

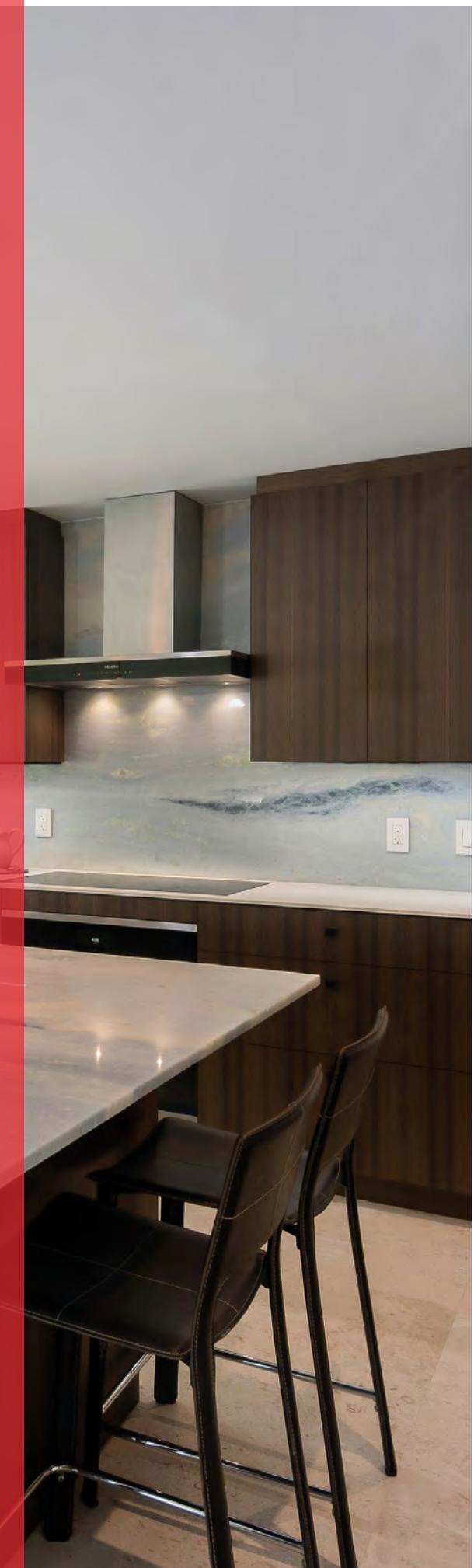


# CompactWood® Interior & Exterior Surfaces

By American Architectural Millwork

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ARCHITECTURAL PRODUCTS





# Natural Beauty of Real Wood, Durability of Exterior Phenolic

CompactWood® is real, natural wood encapsulated within an exterior grade melamine coated phenolic sheet. The beautiful lustre and texture of natural wood is combined with tough and durable melamine overlayer and phenolic backer to provide the most durable natural wood solution ever created.

It is class 'A' Fire Rated self supporting sheet that is incredibly durable. Resistant to high impact, harsh chemicals, moisture and humidity to a degree never before achieved, CompactWood® can even withstand 48 hours in boiling water without delaminating.

Because it is self supporting, it can be used in double sided application for use as cabinet or compartment doors, shelves and furniture components. With special attention, it can be curved, bent or formed into virtually any shape. CompactWood® is perfect for use in virtually any vertical or horizontal application; Architectural Wall Panels, Facades, Column Casings, Restrooms Compartments, Table Tops, Furniture Components etc. CompactWood® can be easily fabricated using traditional woodworking tools.

# CompactWood® Sheets

CompactWood® standard is available from stock in 51"(1300mm) x 120"(3050mm) x 1/2"(12mm) thick sheets. Other thicknesses are available from 1/4" (6mm) to 1-1/4" (30mm). Custom sheet sizes are available too. The grain on all standard sheets runs in the direction of the length. All dimensions are nominal.

## Standard Panel Dimension

Length: 120" (3050mm)  
Width : 51" (1300mm)  
Thickness: 1/2" (12mm)  
Weight: 1/2" (12mm) 3.5LBS per sq.' (18 KG/m2)

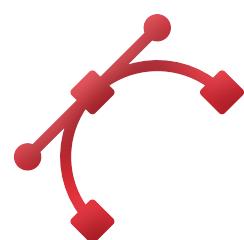
## Panel Tolerances

Length: +/-5.00mm  
Width : +/-5.00mm  
Thickness: +/-0.05mm



### Solid Performance

CompactWood® is real wood fused within phenolic and melamine sheets to provide uncompromising impact resistance



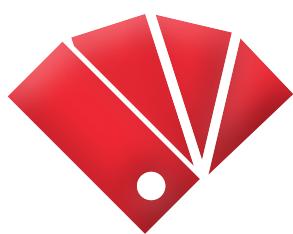
### Flat or Curved

CompactWood® can be formed into unique curves and shapes



### Impervious to Water

Tested to the most demanding specifications, CompactWood® even withstands 48 hours in boiling water!



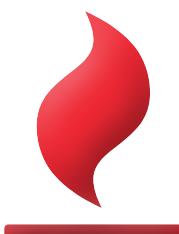
### Huge Selection

With over 100 species, multiple cuts, and endless standard and custom stains to choose from, the design palette is endless.



### Ultimately cleanable

Virtually impervious to cleaning agents and chemicals, food safe surfaces



### Fire Rated

CompactWood® is Class 'A' Fire Rated and is tested to comply with US, Canadian, European and Asian Fire Test standards.



Anigre QC  
CW-QCANI-M-0410-12



Japanese Ash QC Recon  
CW-QCJAS-M-0410-12



Cherry, American FC  
CW-FCCHE-M-0410-12



Eucalyptus QC



Fir QC Recon  
CW-FCCHE-M-0410-12



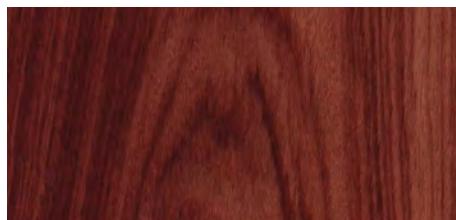
Maple FC  
CW-FCMAP-M-0410-12



White Oak (Rift Cut)  
CW-RIWHO-M-0410-12



Paldao QC  
CW-QCPAL-M-0410-12



East Indian Rosewood FC  
CW-FCEIR-M-0410-12



Walnut FC



Walnut QC  
CW-QCWAL-M-0410-12



Wenge QC  
CW-QCWEN-M-0410-12



Cherry, American QC  
CW-QCCHE-M-0410-12



Ebony QC Recon  
CW-QCREB-M-0410-12



Maple QC  
CW-QCMAP-M-0410-12



Red Oak (Rift Cut)  
CW-RIREO-M-0410-12



Sapele QC  
CW-QCSAP-M-0410-12



Teak FC  
CW-FCTEA-M-0410-12

## Custom Options

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CompactWood® can be easily customized by applying changes to Texture, Color and Sheet Size. The minimum order quantity for this Customization is 800 square feet.

Ultimately, CompactWood® can be fabricated and assembled into virtually any functional form including curved components.

## Textures & Finishes

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CompactWood® is supplied in Natural Grain (NG) texture as standard in all species. Rough Sawn (RS) texture is available to order as a custom option and recommended for areas of ultra high wear. Other custom surface textures are available.

## Colors & Stains

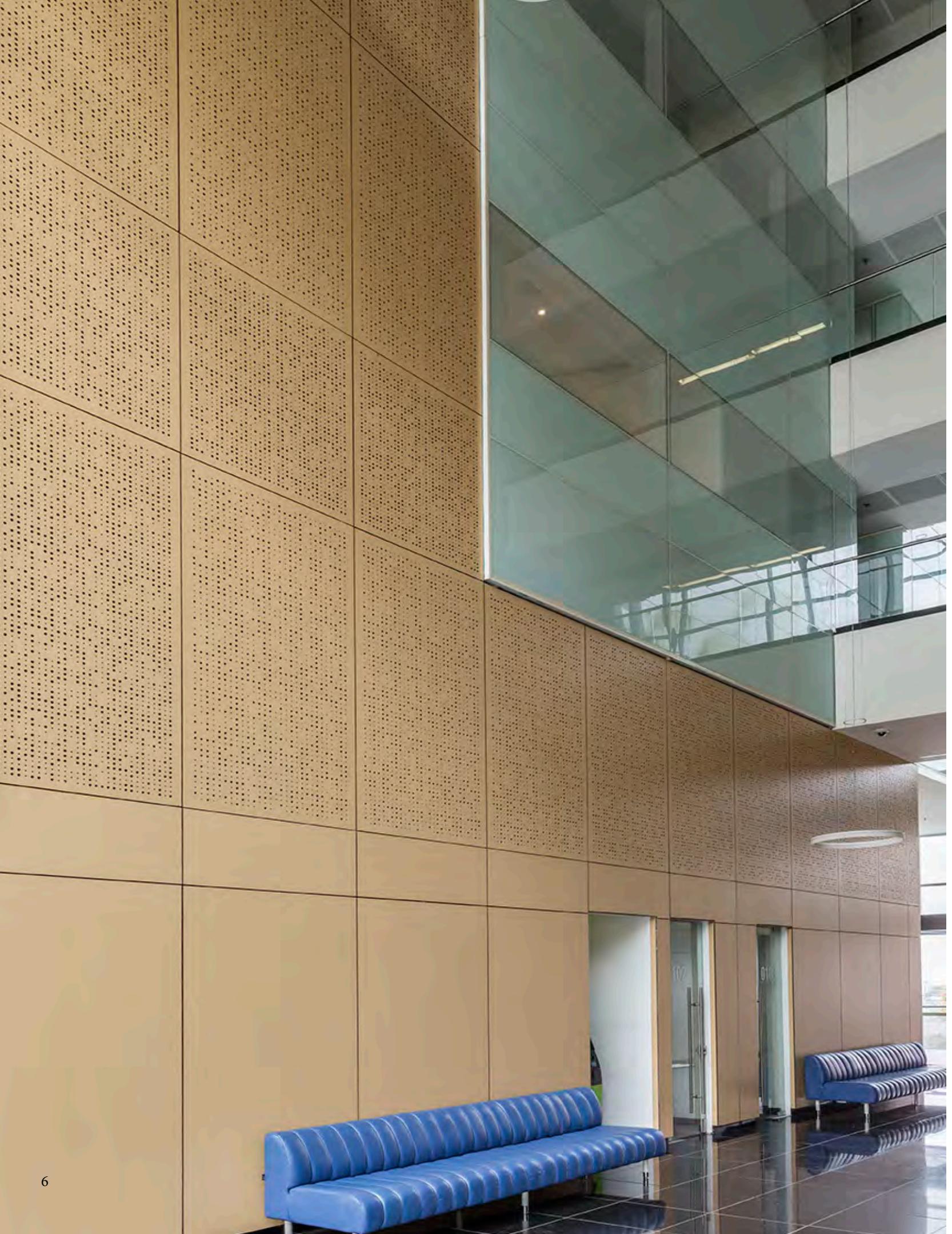
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Custom color and matching is available to order. We can custom color or stain the veneer prior to encapsulation to match your requirements. There is a minimum order quantity of 800 square feet for this service.

Wood is a natural product and will vary in color and grain from flitch to flitch. During the manufacturing process, the addition of the melamine overlay may enhance the color or luster of the natural wood substrate. This subtle variation in color and texture is normal for all wood products and should be expected on all product orders. Because CompactWood® is batch produced by flitch and the veneer sheets are sequenced, the consistency of color from sheet to sheet is the best available in the industry.

Post manufacture there is a possibility of color maturation whereby the exposure to extremes in light conditions may cause small but noticeable changes in the color temperature. Again, this is a phenomenon that occurs with natural materials and although most often this is slight and sometimes unnoticeable, it is never the less an inherent quality of wood.

Custom coloring helps to significantly reduce the appearance of color maturation.



# Fabrication Information

CompactWood® can be cut, drilled and machined with standard woodworking equipment fitted with tungsten carbide edges. Surface mounted objects should be secured using self-tapping screws in pre-drilled holes. Screws into the edges should be avoided. Metal brackets are recommended for securing the panels together. Mitering of edges should be avoided as they are vulnerable to damage. Standard tools for hardwood can be used for machining or processing such as sawing, drilling and routing. Panels will present a distinctive brown edge. CompactWood® is a wood based product and its movement is influenced by humidity absorption. Similar to other thick phenolic laminates.

## Handling

During transport it is essential to use pallets of sufficient size to support the whole of the panel area. Pallets must be strong and stable enough to support their load without bending or buckling. When transporting stacks of panels with mechanical handling vehicles, pallets of adequate size and rigidity should be used. The surface of each panel must be free from debris, grit or foreign bodies, as they can become embedded under the weight of the stack resulting in damage to the surface. Stacked panels must be made secure against slipping. When loading and unloading, panels should be lifted, not slid. Abrasion between decorative faces should be avoided. CompactWood is a heavy material and therefore care should be taken in handling this product. Mechanical handling is recommended for panels with a thickness exceeding 3/8" (10 mm).

## Storage

CompactWood® should be stored in enclosed warehouses where normal interior conditions (18-25°C and 50-60% relative humidity) are maintained. CompactWood® will remain flat if stored horizontally in packs on a flat base board. Insure the edges of each sheet in a pack or stack are flush with one another. The base board must be dry and it should be covered with a material impervious to water, to act as a moisture barrier. The top sheet of each stack should also be covered with a moisture barrier/cover board, with sufficient weight to remain flat and in contact with the whole surface area of the top sheet of CompactWood®. This procedure should be maintained throughout their storage (whether in a warehouse or on the fabrication shop floor) and reinstated whenever a sheet is removed from the stack. If Compact sheets are not stored flat for any length of time, deformation can result which will be almost impossible to rectify, particularly with thicker boards. When materials are brought into a workshop from temperatures or humidity levels different from ambient (e.g. after delivery), they should be allowed to stabilize before fabrication. Usually a minimum of seven days is required.

## Acclimatization

As with all high-pressure decorative laminates, CompactWood® undergoes a certain amount of dimensional movement when subjected to changes in humidity. To minimize the risk of warpage occurring as a result of this movement, the following points must be observed: In new buildings, or where excessive moisture conditions are present or high temperatures will occur, it is recommended that, prior to fixing compact laminates, a process of pre-conditioning be carried out to ensure the panels reach an equilibrium within the site conditions. This can usually be achieved by laying the compact panels on a pallet, neatly and flat, using carefully aligned spacer sticks (20 x 20 mm) between the panels at 12" (300 mm) centers across the full area of the panels, in the area where they are to be used for a minimum of 7 days prior to installation.

## Cutting

CompactWood® imposes greater demands on cutting tools and causes greater wear than traditional wood veneered substrates. Slower feed-speeds than those generally used for cutting laminate faced composite boards are required. The degree of feed speed reduction will depend on the thickness of the laminate and the quality of finish required. Tool manufacturers should be consulted as to the type and quality of tungsten carbide tipping (TCT) to provide the best performance. Where long production runs are contemplated and where a high quality finish is required, it is worth considering PCD (Polycrystalline Diamond) tooling. In all machine processes, localized heating caused by poorly maintained saws and cutters must be avoided.

Panels should be cut with the long edge parallel to the length of the sheet. Dimensional movement across the width of the sheet is twice as great as it is along the length, so cutting panels with the long dimension running across the width of the sheet will greatly increase the risk of bowing. It is recommended that Compact panels be cut along the length of the panel whenever possible.

## Edge Finishing

It is not necessary to apply edging strips to CompactWood® and for many applications clean sawn edges are sufficient. A spindle moulder or router may be used to achieve a superior finish or a profiled edge. Although it is not possible to achieve complete freedom from cutter marks, they can be minimized by feeding the work at a constant controlled speed by the use of a mechanical power feed. Care should be taken to avoid pausing during cutting and profiling, as burn marks may result which are difficult to remove. Where it is desirable for edges to be completely free from cutter marks, a further sanding and scraping operation is necessary. Edges may be further enhanced by buffing with steel wool and applying silicone-free oil. Chamfering or profiling the edges of CompactWood® panels will reduce the risk of edge impact damage. There are various CNC cutters that work well when cutting CompactWood® panels. TCT (Tungsten Carbide Tipped) will give similar results to PCD (Polycrystalline Diamond Tipped) cutters, but with a shorter life span of the cutter. Before any CNC operations are carried out on CompactWood®, it is important to remove the protective film from the surfaces. The film may decrease the suction power of the CNC bed which could cause the laminate to move while a CNC program is running. The following are recommended feed speeds depending on the expected quality of the cut:

18000 RPM with a speed rate of 60"/minute will deliver good quality edges

18000 RPM with a speed rate of 30"/minute will deliver very high quality edges

Saw blades normally used for cutting double sided composites are generally suitable for cutting CompactWood®. Saws of less than 2mm in thickness are not recommended. Breakout on the underside of CompactWood® sheets can be avoided by various methods:

- By the use of a pre-scoring blade on the underside.
- Using a base-board of plywood beneath the CompactWood® sheet.
- Altering the exit angle of the saw blade by adjusting the height setting.

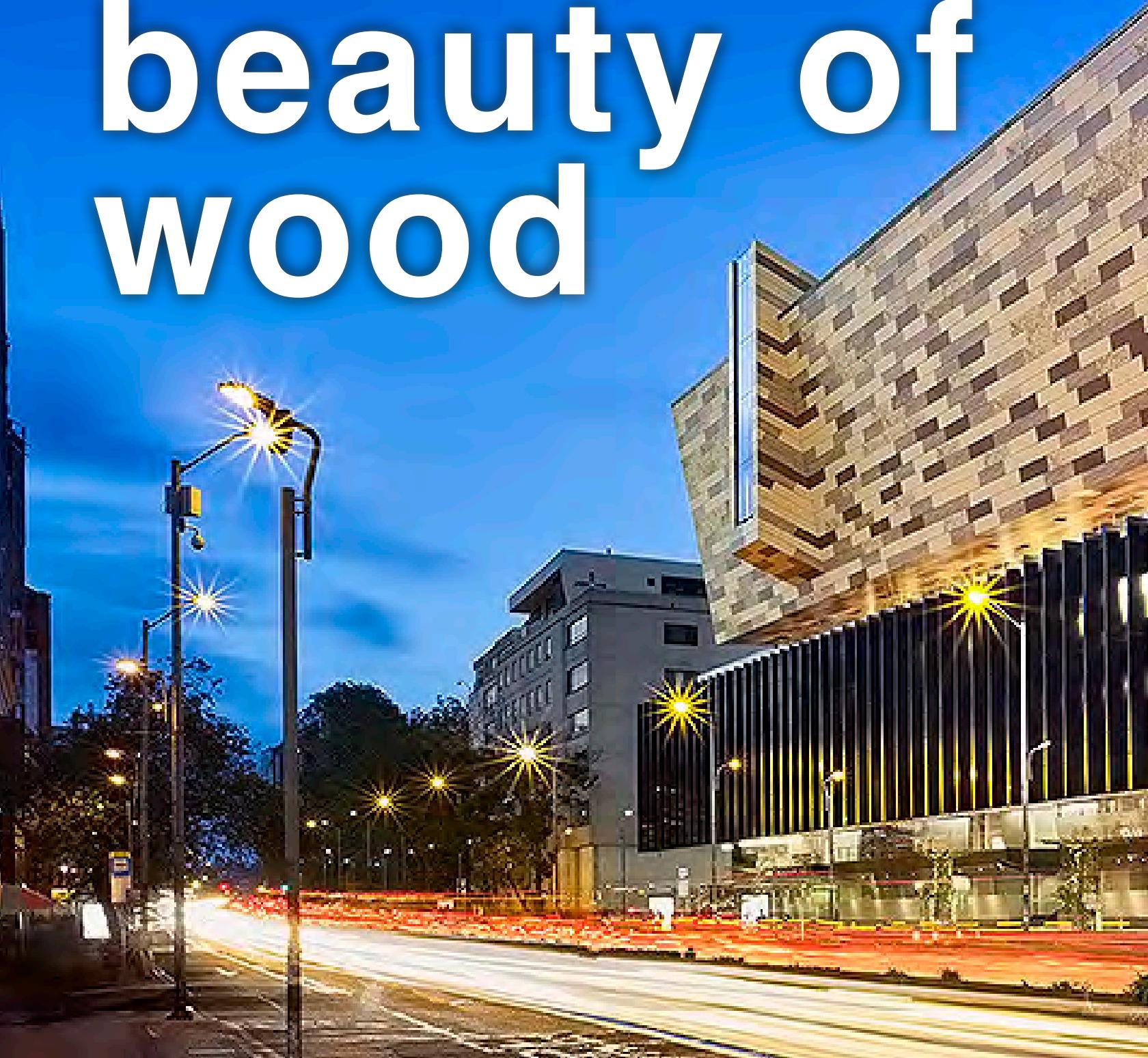
The higher the saw blade the better the top cut and the worse the bottom cut and vice versa. The feed speed essentially governs the quality of the saw cut when sawing CompactWood® having two decorative faces. A speed of between 0.03 mm and 0.05 mm per saw tooth has been found to be the most successful. Round off corners at cut-outs to avoid stress cracks or cracking. The recommended radius for all internal cut outs is 8-10 mm.

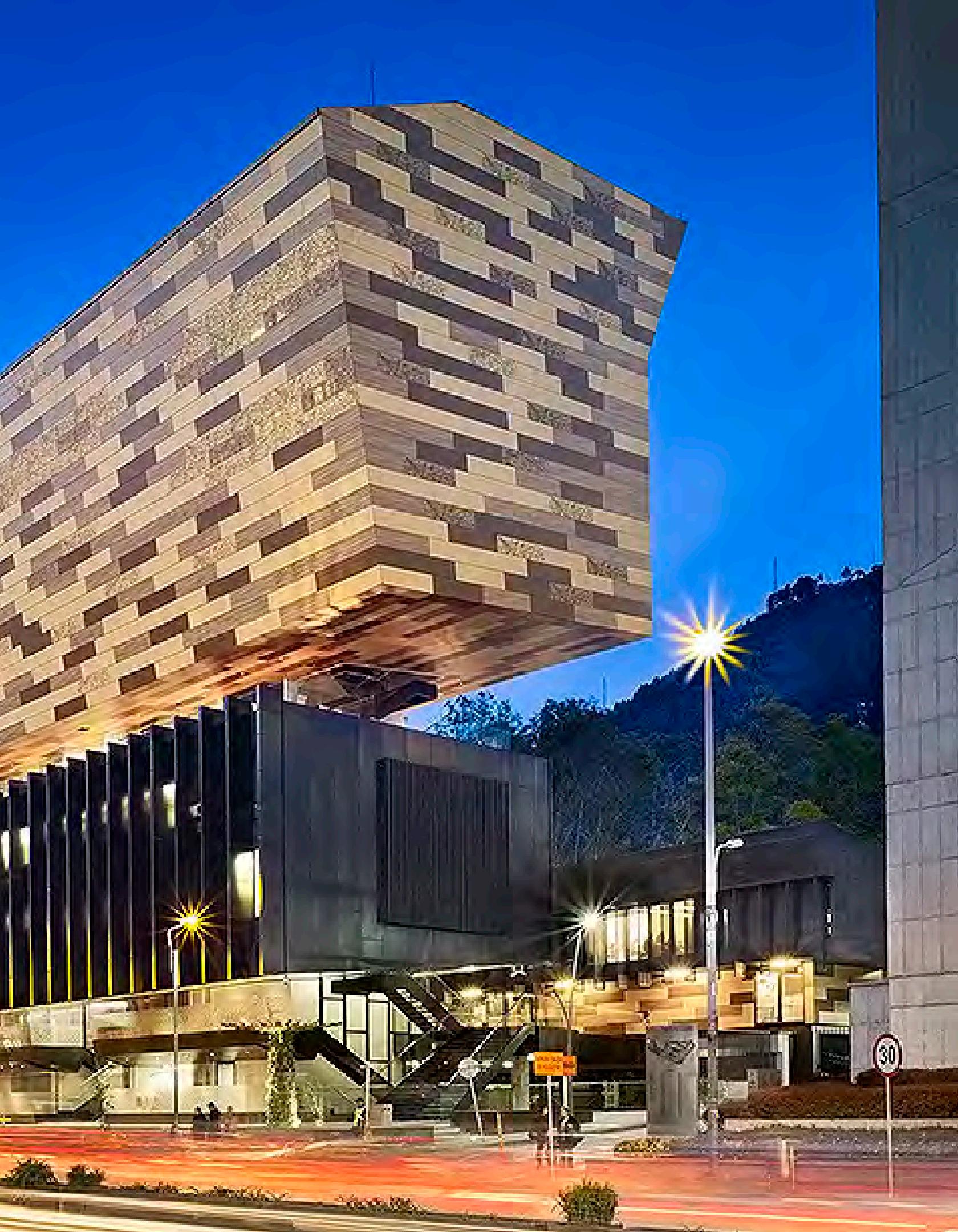
## Drilling

The most suitable drills for use on CompactWood® are those designed for plastic sheet materials. These drills have a point angle of 60°- 80° instead of the normal 120° for drilling metal. To avoid breakout on the reverse side, the feed speed of the drilling head and the pressure applied should be gradually reduced approaching the point of breakthrough. Working on a firm underlay, such as plywood will also reduce the risk of breakout. For blind boring into the face, the depth of the hole should be such that at least 1.5mm of material remains between the bottom of the hole and the other side of the sheet. TCT lip and spur drills will produce clean flat-bottomed blind holes, with less risk of point penetration on the reverse side. This will allow maximum depth of material to be used for fixings. CompactWood® sheets less than 8 mm thick are not suitable for concealed fasteners. When drilling parallel to the surface (edge drilling) at least 3 mm of material must remain on either side of the hole. Threaded holes can be produced using engineers' screw cutting taps. Self-tapping screws or threaded brass inserts may also be used.



# The timeless beauty of wood







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