

MAPAX[®] LD. Leak detection system.



Concept MAPAX[®] LD is an innovative and extremely accurate technology, providing high-speed and non-destructive in-line leak detection for the food and non-food industry. Utilising hydrogen as the detection gas, faulty packages can be detected and removed from the production line quickly and easily.

Leakage and failure occurs because not all food packs are always fully hermitically sealed: product gets caught in the seal, poor sealing, or physical damage such as pinholes, leading to loss of shelf life, damaged products or poor appearance and therefore spoilage. Moreover, if only random checks are applied, this means that when a leak is found, the whole batch produced since the last check either has to be repackaged or disposed of. This in turn leads to increasing production costs or even customer complaints and penalty charges.

MAPAX[®] LD is a patented technology used on modified atmosphere production lines for foodstuffs – from meats and fish to salads or even non-food items. Where previously visual or water testing was undertaken on random samples, MAPAX[®] LD enables testing to be part of the production process and can examine individual, multiple or every item in it – 100 % validation at up to 120 packages per minute. Ensuring that all products are tested and individual defective items (or, in the case of multiple testing, all items) are removed, reducing spoilage and environmental impact (because not the entire batch has to be destroyed, only leaking packs). Faulty settings of the packaging machine can also be detected earlier, when a few leaks are found consecutively, production can be paused and the settings corrected. All of this leads to a better quality of the final product, reduced downtimes and improved customer satisfaction. Add to this the fact that there are no vacuum pumps on the system and maintenance costs are reduced to a minimum.

Operation Hydrogen is added to the MAPAX® gas mix at the initial sealing stage of the product packaging. A mix of up to 4% hydrogen can be used and does not affect the foodstuffs. When hydrogen is detected by the MAPAX® LD sensor, a visual alarm is triggered. When the alarm is activated, the pack or packs will be removed from the production line, using either a pusher arm or compressed air to blow the defective items out. Therefore, no leaking packs can reach the end-customer and the rest continue, ready to be packed into boxes or cradles.

The MAPAX® LD is built to stringent specification, conforming to all food hygiene standards and designed for maximum uptime, working in line with the rest of your production process.

Specifications	System weight	450 kg
	System L x H x W	2032 x 1173 x 838 mm
	Belt height	805 - 870 mm
	Product size capability L x H x W	700 x 150 x 340 mm
	Metal	Stainless steel
	Power	230v/50Hz (country adjustable)
	Defective removal mechanism	Compressed air or pusher arm (others available)
	Compressed air requirements	6 - 10 bar
	Integration into production	RS232 output
	Gas used for leak detection	Hydrogen food grade (ISO - 22000)
	Gas mixture	Up to 4%
	Production capacity	Up to 120 packages per minute in line