SENCON
SENSING • TESTING • GAUGING

Master Series™

Film-Scan™ Automatic Coatings Thickness Gauge

Measures internal and external coating thickness (film thickness) on cans

A fully automatic gauge for accurate, consistent and frequent checking of internal and external film thickness and distribution with results given as either coatings thickness or weight.

- **Complete 360° optical scan of internal and external coatings**
- **Matte and tactile coatings, decorated cans, tinted internal lacquers, and BPA-NI**
- **Measures reverse wall and rim coat**
- **Measures plug, neck, wall internal/external, dome areas**
- **Results displayed as 'coating thickness' or 'coating weight'**
- **World class R&R on coatings measurement of internal and external features**
- **Calibration traceable to NIST standards**



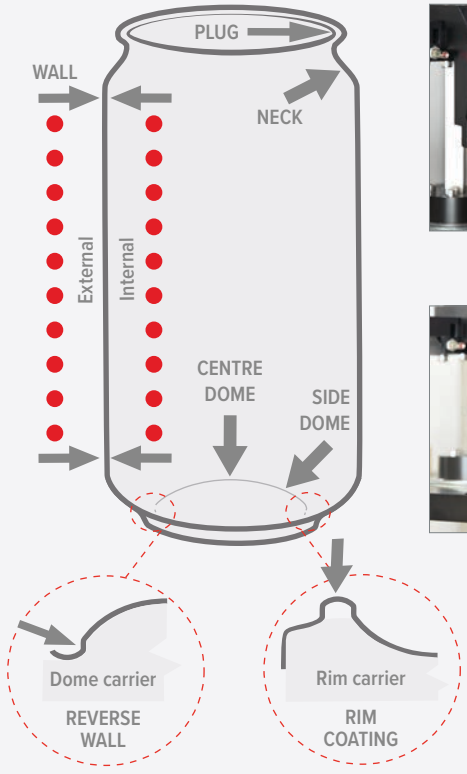
MASTER SERIES

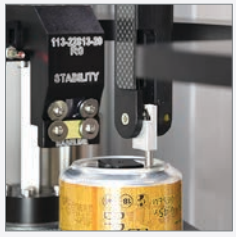
NON-CONTACT COATINGS MEASUREMENT: Sencon's infra-red interferometry has been developed in partnership with leading academic institutions. It's specifically designed for the needs of the can industry. This allows Sencon to measure more coating types, in more locations. Our optical metrology fully correlates to industry coating thickness standards with results given as either coatings thickness or weight.

NO NEED FOR CALIBRATION SAMPLES: The gauge stores a verified list of coatings with data supplied by coatings manufacturers, eliminating the need for separate coatings lists or calibration samples that can deteriorate and become unreliable with continuous use. This also eliminates any influence that operators may have on the results.

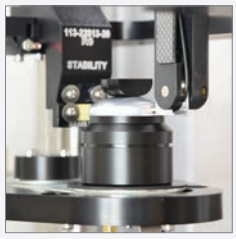
INCREASED ACCURACY: Independent testing has shown that the Sencon gauge is highly accurate with world class repeatability for internal coatings measurement.

OPC-UA CONECTIVITY: An optional OPC-UA service is available, adding machine to machine (M2M) communication.





Rim coatings



Reverse wall

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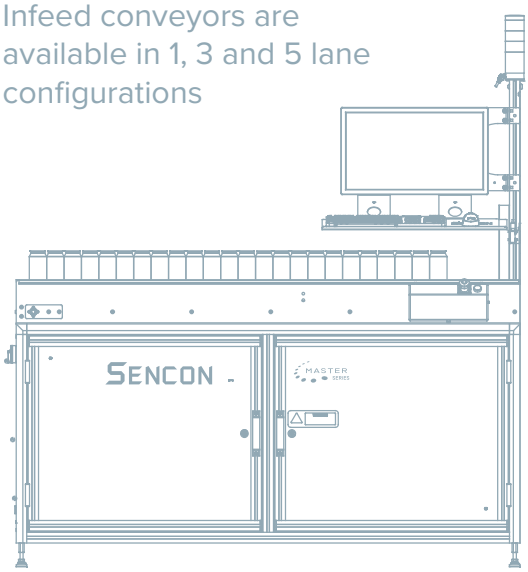
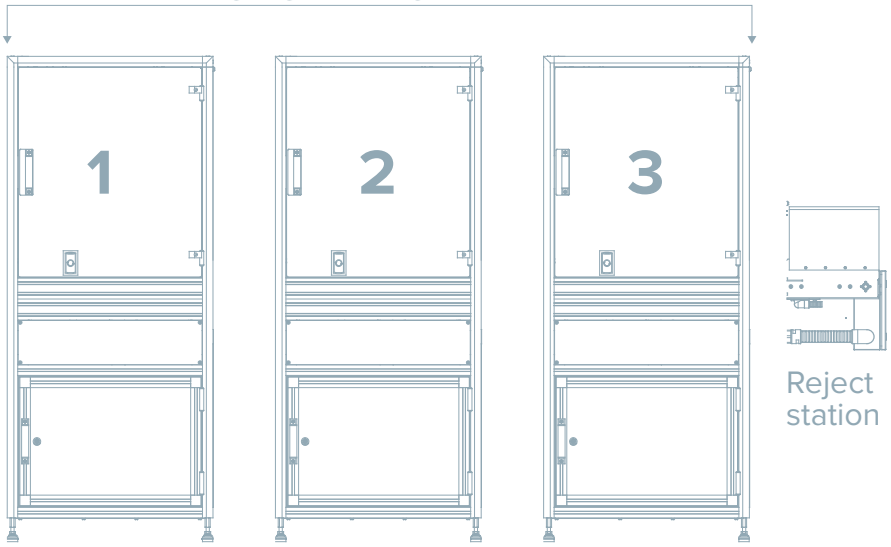
CREATE YOUR PERFECT GAUGING SUITE

Infeed conveyors are available in 1, 3 and 5 lane configurations



Up to 3 gauges configured in parallel



Reject station

Minimum configuration (plus reject station)

TYPCAL SYSTEM CONFIGURATIONS

Back End Suite:	Back End	+	Axial Load	+	Buckle
Coatings Suite:	Film-Scan™	+	Enamel Rater		

Ordering Information

DESCRIPTION	CAN SIZE	NECK	HEIGHT
Master Series™ Film-Scan™ Optical Coatings Gauge: Standard	202 (54mm) to 211 (68mm) automatic adjustment	200 minimum end size	87mm (3.43") to 210mm (8.26") automatic adjustment
Master Series™ Film-Scan™ Optical Coatings Gauge: Large can variant	211 (68mm) to 214 (73mm) automatic adjustment	200 minimum end size	87mm (3.43") to 210mm (8.26") automatic adjustment

PLEASE NOTE: Upgrade options for older systems are also available. Contact your regional Sencon office for more information.

Core Module & Conveyor Options

CODE	DESCRIPTION
210-22215-00	Master Series™ Core Module with Single Lane Conveyor
210-22240-00	Master Series™ Core Module with 3 Lane Conveyor
210-22250-00	Master Series™ Core Module with 5 Lane Conveyor

Each lane has a capacity of 24 cans (211 diameter). Automatic in-line feed is possible as special option on all lanes. Conveyor extensions are also possible.

Options & Accessories

CODE	ITEM	DESCRIPTION
211-22875-00	Universal Reverse Wall Holder	A multi-size (202 to 211) dome holder allows a single holder to be used to measure multiple sizes.
395-16151-00	Bodymaker ID Camera	Optional ID camera for identifying the Bodymaker mark on the can. This is typically installed on the first Master Series™ module of a multi-gauge system.
096-24090-00E	Spray ID Camera	Optional ID camera for identifying the Spray Machine mark on the can. This is typically installed on the first Master Series™ module of a multi-gauge system.
OPC	OPC-UA Plug-in	Adds OPC-UA fuctionallity to Process Master ™ gauge software for machine-to-machine (M2M) communication within the Industry 4.0 digital factory.

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TECHNICAL SPECIFICATIONS

MEASUREMENT CAPABILITIES	
Can Material:	Aluminium and Steel
Cans Accepted:	Necked and un-necked
Maximum Batch Size:	255 cans (auto fed), 24 cans (manual fed)
Measurement Features:	Measurements taken at up to 12 vertical positions on side wall User configurable number of measurements around can circumference at each vertical position Measures dome on the same batch as internal side wall Measures reverse wall and rim coat features

CONTROL	
Controller:	Process Master™ gauge software running on an integrated PC within the Conveyor module
Measurement Reporting:	Batch results displayed on PC screen and optionally sent as report to network storage or network printer.

OPERATING PARAMETERS	
Weight	230kg (507lb) Gauge only
Temperature Range:	10°C to 50°C* (50°F to 122°F)
Relative Humidity:	0% to 80% non-condensing
Dimensions	Gauge cabinet (including rear chute) **Width:** 1053 mm (41.45”) **Depth:** 780 mm (30.70”) **Height:** 1840 mm (72.44”) For full system, add the following to the width: **Reject station:** 375 mm / 15.0” **Single Lane Conveyor:** 1941 mm (76.42”) **3 or 5 Lane Conveyor:** 2401 mm (94.53”)

MAINTENANCE AND CALIBRATION REQUIREMENTS	
Maintenance	Internal stability check performed at each batch start. Calibration certificate provided with annual calibration by Sencon (recommended).
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DESIGN STANDARDS AND SAFETY	
Compliance:	**CE:** Complies with relevant EU product directives **UKCA:** UK Conformity Assessed
Safety	Red, amber and green beacons to indicate system status from a distance Relay outputs for flexible triggering of external (customer) warning systems



UNIVERSAL REVERSE WALL HOLDER: An upgrade from standard reverse wall dome holders, this spring loaded holder centers and firmly holds the dome in place for consistent and repeatable measurements. The three spring loaded clamps will firmly hold domes from can sizes from 202 to 211, removing the need fo multiple sizes of holder.

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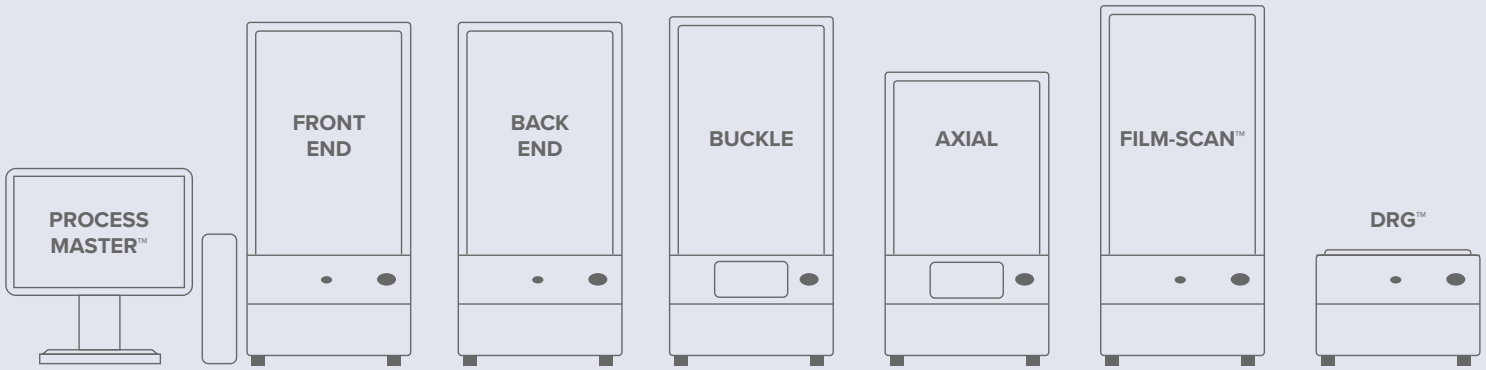
BENEFITS OF MASTER SERIES™

The modular design of our highly flexible and fully automatic Master Series™ gauges allows you to create the perfect combination of gauges to suit your individual requirements. This cost effective solution is the optimum fit for the modern can plant, saving time and floor space.

MULTI-SIZE CAPABILITY AS STANDARD: The gauges can handling system has been designed to accept standard beverage can sizes without change parts.

MODULAR SYSTEM: Allows gauges to be purchased individually or as integrated groups. Individual gauges can be added at a later date to increase throughput or add test features.

- Fully automatic, operator-free measurement
- Sampling on time or production basis
- Fully self-checking
- Data available on screen and exchanged via local area network
- Uses well-proven measurement techniques
- Modular design for cost effective expansion
- Future-proofed for changing requirements – easily update and reconfigure at any time
- Multi-lane capability – universal infeed conveyor



BIG ON CAPABILITY, SMALL ON SIZE

The Benchmark™ range of semi automatic benchtop gauges for the modern can plant

WORLDWIDE SUPPORT YOU CAN TRUST

We are committed to providing the best customer support worldwide with service engineers based in North and South America, Europe and Asia backed up with technical support from experienced industry specialists based at three technical support centers – you can trust Sencon.

Technical support is easily accessible through our 'Quick Assist' QR codes which offer support via WhatsApp*, email, web chat and telephone. Additionally, our online knowledge base provides support resources for all Sencon products.

*only available in Europe, Asia, Africa and Oceania



Industry specialists since 1976

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