

# HEAT SEAL TESTER **ULTRASONICA®**

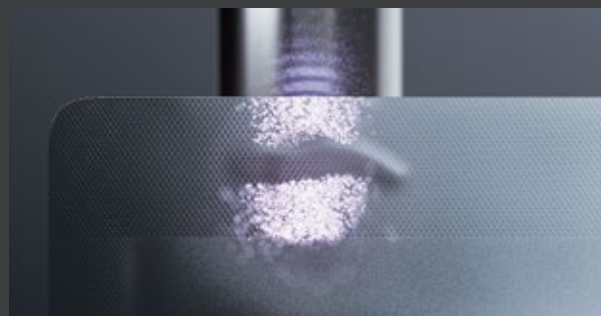
Towards Zero Quality Complaints for  
Retort Pouches



## Accuracy

### Prevent defects from slipping through with high inspection accuracy.

Introducing the industry's first non-contact ultrasonic camera equipped with a line sensor. With Yamaha's advanced sound signal processing technology, we've realized overwhelming sensitivity. The inherently superior ultrasonic inspection method is not affected by the color or material of the packaging, making it possible to detect defects that were previously hard to identify. We deliver consistent inspection performance in any environment or process.



Equipped with an innovative ultrasonic camera.

## Stability

### Stable production achieved through intelligent judgment functions.

Over-detection in the inspection process of heat seals can affect productivity. Stringent inspection criteria may not only misidentify good products as defective, reducing yield, but also burden the process with additional confirmation tasks and readjustments after automatic inspections. To address this, Yamaha has developed a unique judgment algorithm to suppress over-detection. This allows for production stabilization and cost reduction unique to ultrasonic technology.

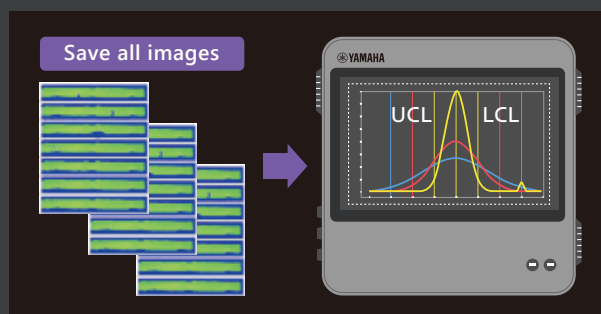


Smart feature to suppress over-detection.

## Reliability

### Enhanced reliability through full-image retention.

Ultrasonic technology enables clear imaging of the seal surface. Defects, sizes, and shapes that couldn't be understood from numbers and graphs alone are now clearly visible. By saving all inspection results as image data, full traceability is also ensured. A strict quality assurance system leads to strong trust from our clients and aids in investigating the causes of defects and improving quality.



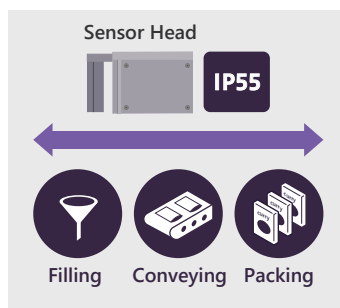
Process improvement through visualization of statistical data.

# Features



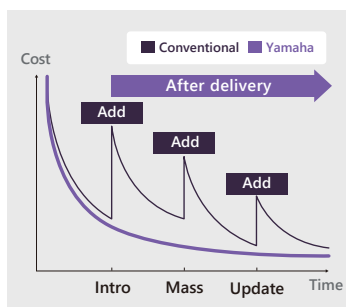
### Easy for anyone to use.

- No difficult skills or experience required. No special training needed.
- Just power on and it's ready to use in three easy steps.
- Intuitive operation is possible thanks to the touch panel and sophisticated UI.



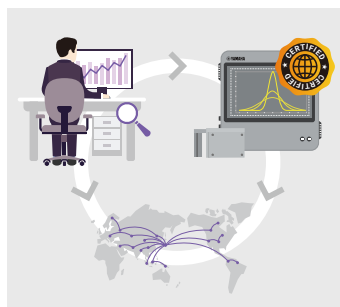
### Inspect anywhere.

- This is a compact sensor that can be installed even in manufacturing processes where fitting was previously difficult due to space constraints.
  - With an IP55 rating for dust and water resistance, it can adapt to a variety of environments.
- \*When the sensor cover is attached.



### Always reliable.

- It is an inspection machine designed to require minimal maintenance.
- Calibration is just one button away. Simple calibration ensures accurate inspections at all times.
- Constant monitoring of output during inspection allows for quick detection of any sensor malfunctions.



### Widely applicable.

- Displays data in an easy-to-understand manner, useful for factory improvement activities.
- Accumulated inspection history can be visualized as statistical data.
- You can grasp the number of defects and distribution trends on a daily or monthly basis.

## Examples of defects

Inclusion of liquids or viscous substances



Unsealed areas



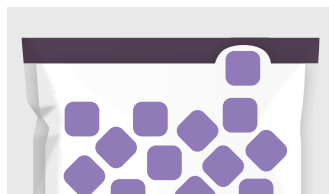
Inclusion of powder substances



Wrinkles in the seal area



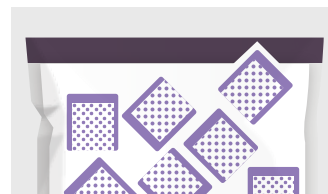
Inclusion of solid substances



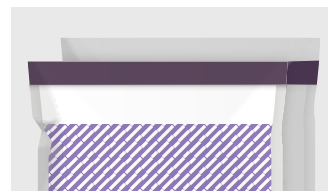
Diagonal sealing (seal width defect)



Inclusion of packaging materials



Double pick-up defect



## Examples of food items

Curry



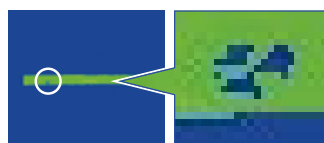
Sauce



Flour



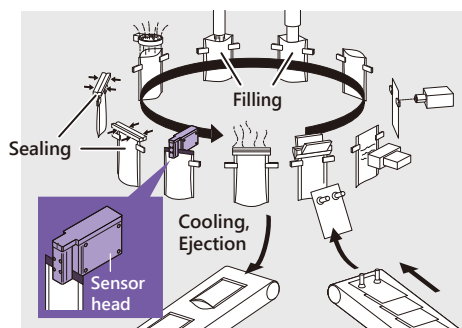
Bonito flakes



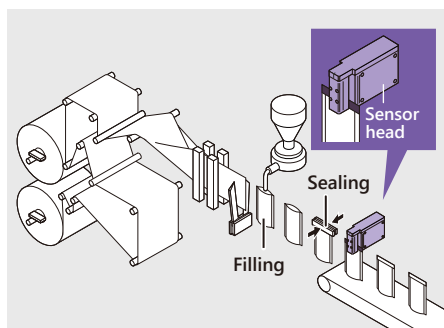
● Ex) Pre-cooked food, Processed meat products, Seafood products, Rice-based food products etc.

## Example of filling machine

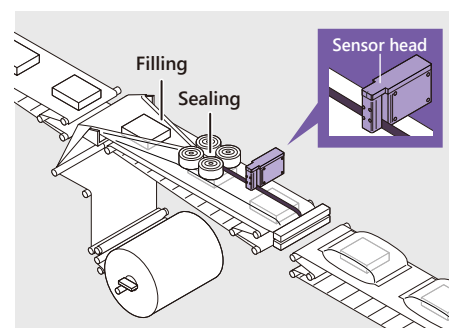
Bag-supplying rotary filling machine



Form-fill-seal machine



Pillow type filling machine



## Contact information

### QR code to more information

You can view promotional videos, answers to frequently asked questions, and information about the product concept



Web site

### QR code to request a quote

You can make inquiries about reference prices and delivery times, and request sample tests and rental of demo equipment



e-mail form

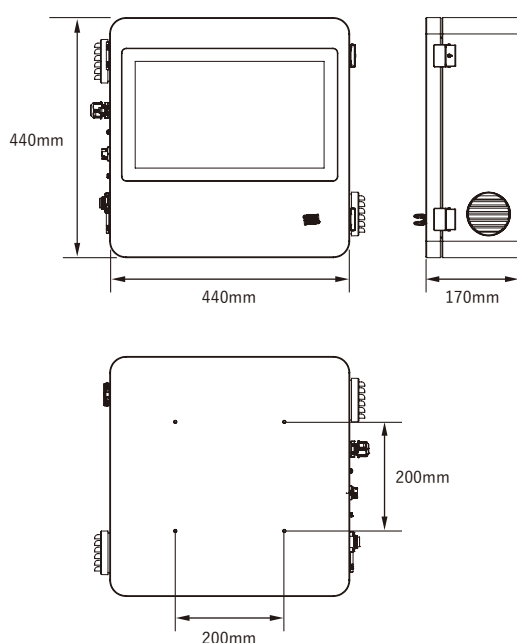
## Specification

Measurable area	20mm *Unable to measure within a 2mm range from the edge of the object being measured.
Minimum defect detection size	Φ2.0mm
Compatible test target speed	1,000mm/sec
Number of measurable points	Minimum of 200 points. ※The minimum measurement cycle is 0.1 seconds. Maximum of 60,000 points. 30 seconds at a pulse transmission cycle of 0.5 milliseconds. 60 seconds at a pulse transmission cycle of 1 milliseconds. 120 seconds at a pulse transmission cycle of 2 milliseconds. 300 seconds at a pulse transmission cycle of 5 milliseconds.
Main unit dimensions	440 × 440 × 170 mm *Refer to the external dimension diagram."
Sensor head dimensions	88 × 75 × 32 mm *Refer to the external dimension diagram."
Main unit waterproof performance	IP53
Sensor head waterproof performance	IP5X
I/O input function	16 pins: WORK EDGE TRIGGER, START, STOP etc.
I/O output function	16 pins: READY, BUSY, OK, NG, ERROR etc.
Communication function	Command communication via RS232C *Other EtherCAT, etc. are supported by optional boards.
Control PC	OS: Windows 10"English" Input: touch panel Display: LCD touch panel "Win10 supported" Storage device: Internal SSD
Language	Document "Instruction Manual, Specifications": Japanese, English, Chinese, Korean Software: Japanese, English
Power	1-phase, 100 to 240V AC, 50/60Hz, 0.5kVA
Temperature	5 to 40°C
Humidity	no condensation

※The contents of this catalog are subject to change without notice.

## Dimensions

Main unit



Sensor head

