LEAK DETECTION SYSTEM
LEAK-MASTER® EASY

www.wittgas.com

Leak detection system for packages with bubble test.
LEAK-MASTER® EASY features the detection even of the smallest leaks.

After the package is placed into the test chamber filled with water, the head space above the water level is evacuated. This is done with the help of a compressed air operated Venturi nozzle (optionally also with electric vacuum pump). Thus, the package immersed in the water inflates, allowing any leaks and their location to be identified by a stream of bubbles.

Benefits

- economic and uncomplicated
- visual inspection allows localization of the leak
- for all flexible and rigid kind of packs (food-, pharmaceutical-, industrial- and other packages)
- short testing period (< 30 sec.)
- easy-to-use intuitive system – no special skills required
- easy installation and start-up
- no trace gas required in package
- can also be used for altitude simulation
- optionally also for vacuum packaging, set order no. 956992700 (-> p. 6)
- various chamber sizes available
- a vacuum relief valve protects the device against deep vacuum (-> p. 6)
- low maintenance
- durability and easy to clean by acrylic housing
- standard with compressed air driven Venturi nozzle (without electrical connections)
- optionally with electrical vacuum pump (-> p. 3)

further information on www.leak-master.net
► Video

Type	LEAK-MASTER® EASY
Testing principle	visual
Vacuum	max. 200 mbar abs. (approx. -800 mbar to ambient pressure), adjustable; special version till 100 mbar abs.
Vacuum generation	compressed air powered venturi injector option: electrical vacuum pump
Compressed air pressure	min. 6 bar, max. 8 bar
Connection	G 1/4
Accessories (incl.)	hose connection OD 8 mm hose connection OD 12 mm adapter G 1/4 M to 1/4″ NPT
Housing	Acryl Plexiglas® - especially robust and special refined against turn yellow
Approvals	Company certified according to ISO 9001 and ISO 22000 for food-grade gases according to: - Regulation (EC) No 1935/2004

Our manyfold accessories:

- Control unit PLUS: portable controller with various predefined measurement programmes, also for documentation of your measuring results (-> p. 4)
- Vacuum testing set: for testing vacuum packaged products and products with low gas volumes (-> p. 6)
- AD100: calibrated pressure gauge with DKD/ DAkkS-certificate (-> p. 6)
- Vacuum holding valve: blocks the chamber after generation of vacuum. Perfect for longer test periods without permanent use of compressed air (-> p. 6)
- supplementary set: for testing according ASTM F2096 (Bubble Test) (-> p. 6)

Find more details of accessories on the following pages.

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Models		inner chamber size approx. in [mm] (inches) (HxWxD)	overall dimension approx. in [mm] (inches) (HxWxD)	Weight approx. in [kg] (lb)
	EASY 0.5	115 x 305 x 195 (4.5 x 12.0 x 7.7)	485 x 440 x 300 (19.1 x 17.3 x 11.8)	15.5 (34)
	EASY 1	165 x 305 x 195 (6.5 x 12.0 x 7.7)	535 x 440 x 300 (21.1 x 17.3 x 11.8)	17 (37)
	EASY 1.5	145 x 505 x 310 (5.7 x 19.9 x 12.2)	520 x 650 x 420 (20.5 x 25.6 x 16.5)	31,5 (69)
	EASY 2	205 x 505 x 310 (8.1 x 19.9 x 12.2)	580 x 650 x 420 (22.8 x 25.6 x 16.5)	35 (76)
	EASY 3	275 x 525 x 360 (10.8 x 20.7 x 14.2)	660 x 705 x 485 (26.0 x 27.8 x 19.1)	55 (121)
	EASY 4	320 x 625 x 500 (12.6 x 24.6 x 19.7)	900 x 840 x 630 (35.4 x 33.1 x 24.8)	108 (238)
	EASY 5	340 x 760 x 500 (13.4 x 29.9 x 19.7)	920 x 970 x 630 (36.2 x 38.2 x 24.8)	120 (265)

The LEAK-MASTER® EASY Leak Detectors can be used to perform a variety of ASTM test methods for detecting leaks and seal integrity.	
ASTM D3078	Standard Test Method for Determination of Leaks in Flexible Packaging by Bubble Emission
ASTM D4169	Standard Practice for Performance Testing of Shipping Containers and Systems
ASTM D4991	Standard Test Method for Leakage Testing of Empty Rigid Containers by Vacuum Method
ASTM D5094	Standard Test Methods for Gross Leakage of Liquids from Containers with Threaded or Lug-Style Closures
ASTM F2096	Standard Test Method for Detecting Gross Leaks in Packaging by Internal Pressurization (Bubble Test) – using our optional supplementary set (-> p. 6)

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Version with electric vacuum pump (option)

All LEAK-MASTER® EASY models can also be operated with an electric vacuum pump - as an alternative to operation with compressed air.

You only need a power socket for this variant. All other functions are identical to the standard compressed air version. However, the vacuum pump cannot be retrofitted.
When ordering your EASY, you must therefore specify which vacuum method you wish to work with.

Suction capacity	approx. 65 l/min at atmospheric pressure
Ultimate vacuum	200 mbar abs.
Diaphragm	HNBR / Stainless steel
Max. operating pressure	0.5 bar rel.
Permissible ambient temperature	+15 ºC ... +50 ºC, intermittent +70 ºC
Permissible media temperature	+5 ºC ... +70 ºC, intermittent +100 ºC
Weight	approx. 10 kg
Dimensions pump housing	approx. 240 x 184 x 515 mm (9.45 x 7.24 x 20.28 inches)
Voltage	100–120 V | 200–240 V
Motor	Capacitor motor
Protection class motor	IP 43
Frequency	50 / 60 Hz
Power P_1	190 W
I_{max}	1.9 A at 60 Hz | 1.20 A at 50 Hz

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CONTROL UNIT PLUS
for LEAK-MASTER® EASY

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Controler for leak detector LEAK-MASTER® EASY. In combination with LEAK-MASTER® EASY features detection of the smallest leaks without the need of costly helium.

Pre-defined measurement programmes, an altitude simulation as well as an user independently quick and continuously working mode characterise this device.

Easily connected to your LEAK-MASTER® EASY.

A flexible controller to guarantee quality and productivity of production processes.

Benefits

- minimal response time
- quick product change
- simple to operate via touch-screen
- easy installation and start-up
- permanent monitoring of set limit values
- operator friendly – data and process parameter entry and administration by means of integrated keyboard or remote personal computer (e.g. MS-Excel®)
- perfect documentation by complete user- and product data as well as error logs
- data transmission of results as a CSV file and PDF report via Ethernet (browser-based EASY PLUS control software) or via USB stick
- Ethernet connection for network integration
- measured data storage
- administration of product names
- user management for measurement personalization
- individual configurable error codes with identification from type and location of leak
- ideal for altitude simulation testing
- for retrofitting your existing LEAK-MASTER® EASY
- hygienic and easy to clean splash-proof stainless steel cabinet / housing

Options

- Barcode Reader for simple and quick user/product selection with IP-protection

Caution!
Control unit PLUS can only be used if your LEAK-MASTER® EASY generates the vacuum using a compressed-air-powered Venturi nozzle!

Other models, options and accessories available upon request.

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Type	Control Unit PLUS for LEAK-MASTER® EASY
Vacuum	max. 800 mbar
Temperature (gas/environment)	0 °C up to +40 °C
Interfaces	Ethernet (optional WLAN) USB by memory stick for software Update RS 232 with ASCII-output of date, time, measured value RJ45 Ethernet FTP-Server for profiles, product and user data, software Update OPC-UA-interface for general device information, -configuration, current user, current product, result of the last measurement
Housing	stainless steel, IP 43
Weight	approx. 8 kg
Dimensions (HxWxD) with carry handle	approx. 110 x 300 x 260 mm
Voltage	100 – 240 V AC; 50 – 60 Hz
Power consumption	230 V AC / 0.12 A
Approvals	Company certified according to ISO 9001 and ISO 22000 CE marked according to: - EMC 2014/30/EU - Low Voltage Directive 2014/35/EU for food-grade gases according to: - Regulation (EC) No 1935/2004

The following barcode types are supported by our barcode reader:		
Code128	ISSN	JAN
EAN128	ISMN	EAN-99
EAN13	EAN-14	EAN-Velocity
QR-Code	DUN14	ISBN-13 Dual
Data Matrix	SSCC-18	ISBN-10
GS1-Data Matrix	UPC-E	PZN8
EAN8	CODE39	Code 128A
PDF417	CODE39-Extended	Code 128B
ISBN-13	Code 25 Interleaved	Code 128C

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Accessories

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Vacuum set

Adapter set for testing vacuum packaged products and products with low gas volumes
Easy installation and simple handling.

Vacuum holding valve

With this option the chamber can blocked after generation of vacuum. Perfect for longer test periods without permanent use of compressed air.

Calibrated pressure gauge AD100

The calibrated pressure gauge AD100 with DKD/DAkkS-certificate gives more security to the customer at the daily use of LEAK-MASTER® EASY.

Barcode-Reader

for selection of product names and users via barcode for the electronic control unit PLUS.
Fast and save detection of all product- and user data, for manifold barcode-types, protection class IP 65.
Ideal for process optimization and optimal quality testing.

Supplementary set

for Standard Test Method according ASTM F2096, for Detecting Gross Leaks in Packaging by Internal Pressurization (Bubble Test) for Standard Test Method according ASTM F2096, for Detecting Gross Leaks in Packaging by Internal Pressurization (Bubble Test).

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