



# Vacuum/Pressure Measurement Systems

VPMS-1  
VPMS-2

**The Vacuum/Pressure Measurement Systems VPMS**, by ibea GmbH, are designed for leak-testing cans and ends. The underlying principle here is to work with vacuum and (over)pressure applied to the inspected product. To determine if there is a leakage there are two measuring systems:

**1. Measurement discrepancies in pressure**

After application of vacuum or pressure a first gauging, via pressure sensor, is taking place before adhering to a stipulated waiting period and a second gauging. The difference of the two readings determines if the product is ok or has a leak, and consequently, will be ejected in the latter case.

In the majority of cases the vacuum technology is applied. The main advantage of using vacuum when testing cans is a gasket-based tooling that guarantees the products' nestling against the tooling with very little mechanical pressure. This allows for a long, maintenance-free time for all mechanical components.

**2. Thermographic measurement**

This is a technique for detecting and measuring variations in the heat, emitted at a defined point to generate a heat flow to the neighboring areas. In case of a leak there are heat gaps which can be captured via thermo-camera.



*VPMS-1 Cycled system for 6 lines  
99 mm easy peelable ends*



*VPMS-1 Cycled system for 4 lines  
153 mm easy peelable ends*

# VPMS

VPMS-1 Cycled systems  
VPMS-2 Clock-based systems



*VPMS-1 Cycled system for 4 lines*

# The intelligent way to test for leaks

The design of the system can be linear or clock-based; the gauging principle and the amount of test stations per system depend on the production line's clock speed. ibea systems are suitable for clock speeds of up to 1,600 parts per minute; however, the application range mostly lies between 100 and 800 parts per minute.

ibea Vacuum / Pressure Measurement Systems VPMS consist of two components: the leak tester and the control panel. The leak tester is comprised of a vacuum/ pressure generator, gasket-based tooling and conveying system. ibea's concept is modular, i.e. it is possible to design variants to existing standards.

Leak-testers contain connections for rotary encoders (speed gauging of product conveyor belt),

trigger light barriers or trigger sensors, as well as one to three eject-stations.

The control panel consists of computer and PLC-connection-units. Operation of the VPMS is clear and simple; parameters can be adjusted directly at the control panel. While in operational mode all measured values, including statistics are displayed for all stations.

Our internal philosophy is to keep an eye on new market developments, to constantly improve and assimilate your ideas into our systems.

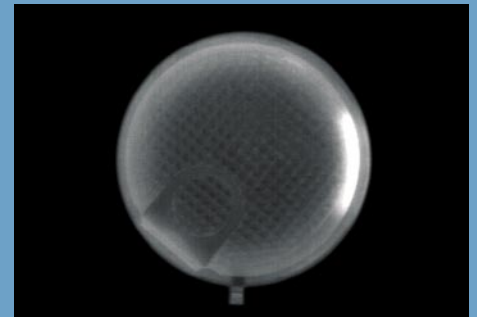
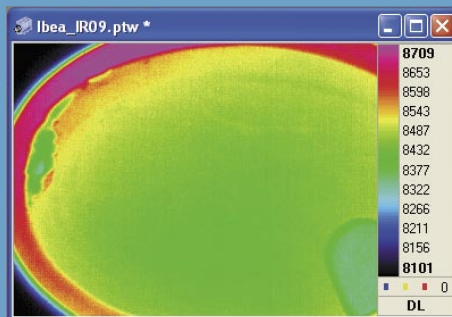
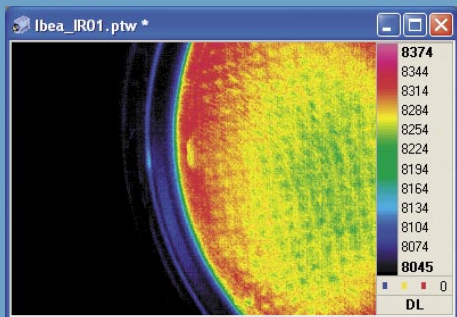
We gladly assist and inform you in much more detail about the VPMS application variety, and the many possibilities to develop a system tailored to your needs.



**VPMS-2** Clock-based system for 8 lines designed for inspection with high clock speeds.



**VPMS-1** Cycled system for 4 lines



Several representations of locating leaks or anomalies while inspecting ends thermographically.



**Motorised lift**  
for automated height  
adjustment of tooling,  
range up to 200 mm



**Air-conditioning**  
for Control Panels

## VPMS Highlights

- **VPMS-1 cycled system: up to 800 parts/ min.**
- **VPMS-2 clock-based system: up to 1,600 parts/min.**
- **Pressure and vacuum measuring method**
- **Thermographic method**
- **Variable number of lines dependent on cycles**
- **Clear and simple handling and operating**
- **Durability and low-maintenance**

## Technical specifications VPMS

### Inputs:

- 240 VAC 50-70 Hz (16 A)
- 6 bar compressed air 200 NL/min.
- Vacuum/Pressure-tank 5 l
- Input sensor for max. 16 tools, 24 VDC PNP
- 2 inputs for line control, each 24 VDC PNP

### Outputs:

- Up to 8 single reject outputs, each 24 VDC (1 A)
- Serial interface RS 232
- 2 more freely programmable system outputs, each 24 VDC (1 A), including relays

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