



SealScope™

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



ENGILICO™





What is SealScope™ ?

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

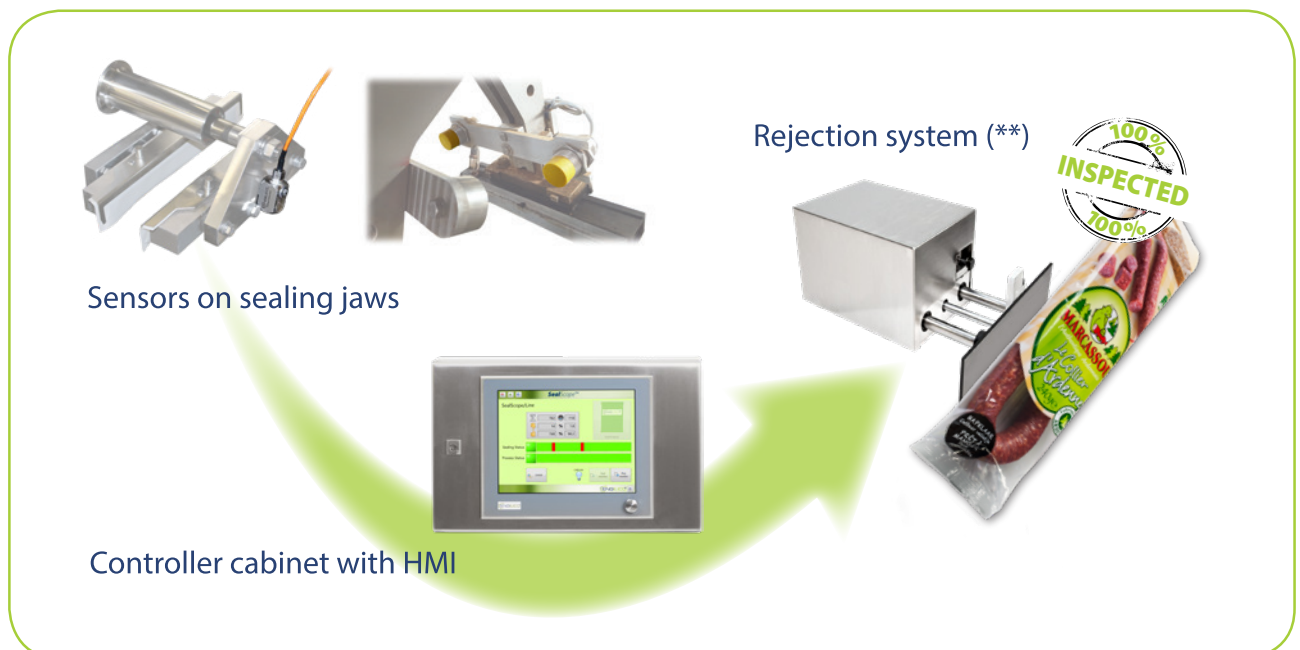
- **Detection and rejection** of compromised packages due to wrinkles and product in seal
- **Optimization** of your packaging process for higher outgoing packaging quality and higher effective line speed
- **Monitoring** of your sealing process KPI's and issuing alarms when they exceed user defined thresholds
- **Logging and visualization** of production data

SealScope™ consists of one or multiple **sensors**, a **controller** with HMI and the SealScope™ **software**.

SealScope™ is compatible with most packaging processes & packaging types, including pillow bags, flow packs and pouches.

Using the detection and monitoring tools of **SealScope™** you can reduce the number of incidental open packages by a factor of 10 or more (*). Additionally, effective packaging speed can be increased while monitoring the sealing quality.

SealScope™ layout



(*) results are process dependent, please contact us for advice.

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



SealScope™ working principle ?

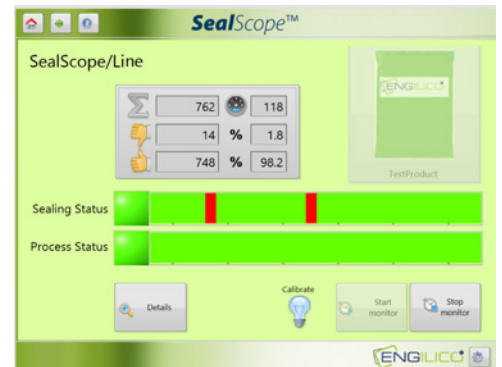
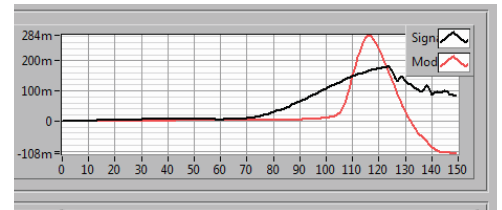
SealScope™ measures the sensor signals when the seal bars are closing and compares these with a reference model.

These reference models are automatically built during the first seals at startup (**autocalibration**).

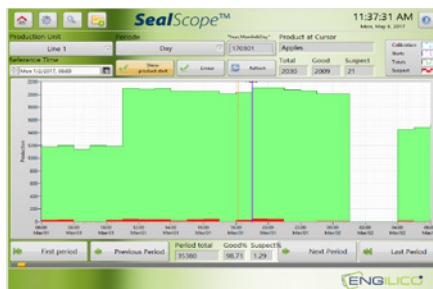
SealScope™ checks every package, **independent of line speed**.

Compromised packages due to **wrinkles and product in seal** can very easily be detected and rejected.

SealScope™ also monitors the KPI's of the sealing process and issues alarms in case thresholds are exceeded (user definable).



Additional functionality of SealScope™



Visualization of production data

Easy visualization of hourly production data allows for comparing production performance over various machines, shifts, products, packaging lines, etc.

Action	Product	Run#	Date	Time	Total	Numbered	NumGood
2 Start	Apples	1	3/2/2017	12:00:00 AM	0	0	0
3 Sensitivity:Medium	Apples	1	3/2/2017	12:00:00 AM	0	0	0
4 Alarm:Raised Sensor1	Apples	1	3/2/2017	3:45:00 PM	16131	280	16251
5 Stop	Apples	1	3/2/2017	7:00:00 PM	33114	463	32651
6 Start	Pears	2	3/2/2017	7:03:00 PM	0	0	0
7 Sensitivity:Medium	Pears	2	3/2/2017	7:03:00 PM	0	0	0
8 Start	Pears	2	3/2/2017	2:00:01 PM	27288	899	28884
9 Stop	Apples	1	3/2/2017	3:01:00 PM	0	0	0
10 Sensitivity:Medium	Apples	1	3/2/2017	2:01:00 PM	0	0	0
11 Alarm:Raised Sensor1 Variance	Apples	1	3/2/2017	4:00:01 PM	4130	56	4074
12 Start	Grapes	4	3/2/2017	4:03:00 PM	0	0	0
13 Alarm:Raised Sensor1 Variance	Vibratio	11	3/2/2017	4:03:00 PM	0	0	0
14 Stop	Grapes	4	3/2/2017	1:00:00 PM	1968376	28873	1998209
15 Alarm:Raised Sensor1 Variance	Vibratio	11	3/2/2017	3:32:27 PM	148	11	137
16 Alarm:Raised Sensor1 Variance	Vibratio	11	3/2/2017	3:02:33 PM	154	11	143

Logging of production data

SealScope™ logs production data like number of packages made, number of good/bad packages, machine speed, etc. per product. This data is available in txt format and can be used for off-line statistical analysis.



OPC / QMTT

All measurement data can be shared to the company network via OPC/QMTT connectors.

Time	Operator	Product	Action
3/2/2017 12:00:00 AM	Operator	Apples	Start
3/2/2017 12:00:00 AM	Operator	Apples	Sensitivity:Medium
3/2/2017 3:45:00 PM	Operator	Apples	Alarm:Raised Sensor1
3/2/2017 7:00:00 PM	Operator	Apples	Stop
3/2/2017 7:03:00 PM	Operator	Pears	Start
3/2/2017 7:03:00 PM	Operator	Pears	Sensitivity:Medium
3/2/2017 2:00:01 PM	Operator	Pears	Stop
3/2/2017 3:01:00 PM	Operator	Apples	Start
3/2/2017 2:01:00 PM	Operator	Apples	Sensitivity:Medium
3/2/2017 4:00:01 PM	Operator	Apples	Alarm:Raised Sensor1 Variance
3/2/2017 4:03:00 PM	Operator	Grapes	Start
3/2/2017 4:03:00 PM	Operator	Grapes	Sensitivity:Medium
3/2/2017 1:00:00 PM	Operator	Grapes	Stop
3/2/2017 3:32:27 PM	Operator	Vibratio	Alarm:Raised Sensor1 Variance
3/2/2017 3:02:33 PM	Operator	Vibratio	Alarm:Raised Sensor1 Variance

Audit trail

Next to measurement data per product, SealScope™ also logs all operator interactions for 100% traceability.



What do our customers use **SealScope™** for?



INCREASING PACKAGING QUALITY



Detection and rejection of compromised packages due to wrinkles and product in seal leads to higher outgoing quality. This means longer shelf life, higher customer satisfaction and ultimately a stronger brand image.



INCREASING EFFECTIVE PACKAGING SPEED



A lot of 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.



REDUCING MANUAL REWORK



SealScope™ detects and rejects defective packages at the source. Hence, quarantining and manual rework can strongly be reduced.



END-OF-LINE AUTOMATION



On a completely automated line without any human interaction with the product, **SealScope™** offers the perfect solution by means of automated 100% inspection and process monitoring.



UNIFORMIZING MACHINE PERFORMANCE



By comparing and using the **SealScope™** data from various machines, you can achieve uniform performance over different machines and operators.



TARGETED MACHINE MAINTENANCE



By inspecting the rejected packages, the root cause of rejection can easily be determined which makes it easier for maintenance to keep the machines in optimal shape.



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