

# MG1

Compact and lightweight inline measurement



Non-contact measurement  
Full strip profile displayed  
“Gauge and Go” measurement  
mode  
Touchscreen display

Easily installed and maintained  
Networkable  
Remote support  
Data logging



Contact us for more info or to order an MG1

[info@mategauge.com](mailto:info@mategauge.com)

# Go flat out with the MG1

- **Laser measurement for unmatched precision:** Laser sensors measure the surfaces of samples as they're being produced. Removes the need to rely on inaccurate hand micrometer measurements and line stoppages to check product quality.
- **Continuous measuring:** Our "gauge and go" continuous measurement system enables operators and managers to monitor thickness during the entire operation. For more detailed thickness measurement data about sections across the sample our "Zones Scan" mode enables operators to monitor thickness of individual sections of the surface.
- **Side to side thickness measurement:** Scanning laser heads measure thickness across the samples thanks to our linear belt actuator. Avoids relying on the edge measurements to control your process.
- **Multi-purpose design:** The MG1 measures cross-sectional thickness for a wide range of plate and strip materials. Its compact, flexible design means it can be used across a variety of industries and products.
- **PLC connection:** Engineered to blend seamlessly into your production line, the MG1 can connect directly to your PLC. This makes for easy changes in thickness, settings, and scan data. With built-in Ethernet ports, it's as simple as plug in and go.
- **Monitor thickness measurement in real-time:** Our on-screen data visualizations are purpose-built for operator ease. Monitor real-time thicknesses and run charts of multiple locations across your product. Automatically connect to your existing systems to set thickness targets and key thresholds. Be immediately notified by on-screen alarms when issues arise. Keep an eye on your lines without leaving your desk. You'll have access to real-time measurement data, as well as the ability to track trends over run-time and perform data file downloads. All of this with ironclad security - your data is only accessible via your facility's local network.
- **Ease of use and stress-free maintenance:** The belt-driven, single actuator includes built-in centering for in-field positioning. Calibration, using the NIST-traceable master calibration block, only needs to be done once every 3 months. The laser sensors' modular design and quick electrical disconnects means, when needed, they are quickly and easily replaced. The belt-drive actuator design is familiar making it easy to maintain.
- **Monitor and reduce dirt accumulation:** When the sensors get dirty, our alert system ensures you're immediately notified. Dirty sensors are easily retracted and quickly cleaned with no disruption to your production line. The actuator's overhead position, located away from conveyors, moving materials and strips, reduces the risk of particulates entering the drive system and eliminates failure points.
- **Compact and lightweight:** Coming in at only 45 pounds, it's easy to move the MG1 to different locations in your production facility.

# MG1 Technical Specifications

## THICKNESS MEASUREMENTS DETAILS

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

## SUPPLY REQUIREMENTS

Power 4A @ 110V/60 Hz 2A @ 240V/50 Hz

## WEIGHT

Complete Assembly 20.4 kg [45 lbs]

## PHYSICAL DIMENSIONS

Main Housing 623x368x203 mm [22x13x7 in]

## ENVIRONMENTAL REQUIREMENTS

Operating Temperature 10 °C to 50 °C [50 °F to 120 °F]

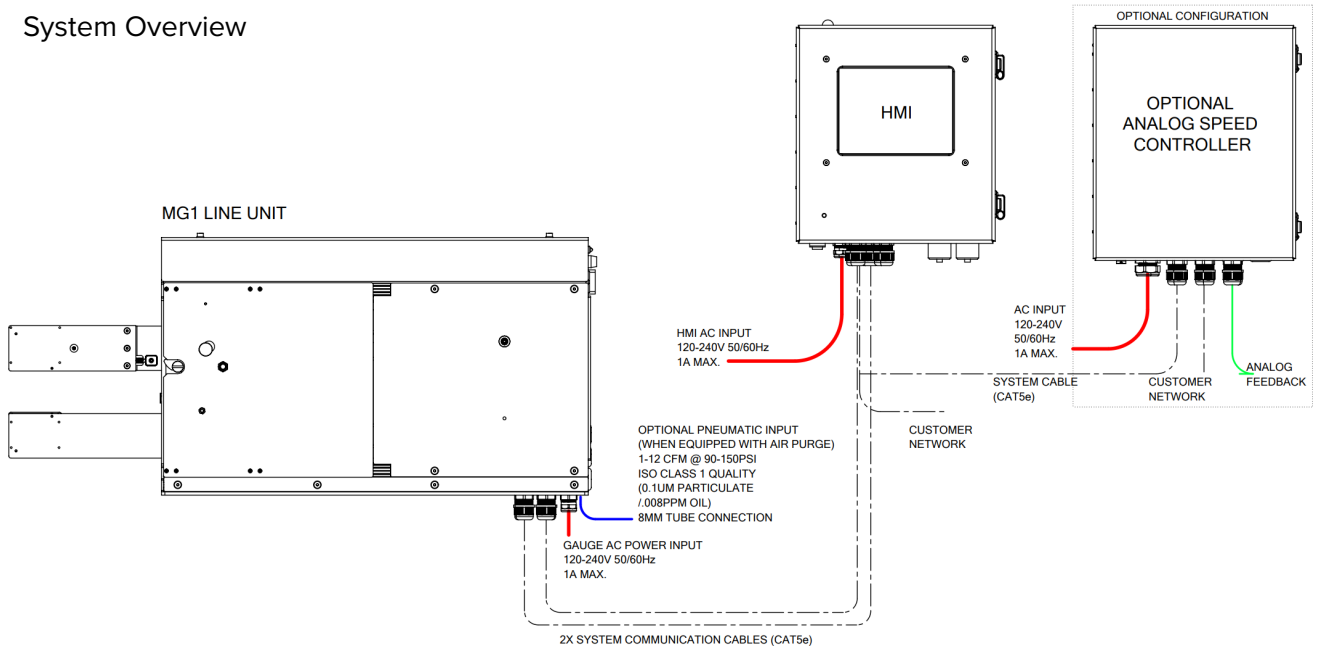
Humidity < 90%

## CONFIGURATIONS

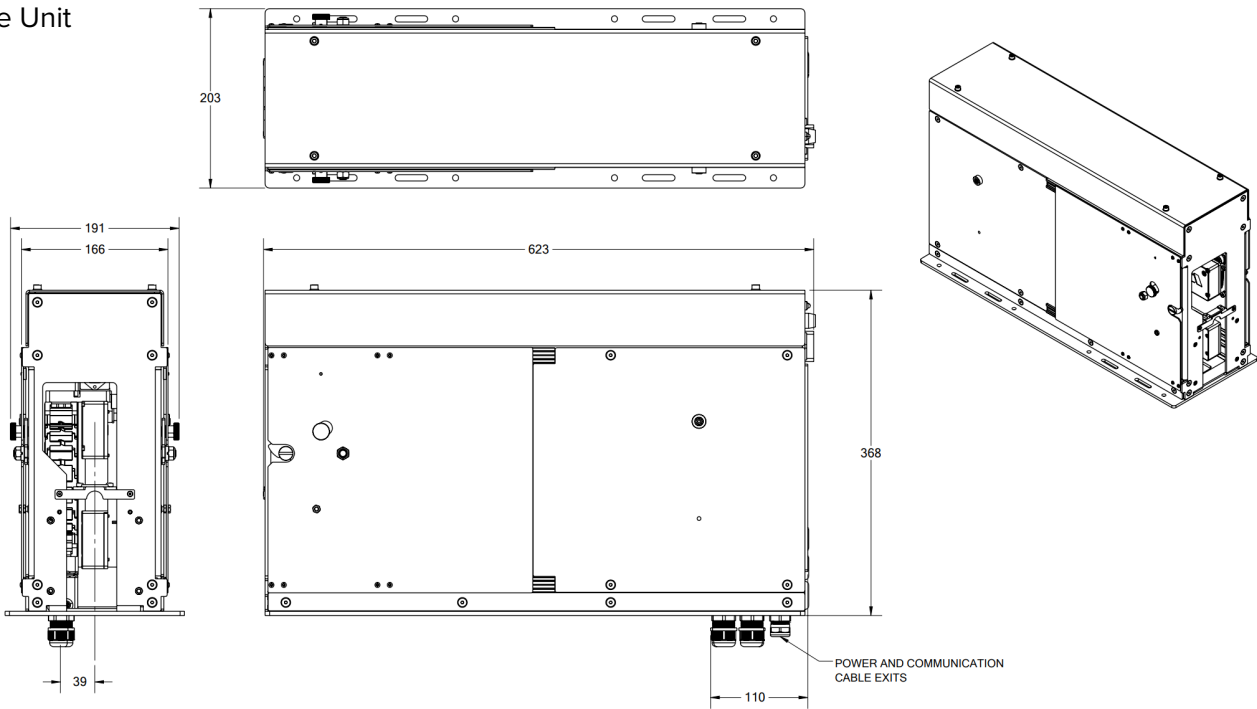
Item	Part Number	Description
1	10041540	MG1 - A Standard Build
2	10041850	MG1 - B Extended Range (0-20 mm)
3	10041851	MG1 - C Extended Range (0-40 mm)

# MG1 Schematics

## System Overview

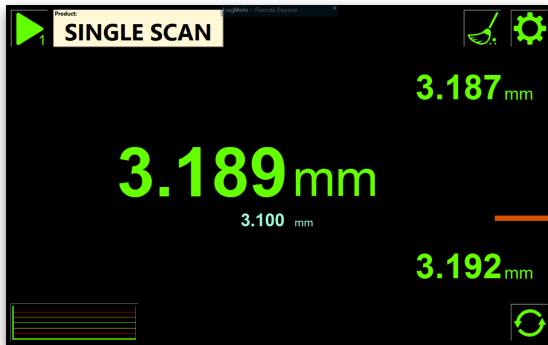


## Line Unit

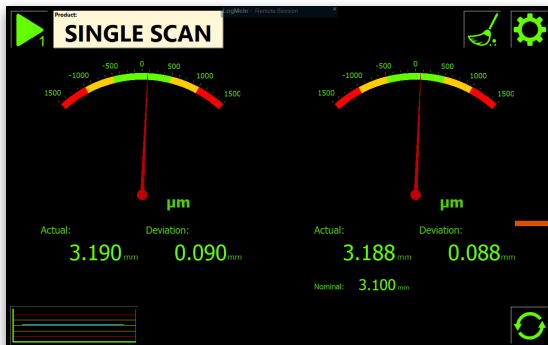


# MG1 Controls and Displays

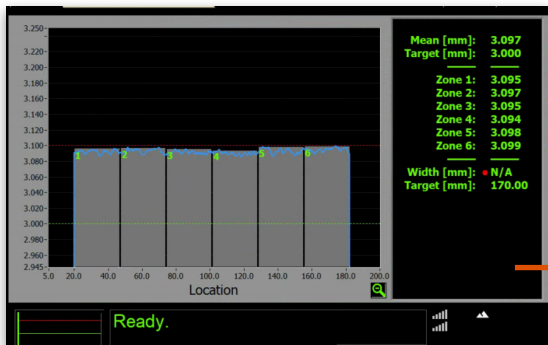
Purpose-built for operator ease



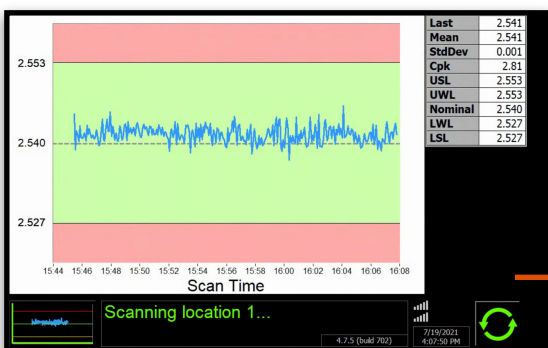
Large numerical display



Needle gauge location showing left-right thickness



View thickness of sample in a range of zones



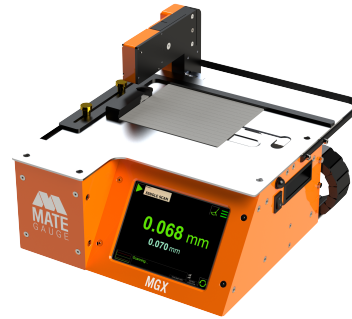
See sample thickness over time

Not sure which Mate Gauge is right for you? Check out our other

## Ready out of the box

The MGX is our newest and smallest bench top that gives you hands-free measurements.

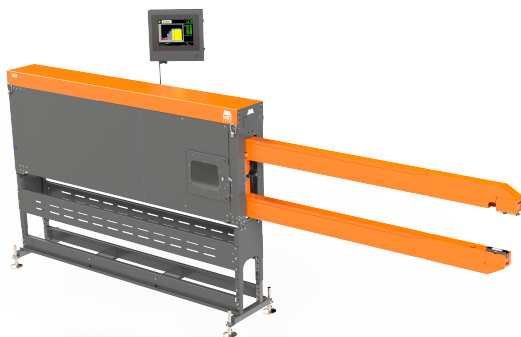
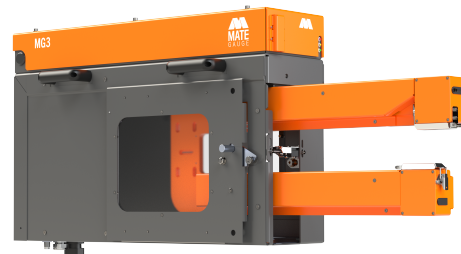
[Learn more](#)



## Our Flagship Gauge

Tolerant of dirt and temperature swings, the MG3 provides rich data for your inline needs

[Learn more](#)



## No area is out of reach

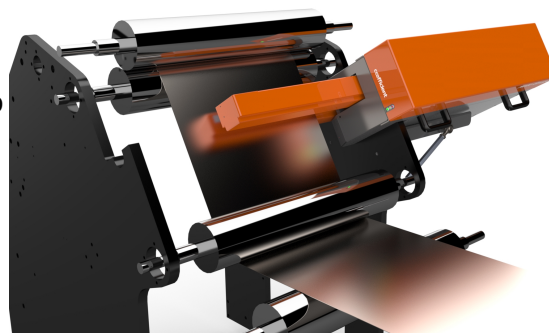
The MG5 is a large scale thickness scanner designed for wide continuous-strip materials.

[Learn more](#)

## For cast lead strips

The MG-CLS improves lead strip thickness control with automatic measurement.

[Learn more](#)



**Your complete thickness measurement system**