Natural wood
Made to last

Installation Guide Kebony Clear Cladding

03-04-2024

Installation Guide

Kebony

Kebony supplies cladding products to be used in application class 3.1 (EN 335), for outdoor use above ground. This guide provides instructions for installing **Kebony Clear Cladding** to give an attractive and durable result. Always pay attention to local conditions and building regulations. This guide assumes that the installer has the necessary professional competence.

Kebony is a modified wood product in which the timber's properties are permanently changed and enhanced through an eco-friendly process without the use of toxins. Our process yields a stable, hardwearing, long-lasting and beautiful cladding material. Kebony wood will behave like natural timber and will swell and shrink along with changes in the environment in which it is installed.

It is recommended to use the principles of constructive wood protection for the entire construction and solutions for untreated timber outdoors. Pay particular attention to the design and execution of end-grain and ventilation and avoid moisture traps. In this guide, we show examples of good solutions that adhere to these principles.

Kebony products must be stored dry until installation and should be covered in plastic until use.

Appearance

Kebony cladding has a dark brown colour when supplied. Once the cladding has been exposed to rain and sunlight over time, the surface will change and gradually develop a natural silver-grey patina. Since the effects of weather around a building can vary, there will also be variation in how the wood changes colour due to different orientations. Physical global location and local climate will also have an influence on the tempo and appearance of weathering. Some surface cracks and fissures are natural in timber that is installed outdoors without surface treatment. Initially, the runoff of rain from a Kebony surface will have a dark colour that may be visible on some light surfaces

Timber and metals

Kebony can be combined with stainless and acid-proof steel, enamelled or coated fittings and aluminium without the timber becoming discoloured. When using other combinations, the runoff from Kebony timber may cause discolouration and corrosion. For example, zinc fittings can corrode, while copper ones will remain bright where exposed to runoff from the wood. Runoff from galvanised or ferrous metals to Kebony will result in a dark discolouration of the wood.
Fastenings in contact with the timber must be made from stainless steel A4 or stainless steel A2. A4 is generally recommended and must always be used in coastal areas and environments exposed to chloride. Screws of a different quality or use of A2 in the wrong environment may result in dark discolouration around the screw holes.

Extended warranty

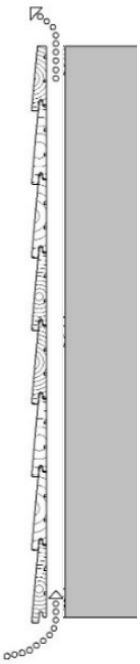
Kebony cladding is covered by a long warranty against damage by decay through mould. It is a condition of the warranty that the directions in this installation guide are followed.

Kebony Clear Cladding

The main function of the exterior cladding is to protect the wall core from climatic and mechanical stresses. The cladding also has an aesthetic function and is of great importance for the building's architectural expression.

The substructure must be expertly executed in accordance with applicable standards and regulations. The cladding must be mounted with a ventilated cavity with an opening at the top and bottom, so that there is air circulation in the cavity behind the cladding and moisture dries out quickly. Use principles of installation of untreated wood cladding.

Kebony does not require any surface treatment. If desired, UV protective wood oils or stain can be used to preserve some of the original tan. Kebony can also be painted or stained if you want to change the colour. A slightly longer drying time should be expected, as Kebony has a high density and a smooth-planed surface.



Principle ventilated cavity behind claddi

Planning & design

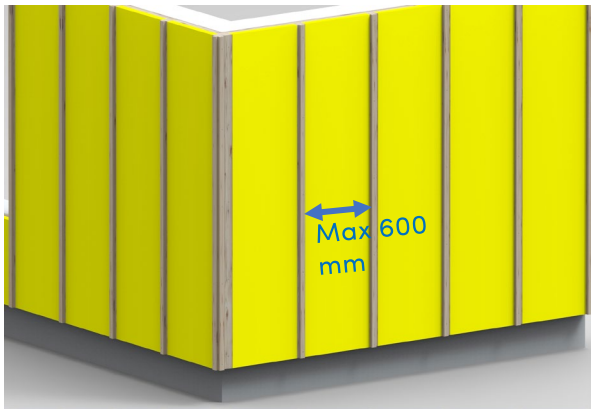
For a successful result, the wall surface must be designed taking into account the external climate. A steady exposure to rain and sunlight is a condition for a uniform color change of the wood. Overhanging building parts and details that divert water away from the façade will cause colour variations, examples of which may be roof extensions, gutter boards and cornice fittings. Larger roof extensions, coverings and similar elements, can also be used to create beautiful contrasts. Wood that is protected under a roof will retain a rich dark brown color.
The design of the façade should be planned taking into account profile widths and openings in the wall. If the partition and details are predetermined, unfortunate adjustments are avoided.
The partition of the façade into panels can be used to use entire lengths of cladding boards. Horizontal division using window sill profiles or similar can be used to ensure good ventilation and drainage on high facades.

Note: The recommendations given in this guide on minimum and maximum values, is based on installing the Kebony product to achieve an attractive and durable result. Building regulations can provide stricter requirements than Kebonys recommendations. In these case the building regulations must always be followed. This can be for example dimensioning of battens and fasteners for wind load or requirements in regards to fire.

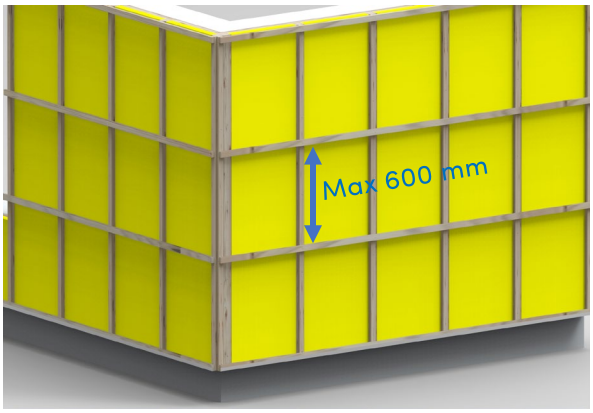
Batten spacing and dimensions

For battens and counter battens, materials that are used must have similar or better durability than the cladding. Dimensioning of battens must always be carried out in accordance with applicable regulations and must ensure adequate ventilation and strength.
For horizontal cladding, vertical battens are used for ventilation with a thickness of at least 20 mm. Recommended centre distance between battens is maximum 600 mm.
For vertical cladding, vertical counter battens are used for ventilation with a thickness of at least 20 mm and horizontal battens with a thickness of at least 30 mm. Recommended centre distance between horizontal battens should is maximum 600 mm.

Note: Thickness of battens for fastening the cladding must be in alligned with the thickness of of the cladding and the lenght of the screw to aviod damage to the housewrap.

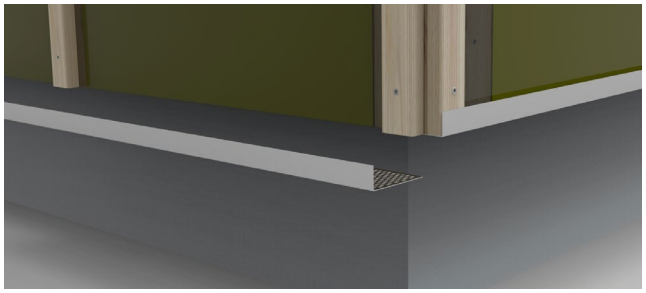


Battens for horizontal cladding



Battens and counter battens for vertical cladding

In the case of high facades or facades with high climatic stresses, the dimensioning of battens, the centre distance between these and fasteners must be specifically dimensioned.
There must be a good air gap at the bottom and top of the cladding to ensure good air circulation. No fittings should obstruct proper ventilation. Vents at the bottom of the cladding are secured with vermin mesh, perforated fittings or similar.



Securing air gap against rodents.

Mounting instructions

Kebony Clear cladding is recommended to be pre-drilled and fastened with screws in stainless steel A4 or stainless steel A2 quality. The recommended dimensions are minimum 5x50 mm for cladding with 19 and 22 mm thickness, and 5x80 for cladding with 40 mm thickness. Make sure that the screw is not immersed into the wood, the screw should flush with the surface of the wood. Fasteners should be placed min 20 mm from the side edge of the board on rectangular profiles, for shiplap and tounge and groove profiles 35 mm, and 25 mm from the end edge of the board on all profiles. The distance from the bottom batten to the free end of the upright cladding should be a maximum of 100 mm.

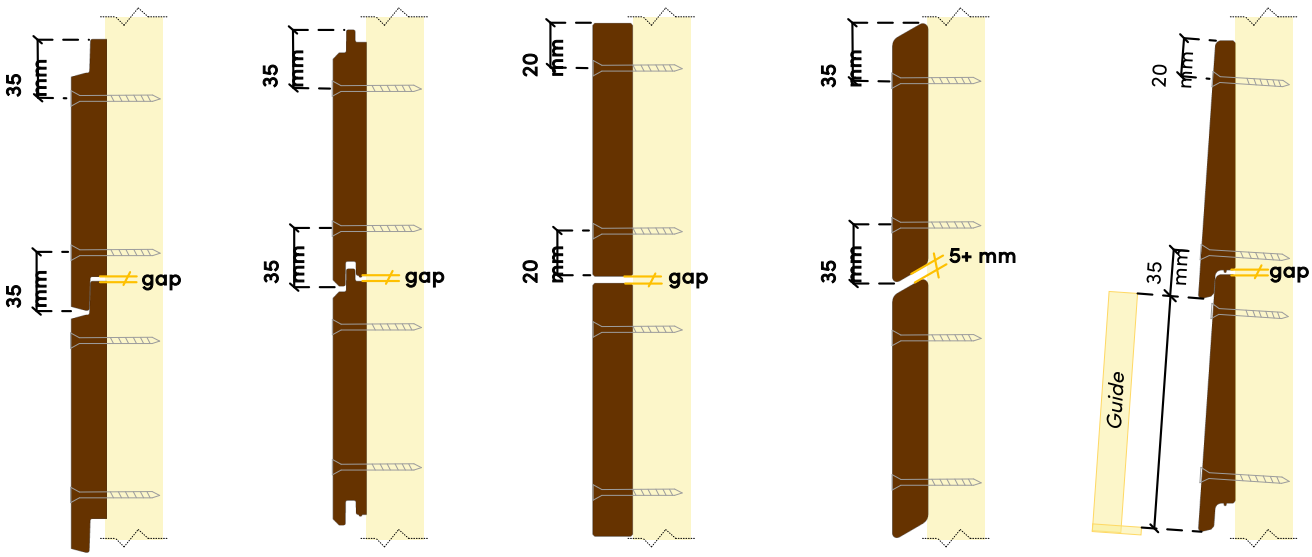
Shiplap cladding
120 mm width fixed with 1 screw
145 mm width is fixed with 1-2 screws
190 mm width fixed with 2 screws

Tongue and groove cladding
120 mm width fixed with 1 screw
145 mm width fixed with 2 screws
190 mm width fixed with 2 screws

Rectangular cladding and Rhombus
>80 mm width is fixed with 1 screw
< 80 mm width is fixed with 2 screws

Kebony is dried during production, therefore some swelling must be expected when installed outdoors. During assembly, there should be a gap opening, this distance is easily ensured by inserting spacers on the front of the tables.

Width	Minimum gap opening
<110 mm	2 mm
120 mm -145 mm	3 mm
<150 mm	4 mm

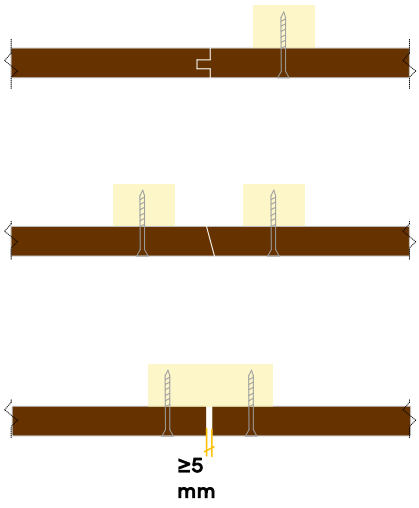


Screws are the preferred fixing method for most hardwoods, but nailing is also feasible. Please ensure that you select and test appropriate nails to prevent splitting and pull-through.

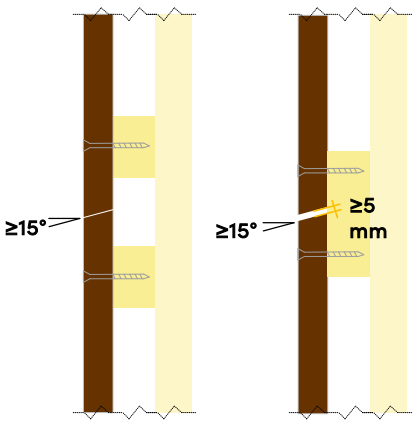
The above fastening suggestions are the most suitable methods based on Kebony's knowledge. Local building regulations may require other dimensions or fixing types. Always follow the requirements set out in local building codes.

Joints and endings

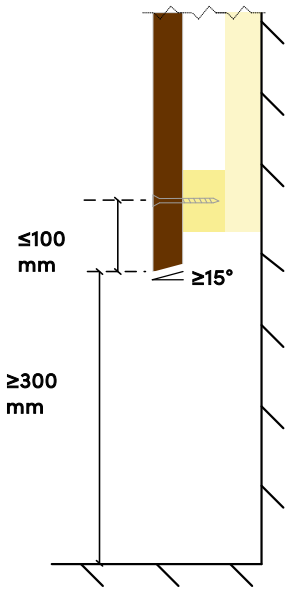
Joining cladding profiles should be avoided as far as possible. Profiles that are joined must always have the same orientation on the annual rings. Profiles with end end matching are joined close toa batten, in the case of vertical cladding, end matching must be mounted with a slope in the right way. When jointing cladding without end matching, both ends must be supported by battens.
On vertical cladding, the ends and terminations must be cut with a drip edge at an angle of at least 15 degrees. It is recommended to treat all ends with Kebony end-sealing wax. This both protects the wood and reduces cracking.
The distance from the bottom of the cladding to the ground must be a minimum of 300 mm. This distance can be reduced if measures have been taken to reduce water splashes from the ground to the cladding, such as the Kebony ventilation profile.



Horizontal cladding



Vertical cladding



Distance to ground

Please contact your local Kebony sales representative for questions and assistance regarding your project. See Kebony's maintenance guide for inspection and cleaning after installation.