controlled torque; they must not be overdriven or strip their hold, deform the board or break through the timber surface.

Incorrect fixing

- using screws that corrode or are unsuitable
- using only one screw at a fixing point where two are specified
- positioning a screw too close to the board edge or end
- driving a screw head too deep
- leaving a screw head protruding
- fixing a board in a way that restricts normal timber movement
- damaging the charred or other finished surface through fixing

6. CUTTING AND TREATING BOARD ENDS

Degmeda charred and thermally modified timber products are often cut to suit project dimensions during installation. Cut ends and areas damaged during installation must be properly treated to reduce moisture ingress and maintain a consistent surface appearance.

Cutting and end treatment

Cladding boards must be cut with sharp tools suitable for timber. Avoid splintering, splitting and damage to the charred layer during cutting. All board ends cut on site must be treated with a water-based oil or impregnating treatment recommended by Degmeda.

Damage to the charred surface

Minor damage to the charred surface caused during installation must be repaired before completion. The damaged area must be gently cleaned and, where necessary, restored using a water-based oil or impregnating treatment recommended by Degmeda.

Deep Char surface

The Deep Char surface is more sensitive to mechanical impact and must not be rubbed, scrubbed or pressed heavily during installation. After installation, re-oiling the entire Deep Char facade surface is recommended to consolidate the surface and reduce the effects of micro-damage that becomes apparent later.

Corners and reveals

External and internal corners, and window and door reveals, must be detailed to provide drainage, continuous ventilation, sufficient allowance for timber movement and proper treatment of cut board ends. A detail must be provided above windows and doors to prevent water from accumulating behind the cladding or entering unprotected board ends.

Contact with other elements

Charred or thermally modified timber surfaces must not be installed in a way that allows downpipes, flashings, cables, railings, scaffolding components or other structures to rub against them continuously.

Instructional video

Treatment of cut board ends and practical examples: <https://www.youtube.com/watch?v=-J505UIqro4>

7. STORAGE AND ACCLIMATISATION

Before installation, Degmeda charred and thermally modified timber must be stored in a way that protects it from moisture accumulation, deformation, uneven drying and mechanical damage.

Base

Timber packs must be stored on a dry, stable and drained base. Packs must be raised at least 100 mm above a dry, hard surface and at least 300 mm above unpaved ground. Raising a pack above the ground is not sufficient if water accumulates beneath it: there must be no puddles or continuously wet surface underneath.

Supports

Packs must be stored horizontally on level supports. The recommended maximum distance between supports is 1000 mm. When packs are stacked, the supports must be vertically aligned.

Protection from precipitation and sunlight

Timber must be protected from direct precipitation, but packs must not be covered so tightly that condensation accumulates inside. For longer storage periods, avoiding direct UV exposure is recommended, particularly where part of a pack is covered and part is exposed.

Opened packs

Boards removed from their packaging must be protected from direct UV radiation and precipitation. If boards are stored before installation, stack them neatly and horizontally and, where ventilation or drying is needed, separate them with spacers to avoid uneven loads and distortion. Timber must be kept stable, evenly supported and protected from uneven sun exposure.

Wet timber

If timber becomes wet during storage, it must be dried in a ventilated area before installation. Boards must be separated with spacers so that air can circulate between them. Wet timber must not be tightly wrapped and left without ventilation.

Boards of different lengths and surface protection

When storing boards of different lengths, placing longer boards at the bottom and shorter boards above them is recommended. The visible face of charred timber must be protected from friction, impacts and other mechanical damage; boards must not be dragged with their visible face against floors, concrete, ground or other abrasive surfaces.

Acclimatisation

Before installation, allowing the timber time to adjust to site conditions is recommended. The recommended minimum acclimatisation period is 72 hours. If there is a large difference in temperature or humidity between the storage location and installation site, a longer acclimatisation period is recommended.

8. FACADE AND DECKING MAINTENANCE

Degmeda charred and thermally modified timber products must be inspected periodically and maintained to preserve a suitable surface condition, ventilation of the construction and drainage.

Periodic inspection

- check that the ventilation openings at the bottom and top of the facade are unobstructed
- check that water does not collect beneath the deck and that air circulation is maintained
- check that downpipes, flashings, cables or other elements are not rubbing against the timber
- check for areas where water continuously runs over or accumulates on the timber
- check for mechanical damage, moss, surface mould or other biological growth
- check that decking boards and fixings are not loose or damaged

Routine cleaning

Facades and decks may be cleaned with running water and, if necessary, a soft brush or another tool that does not scratch the timber surface. Dirt should not be left for long periods, particularly where it may retain moisture.

Pressure washing

Facade and decking surfaces may be cleaned with a pressure washer, but only with care. It is recommended to start with lower pressure and a greater distance, first test a small, less visible area and watch for damage to the timber surface while washing. If timber fibres begin to rise, surface particles detach or the timber structure changes in any other way, reduce the pressure, increase the distance or stop washing.

Deep Char exception

Deep Char facade surfaces must not be cleaned with a pressure washer. Clean them only with gently flowing water, avoiding rubbing, abrasive tools and a concentrated, powerful water jet.

Cleaning products and decking maintenance

Aggressive, strongly acidic or alkaline cleaners, solvents, wire brushes and other products or tools that may damage the surface are not recommended. Leaves, soil, sand and other dirt must be removed from decks regularly, particularly from gaps between boards and areas where water may collect. Gaps between boards must not be blocked.

Snow and ice

When clearing snow, using tools that do not damage the timber surface is recommended. Contact between boards and metal shovels or other sharp tools may cause mechanical surface damage. Before using chemical de-icing products, ensure that they are suitable for timber surfaces.

Refreshing the surface

Timber used outdoors naturally changes colour and appearance under UV radiation, precipitation and other environmental influences. To retain a stronger colour or more uniform surface for longer, periodic renewal of the protective oil or other suitable surface treatment is recommended according to the condition of the particular product.

Deep Char after installation

After installing a Deep Char facade, re-oiling the entire visible surface with a suitable oil is recommended. Minor micro-damage that is initially difficult to see may occur during installation, so re-oiling helps consolidate the surface and make its appearance more uniform.

Instructional video

Facade and decking maintenance – practical video: <https://www.youtube.com/watch?v=cvHlc6mUycg>

9. DECK CONSTRUCTION AND INSTALLATION

Degmeda decking boards must be installed on a stable, drained and well-ventilated substructure. The deck construction must prevent water from accumulating beneath the boards and allow air to circulate freely.

Base and construction height

The base must be stable and drained, with a fall to allow water to run off. Water must not accumulate beneath the deck or around timber structural elements. The clear vertical gap is measured from the finished base surface to the underside of the lowest horizontal load-bearing element, not to the top of the decking boards. Allow at least 50 mm above a hard, impermeable base and at least 100 mm above ground. These are minimum limits and apply only where drainage works and air circulates freely beneath the entire deck. A greater gap is recommended, particularly on damp, shaded sites or where air access is restricted. If water is retained or the construction cannot dry, these minimum clearances alone are insufficient: increase the construction height and improve drainage and ventilation. A low-level deck detail must be assessed by the designer or installer according to the specific site conditions.

Joist spacing

The recommended maximum spacing of supporting joists is 450 mm centres.

Gaps

A 6 mm gap between decking boards is recommended. A gap of at least 20 mm between decking boards and a building wall, edging or other fixed construction is recommended to allow timber movement, drainage and air circulation.

Ventilation at the sides of the deck

The sides of the deck must not be fully enclosed. Where side cladding is installed, at least 50 % of the side area should remain open or ventilated so that air can enter freely beneath the deck and circulate under the entire structure. Allow at least 50 mm between the lower edge of the side cladding and a hard, well-drained base, and at least 100 mm above ground. These are minimum clearances only; raise the cladding higher in areas exposed to splashback, snow accumulation or persistent wetting. This gap does not replace a clear air path beneath the load-bearing structure. Gaps of at least 6 mm between individual side cladding boards are recommended. Ventilation openings must not be covered by grass, plants, soil, cladding elements or other objects.

Fall

A fall of 1.5–2.0 % away from the building in the direction of water runoff is recommended for the deck construction, equivalent to approximately 15–20 mm per metre.

Fixing boards from above

Degmeda recommends fixing decking boards with screws from above, through the visible face, because this fixing method is more reliable. Concealed fixing of decking boards is not recommended. Fix each board to every joist with two A2 stainless steel screws. A4 screws are recommended in coastal, swimming pool, chloride or other aggressive environments.

Screw position

Position screws symmetrically, at least 20 mm from the side edge of the board; a distance of at least 50 mm from the board end is recommended. When fixing at board ends, pre-drilling the fixing holes is recommended.

Board end joints

At end joints, using two adjacent supporting joists is recommended so that each board end has its own firm support and screws are not positioned too close to the edge. A gap of at least 5–6 mm between board ends is recommended to allow natural timber movement, ventilation and drainage.

Drainage and inspection

The gaps between boards, fall and substructure must work as one system. There must be no areas where water continuously stands beneath boards or at their ends. Before installing the decking boards, it is recommended to check that the base is stable, joists are straight and aligned in the same plane, the required fall is maintained, ventilation beneath the structure is sufficient and there are no areas where water could accumulate.

10. FINAL TECHNICAL NOTES

Scope of the guide

This installation, storage and maintenance guide applies to charred, thermally modified and other timber products supplied by Degmeda for exterior use.

Local building requirements

Installation of Degmeda products must comply with building regulations, fire safety, structural, moisture-control and other mandatory requirements applicable in the particular country and project. This guide does not replace the structural design for the particular building.

Installer and designer responsibilities

The installer and/or designer must assess the construction, substrate, wind loads, drainage, ventilation, moisture conditions and other technical details of the particular building. Degmeda's timber product installation recommendations do not in themselves constitute a design for the entire facade or deck structure.

Product inspection before installation

- check that the correct product has been delivered
- check that the profile and dimensions comply with the Order
- check that the boards have no obvious transport or storage damage
- check that the surface and colour match the selected product
- check that the timber has acclimatised properly and is not visibly wet

If an apparent or reasonably suspected product non-conformity is identified, the disputed boards must not be cut, processed or installed before assessment by Degmeda. If a recurring non-conformity is noticed, installation of the relevant Order line must be suspended and Degmeda informed immediately. If there is uncertainty solely about an installation detail, consultation with Degmeda before continuing the work is recommended.

Installation of visibly damaged boards

Boards that are visibly damaged or unsuitable for the particular use must not be installed before their condition has been assessed. Quality and permitted grade A/B and C characteristics are assessed against the "Degmeda Timber Quality Specification" agreed with the Order. Permitted grade characteristics do not in themselves prohibit installation of a board. Inspection before installation is particularly important in hard-to-access areas or where subsequent dismantling would be difficult.

Natural timber

Timber is a natural material, so individual boards may vary in shade, texture, grain pattern, knot content and other natural characteristics.