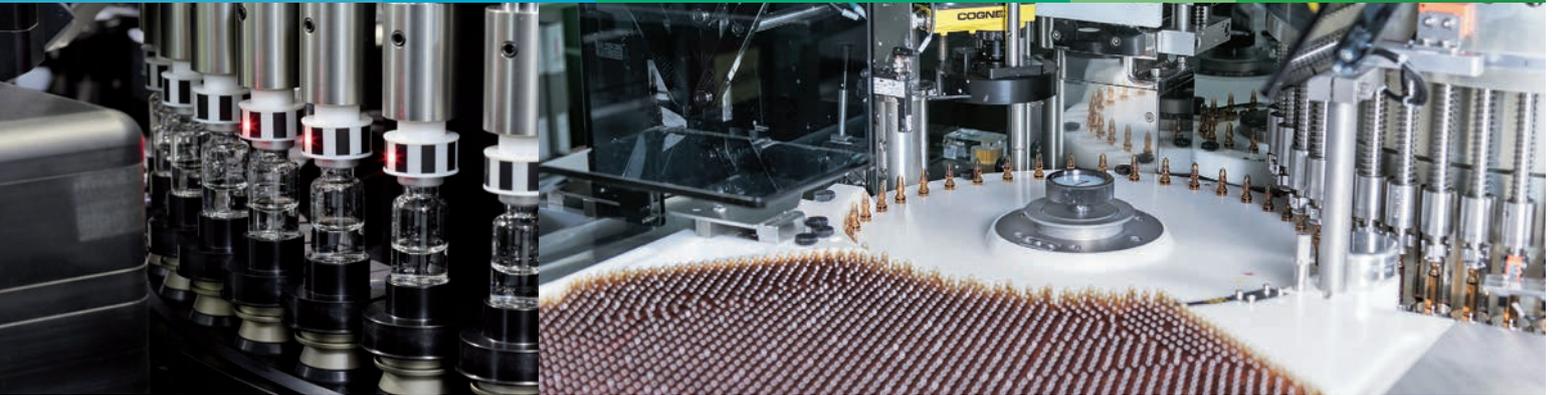




**BOSCH**  
Invented for life

# Living up to the highest quality standards



Located in Melsungen, Germany, **Solpharm** is one of the leading contract manufacturers for small volume parenterals, such as local anesthetics, electrolyte solutions and vitamin preparations. With two vial and three ampoule lines from Packaging Technology, Solpharm produces, fills and packages different batch sizes of ampoules with volumes between 1 and 30 milliliters, as well as vials with volumes of 5 to 500 milliliters.



## Challenge

Positive business development resulted in an increase of processed containers from 60 to 190 million a year. In the course of the increasing order situation, Solpharm decided to expand its

production and inspection capacities especially for ampoules. This required integrating the necessary technology for leak detection in all lines.



## Project

Until the expansion, Solpharm inspected its containers on a total of eight inspection machines, including five for ampoules and an AIM 296 from Bosch Packaging Technology for particle and cosmetic inspection of glass containers. Due to a long-standing partnership with Bosch in sterile filling operations, the company decided to renew this collaboration.

For about a year, a five-strong Bosch project team worked on the development, implementation, and commissioning of a new state-of-the-art inspection line for the examination of sterile pharmaceutical solutions in glass vials

and ampoules. The line consists of an AIM 596 for particle and cosmetic inspection of vials and ampoules, as well as a KLD 1043 for leak detection. The particular challenge of the project consisted in combining the proven Bosch technology for leak detection with the Static Division (SD) technology, which had only recently been integrated into the portfolio. Merging the machines into an inspection line required exact coordination of the different technologies. The project partners tackled this challenge successfully and wrapped up the project in just below a year.



“*Bosch has always been a reliable partner, even beyond the specific project work. Thanks to the comprehensive after-sales services, we have spare parts and technical knowledge available around the clock, helping us to maintain our high standards.*”

Hans-Jörg Wattradt,  
operations manager at Solupharm

## Solution

The AIM 596 is equipped with SD technology and inspects up to 300 containers per minute for particles in low to medium viscosity liquids, as well as for cosmetic container defects. By transmitting light through the liquid onto an optical SD sensor, the technology differentiates static from moving objects. After particle inspection, the KLD

1043 checks the tightness of cylinder ampoules and vials using a special high-voltage system, already developed by Bosch in the 1980s. The KLD 1043 rotates the containers by 360 degrees, while bar electrodes measure the electrical resistance of the containers from below, which changes significantly in case of cracks.

## Benefits

- ▶ Visual control of different ampoules and vials
- ▶ Inspection rate increased by 15 percent
- ▶ High flexibility: machines available as stand-alone solutions for customer-specific inspection

## Products

- ▶ AIM 596 with Static Division technology (SD)
- ▶ KLD 1043 with high-voltage leak detection (HVLD)

## Contact

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