CUSTOMER SUCCESS STORY

Moving towards the future: Automated vision for life sciences

AJ Vaccines

Copenhagen, Denmark

100% accurate vial counting

Regulatory compliance

Scalable digitization

Click here for more information on AJ Vaccines

Key Benefits

1. 100% success rate in vial counting for reliable quality control.
2. Automated data reconciliation enhances production transparency.
3. Retrofit solution avoids costly production line replacements.
4. GxP-compliant-ready system meets life sciences standards.
5. Supports scalable, digitized production processes for the future.

At a glance

AJ Vaccines has implemented a successful proof of concept with OMRON to automate vial counting using advanced vision technology. This solution improves data reconciliation, enhances quality control, and supports regulatory compliance, all while avoiding the need for major production line changes.

With a 100% success rate during testing, the system has demonstrated its reliability and ease of use. Fully aligned with life sciences standards, it helps AJ Vaccines take the next step toward scalable, cost-efficient digitization of their manufacturing processes — paving the way for increased efficiency and transparency in vaccine production.

As an innovative company, we want to be at the forefront of the technological frontier by trying out new, innovative solutions that can increase our high-quality standards even further.

AJ Vaccines implements a prototype of vision-based vial counting

To further strengthen the data reconciliation processes at vaccine manufacturer AJ Vaccines, OMRON has successfully developed and deployed a proof of concept for the automatic counting of vials in AJ Vaccines' production.

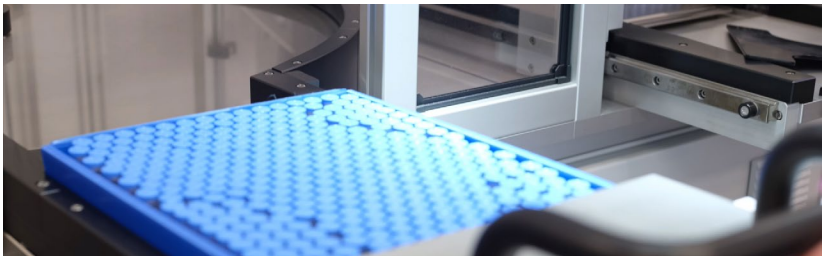
AJ Vaccines develops and manufactures vaccines, diagnostics, and therapeutic solutions and has a close collaboration with both WHO and UNICEF. Established in 2017 following the acquisition of the vaccine division of Statens Serum Institut, the company continues a legacy of over 100 years in vaccine manufacturing. In its headquarters and main production facility in Copenhagen, the company produces vaccines for diseases such as diphtheria, tetanus, pertussis, tuberculosis, and polio.

At AJ Vaccines, data reconciliation is key. Data reconciliation is the process of comparing and verifying data sets from multiple sources. This process is helpful in order to promote transparency and supply chain management, and an essential step in pharmaceutical production to ensure regulatory compliance.

That is one of the main reasons why OMRON and AJ Vaccines have developed and deployed a proof of concept for a vision add-on solution to an existing manufacturing line – a solution that automates the task of manually counting vials in AJ Vaccine's production and thereby makes it easier to reconcile those data with other data in the system.

"As an innovative company, we want to be at the forefront of the technological frontier by trying out new, innovative solutions that can increase our high-quality standards even further," AJ Vaccines comments.

"*Supporting a company like AJ Vaccines, which plays a vital role in global health, is a perfect match with OMRON's core mission of improving lives and contributing to a better society. What could be a more meaningful application of our technology than helping make life-saving vaccines more efficiently and reliably?*" says Sam Tilley, Regional General Manager for the Nordics & Baltics at OMRON.



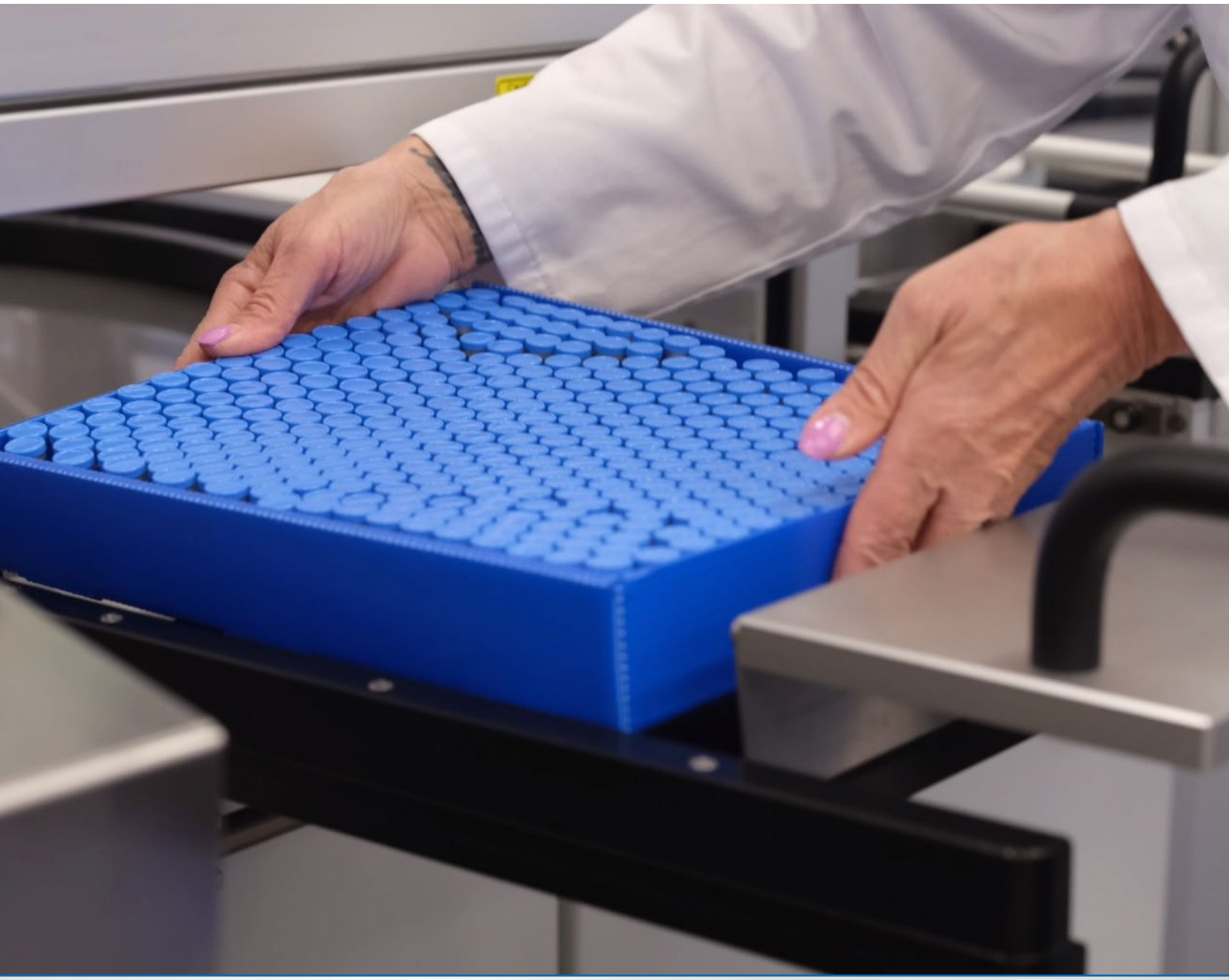
100 percent success rate

The vision equipment from OMRON has been retrofitted onto one of AJ Vaccine's existing manufacturing lines and subsequently tested for a full month to build up the necessary amount of test data. The cell itself consists of an OMRON FH 5552 Controller aided by a megapixel camera and four light bars.

The operator places a box of vials on the machine infeed, after which the camera uses photometric stereo light– i.e. photography at four different degrees of lighting – to enhance the contour of each vial. Using well-documented tools, the system counts and displays each of the identified vials on an HMI for ease of use and simpler validation.

And this, with great success. Based on the initial test period, AJ Vaccine's subsequent quality control showed a 100 per cent success rate when it came to counting the vials.

AJ Vaccines has been very content with this proof of concept that OMRON developed. The test results have proved very promising, and they are keen on exploring further opportunities within this field.



Paving the way for a more digitized production environment

The OMRON FH 5552 controller is GxP-compliant-ready with current life sciences regulations and standards. It also supports AJ Vaccines' ambition to digitize production processes in a cost-efficient and scalable way.

"Around the world, companies within life science and pharma are looking for ways to become more efficient and data transparent without compromising quality. The proof of concept at AJ Vaccines shows that it is indeed possible to develop relatively cost-efficient, retrofitted solutions that can help pave the way for more digitized production processes," Tilley concludes.

About AJ Vaccines
For more information, please visit: https://ajvaccines.com

About OMRON Corporation
OMRON Corporation is a leading automation company with its core competencies in Sensing & Control + Think technology. OMRON is engaged in a wide range of businesses including industrial automation, healthcare, social systems, device & module solutions. Established in 1933, OMRON has about 28,000 employees worldwide, working to provide products and services in more than 130 countries, contributing to the creation of a better society. For more information, please visit http://industrial.omron.eu