BOC
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# 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 chain 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 can lead to loss of shelf life, damaged products or poor appearance and therefore spoilage. Moreover, if only random checks are applied, 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 chain and can examine individual, multiple or every item in it – at up to 60 analysis cycles per minute. Ensuring that all products are tested and individual defective items (or, in the case of multiple testing, all items) are removed, spoilage and environmental impacts are reduced because the entire batch doesn't have to be destroyed, only the 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 downtime 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.

MAPAX® is a registered trademark of The Linde Group.

## Operation

Hydrogen is added to the MAPAX® gas mix at the initial sealing stage of the product packaging. A mix of up to 3% 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 specifications, conforming to all food hygiene standards and designed for maximum uptime, working in line with the rest of your production process.

## Specifications

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| System weight | 350 kg |
| System L x H x W | 1957 x 1292 x 708 mm<br>(can be customised to fit with production requirements) |
| Belt height | 885 – 925 mm<br>(customer adjustable, further adjustment available via legs/wheels) |
| Product size capability L x H x W | 700 x 150 x 340 mm<br>(can be customised to fit with production requirements) |
| 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 3% |
| Measurement capability | >1ppm |
| Production capacity | Up to 60 analysis per minute in line |

## Treating food better

Our dedicated team of food experts are available to discuss your individual requirements.
Please contact us for further information on our range of products and services for the food industry.

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