



SealScope®

IN-LINE 100% SEAL INSPECTION
FOR THE BEST PACKAGING RESULTS





What is SealScope® ?

SealScope® is a patented, in-line solution for 100% seal inspection and monitoring of your sealing process. SealScope's main functionalities are:

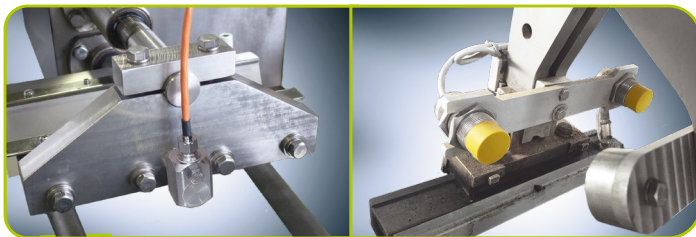
- **Detection and rejection** of compromised packages due to wrinkles or product in seal
- **Optimization** of your packaging process for higher outgoing packaging quality and higher packaging equipment performance and availability
- **Monitoring** of your sealing process and issuing alarms when exceeding user defined thresholds
- **Logging and visualization** of production data

SealScope® consists of one or multiple **sensors**, a **controller cabinet with touchscreen** and the intuitive **SealScope® software**.

SealScope® is compatible with almost all packaging machines producing flexible packaging types including **pillow bags, flow packs and pouches** and can verify up to 500 packages per minute.

Using the detection and monitoring tools of **SealScope®**, the outgoing number of packages with defective seals can be reduced by a factor of 10 or more (*). Additionally, the overall packaging machine effectiveness can be increased while monitoring the sealing quality.

SealScope® layout



Sensors on sealing jaws

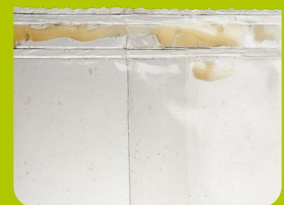


Controller cabinet with touchscreen user interface



Rejection system (**)

Example defects



Product in seal



Wrinkles in seal

(*) results are process and machine dependent

(**) rejection system is not included as this is strongly line and application dependent



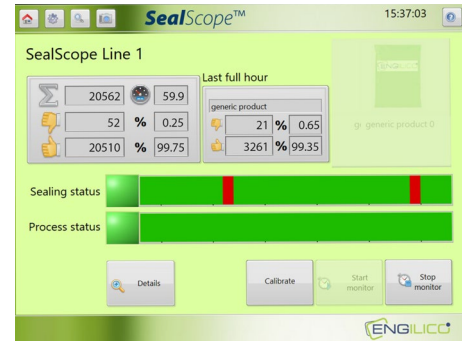
SealScope® working principle

SealScope® checks every seal by measuring the sensor signal(s) during the closing of the seal bars and comparing them with a reference model.

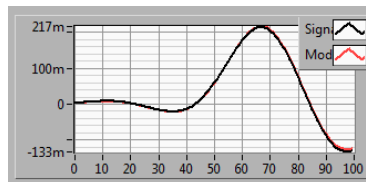
In case the difference is higher than the user defined limit, **SealScope®** will issue a rejection signal.

The reference models are automatically updated at the start of every run using correct seal profiles (**base lining**).

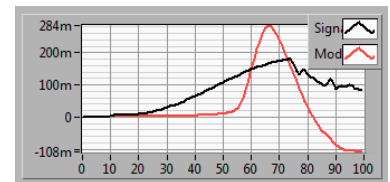
SealScope® can use different reference models to accommodate changes in thickness, material, weight or size.



SealScope® operator view



Good seal

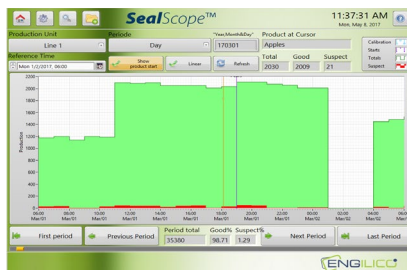


Bad seal

Industry 4.0 functionality

Visualization of production data

SealScope® logs hourly production data to visually compare performance over various operators, products and packaging lines.



OPC / MQTT

All measurement data can be shared to the company network via OPC/MQTT connectors. This allows big data analysis & processing to monitor the line performance.



Logging of production data

SealScope® logs date, time, total packages, number of good/bad packages per product type. This data is available in .txt-format for off-line statistical analysis.

Audit trail

Operator interactions with **SealScope®** are logged to obtain 100% traceability.



Our customers and why they use **SealScope®**

SealScope® is running on 300+ packaging lines at international customers in the food, pet care and other industries. Customers such as **Unilever, Kikkoman, FrieslandCampina, Materne, Ecolab** use **SealScope®** to realize following benefits:



INCREASING PACKAGING QUALITY



Detection and rejection of compromised seals results in higher outgoing quality. This means longer shelf life, higher customer satisfaction and ultimately a stronger brand image.



INCREASING PACKAGING LINE PERFORMANCE AND AVAILABILITY



Often packaging machines run either too slow (to get acceptable quality) or too fast (with adverse effect on quality). With **SealScope®** you can determine the optimal machine speed where production output and package quality are maximized. Additionally, rejection of open packages will reduce downstream contamination and standstills.



END-OF-LINE AUTOMATION



SealScope® enables safe end-of-line automation by automating the seal inspection process.



ELIMINATING MANUAL INSPECTION



SealScope® allows the replacement of manual verification by 100% automated seal inspection.



UNIFORMIZING PRODUCTION PERFORMANCE



By comparing **SealScope®** data from various operators and machines, a better overall production performance can be achieved.



OPTIMIZED MACHINE OPERATION



By verifying the bad packages, the root cause of rejection can be faster determined. This makes it easier for operators and maintenance to keep the machines in optimal operation conditions.



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