MG5

Non-contact thickness measuring solution for your production line.

FROM COMPACT TO EXTENDED – A STROKE LENGTH FOR EVERY NEED.

Scan for digital download.

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mategauge.com

MATE GAUGE

LASER TRIANGULATION TECHNOLOGY FOR NON-CONTACT THICKNESS MEASUREMENT

Sensors scan across the material at a sampling rate of 1-20 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
- Consistent thickness measurement in corrosive environments
- Continuous Virtual Micrometer 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 MG5 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

- Strip/sheet thickness measurement
- Strip/sheet 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

MG5 Stroke Length Options

The following schematics illustrate the standard configurations of the Mate Gauge MG5, showcasing its essential components and layout for general applications.

The MG5 is available in five different stroke lengths: 24 in, 48 in, 80 in, and 86 in, providing flexibility for various measurement requirements. Each variation ensures precise and reliable performance to suit different industrial applications.

For specialized applications or unique sensor integrations, adjustments to the Mate Gauge configuration may be required.

MG5 24”

MG5 48”

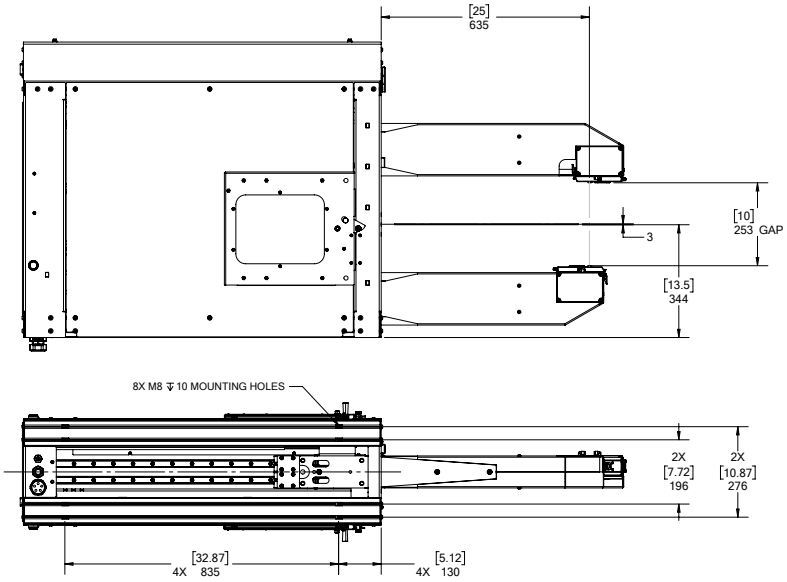
MG5 80”

MG5 86”

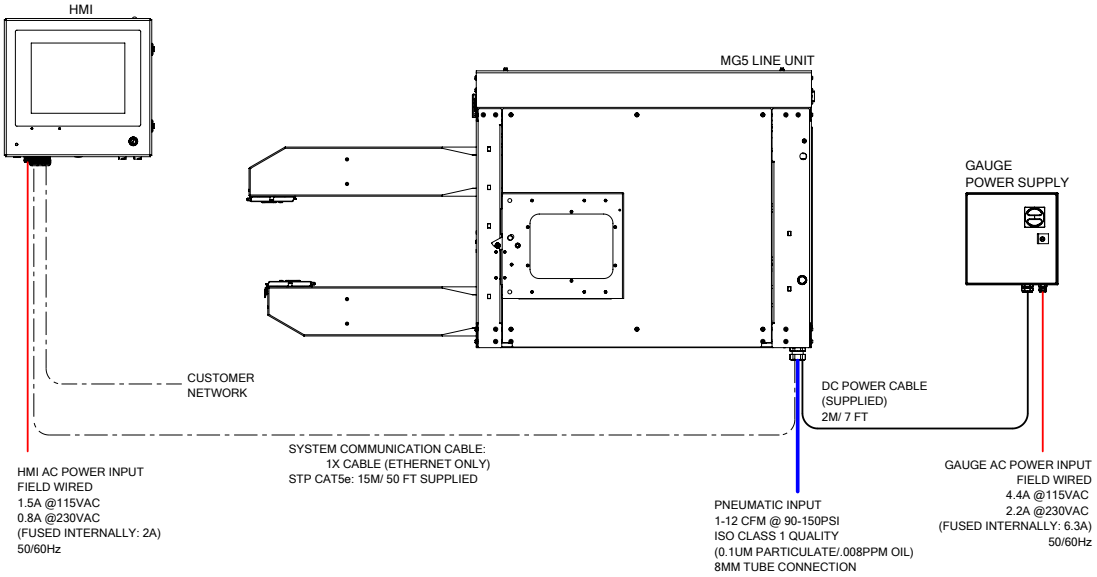
MG5 24” Stroke Configuration

Scanning Speed	150 mm/sec	[6 in/sec]
Rated Scan Length	610 mm	24 in
Maximum Reach	635 mm (+/- 10 mm)	25 in (+/- 0.4 in)
Measurement Frequency	1 to 20 kHz	

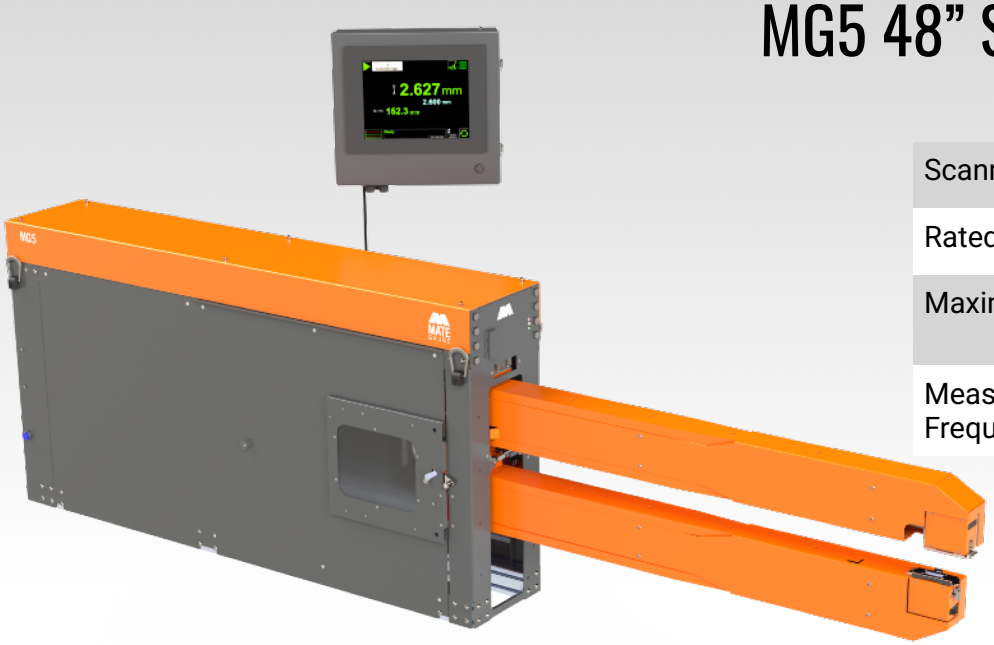
Line Unit



System Overview

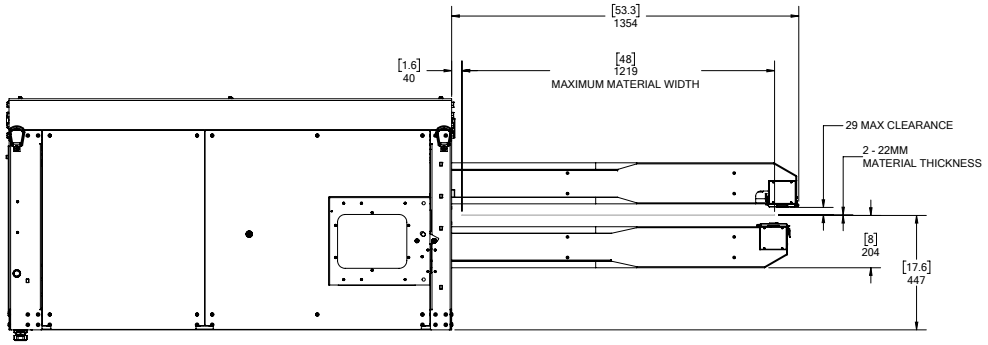


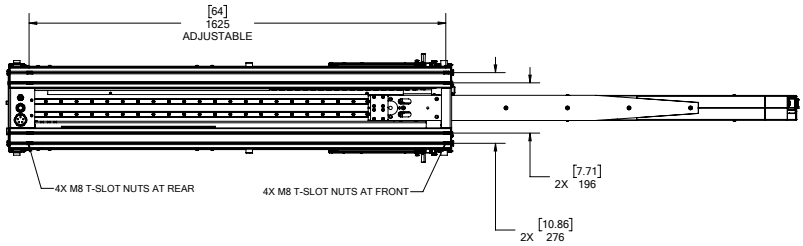
MG5 48” Stroke Configuration



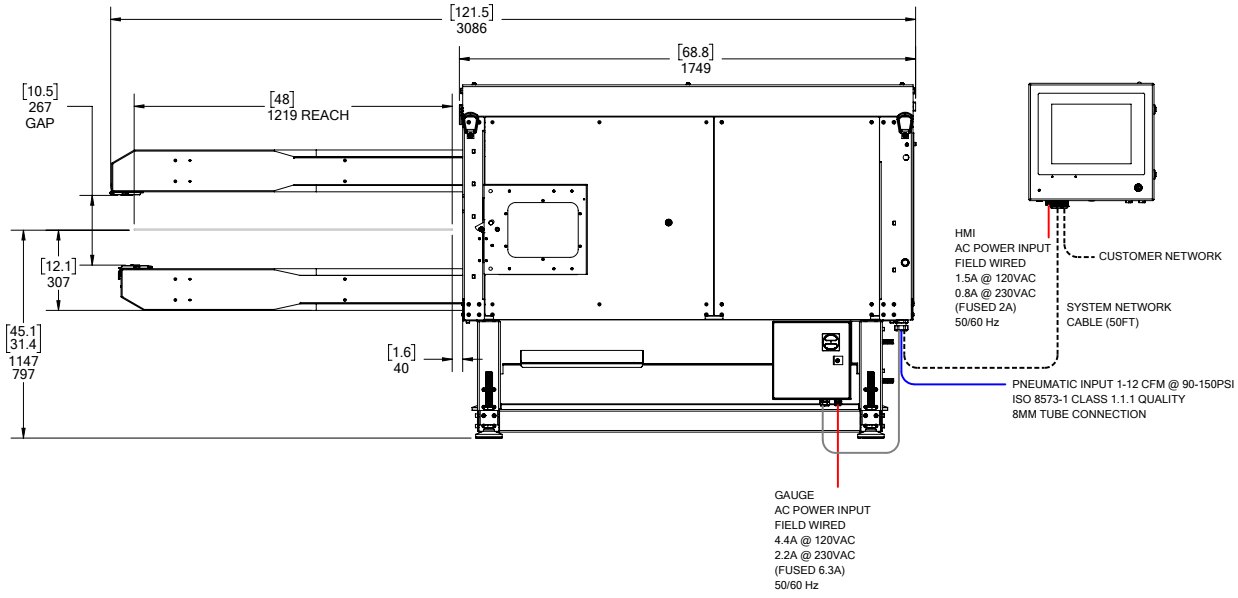
Scanning Speed	150 mm/sec	[6 in/sec]
Rated Scan Length	1219 mm	48 in
Maximum Reach	1260 mm (+/- 10 mm)	49.6 in (+/- 0.4 in)
Measurement Frequency	1 to 20 kHz	

Line Unit



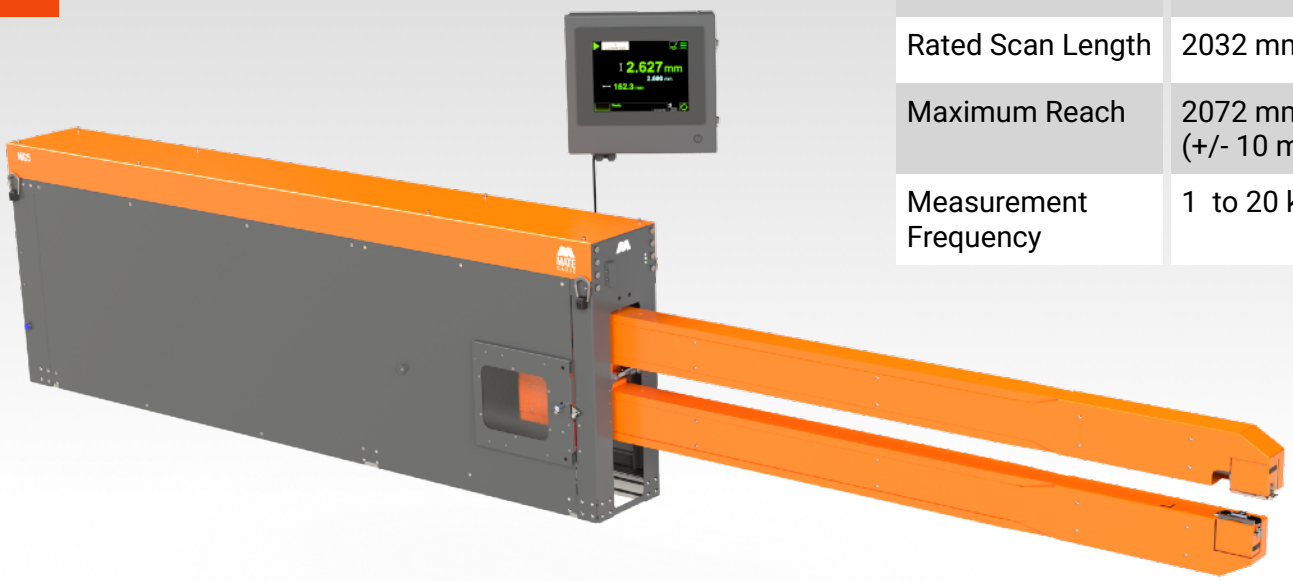


System Overview

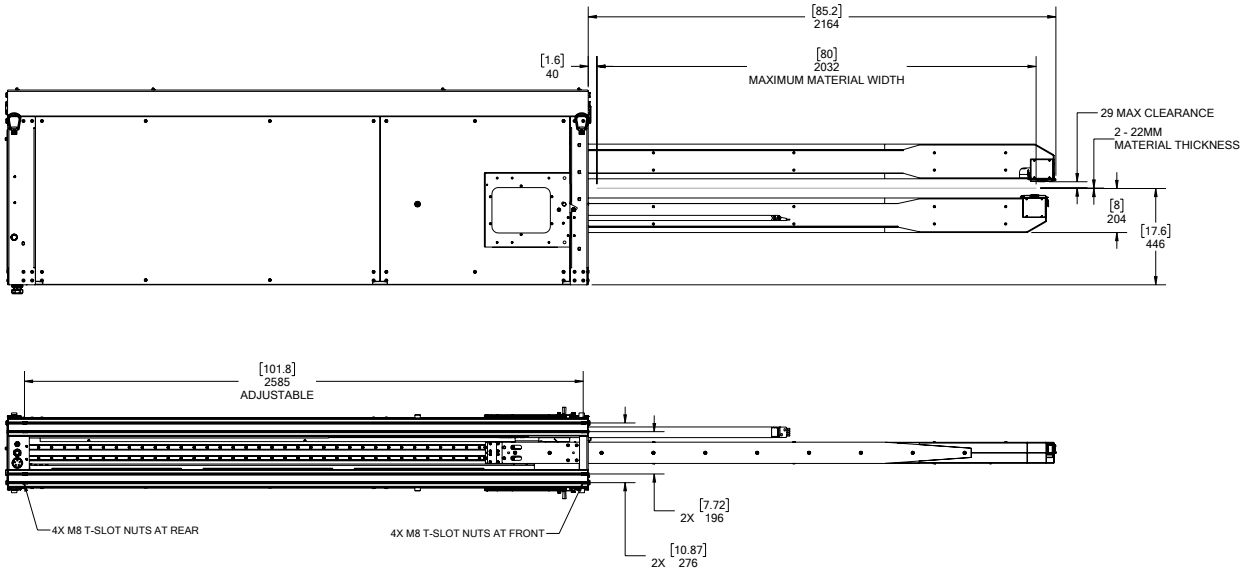


MG5 80” Stroke Configuration

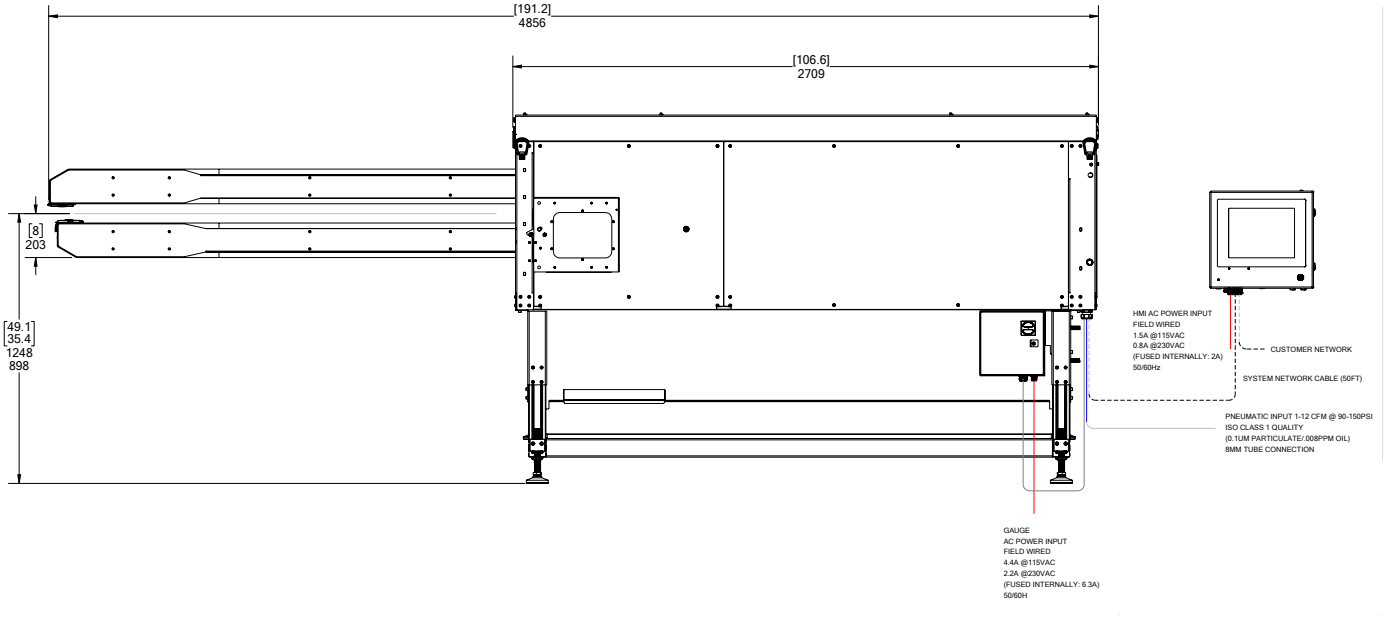
Scanning Speed	150 mm/sec	[6 in/sec]
Rated Scan Length	2032 mm	80 in
Maximum Reach	2072 mm (+/- 10 mm)	81.5 in (+/- 0.4 in)
Measurement Frequency	1 to 20 kHz	



Line Unit

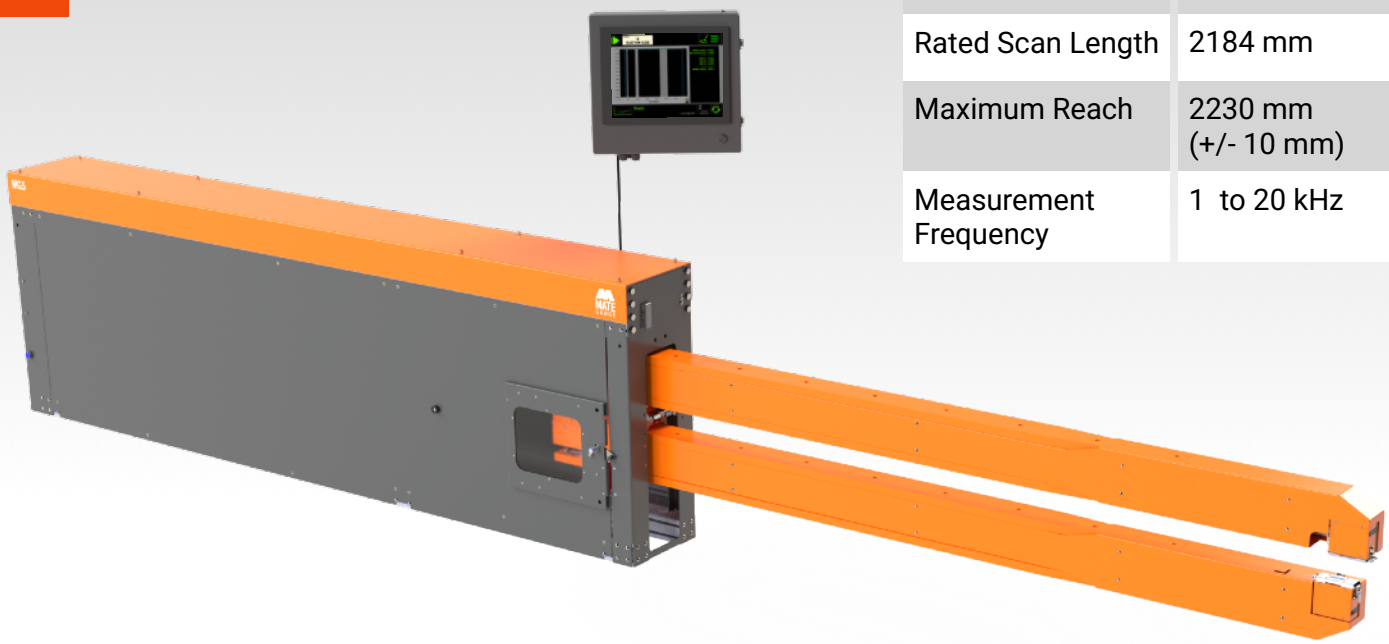


System Overview

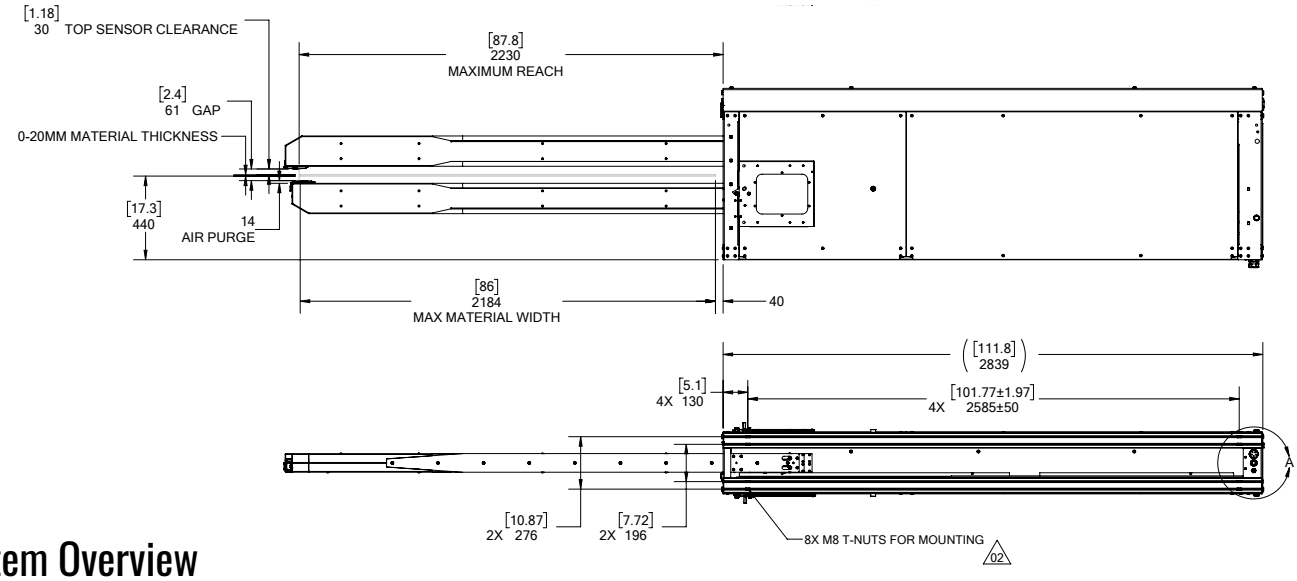


MG5 86” Stroke Configuration

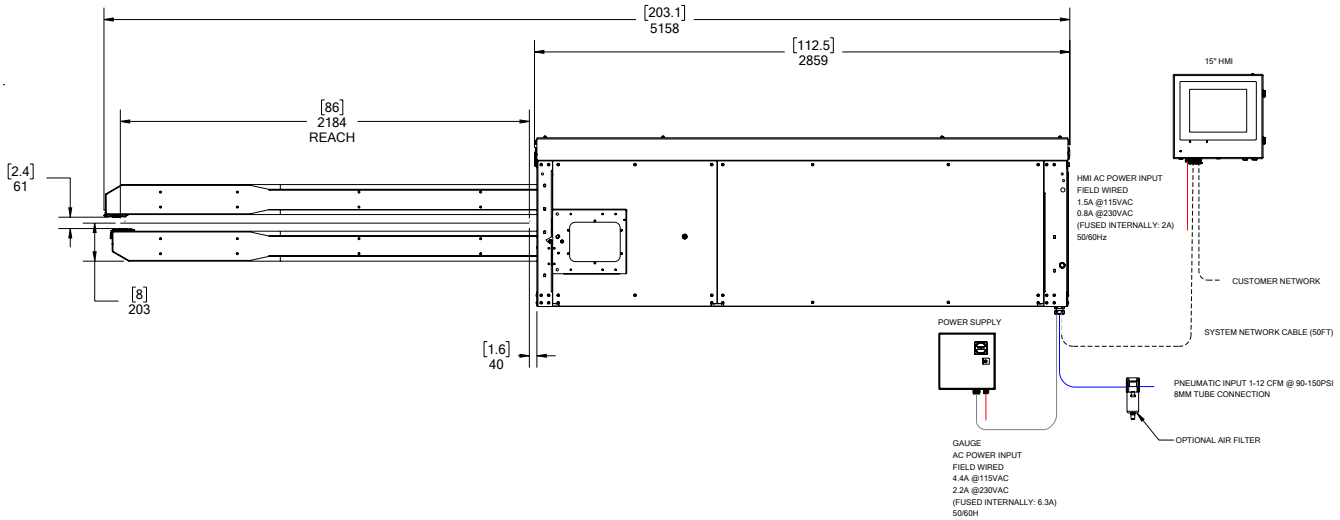
Scanning Speed	150 mm/sec	[6 in/sec]
Rated Scan Length	2184 mm	86 in
Maximum Reach	2230 mm (+/- 10 mm)	87.8 in (+/- 0.4 in)
Measurement Frequency	1 to 20 kHz	



Line Unit



System Overview



MG5 Technical Specifications

THICKNESS MEASUREMENT DETAILS

Sensors	50 mm Pro		150 mm Pro	
Resolution	0.5 µm	[0.00002 in]	0.5 µm	[0.00002 in]
Accuracy (typical)	5 µm	[0.0002 in]	7 µm	[0.0003 in]
Stroke range	0 to 2184 mm	[0 to 86 in]	0 to 2184 mm	[0 to 86 in]
Scanning Speed	150 mm/sec	[6 in/sec]	150 mm/sec	[6 in/sec]
Thickness Range	0 to 13 mm	[0 to 0.5 in]	0 to 51 mm	[0 to 2 in]
Measurement Frequency	1 to 20 kHz		1 to 20 kHz	

STANDARD CONFIGURATIONS

Product Name	Rated Scan Length	Maximum Reach
MG5-24	610 mm	635 (+/- 10) mm
MG5-48	1219 mm	1260 (+/- 10) mm
MG5-80	2032 mm	2072 (+/- 10) mm
MG5-86	2184 mm	2230 (+/- 10) mm

SUPPLY REQUIREMENTS

Line Unit Power	4.4A@115V/2.2A @230V
HMI Power	1.5A@115V 0.75A@230V
Air Supply	1-12 CFM @ 90-150 PSI

ENVIRONMENTAL REQUIREMENTS

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)	

SUPPORT AND SERVICES

Mate Gauge provides comprehensive support services to ensure optimal performance of your MG5 system. From initial setup to ongoing maintenance, our team is committed to your success.

- **Line location consultation**
- **Post-purchase support with Applications Engineer**
- **Product setup guidance**
- **Operator training**

Beyond measure.