

PCS700-LS CO2 PRESSURE INSPECTION SYSTEM

The PCS700-LS Pressure Inspection System

The PCS700-LS Pressure Inspection System is ideal for measuring total pressure in transparent and semi-transparent glass and plastic containers filled with carbonated products including carbonated soft drinks, beer and sparkling wines.

The system uses a laser to inspect the pressure by analyzing the gas in the headspace of the filled and sealed container. The inspection is non-contact, non-destructive and capable of inspection speeds up to 1,200 containers per minute. The patented technology gives the PCS700-LS the ability to perform the measurement independent of color of the container.



The **PCS700-LS** is ideal for detecting

- Low pressure in glass and plastic carbonated beverage containers
- Leaking containers

PCS700-LS TECHNOLOGY - Theory of Operation

The FT System PCS700-LS system uses a patented tunable diode laser absorption spectroscopy (TDLAS) technique. Certain molecules, including CO₂, when in the gaseous state, have a particular and unique frequency where they absorb light. This characteristic is measurable using the TDLAS technology. As a container passes through the sensor, the laser emits a beam at a specific frequency on one side of the container. A receiver on the opposite side of the container measures the beam after it has passed through the headspace of the container. The measurement of total pressure is based on the alteration of the laser beam caused by interference from the CO₂ molecules in the head space. The PCS700-LS state-of-the-art laser emitter and receiver analyze the gas in the headspace and convert the data to a pressure value. Any container with internal pressure that falls below user set limits is rejected. The system is ideal for plastic containers and eliminates the need for unsanitary and expensive squeeze belts. The system is also ideal for glass containers with aluminum or steel closures such as beer and sparkling wines.



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CONTROL SYSTEM FEATURES

- Independent controller housing
- Microprocessor unit with integrated UPS
- Ethernet communications port
- Expandable to include other FT System inspection modules including vision and fill level sensors
- Industrial PC with 15" TFT touch screen monitor



INSPECTION SENSOR FEATURES

- Non-destructive analysis
- Non-contact inspection
- High speed inspection (1,200cpm)
- Cantilevered Design for easy installation
- Requires no modifications to existing conveyor
- No unsanitary belts or expensive wear parts

SOFTWARE / HMI FEATURES

- FT System Control Manager Software
- Unlimited product library to store container set ups
- Simple user interface designed for easy set up and change-over
- Touch-Screen technology
- Software tools for easy setup or change over
- Segregated data base for storage of historical production data for up to 18 months including storage of past failure alarms with date and time stamp.

