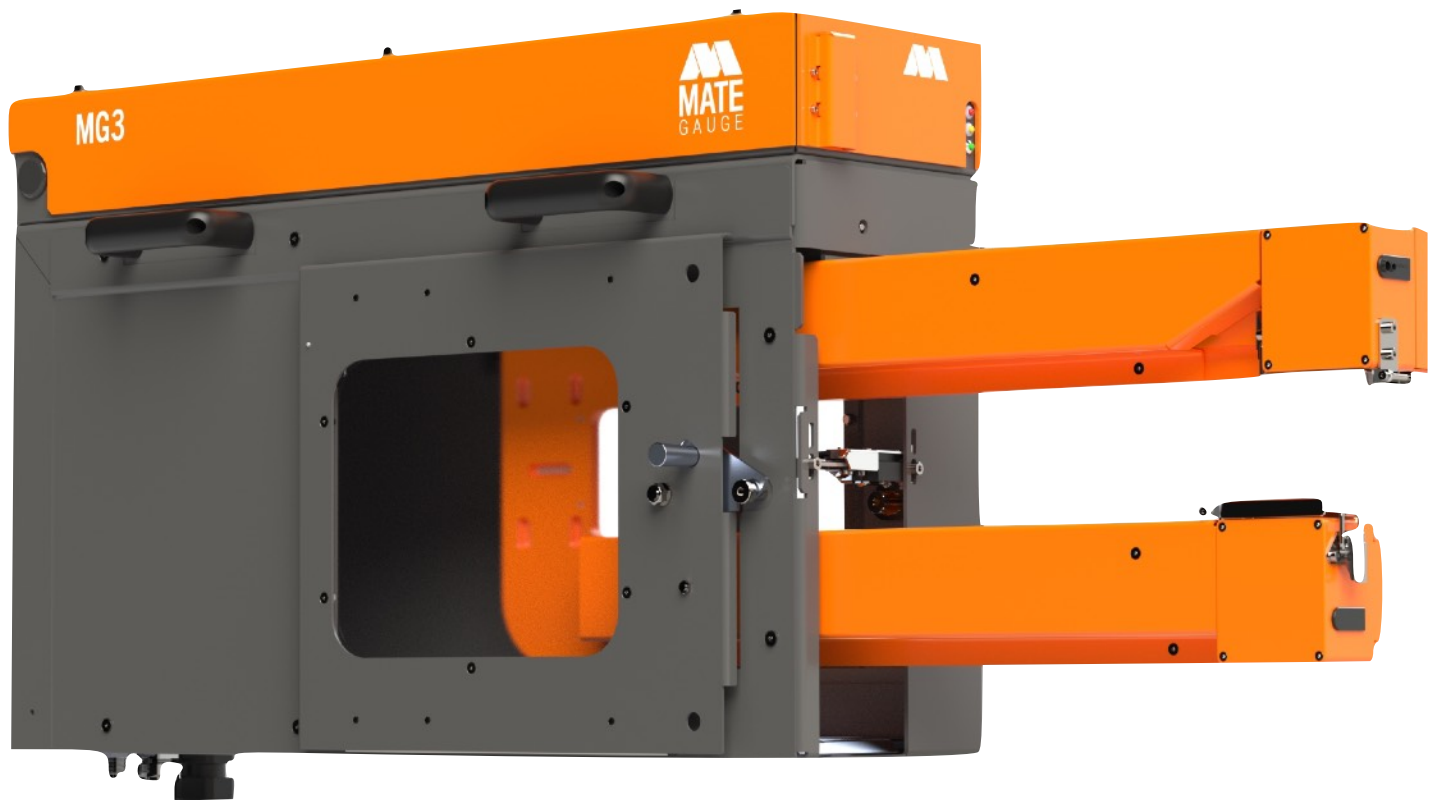


# MG3 Non-contact thickness measuring solution for battery manufacturing.



**Robust. Connected. Complete. And smart.**



Scan for digital  
download.

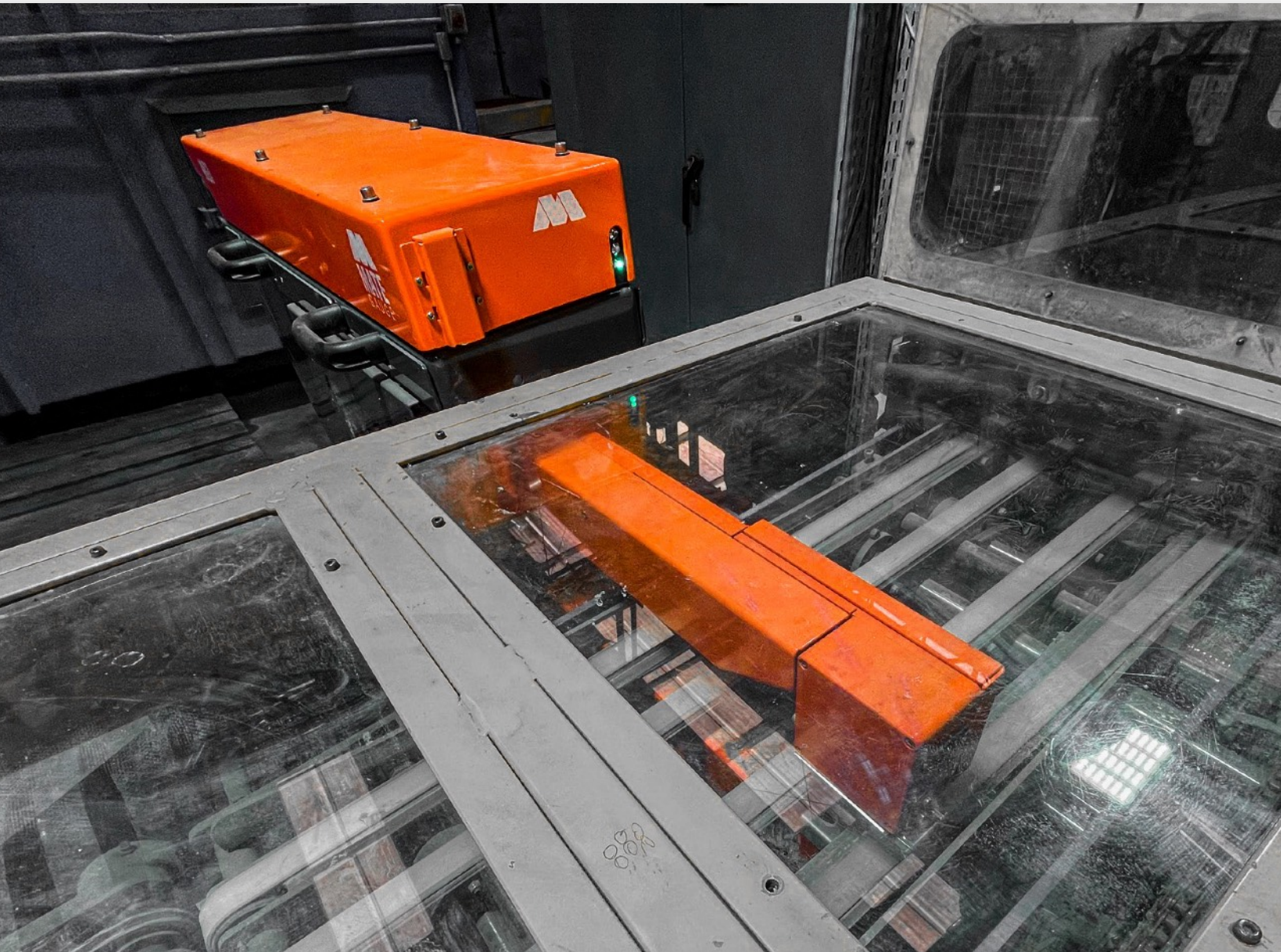
+1 613-287-0171  
[mategauge.com](http://mategauge.com)



# 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.

- ✓ **Belt-driven, single actuator** with built-in centering
- ✓ **Automatic Thickness Reference (TR)** check compensates for thermal expansion
- ✓ **Quick cleaning process** to minimize production disruption
- ✓ **Alert system** for sensor dirt accumulation
- ✓ **Edge-to-edge thickness measurement** across individual plates or strips
- ✓ **Continuous "gauge and go"** measurement system
- ✓ **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 MG3 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 15" HMI display.



## Full thickness profile displayed

- Strips/plates thickness measurement
- Strips/plates width measurement



## Data Visualization

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



## Custom App

- Virtual Micrometer settings
- Ability to set thickness KPIs



## Automation with PLC

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



## PDF and .CSV reporting

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



## Alerts

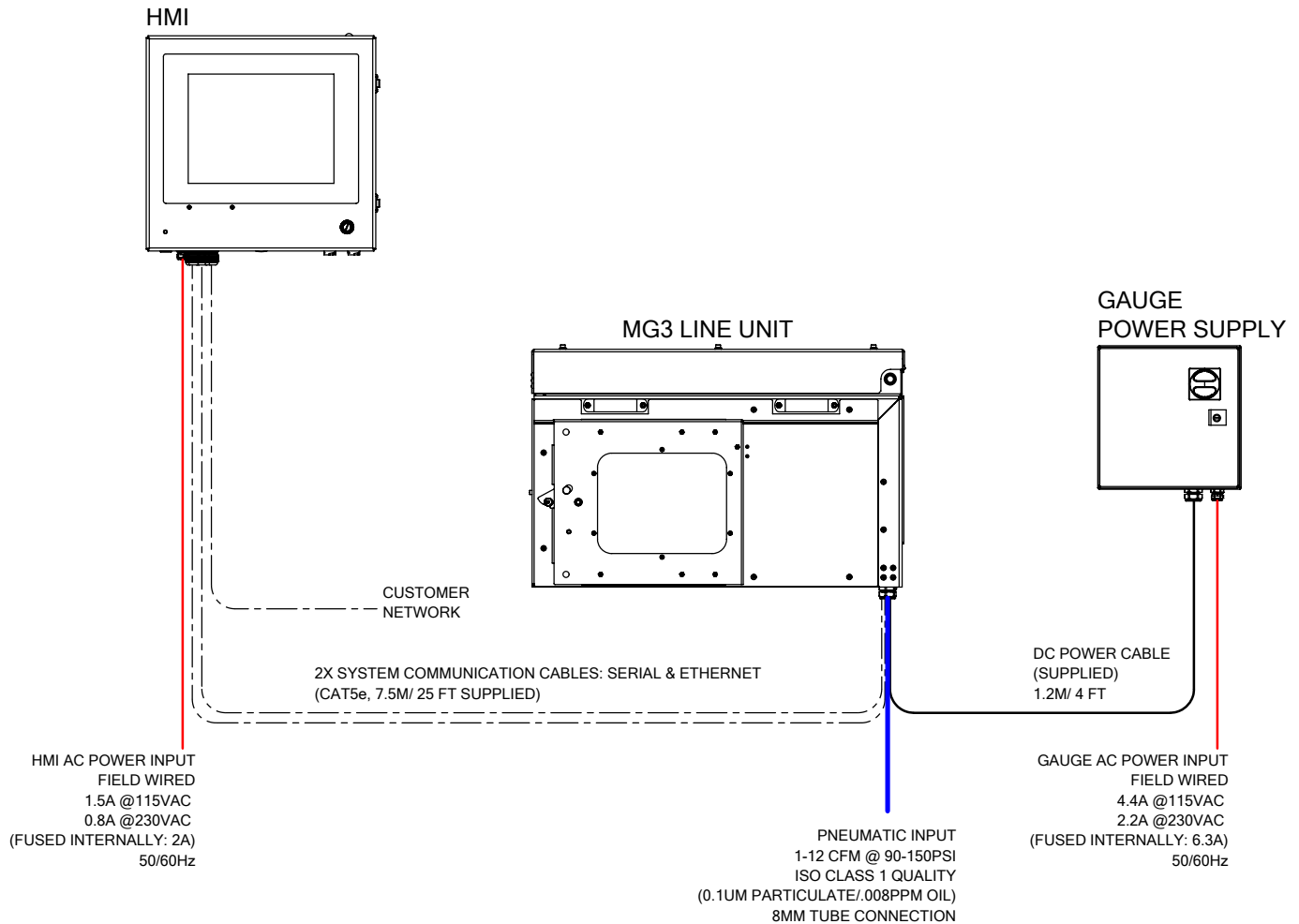
- Configurable alerts based on target specifications

# MG3 Schematics

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

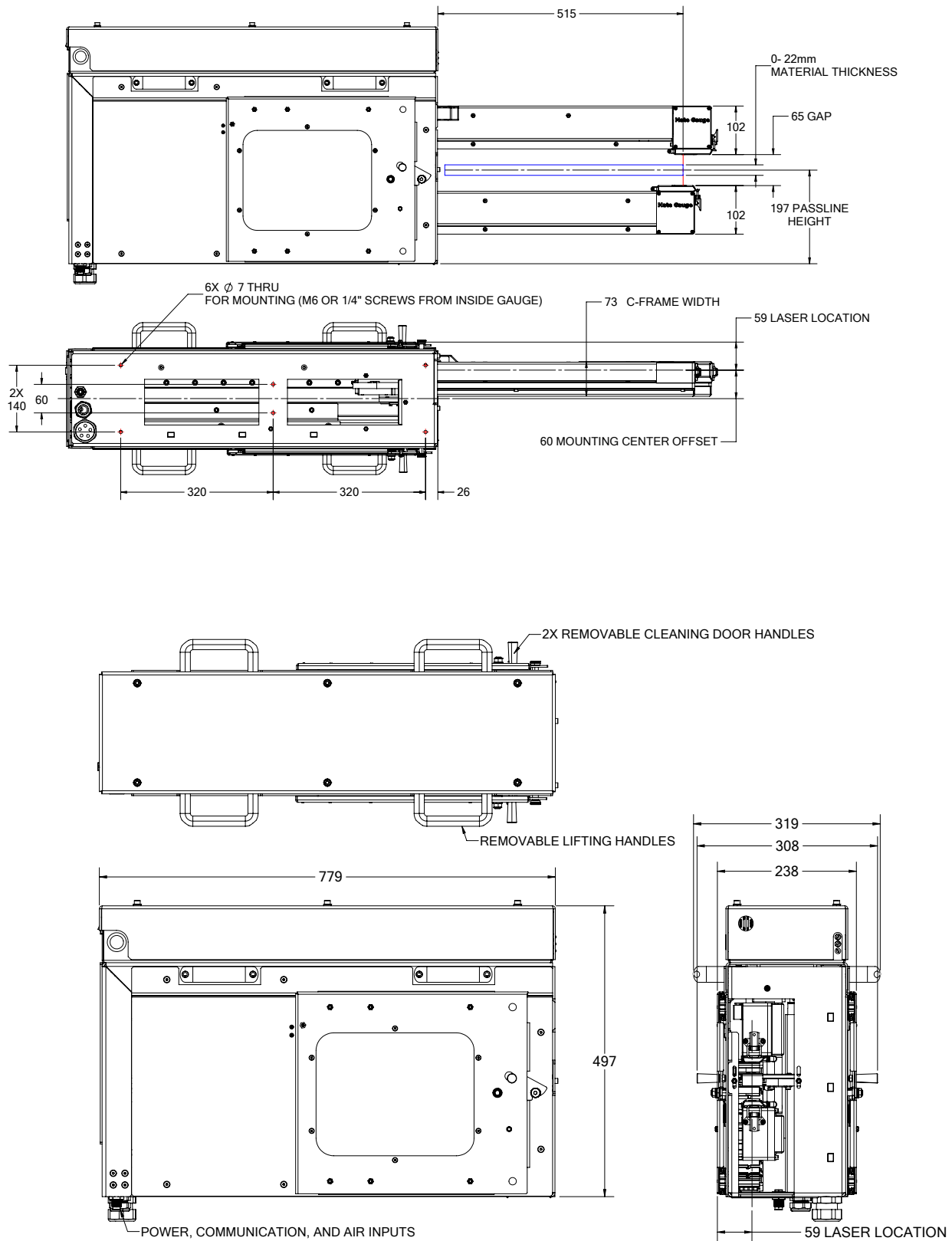
Different applications and sensors types require specific adjustments to the Mate Gauge configuration. We are committed to providing solutions tailored to your specific measurement needs.

## System Overview



# MG3 Schematics

## Line Unit



# MG3 Technical Specifications

## THICKNESS MEASUREMENT DETAILS

Sensors	30mm Standard		50mm Standard	
Resolution	0.5 $\mu\text{m}$	[0.00002 in]	1.5 $\mu\text{m}$	[0.00006 in]
Accuracy (typical)	2 $\mu\text{m}$	[0.00008 in]	4 $\mu\text{m}$	[0.00016 in]
Stroke	515 mm	[20.3 in]	515 mm	[20.3 in]
Scanning Speed	150 mm/sec	[6 in/sec]	150 mm/sec	[6 in/sec]
Thickness Range	0 to 8 mm	[0 to 0.32 in]	0 to 20 mm	[0 to 0.79 in]
Measurement Frequency	1 to 5 kHz		1 to 5 kHz	

## SUPPLY REQUIREMENTS

Line Unit Power	100-240 VAC @ 50/60Hz, 4.4-2.2A
HMI Power	100-240VAC @ 50/60Hz, 1.5-0.8A
Air Supply	2-12 CFM @ 90-110 PSI

## WEIGHT

Complete Assembly	49 kg	[108 lbs]
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## PHYSICAL DIMENSIONS

Main Housing	798x506x238 mm	[31x20x9 in]
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## ENVIRONMENTAL REQUIREMENTS

Operating Temperature	5 °C to 50 °C	[41 °F to 120 °F]
Humidity	< 90%	

## SUPPORT AND SERVICES

Mate Gauge provides comprehensive support services to ensure optimal performance of your MG3 system. From initial setup to ongoing maintenance, our team is committed to your success.



**Line location  
consultation**



**Operator training**



**Product setup  
guidance**



**Post-purchase support  
with on-call technicians**



**Beyond measure.**

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