

Empty PET Bottles: Rotary Whole Surface Inspection system

Description

P&S 21RP - high speed rotary inspection system, which rotates the PET bottle 360 degrees and inspects the mouth top crack, oval, substances in & out, at the sidewall as well as the bottom of the bottle.

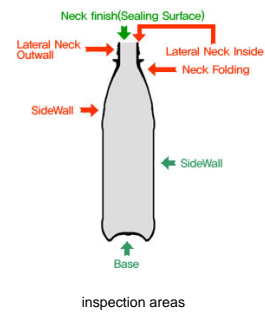
The system utilizes a grayscale CCD camera to film and analyze the bottle's surface. Data is collected throughout the process, enabling a statistical process control (SPC) system to continually monitor the line.

The unit was designed for round-the-clock (24/7) use and includes self diagnosis features, which alerts the operators in case of breakdown or any other problems. The system and its parts were designed for long lifespan even under heavy useage.

The mechanical structure of the system enables 24hours of use without any problems and adjustments can be made depending on the model and the size of the product.



PS-21RP



Features

Features

- High resolution CCD Camera detects unknown substances over 0.5mm at a rate of 99.5%.
- Height adjustment for bottle sizes between 0.5L - 1.5L !
- Self diagnostic feature immediately alerts, preventing inspection downtime and failures.
- Synchronized monitoring of images, deficiencies, and production screen - allowing operators to monitor quality and alert when the system locates any problems with production.
- Simple to replace spare parts.
- Instrument is easy to use and operate
- Modular software
- Individually adjustable inspection areas
- Quick and easy software updates
- Sensitivity adjustment
- Decentralized monitoring

Technical information

- High performance Industrial PC for auditing and processing
- On-line control for container tracking
- PLC for drive and control tasks
- Runs on Windows 2000/XP OS
- Touch screen LCD

Camera and illumination

- Cameras range from VGA to 1.3M resolution
- Analog and Digital cameras
- CCD (CMOS optional)
- Digital image process technology is proprietary
- High performance LED and controller
- consistent illumination of objects
- low heat
- long half-life span
- Low power, low operating costs



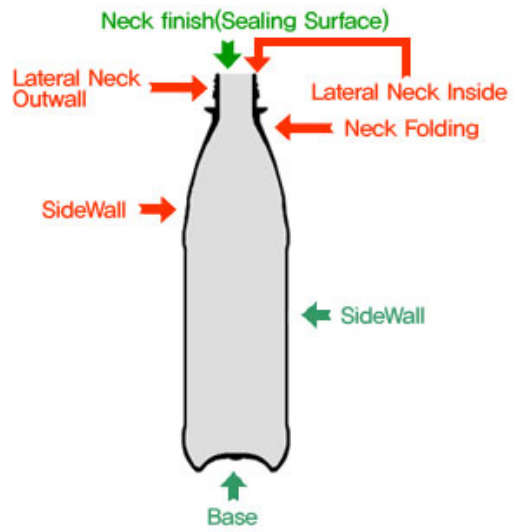
Specification

Container	Empty PET Bottles in various fields
Capacity	Max 24,000 BPH
Inspection unit & Accuracy	Sealing surface particles: min 99.5% detectable for 0.5 mm Lateral Neck in & out wall particles: 98% detectable to min. 0.5mm Bottom particles: min 98% detectable for 0.5mm Sidewall particles; min 98% detectable for 0.5mm
Utilities	3Phase 3Wire, 220V, 60Hz
Dimensions	1750 x 1750 x 2600mm (H)
Weight	Approx :2,500 kg
Container	Empty PET Bottles in various fields
Capacity	Max 24,000 BPH
Inspection unit & Accuracy	Sealing surface particles: min 99.5% detectable for .02" Lateral Neck in & out wall particles: 98% detectable to min. .02" Bottom particles: min 98% detectable for .02" Sidewall particles; min 98% detectable for .02"
Utilities	3Phase 3Wire, 220V, 60Hz
Dimensions	68.9 x 68.9 x 102.3 " (WxDxH)
Weight	Approx : 5,512 lbs

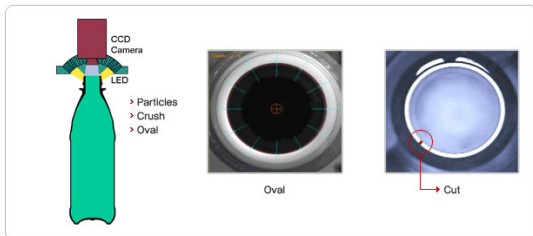
Pictures



PS-21RP unit



inspection areas



top sealing surface

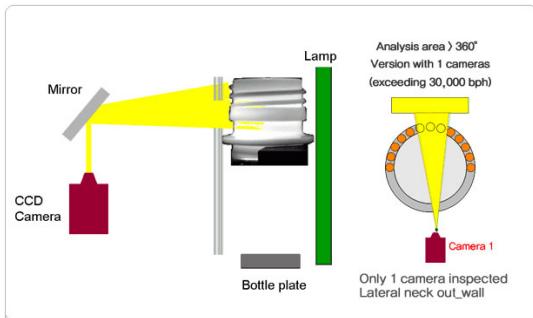
1. White PET bottles (PR type)
 1) Black particles
 0,5mm X 0,5mm 95%
 1,0mm X 1,0mm 99%

2. Yellow green PET bottles (PR type)
 1) Black particles
 0,5mm X 0,5mm 90%
 1,0mm X 1,0mm 95,5%

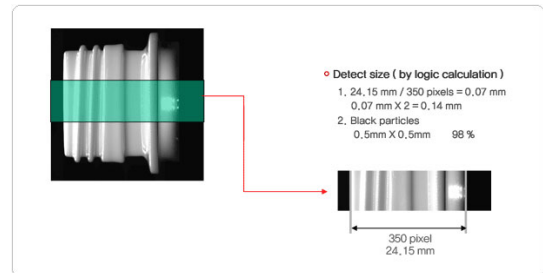
3. White & Yellow green PET bottles (HR type)
 1) Cut
 0,5mm X 0,5mm 90%
 1,0mm X 1,0mm 95%

Particles : 99 % Detected

top sealing surface



lateral neck outwall



lateral neck outwall

A. Top edge
 1) Black particles 1 X 1mm 90% (White PET)
 2) Black particles 2 X 2mm 90% (Yellow green)

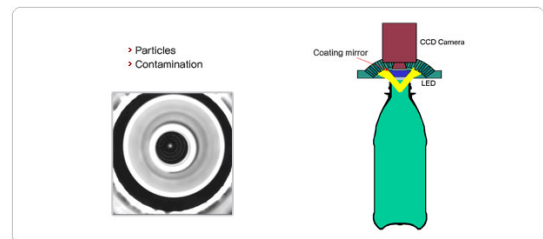
B. Screw top
 1) Black particles 0,5 X 0,5mm 90% (White PET)
 2) Black particles 1 X 1mm 99% (White PET)
 3) Black particles 1 X 1mm 90% (Yellow green)

C. Screw lower
 1) Black particles 0,5 X 0,5mm 98% (White PET)
 2) Black particles 1 X 1mm 90% (Yellow green)

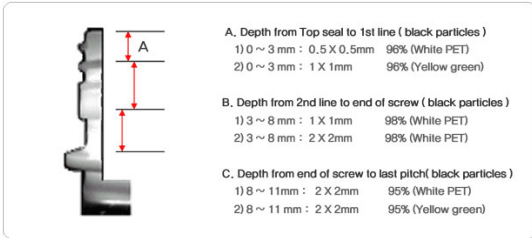
D. Between screw and screw
 1) Black particles 0,5 X 0,5mm 90% (White PET)
 2) Black particles 1 X 1mm 99% (White PET)
 3) Black particles 1 X 1mm 95% (Yellow green)

E. Under screw line
 1) No inspected (Dead area)

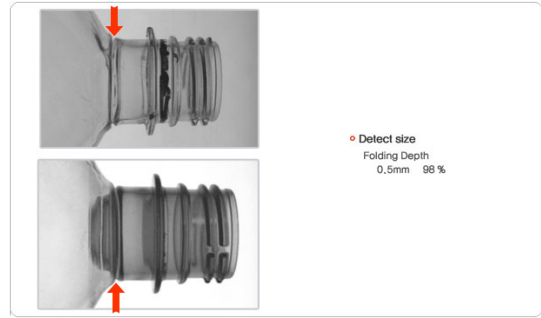
lateral neck outwall



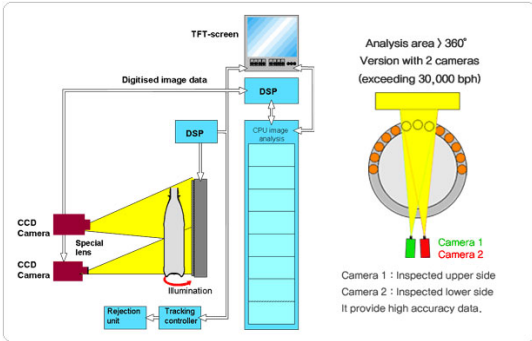
lateral neck inside



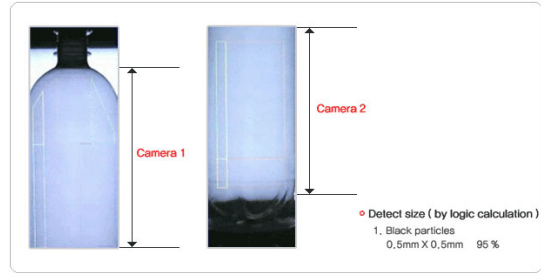
lateral neck inside



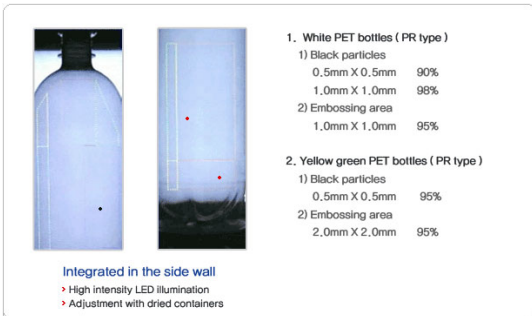
neck folding



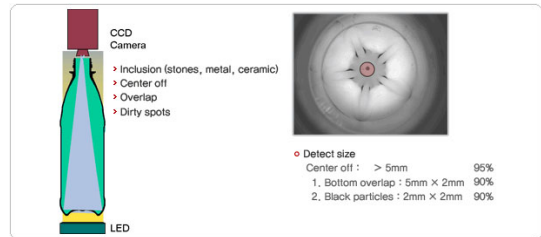
side wall



side wall



side wall



base

