Natural and Techwood Veneers

Two types of wood veneer are available for Knoll: Natural and Techwood. While both provide a true wood surface, each has its own unique characteristics.

Natural Veneer Cutting Process

Natural veneer has all the natural beauty of a living organism. Each tree has its own variations of grain, growth, and color patterns. The preference for natural veneer is not only for the warmth but for the personal characteristics of the wood. The inconsistencies and defects are part of the natural beauty.

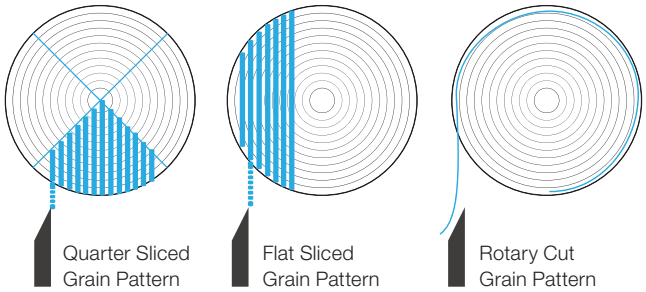
Actual trees are cut and sliced into very thin sheets of wood called natural veneers. These sheets are a dissection of the log showing all the wood's beauty as well as all of the wood's natural defects. The defects, such as knots, sap, wind twist, cracks and worm holes, remain in the log and the veneer cutter has to work around them to get the highest possible yield from each log. The yield from a natural veneer is about 40% - 60%, which means that 60% of the log is wasted. Knoll facilitates recycling of all wood parts.

There are many areas to consider when choosing a veneer. One thing to consider is the limitation to the selection of the wood. The height of the tree and the availability of the species will be a main factor in selecting the veneer. A veneer type should be selected to fit a project. Factors that are important in this process are final color desired and acceptability of stain onto the veneer.

The staining process creates a uniform color base for furniture, however veneer being a natural product has a slight color window. If a clear finish is chosen the color range is wider and over time all veneers will change in color.

Veneers are hand picked, cut, layed up and matched per component. No modifications are done to the veneer. The natural veneer orders are generated separately depending on the finish and the customer. Natural veneer orders take extra time and attention to ensure the proper outcome for the customer.

Natural veneers are often flat-sliced which, as the name implies, are a series of flat slices across the log. This produces various grain configurations, some highly figured, others less so; producing veneers characterized by a combination of close grain with a central heart or cathedral.



Planning with Wood

All natural veneer panels with stacking modules are grain matched from bottom to top. Replacement of natural veneer on a drawer front or tiled panel requires replacement of upper and lower components for a consistent color and grain match.

Long panel runs may reveal color change from one panel to the next (more than one flitch used).

Techwood

Techwood is environmentally friendly, 100% natural and genuine wood veneer which has been enhanced by modern technology. Color consistency is controlled through the use of dyes and the consistency of the grain patterns are dictated with the use of forms or molds.

Techwood was developed in order to give a high yielding, consistent product, with very few defects Techwood is a blend of Obeche and Poplar trees and processed into high-quality veneer. It is of medium density and hardness, but once manufactured into the finished product it compares well with Cherry or Walnut. It is also plentiful, especially compared to some other wood species.

Knoll

Left: Natural Veneer, Right: Techwood

Layup Process

Due to environmental issues concerning deforestation, it is important to note that the Obeche and Poplar trees grow at a much faster rate than trees in North America. A reforestation program has been implemented whereby only mature trees are cut and new trees are planted to take their place. One tree for every three acres is cut down. The yield from Techwood is approximately 85%, much higher than with natural veneers.

Unlike natural veneer which is either flat-sliced or quarter-sliced, Techwood is rotary sliced from Obeche and Poplar logs very similar to the sheets from a paper towel roll. It is highly efficient and there is very little waste. The Obeche and Poplar veneers are then bleached to achieve an even more consistent, homogeneous appearance. The veneer sheets are then dyed through to specific colors.

These different colors are then layered up in a stack, glued together and pressed to form a flaw-free block. The Techwood is then flat cut and is restacked into a mold that has “waves” top and bottom. When this block is sliced through, the effect is that of flat slicing through a natural log creating cathedral details like that of a natural veneer.

Knoll takes this process one step further using a patented pattern. The block is cut to produce a heart pattern every 8". This heart pattern gives us two hearts on every 16" wide pedestal, 10 hearts on an 80" overhead and so on. The result of the technique is that veneers can be produced which closely reflect the appearance and technical properties of oak, walnut, cherry, etc.

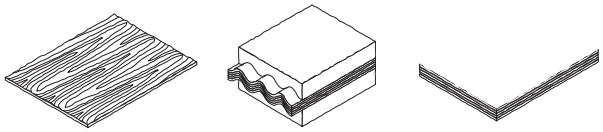
The Techwood Process

One common misconception is that Techwood is inexpensive and is used to cut costs. This is not the case Techwood veneers are used because of their superior quality and consistency. They can in fact cost as much as twice the cost of natural veneers.

The greatest advantage of Techwood over natural veneer is found when filling large systems furniture orders. The matching of color and grain pattern is more consistent on long panel runs. Also, the high yield ratio of techwood helps to provide a finished product with less waste, hence the lower price.

Add-on orders at later dates can be produced and will show existing product grain pattern with a closer color match than can be achieved from natural veneer.

If damage in transit or installation occurs, a single drawer front can be replaced without the concern of matching natural veneer cathedrals. Consistency of supply and control of color, grain pattern and thickness are all key advantages.



Final Techwood Product

Panels inserted between molding

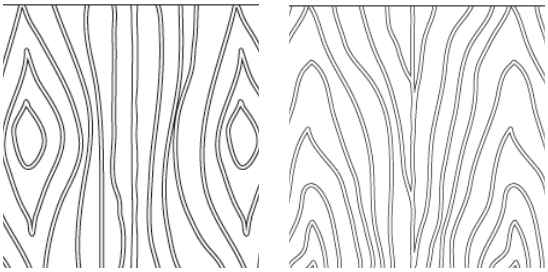
Stacked panels

	Natural	Techwood
Wood Grain	Variation Cathedrals & Islands	Consistency Linear
Color	Variation	Controlled
Cost	$$$ Low yield/higher cost	$$ High yield/lower cost
Aesthetic	Traditional	Contemporary

Veneer Matching

Matching is a method by which individual pieces of veneer are joined together to make a face. The match determines the veneer’s final appearance. There are two common methods used for veneer matching in Knoll furniture: Bookmatch and Slipmatch.

+ **Bookmatch.** This match is achieved by turning over every other piece of veneer as if turning the pages of a book. This produces a matching joint and if one remembers that the underside of one leaf is the exact mirror of the face of the next leaf, you realize that this match produces the most consistency when making faces. Bookmatch is used on both plain slice and quartered veneers. All Knoll Office front sets and worksurfaces are bookmatched.



Left: Bookmatch, Right: Slipmatch

+ **Slipmatch.** In this match, the veneer leaves are pulled in sequence or “slipped” one piece next to the other and joined. Thus, the grain figure is repeated but the joints do not match. This match is most commonly used with rift and quartered veneers.

Which Veneer Is Right For /you?

Costs for natural and engineered veneer vary depending upon the particular wood species and finish, but the quality is the same. Both options undergo Knoll’s stringent 11-step finishing process, and both are available in a broad color palette. So, the decision as to which wood veneer—natural veneer or Techwood—is right for a given application is merely a matter of personal taste and priorities.

And priorities vary. Knoll’s natural veneers highlight the beauty and drama of natural figuring and distinctive grain. Thus, they are the ideal choice for customers who appreciate natural wood and all its idiosyncrasies. By contrast, Techwood, Knoll’s engineered wood veneer, is created in such a way as to produce a more consistent grain pattern—one that is devoid of cathedrals and natural irregularities. Thus, Techwood is ideal for people who love the a warmth and elegance of wood but prefer a more controlled aesthetic. Also, because the manufacture of Techwood results in a higher yield from the log, it may be the right choice for those who are sensitive to waste reduction.