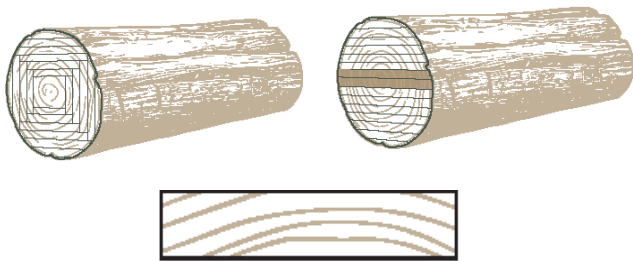


Lumber Cutting & Veneer Slicing Methods

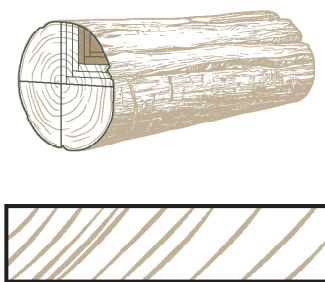
Whether solid or veneer, the beauty of wood starts at the source—with how it's cut from the log. Each slicing method reveals a distinct grain pattern, setting the tone for the look and character of the final product. In veneer applications, that craftsmanship extends to how each slice is laid out across a surface—a technique known as veneer matching—which plays a pivotal role in shaping the overall design aesthetic. At Columbia, we consider both the method and the match essential to delivering refined, purposeful cabinetry with lasting visual impact.

Lumber Cutting Methods (*Solid Wood*)



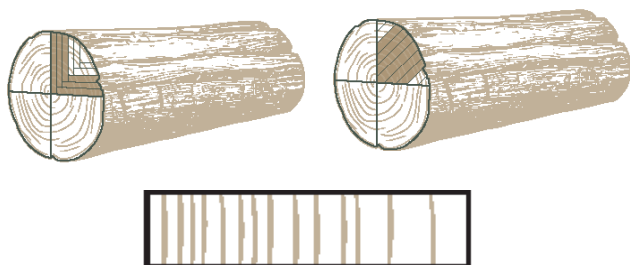
PLAIN SAWN (FLAT SAWN):

- **Process:** Each log is sliced parallel to its center, producing boards with growth rings typically at angles less than 45 degrees to the board's surface.
- **Grain Pattern:** Less uniform, offering a varied appearance, featuring flowing lines and "cathedral" arches.



RIFT SAWN (RIFT CUT):

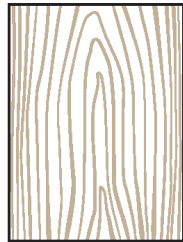
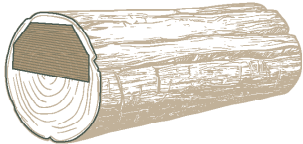
- **Process:** Boards are cut at a slight angle to the medullary rays, typically between 30 to 60 degrees to the growth rings.
- **Grain Pattern:** Species such as Rift Cut White Oak exhibit a mostly consistent, straight grain without prominent ray flecks, offering a clean and contemporary look. Slight variations can be expected, however, due to the unique characteristics of each tree and the way each log is cut. Factors such as the tree's growth conditions and the varying angle of the saw blade (typically 30–60 degrees) as it slices through the cylindrical log can result in broader grain lines or subtle diagonal shifts in the pattern.



QUARTER SAWN:

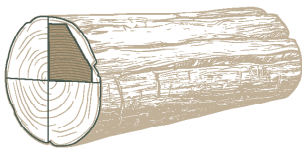
- **Process:** The log is first quartered, and then boards are cut perpendicular to the growth rings, typically between 60 to 90 degrees.
- **Grain Pattern:** Displays straight, uniform lines and may reveal decorative "ray and fleck" patterns.

Veneer Slicing Methods



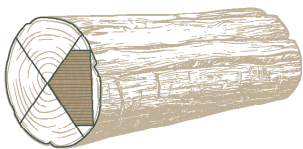
PLAIN SLICING (FLAT CUT):

- **Process:** The log is sliced parallel to its center.
- **Grain Pattern:** Veneers with a distinctive "cathedral" grain pattern are produced.



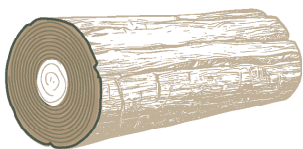
RIFT CUT:

- **Process:** Rift cutting involves slicing the log at a slight angle to the medullary rays (as is done with full boards).
- **Grain Pattern:** Species such as Rift Cut White Oak are known for a clean, modern aesthetic, defined by mostly straight, uniform grain with minimal ray flecking. While the overall appearance is consistent, natural variations may occur. These are influenced by each tree's unique attributes and the veneer cutting process—specifically the saw blade's angle (typically between 30 and 60 degrees) as it passes through the log. As a result, subtle shifts in grain direction or the appearance of wider lines may be present.



QUARTER SLICING:

- **Process:** The log is quartered and sliced perpendicular to the growth rings.
- **Grain Pattern:** Quarter slicing results in a straight grain pattern that provides a "striped" effect.



ROTARY SLICING:

- **Process:** A continuous sheet of veneer is shaved from the log in a spiral using a stationary blade—similar to unwinding a roll of paper.
- **Grain Pattern:** Veneers exhibit considerable movement, featuring varied grain patterns with swirls, waves, and cathedrals.

Understanding the Differences Between Solid Wood and Veneer

Though solid wood and veneer may come from the same species and share similar grain patterns depending on the cut, they differ in subtle but important ways. These differences arise from how each material is processed and finished. The section below outlines key visual and performance characteristics that distinguish solid wood from veneer—especially in cabinetry where both are often used together.

- **Depth and Texture:** Solid wood typically offers more visual depth and natural texture, while veneer, being thinner and often pressed flat, can appear more two-dimensional.
- **Grain Consistency:** Veneers typically display less variation—even across large surfaces—due to controlled matching techniques, while solid wood often reveals more prominent grain characteristics and variety from board to board. In designs that incorporate both solid and veneer components, such differences are considered a natural feature and speak to the inherent beauty and character of real wood.
- **Natural Color and Photosensitivity:** Veneers may exhibit more color uniformity due to how they are produced, while thicker solid boards can vary significantly from piece to piece. Veneers also tend to mellow more quickly over time with exposure to light, which can result in noticeable color differences between cabinetry components. This variation is a natural characteristic of working with different cuts of wood and is not considered a defect.
- **Stain Absorption:** Solid wood tends to absorb stain more evenly and deeply, while veneers may absorb less due to their thinner profile and the way they're cut, resulting in a softer, more muted appearance.