

# MG1 Non-contact thickness measuring solution for your production line.



**COMPACT AND LIGHT INLINE THICKNESS MEASUREMENT**

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# LASER TRIANGULATION TECHNOLOGY FOR NON-CONTACT THICKNESS MEASUREMENT

Sensors scan across the material at a sampling rate of 1-5 kHz. The thickness is determined from the distance of both measuring heads to each other and the difference of the measured individual distances to the material to be measured.

- ✓ Alert system for sensor dirt accumulation
- ✓ Edge-to-edge thickness measurement
- ✓ Automatic Thickness Reference (TR) check compensates for thermal expansion
- ✓ Belt-driven, single actuator with built-in centring
- ✓ Quick cleaning process to minimize production disruption
- ✓ Easy calibration every 3 months using NIST-traceable master block



# mgOS SOFTWARE - PURPOSE-BUILT FOR OPERATOR EASE

Whether you're upgrading existing systems or implementing new ones, the MG1 integrates with your systems through PLC connection and Ethernet ports. The Mate Gauge software filters and processes the thickness waveform to extract and record measurements and key performance indicators (KPIs). Measurement results are continuously published and displayed on a 8" (optional 15") HMI display.



## Full thickness profile displayed

- Strip thickness measurement
- Strip width measurement



## Automation with PLC

- Automatic changes in thickness, settings, and scan data.



## Data Visualization

- Real-time data visualizations designed for operator ease
- Touchscreen display



## PDF and .CSV reporting

- Data file downloads for offline analysis
- Trend tracking over run-time



## Custom App

- Virtual Micrometer settings
- Ability to set thickness KPIs



## Alerts

- Configurable alerts based on target specifications

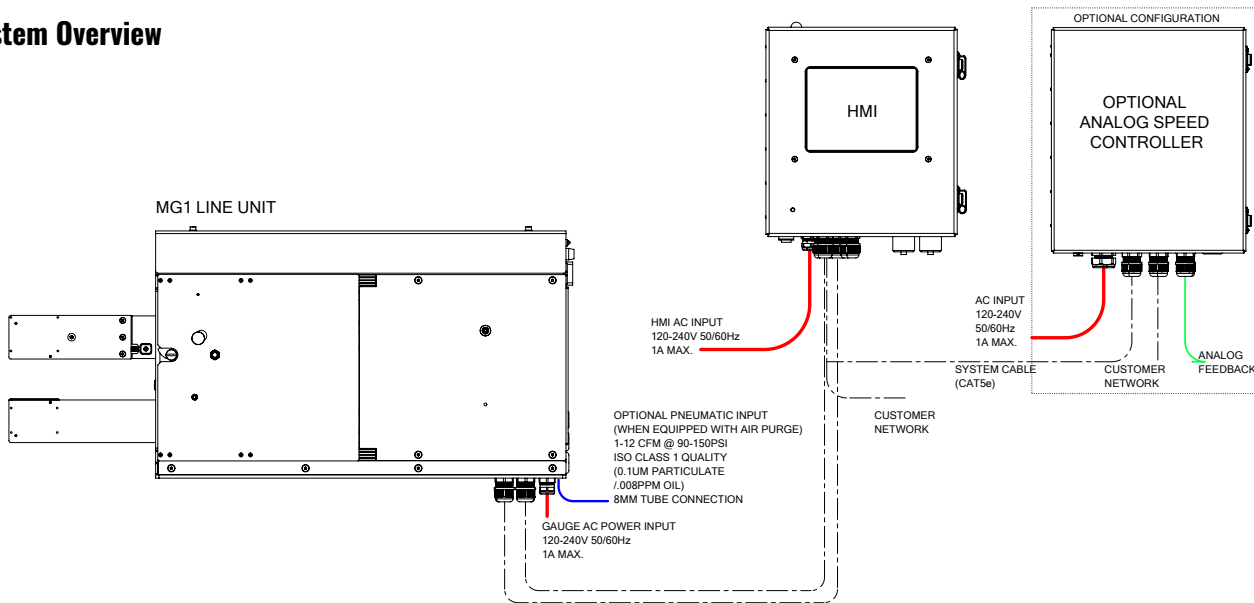
# MG1 Schematics

The following schematics illustrate the standard configuration of your Mate Gauge. This configuration includes the essential components and layout designed for general applications.

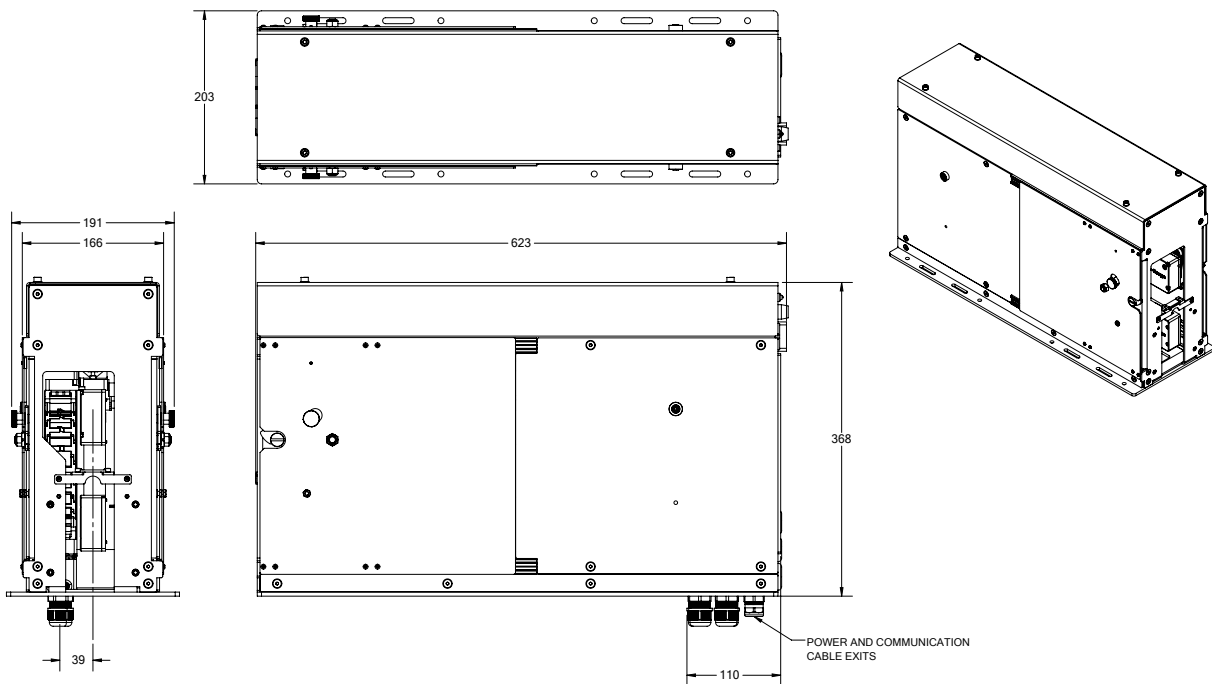
Different applications and sensors types require specific adjustments to the Mate Gauge configuration. We are committed to providing solutions tailored to your specific measurement needs.

## Contact Us

### System Overview



### Line Unit



# MG1 Technical Specifications

## THICKNESS MEASUREMENT DETAILS

Sensors	30mm Standard		50mm Standard	
Resolution	0.5 $\mu\text{m}$	[0.00002 in]	1.5 $\mu\text{m}$	[0.00004 in]
Accuracy (typical)	2 $\mu\text{m}$	[0.00008 in]	4 $\mu\text{m}$	[0.00016 in]
Stroke	422 mm	[16.6 in]	422 mm	[16.6 in]
Scanning Speed	150 mm/sec	[6 in/sec]	150 mm/sec	[6 in/sec]
Thickness Range	0 to 8 mm	[0 to 0.3 in]	6 to 26 mm	[0.25 to 1 in]
Measurement Frequency	1 to 5 kHz		1 to 5 kHz	

## SUPPLY REQUIREMENTS

Line Unit Power	1A @ 115V / 0.5A @ 230V 50/60Hz
HMI Power	1.5A @115V, 0.8A@230V, 50/60Hz
Air	0-5 CFM @ 90-110 PSI with optional air purge

## WEIGHT

Complete Assembly	20.4 kg	[45 lbs]
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## PHYSICAL DIMENSIONS

Main Housing	623x368x203 mm	[22x13x7 in]
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## ENVIRONMENTAL REQUIREMENTS

Operating Temperature	5 °C to 45 °C	[41 °F to 113 °F]
Humidity	< 90%	

## SUPPORT AND SERVICES

Mate Gauge provides comprehensive support services to ensure optimal performance of your MG1 system. From initial setup to ongoing maintenance, our team is committed to your success.

- ✓ **Line location consultation**
- ✓ **Product setup guidance**
- ✓ **Operator training**
- ✓ **Post-purchase support with on-call technicians**



**Beyond measure.**

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