Bonfiglioli Engineering
Quality Control Solutions

TASI GROUP

Quality Management System Nr 50 100 10979

PHARMACEUTICAL

LVA 600

In-Line Headspace Gas Analyzer

- LVA 600 is an in-line fully automated test unit for performing Headspace Gas Analysis (HGA) of sterile pharmaceutical containers.
- LVA 600 is a non-contact, non-destructive unit that employs non-invasive laser-based technology for monitoring the headspace concentration of gases such as oxygen and moisture content.
- HGA inspection process is based on the Tunable Diode Laser Absorption Spectroscopy (TDLAS) method which accurately detects and quantifies gaseous concentration levels.
- A diode laser beam is transmitted through the container headspace and received by a detector. The target molecule within the container when crossed by the laser beam absorbs the energy depending on the amount of pressure surrounding it. The LVA 600 sensors then measure the laser beam absorption, which will indicate target gas concentration.

Key Objectives and Benefits

- Nitrogen purging is not required when measuring oxygen levels:
  > Oxygen does not interfere with the measurement
  > Accuracy and robustness without the need for purging the package surroundings
- Non-intrusive and non-destructive inspection method.
- Standard master container is not required for continuous system calibration.
- Etalon effect is made negligible by a technical solution.
- Fast, reliable and repeatable results.
- Fully automated loading and unloading systems.
- Easily incorporated into existing production lines.
- Small design saves space.
- High production speeds.
- Easy to clean – no hidden corners.
- Quick change over.
- Low power consumption.
- Storage, maintenance, and download of historical data (production, raw data, events, alarms).
- HMI real time display of statistics and raw data.
- Validation package guarantees complete and efficient regulatory compliance.

Technical Specifications

Tested Container	Vials.
Container Filling	Filled.
Container Content	Lyophilised, Liquid, Powder, Semi-solid.
Machine Type	Rotative Leak Tester.
Testing Methods	Headspace Gas Analysis.
Max speed	Cpm
Min Container Dimension	15 x 15 x 39 mm (LxWxH)
Max Container Dimension	53 x 53 x 108 mm (LxWxH)
Testing Heads Number	1 to 4

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