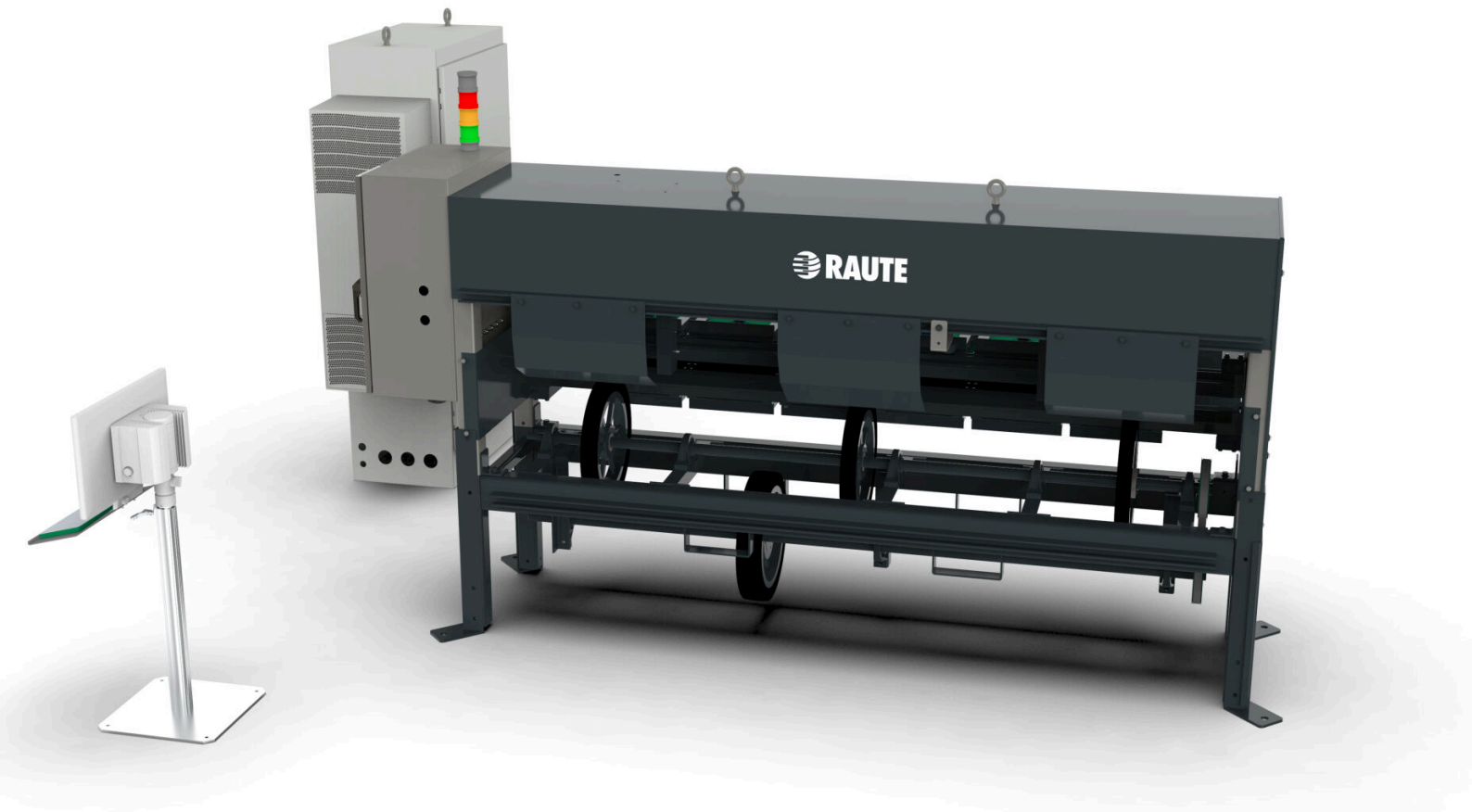
Veneer Strength Analyzer R7 - Drying

PRODUCE STRONGER END PRODUCTS WITH STRENGTH ANALYSIS



Utilize strength grading to use the raw material efficiently

Veneer Strength Analyzer R7 (formerly known as Metriguard 2865 DME) provides industry-standard strength veneer grading to produce consistent quality panels and LVL and predictable end-products. A strength analyzer allows you to sort veneer into different strength and density grades. This way the sheets can be used efficiently for correct layers to produce stronger end products.

Veneer Strength Analyzer R7 utilizes different measurement technologies for strength analysis. It measures the density, moisture, and thickness of the veneer sheets as well as sonic velocity through the veneer. Analysis based on these measurements enables the grading of veneers based on the moisture, density, ultrasonic propagation time (UPT), or Modulus of Elasticity (MoE).

Key benefits

OPTIMIZE LVL AND PLYWOOD STRUCTURES

PRODUCE HIGH-QUALITY STRUCTURAL PLYWOOD

MORE EFFICIENT USE OF RAW MATERIAL

INCREASE PROFITS

Images and videos

Technical specifications

	MOE	Sonic Velocity
Veneer thickness (mm)	0.5 – 4.2	0.5 – 4.2
Available sizes (ft)	5 - 10	5 - 10
Grading accuracy	>95%	>95%
Moisture Range (mc)	1% - 30%	
Moisture Accuracy (mc)	±2.5%	
Moisture and density sensors (pcs)	6 - 10	
Thickness Accuracy (mm)	±0.5	±0.5
Density range (kg/m^3)	300-1500	
Density accuracy (kg/m^3)	±10%	
Sonic Wheels (pcs)	2-3	2-3
Sonic Accuracy (mm/s)	±3%	±3%
Modulus of Elasticity (E)	±15%	

Analyzers for Veneer Drying

Grade the sheets accurately for the following process phases

At the veneer drying line, accurate grading is essential to keep material flowing efficiently toward the next process phases. The best way to secure consistent, unbiased decisions is to let intelligent analyzers perform the grading for you. In addition to classifying sheets, analyzers collect valuable process data that helps you optimize dryer performance, improve veneer quality, and boost overall profitability.

Modern analyzers grade sheets based on visual properties, moisture content, strength, and density. These capabilities can be delivered through individual systems or through integrated solutions that combine the features of two or even three analyzers into one compact unit, saving floor space, reducing investment costs, and most importantly, improving grading accuracy.

AI takes dry grading to a new level. Conventional vision systems often struggle to distinguish between sound knots, dark knots, loose knots, bark defects, and variations caused by heartwood or grain patterns. These limitations can lead to misgrading, unnecessary patching, and costly panel downgrading.

With AI-enhanced visual grading, these challenging distinctions can now be made reliably. At the drying line, AI accurately separates defects that need patching or composing from those that can be routed further downstream, such as to the panel repairing line. When combined with process simulation features, each veneer sheet can be directed to its most suitable next phase individually.

For example, face-quality sheets that require no patching can be identified directly at the dryer and sent straight to the lay-up line instead of the patching line, streamlining sheet flow and improving end-product quality.

Raute's AI analyzers can be retrofitted to any dry grading line. AI-enabled visual detection can also be combined with moisture grading, strength analysis, and surface property assessment such as waviness and roughness, providing you with better decision-making tools to maximize raw-material value across your mill.

Discover how AI-enhanced dry veneer grading can improve quality, accuracy, and flow in your production.