

# Thermo Scientific RM 100 PL and RM 110 PL strip thickness gauges

Thermo Scientific™ strip thickness gauges provide reliable, accurate non-contact thickness measurement of flat sheet metal in every type of processing line. With their compact design and superior performance, these gauges are the perfect choice when you need a durable, reliable thickness gauge at an affordable price.

### Features

- Reliable, proven sensors
- Easy to use operator's terminal
- C-frame with electric drive
- Mill-mounted or C-frame-mounted configurations

### Applications

- Pickling lines
- Annealing lines
- Shearing and inspection lines
- Slitting lines
- Cut-to-length shearing lines
- Entry or exit gauge for coating lines

### Measuring unit

The Thermo Scientific™ RM 100 PL strip thickness gauge includes a sensor head with a gamma-ray source that is ideal for measuring the thickness of process-line steel products. The sensor is housed in an industrial, heavy-duty C-frame for centerline measurement to provide reliable data. For increased measuring performance, the RM 110 PL strip thickness gauge utilizes an x-ray measuring head instead of the gamma-ray measuring head. All measuring heads are designed to operate with minimum maintenance in challenging environments. Both systems use high efficiency, ionization chamber-based radiation detectors for excellent measurement stability. The gauges measure the centerline thickness as well as the cross profile in the optional scanning mode.



### Operator's interface

The operator's interface runs from a Windows®-based PC and can be positioned in a variety of locations at and around the mill. Operator station and processing electronics can also be installed in a cabinet for mounting right at the mill. The menu system allows the operator to enter key product information, monitor the product variations as they are rolled and track any out-of-tolerance conditions. Maintenance diagnostic screens enable monitoring of all digital and analog I/O points, the control frame motion, and the mill communication status.

### Report printouts

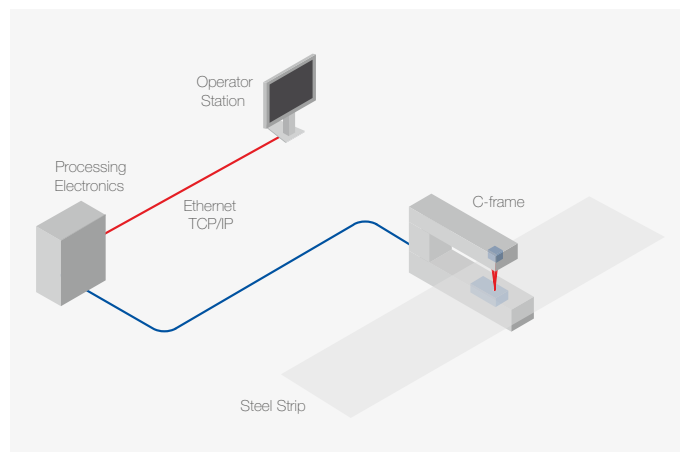
For product quality documentation, reports are calculated at the coil end or start of the next product. These include message list, actual coil report including histogram and last coil report. The reports can be printed out as hardcopy or stored as PDF files. The optional "fault location list" indicates all positions where the measured material is out of tolerance. Additionally, each record in this list indicates date, time, setpoint, actual value, and the setpoint deviation of the fault location.

## Optional ASCII archiving

The data recorded by the measuring system can automatically be stored as ASCII text file (CSV format). The stored data can be called up at any time allowing a complete inspection of the product data even if the coil was produced a long time in the past. Furthermore, the standardization history and the capability tests of the measuring system can be stored for quality assurance purposes according to DIN ISO 9001.

## Interfaces

The gauge can be linked via a TCP/IP-based Ethernet protocol using the Thermo Scientific™ GEHI interface to allow remote system setup from a host computer without operator intervention and to transmit the measurement results. Additionally, PROFIBUS, PROFINET and serial interfaces (RS 232 or RS 422) are available.



Typical configuration of a RM 100 PL strip thickness gauge in a process line

General specifications	RM 100 PL	RM 110 PL
Source type	Am-241 (up to 111 GBq)	X-ray source up to 85 kV
Material to be measured	Steel strip	Steel strip
Thickness measurement range	0.1 to 6.0 mm (0.004 in to 0.24 in)	up to 3.5 mm (0.138 in) with 60 kV or up to 8.0 mm (0.315 in) with 85 kV
Detector type	Ionization chamber	Ionization chamber
C-frame air gap	Typically 200 mm (7.87 in); alternatively 300 mm (11.81 in) and 400 mm (15.75 in)	Typically 200 mm (7.87 in); alternatively 300 mm (11.81 in) and 400 mm (15.75 in)
C-frame throat depth	Typically 1,200 mm (47.2 in)	Typically 1,200 mm (47.2 in)
Maximum strip width	1,900 mm (74.8 in)	1,900 mm (74.8 in)



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Erlangen, Germany is ISO Certified.

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