LEAK DETECTION SYSTEM
LEAK-MASTER® MAPMAX

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►Video

Automatic in-line micro-leak detection system for packages based on CO_2.
LEAK-MASTER® MAPMAX features non-destructive detection of the smallest leaks without the need of costly helium - directly from the packaging line.

CO_2 is the most important gas in the packaging of food under modified atmospheres.
The LEAK-MASTER® MAPMAX uses this CO_2 as trace gas. That way it is possible to test the packages for leaks directly after the packing process.

The LEAK-MASTER® MAPMAX places the packages or complete shipping cases precisely in the test chamber. If the test sample is leaking, the pressure difference will result in a gas flow from the package into the chamber and the CO_2-concentration within the chamber rises. The highly sensitive sensor will notice the changes of the CO_2-concentration and even smallest leaks are easily detected.

After each test cycle (up to 15 cycles per minute) the chamber is ventilated and the test sample is moved on to the following system. If a leak has been detected, several potential free contacts for communication with external systems are available (e.g. alarms and/or pusher).

Benefits

- short response time
- high operating speed (max. 15 cycles/min.) depending on the type of packaging, the leak size to be detected, the CO_2 content (min. 10 %) and gas volume in the package, and the chamber size.
- for single packages or complete shipping cases
- 2 chamber/belt conveyor widths
- various chamber lengths and heights, optimised for the packaging to be tested
- for flexible and rigid packs
- easy-to-use intuitive system – no special skills required
- operator friendly - data and process parameter entry by means of integrated PLC with touchscreen or via remote personal computer
- convenient data administration and evaluation for customer oriented quality documentation
- remote transmission of results via Ethernet
- easy to clean stainless steel housing with acrylic doors in the upper area

Other models, options and accessories available upon request.

LM4 - M01/6E subject to change

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Type	LEAK-MASTER® MAPMAX
Machine type 400	conveying width 430 mm
Machine type 700	conveying width 700 mm
Drive Mechanism	frequency-controlled belt conveyor
Measuring System	infrared sensor for CO_2
Measuring range	0 ppm – 5 000 ppm (resolution: 1 ppm)
Response time	approx. 1 sec.
max. CO_2 concentration in ambient air	2 500 ppm (fluctuating CO_2 values impair measurement accuracy)
Leak testing cycle	max. 15 measures/min. depends on leak size, CO_2-percentage in package and size of chamber
Operating vacuum	up to 100 mbar abs.
Temperature range	5 – 40 °C (41 – 104 °F)
Humidity of ambient air	max. 90% at 20 °C (68 °F) / max. 50% at 40 °C (104 °F)
Alarms	potential free contact; max. 250 V AC or 24 V DC / 2 A
Communication	- data communication via Ethernet - digital output for take-over cycle - digital output for pusher unit
Compressed air connection	Plug nipple NW7.2 for compressed air coupling / 6 – 8 bar
Housing	stainless steel
Weight	approx. 1 100 kg including vacuum pump, approx. 900 kg for external vacuum
Test chamber width **machine type 400** **machine type 700**	 400 mm 680 mm
Test chamber height	200 - 500 mm in 20 mm steps (max. package height = chamber height - 100 mm)
Test chamber length	450 - 850 mm in 50 mm steps (max. package length = chamber length - 50 mm)
Total length	1 700 mm
Total width	1 250 mm
Total height	approx. 2 200 mm
Take-over-height	approx. 850 mm
Power consumption	400 V - 50 Hz, 3 Ph/N/PE
Approvals	Company certified according to ISO 9001 and ISO 22000 CE-marked according to: - EMC 2014/30/EU - Low Voltage Directive 2014/35/EU - Machines Directive 2006/42/EC

Caution!
This equipment is not suitable for the checking of packaging featuring O_2 content greater than 20.9% (fresh meat, for example).

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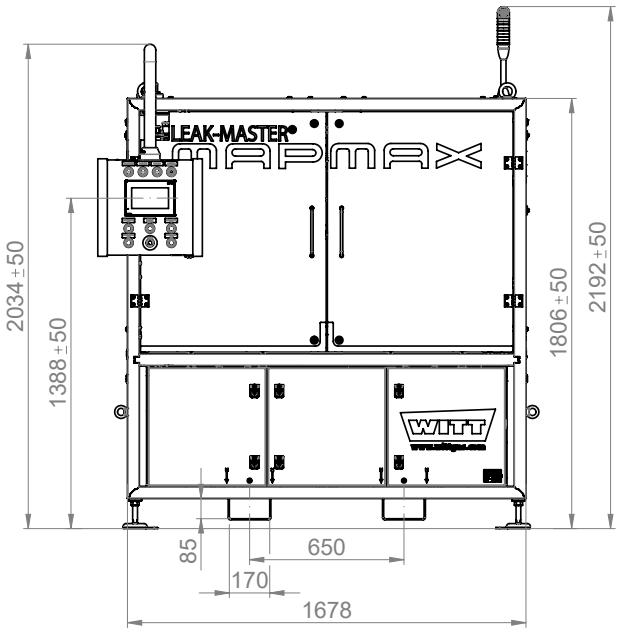

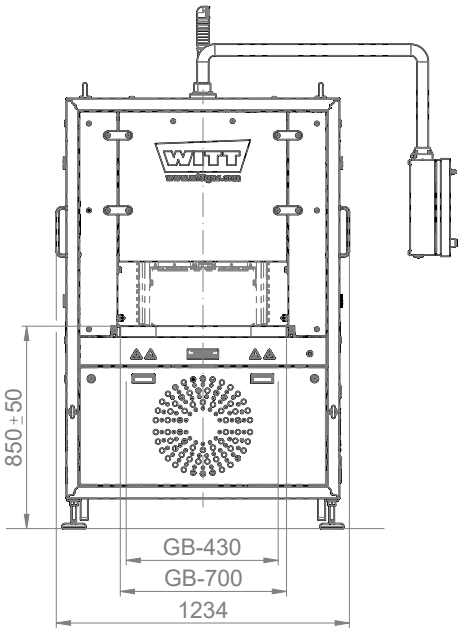

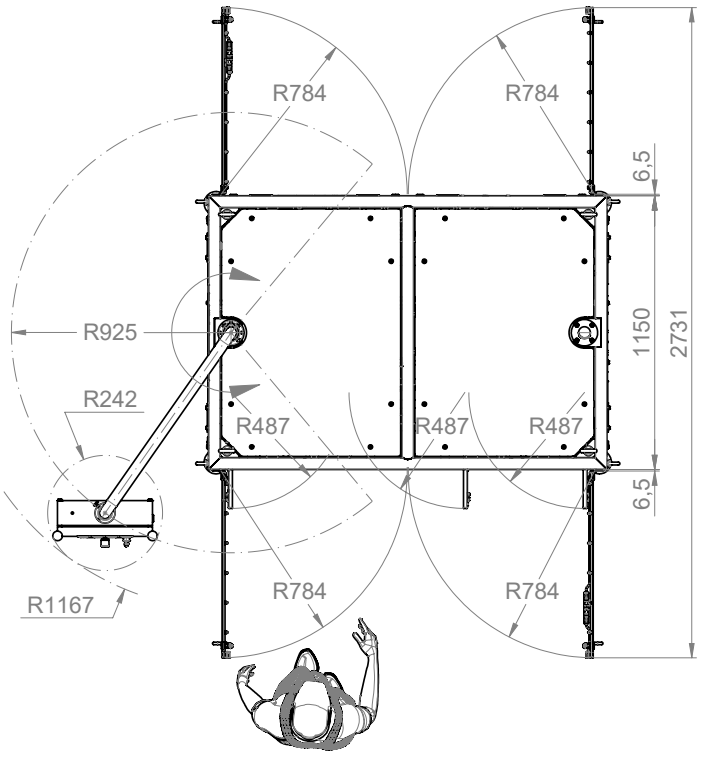

dimensions in mm

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