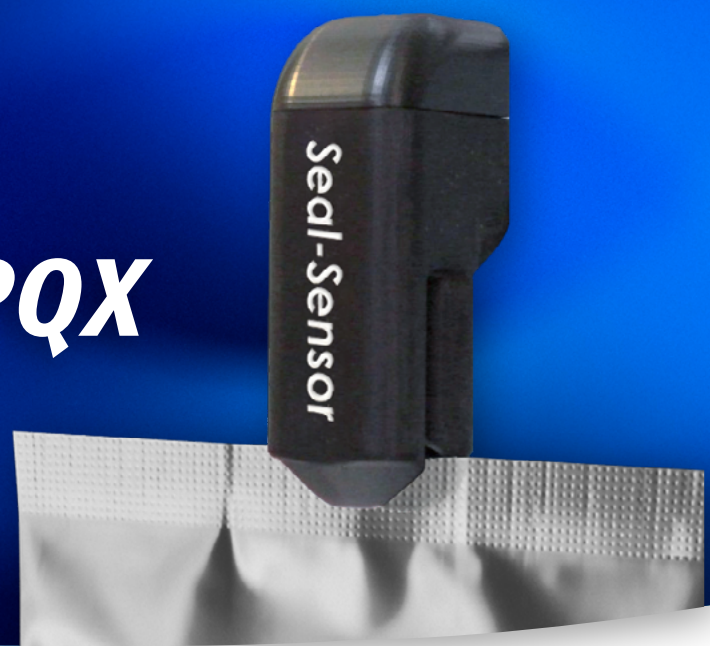


Seal-Sensor PQX

100% POUCH SEAL
INSPECTION



Product Overview

The Seal-Sensor PQX is a **fully automated** complete handling system and pouch seal inspection solution. It features a **built-in conveyor** that can be easily integrated into a production line. The technology is PTI's Seal-Sensor airborne ultrasound to automatically scan the final pouch seal online at **high speed**. Seal-Sensor technology is an **ASTM Test Method F3004** and a recognized FDA consensus **standard for seal quality inspection**.

A rapid linear scan of the pouch seal provides immediate seal check/verification of seal quality inline at high outputs. Test result data is produced in seconds.



Seal-Sensor PQX Benefits:

- 100% pouch seal inspection
- Easy integration into production lines
- Adjustable for different size pouches
- Manual load or robotic pick & place
- Built-in reject chute

Technology

Process

Pouch seal passes between ultrasonic transmitter and receiver.

Focal Point for Ultrasonics

3 scanning options depending on application, pouch characteristics, and defect profile.

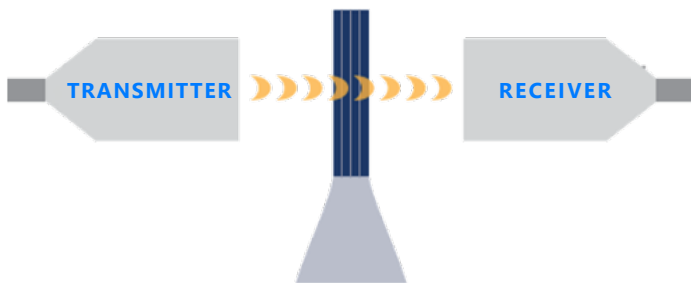
Requirements

Minimum seal width

8mm
6mm

2mm
4mm
6mm

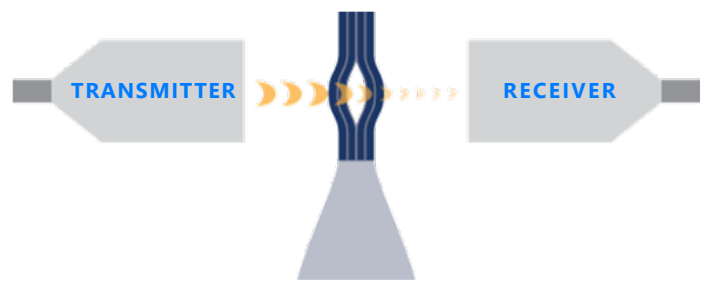
GOOD POUCH SEAL



Ultrasonic waves propagate through single or multiple layers of well bonded materials.



DEFECTIVE POUCH SEAL



Transition through different mediums causes reflection of sound waves and reduces/eliminates signal strength.



Designed for Easy Integration

The Seal-Sensor PQX is a plug and play solution for inline pouch seal quality testing. This easy to install system features a small footprint, with full screen HMI to display test result data as pouches are scanned. Inspection rates range up to 350 mm/sec. A built-in reject chute quickly removes defects from the line, and built-in stack light provides easy identification of pass/rail results.

Seal-Sensor Controls & HMI



Good Seal



Avg.	Min.	Max.	StD
73.44	41	92	5.79

Seal with 0.75mm Defect



Avg.	Min.	Max.	StD
64.12	3	94	18.87

Seal-Sensor Mounted on Conveyor



Specifications

APPLICATION	Online pouch seal inspection
TECHNOLOGY	Airborne Ultrasound Technology*
RECOGNIZED TEST METHOD	<ul style="list-style-type: none"> ◦ ASTM F3004-13 Test Method ◦ Referenced in USP <1207> ◦ FDA Consensus standard for seal quality inspection
PACKAGE TYPE	Pouches
PACKAGE MATERIAL & COMBINATIONS	Tyvek®, Paper, Aluminum, Plastic, Poly
INSPECTION LINE SPEED	Up to 350mm/sec.
INSPECTION MEASUREMENT RATE	Up to 1,000 pulses/sec.
POUCH HANDLING	Manual loading by operator onto conveyor or optional robotic pick & place onto conveyor
TEST RESULTS	Quantitative data with <i>PASS/FAIL</i> result. Stack Light illuminates green (<i>PASS</i>) or red (<i>FAIL</i>)
INSPECTION DATA	Statistical Results: Signal Avg/Min/Max/Std. Deviation/# Scans
SEAL DEFECTS**	Incomplete seal, inclusions, wrinkles, channel defects, misaligned seal, delamination, blister
MINIMUM DEFECT SIZE**	500 microns
DATA OUTPUT	Data stream, reject I/O signal
SEAL-SENSOR TEST HEAD DIMENSION/WEIGHT	H 3" x W 1" x D 1.5" Weight <0.5lb
POWER	100-240 VAC 50/60 Hz
TOTAL SEAL-SENSOR SHIPPING WEIGHT	Test head, control panel with HMI operator interface: 25lbs

Integrated Conveyor Specifications:

CONVEYOR***	Stainless steel modular conveyor tilted 60 degrees: 100mm W x 2900mm length
OPTIONAL MAGAZINE	Configurations are package dependent
REJECT	Built-in reject chute on conveyor

*U.S. Patents 6,840,108 – 6,920,793 – 7,167,415

** Dependent on materials & application.

*** Custom conveyor options available based on application.