

# IS YOUR PACKAGE REALLY LEAK-TIGHT?

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Benefit from WITT's  
certified quality  
systems for leak  
detection of all types  
of packaging  
Keyword: HACCP

# LEAK-MASTER® EASY

Bubble-test leak detection



## 1 Perspex high-quality housing

- 360° view
- Robust and easy to clean

## 2 Venturi injector

- No electrical connections
- Operation with compressed air

## 3 Pressure regulator

- Setting of vacuum

## 4 Water level indicator

## 5 Water drain

## 6 Lid adjustment

- Avoids injuries

## 7 Ball valve

## 8 Pressure gauge

- Control of vacuum

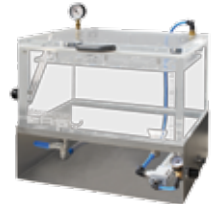
## 9 Handle

- Simple open and closing

## OPTIONAL

As EASY PLUS with electronic control. For perfect documentation as well as fast and standardized test processes – user independent and repeatable.

Localization of the leak – also suitable for vacuum packages



## › LEAK-MASTER® EASY SERIES 1-5

You have the choice: the LEAK-MASTER® EASY is available in 5 different chamber sizes. You are not sure which size you require? Just send us your packages and we identify the suitable version for your application.

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LEAK-MASTER® EASY features detection of even the smallest leaks without the need for trace gases. The principle is based on one of the oldest and most intuitive methods of leak detection: the bubble test in a water bath. The test package is placed in the chamber filled with water and pressed under water by means of a downholder. With the aid of compressed air and a venturi nozzle, a vacuum is generated in the air space above the water level. As a result, the package immersed in water inflates. Testing time takes just a few seconds. If there is a leak, air or filling gas escapes from the location of the leak as a visible stream of bubbles. This is particularly important in order to identify at which point in the packaging process an error may have occurred, e. g. if there is a material defect or a sealing problem.

LEAK-MASTER® EASY can also be used for other applications: For example, an optional accessory is available for testing vacuum packaging. In addition, if the packed products will be shipped by air freight, the LEAK-MASTER® EASY is recommended for altitude simulation test. And for ease of checking the stability of a package, it can also be tested in the dry chamber.

Furthermore, optional feature is the electronic control unit (modell EASY PLUS), which accelerates and economizes test sequences: via pre-set measuring programs, convenient data management and easy documentation of your measurement results.

#### › **BENEFITS**

- Simple and cost-effective
- Visual inspection enables localization of the leak
- Short testing period (< 30 sec.)
- For all flexible and rigid kinds of packs (food, pharmaceutical, industrial, etc.)
- No trace gas required in package
- No calibration required
- Simple rigidity test via the dry chamber
- Altitude simulation test (air freight)
- Easy to-use intuitive system – no special skills required
- Various chamber sizes available
- Easy installation and start-up
- Low maintenance
- Easy to clean perspex housing
- No vacuum pump necessary
- No electrical connections-operation using compressed air

#### › **OPTIONAL**

- Adapter for testing vacuum packaging
- Electronic control unit (PLUS), can also be retrofitted
- Calibrated gauge
- Vacuum stop valve

**LEAK-MASTER® EASY by WITT – Bubble-test leak detection –  
ideal for locating the leak. Cost effective and easy.**



# LEAK-MASTER® PRO

Leak detection system for packages containing CO<sub>2</sub>



## 1 User interface

- Touch-screen
- Intuitive data and parameter entry
- No calibration necessary
- No skilled personnel needed

## 2 Manifold connection options

- Potential-free contact for connection of external/visual device – or to stop the system
- Barcode reader for fast and easy identification of user and product (optional)
- Compressed air connection for optimal ventilation in CO<sub>2</sub>-enriched environments

## 3 Viewing point on all chambers

- Double safety by visual check

## 4 Ethernet interface (optional WLAN/WiFi) at the rear

- Integration into company network
- Comfortable data administration and analysis
- Customer oriented quality documentation

## 5 Optimal hygiene by easy cleaning

- Chamber: ventilator module can be removed without special tools
- Box: stainless steel, smooth surface, splash-proof

Non-destructive leak testing – highly accurate and fast

## > USER INTERFACE

### Touch-screen

- LC-Display 7"
- 256 colours
- Resolution: 800 × 480 Pixel
- Graphical elements

### Barcode administration

- Easy choice of user
- Fast change of product

### Product data administration

- Up to 1,200 products
- Password protection

### Menu

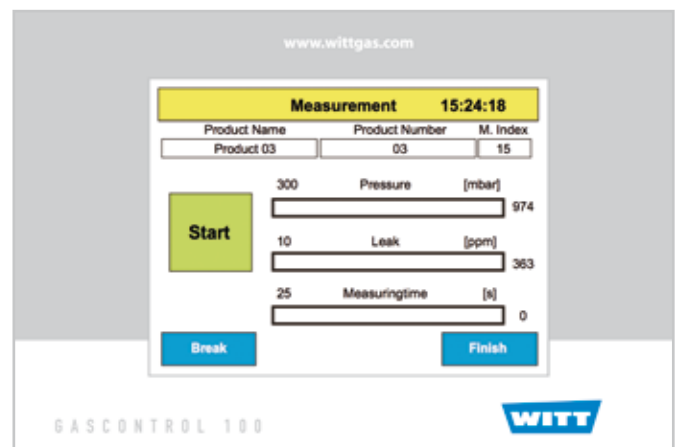
- Multi-lingual
- Intuitive use

### User administration

- Up to 60 users
- Password protection

### Data memory

- Product details (name, item number, barcode)
- Measure time
- Result
- Date and time
- Name of user
- Charge



The functionality of this leak detection system for modified atmosphere packaging is quite simple. Modified atmosphere packages normally contain CO<sub>2</sub> as part of the protective atmosphere – other products produce CO<sub>2</sub> by themselves. The LEAK-MASTER® PRO uses this CO<sub>2</sub> as a trace gas. Packages can be tested for leaks directly after the packaging process. A settable vacuum is produced inside the chamber. Resulting in pressure differences between the tested package and the testing chamber, CO<sub>2</sub> escapes through smallest leaks. The CO<sub>2</sub> concentration within the chamber rises. The highly sensitive sensor reacts and detects even smallest leaks. Using this method ensures that the product remains entirely undamaged and dry after testing. The LEAK-MASTER® PRO administrates the specific settings for up to 1,200 products as well as name, password and barcode for up to 60 users. The test remains user independent and can be easily repeated. The selection of tested products and the user log-on is controlled via touch-screen or by optional barcode reader.

Meeting the requirements of the HACCP concept, the LEAK-MASTER® PRO checks leak-tightness of packages to avoid any quality risks. With optional WITT software, measurement documentatation can be integrated into the overall quality system.

All results including date, time, product details and user name can additionally be sent to MS-Excel. For data transfer the LEAK-MASTER® PRO comes standard with Ethernet, and WIFI is optionally available.

› **BENEFITS**

- Finds the smallest of leaks
- Short testing time by highly sensitive, ultra-fast CO<sub>2</sub> sensor
- No need for costly helium
- Fast change of products
- For flexible and solid packages
- Intuitive use
- No calibration required
- No skilled personnel needed
- Stainless steel frame
- Various chamber sizes
- For sample testing of:
  - Single packages
  - Cartons
  - E2 boxes

› **OPTIONS**

- Barcode Reader
- WLAN/WiFi
- Flushing air connection

## LEAK-MASTER® PRO by WITT – Leak testing of food packages containing CO<sub>2</sub>. Non-destructive, fast and exact.

› **GAS CONTROL CENTER**

**Software for data administration**

**Product and user administration**

- Parameters (product and user)
- File administration  
(MS Excel compatible)

**Measuring data administration**

- Automatic (periodic) or manual
- Data transmission to MS Excel

**Multi-device**

- Data exchange with multiple LEAK-MASTER®



# LEAK-MASTER® MAPMAX

In-line micro leak detection system for packages containing CO<sub>2</sub>



- 1 Stainless steel frame**
  - Smooth surface, splash-proof
  - Optimal hygiene
- 2 User interface**
  - Touch-screen
  - Intuitive data and parameter entry
  - No skilled personnel needed
- 3 Emergency stop**
- 4 Two synchronized belt conveyors**
  - For placing the package in the measuring chamber and for forwarding to following systems
- 5 Alarm signal**
- 6 Measuring chamber**
- 7 Ethernet interface (optional WLAN/WiFi)**
  - Integration into company network
  - Comfortable data administration and analysis
  - Customer oriented quality documentation
- 8 Manifold connection options**
  - Potential-free contact to connect a signal-horn, alarm indicator or to stop the system
  - Digital contact to control the number of cycles and to control an external reject device

For 100% safety –  
up to 15 cycles per minute

## › USER INTERFACE

### Menu

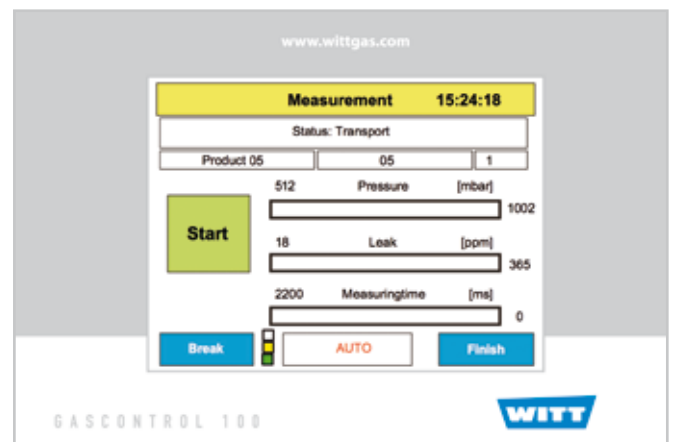
- Multi-lingual
- Intuitive use

### User administration

- Up to 60 users
- Password protection

### Data memory

- Product details (name, item number, barcode)
- Measure time
- Result
- Date and time
- Name of user



LEAK-MASTER® MAPMAX features detection of even the smallest leaks using CO<sub>2</sub> as trace gas – a 100 % testing method connected directly to the packaging process. Thus, not a single leaking package gets to the customer. In this non-destructive testing system, the LEAK-MASTER® MAPMAX places the packages or shipping case in the test chamber. A settable vacuum is produced, resulting in pressure differences between the tested package and the testing chamber. CO<sub>2</sub> escapes through smallest leaks, causing the CO<sub>2</sub> concentration within the chamber to rise. The highly sensitive sensor reacts and detects any leaks. The sensor allows a resolution of 1 ppm.

After each test cycle, the chamber is flushed with air and the tested package is forwarded to following systems.

If a leak has been detected, several potential free contacts are available for communication with other equipment, for example, to trigger an alarm or a sorter to reject the faulty package.

Important facts for the achievable cycle time are the CO<sub>2</sub> concentration within the package, the leak size, the chamber size and the environmental conditions.

› **BENEFITS**

- Non-destructive leak detection and sealed seam testing for flexible and rigid single packages or shipping cases
- No costly returns – 100 % protection against order or reputation loss
- Functionality like LEAK-MASTER® PRO – but fully automatic
- Installation directly into the packaging line
- Unique worldwide high frequency – up to 15 cycles per minute
- Suitable for all packages containing CO<sub>2</sub>
- Highly sensitive, very fast CO<sub>2</sub>-Sensor
- No need for costly helium
- Two standard machines for all customers' requirements as well as customized versions available

› **OPTIONS**

- Reject system
- Barcode Reader
- WLAN/WiFi

**LEAK-MASTER® MAPMAX by WITT – In-line leak detection system based on CO<sub>2</sub> for up to 15 cycles per minute. Unique worldwide.**



## OUR PRODUCT RANGE

### GAS CONTROL EQUIPMENT

- Gas mixing systems
- Gas metering systems
- Gas analyzers
- Leak detection systems
- Gas pressure vessels
- Engineering of customized systems

### GAS SAFETY EQUIPMENT

- Flashback arrestors
- Non-return valves / check valves
- Quick couplers
- Safety relief valves
- Stainless steel devices
- Gas filters
- Pressure regulators
- Outlet points
- Lance holders
- Ball valves
- Automatic hose reels
- Test equipment
- Accessories
- Customized safety equipment

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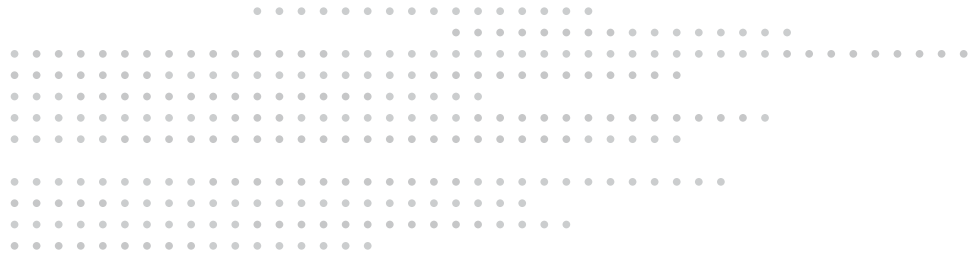
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