



MAPAX[®] LD. Leak detection system.



Concept Linde's MAPAX[®] LD leak detection system is an innovative and extremely accurate technology, providing high-speed and nondestructive in-line leak detection for the food and non-food industry. Utilizing 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 hermetically sealed: product caught in the seal, poor sealing, and physical damage such as pinholes lead to loss of shelf life, damaged products, poor appearance, and 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 increased production costs or even customer complaints and penalty charges.

The MAPAX LD leak detection system is a patented technology used on modified atmosphere production lines for food products – from meats and fish to salads or even non-food items. Where visual or water testing of random samples was previously used, the MAPAX LD system enables testing to be part of the production process and can examine individual, multiple or every item in it – 100 % sampling 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 reduces spoilage and environmental impact (because the entire batch does not have 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 better quality 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 food products. 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.

The MAPAX LD leak detection system 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	990 lb
System L x H x W	80 x 46 x 33 in
Belt height	32-3/4 - 34-1/4 in
Product size capability L x H x W	27 x 6 x 13 in
Metal	Stainless steel
Power	230v/50Hz (country adjustable)
Defective removal mechanism	Compressed air or pusher arm (others available)
Compressed air requirements	90 – 145 psi
Integration into production	RS232 output
Gas used for leak detection	Hydrogen
Gas mixture	Up to 4 %
Production capacity	Up to 120 packages per minute in line

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