MGV

Complete Thickness Monitoring for Veneer Peeling Lines

Gain complete insight and automate your quality control with the all new MGV, our first triple-laser gauge designed from the ground-up for Veneer production.

In veneer peeling, yield is determined by the consistency of the ribbon. Lathe chatter and thickness variation don't just affect the peel; they cause issues downstream in drying and lay-up.

The new MGV continuously measures thickness at three fixed locations (edge, center, and edge), providing a live view of veneer quality through every peel and every ribbon. The MGV brings laboratory-grade precision directly to the green end of your line, allowing operators to spot chatter marks and blade wear instantly, long before the veneer reaches the dryer.

SCAN FOR DIGITAL DOWNLOAD

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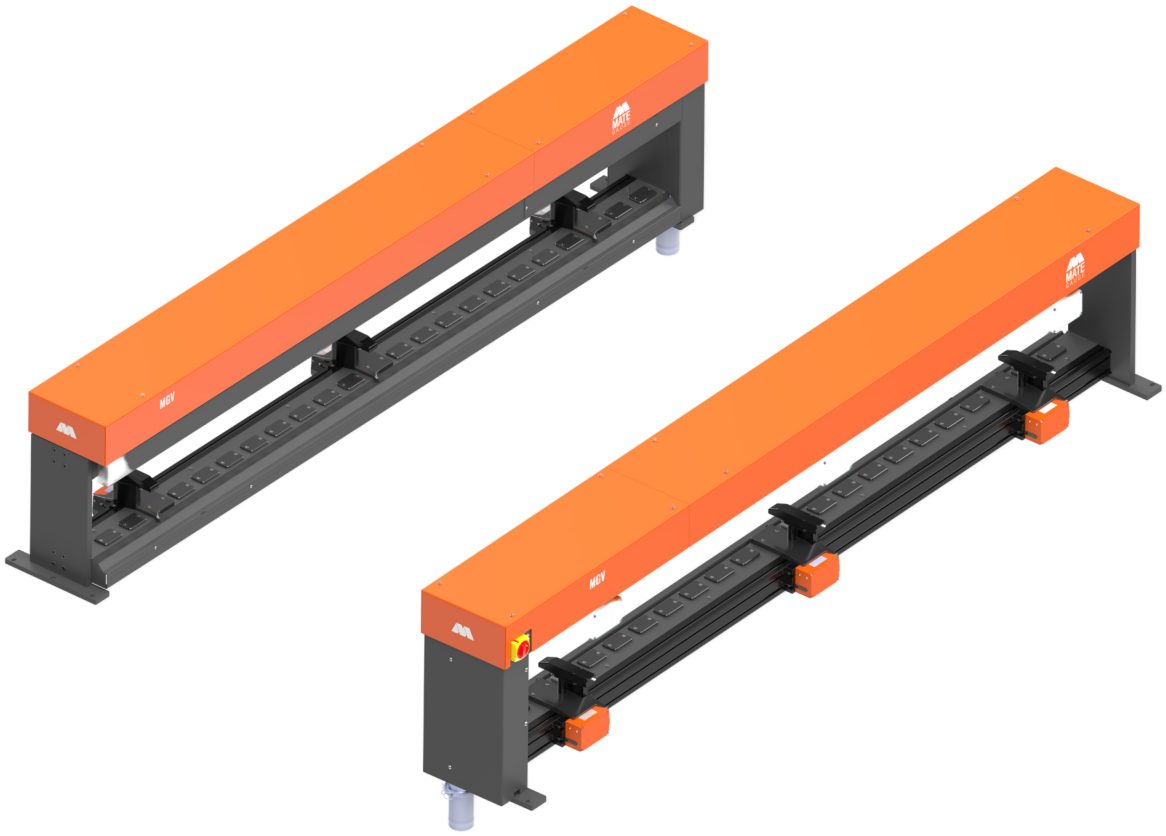
mategauge.com

MGV - NEW FORM FACTOR



With MGV, operators finally gain continuous, reliable visibility into veneer thickness and chatter. The system transforms peeling from a reactive process into a controlled, data-driven one. It ensures proper blade setup, detects issues instantly, and provides quality assurance throughout the run, all without disrupting production.

MGV measures thickness continuously at three independent locations across a 107" span.

- Continuous, edge-center-edge thickness measurement directly after the lathe
- Detects chatter and setup issues before they affect product quality
- Seamless PLC integration for full data publishing and automation
- Easy calibration every 3 months using a NIST-Traceable referene block
- Active air-curtains keep optics clean, even in high-pitch environments.
- Historical tracking for process optimization and recovery

COMPLETE VENEER THICKNESS DATA

01
Runs reliably without intervention.

Self-calibrating, temperature-stabilized, and cleaning-monitored. The MGV is built to hold accuracy across every shift without operator babysitting.

02
Virtual micrometer readings on every sheet/ribbon, live to your PLC.

Every sheet or ribbon is measured from edge-to-edge with three continuous measurement lanes, which display data as your specified number of virtual micrometers. Results are published directly to your PLC in real-time. No manual logging, no sampling, no lag.

03
Full coverage at full speed.

The MGV samples at 75,000 times per second across three locations simultaneously, measuring both edges and centre without slowing your line or interrupting production.

Reliability

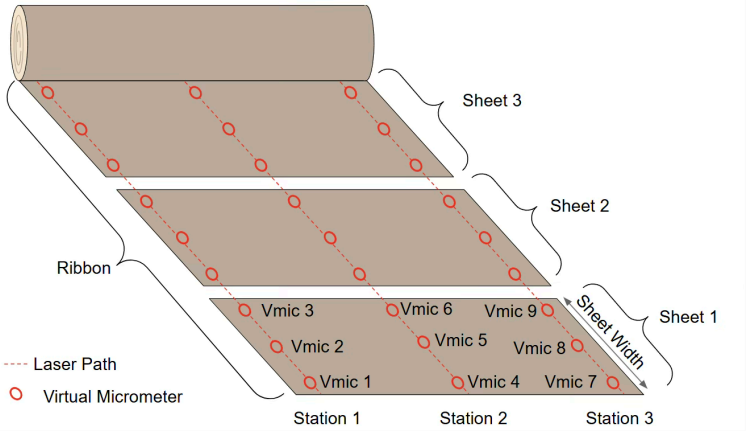
- Self-calibration thickness reference system
- Active temperature stabilization up to ±0.1°C
- Sensor cleaning status indicators
- Active air curtains for dust control and steam mitigation
- NIST-traceable calibration every 3 months

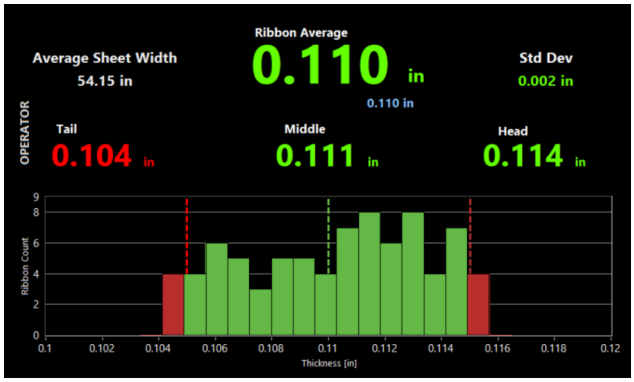
Integration

- Native Ethernet/IP works with Allen-Bradley, Siemens, and Omron
- Line-triggered scanning. Starts automatically when your line runs
- Real-time KPI publishing to PLC tags
- CSV data logging stored on-device
- Remote access and diagnostics

Measurement

- 75,000 samples per second
- Runs at full line speeds; no slowdown required
- Full sheet and ribbon thickness profiles
- Thickness roughness measurement
- Clip width measurement



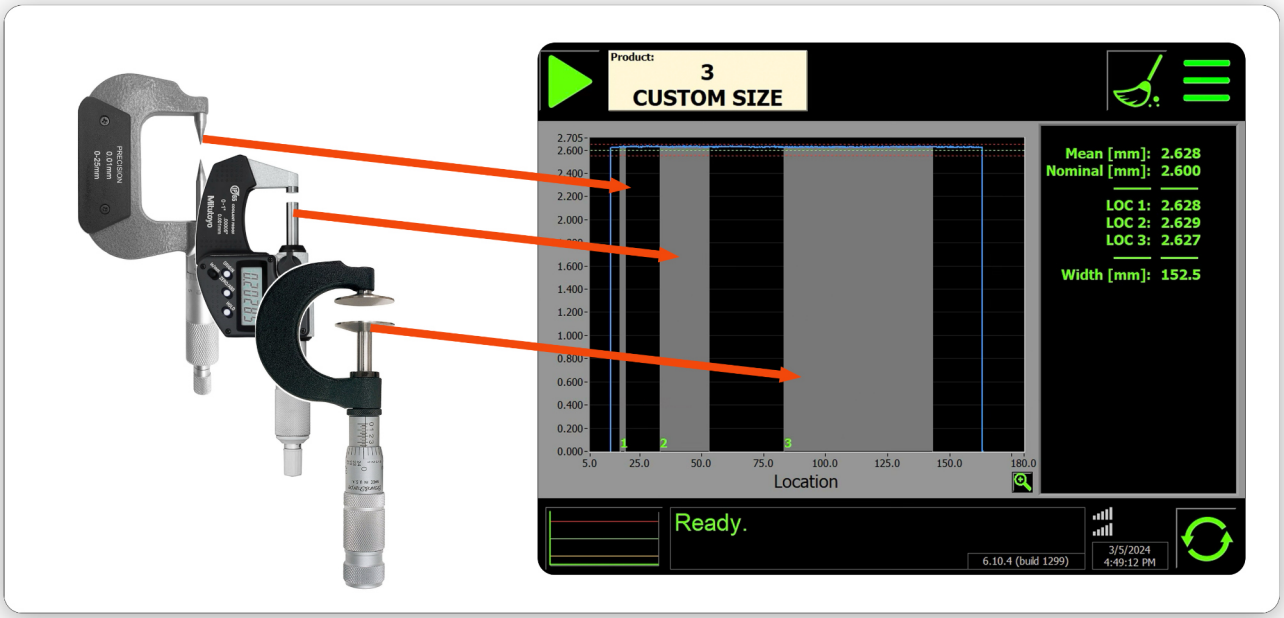


STAY INFORMED WITH mgOS FOR VENEER

- Real-time measurement and profile insights at a glance
- Configurable measurement zones and Vmic parameters
- Seamless PLC integration for line integration and results publishing

Built into every Mate Gauge system is mgOS, our thickness monitoring software. Engineered specifically for inline use, it transforms raw measurements into actionable insights, providing your operators and managers with the clarity and control they need to keep your lines running smoothly.

VIRTUAL MICROMETERS AT YOUR FINGERTIPS



Get fast, repeatable, inline measurements without slowing your line. Manual micrometers have their place, but they can't keep up with production speed and may deliver different results depending on the user. Mate Gauge gives you the familiar readings of your micrometer but in digital form.

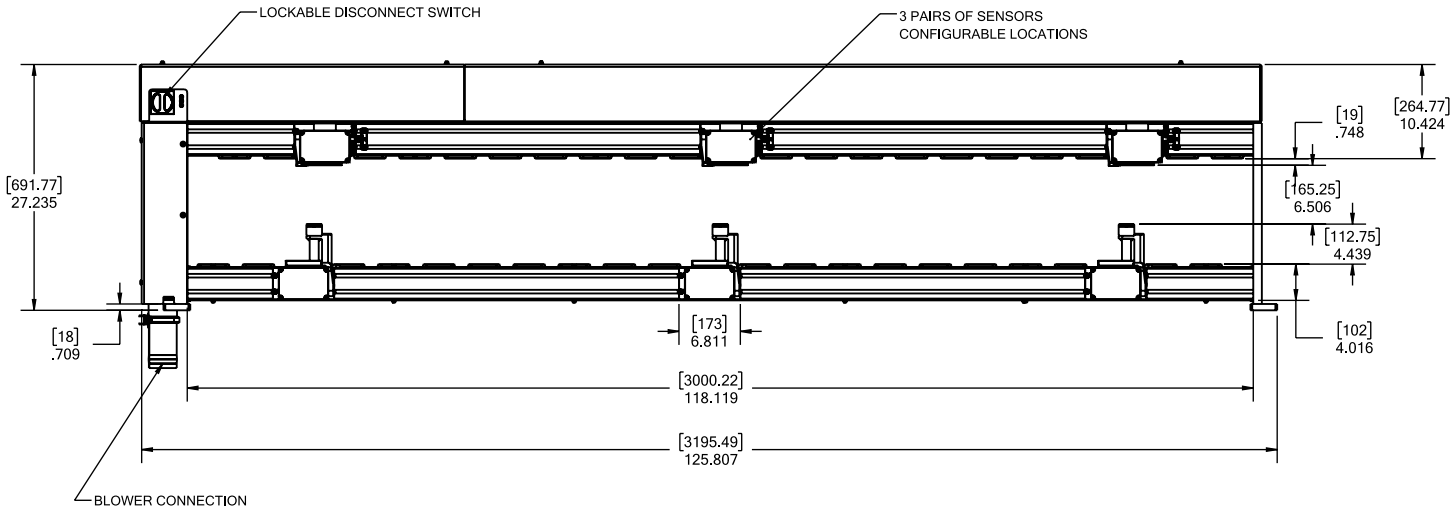
Increase Speed: capture measurements continuously, in real time, rather than spot-checking manually.

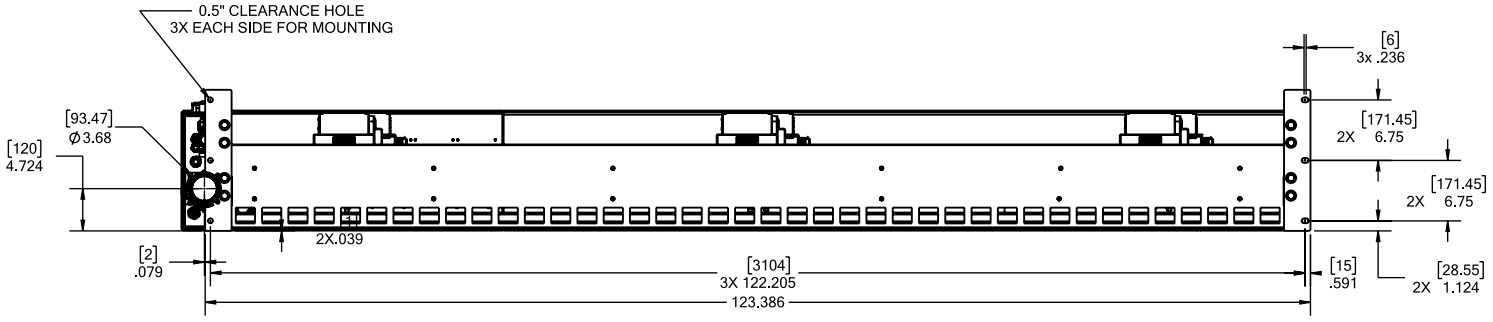
Eliminate Variability: ensure consistent results regardless of operator or shift.

Customize Measurements: adjust anvil size and mic placement (centered, repeated, custom, or zone-based) to fit your measurement needs.

Automated Record-Keeping: all measurements are logged automatically to a CSV file, so results are saved and accessible without manual data entry.

MGV - LINE UNIT DRAWING





MGV - SPECIFICATIONS

ENVIRONMENTAL REQUIREMENTS	Value (Metric)	Value (Imperial)
Resolution	0.5 µm	[0.00002 in]
Accuracy (typical)	10 µm	[0.0004 in]
Thickness Range	0 to 64 mm	[0 to 2.5 in]
Measurement Frequency	1 to 20 kHz	
Scan Result Rate Per Scan Cycle (typically, depending on scan length and speed)	1 - 10 s	
Live Thickness Rate	10 Hz	
Max Material Width	2718 mm	[107 in]
System Weight	158.76 kg	350 lbs

SUPPLY REQUIREMENTS	Value (Metric)
Line Unit Power	6.6A @ 115V / 3.3A @ 230V
HMI Power	1.5A @ 115V / 0.75A @ 230V
Air Supply	20 CFM @ 90 - 150 PSI / 34 m^3/hr @ 6.2 - 10.3 Bar
Blower	8A @ 120 VAC / 4A @ 230 VAC

ENVIRONMENTAL REQUIREMENTS	Value (Metric)	Value (Imperial)
Operating Temperature	5°C to 50°C	[41°F to 120°F]
Humidity	80% at 31°C (88°F) - 50% at 40°C (104°F)	

MATE
GAUGE

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