

hitmark = robotics

Hitmark Sp. z o.o.

ul. Platynowa 3

05-090 Wypędy

tel +48 22 754 10 13

fax +48 22 754 10 14

nip 123 10 57 785

mail hitmark@hitmark.pl

Serwis +48 604 262 200

www.hitmark.pl



**Palletization Automation
in the Cosmetics Industry**

CASE STUDY

Client: DR Retter EC
Application: Palletization
Robot: Fanuc M-710iC/45M
Implementation: February 2023

Compact... yet efficient

DR Retter EC, with over 25 years of experience in the market, specializes in the production of cosmetics, offering a rich selection of care products with precisely selected ingredients. Their production facility, located in Kołbiel, near Warsaw, is the place where cosmetics that are recognized worldwide are made, available both under the company's brand and made to order. DR Retter EC is distinguished not only by the highest quality of products offered but also by honesty in business relationships and social responsibility, striving to improve the standard of living of consumers and the quality of work of its employees.

Client Challenges

The main challenges that led DR Retter EC to implement robotization of the palletizing process can be summarized in the following points:

- **Safety.** The previous Cartesian palletizer caused damage to products, which also posed a danger to employees.
- **Flexibility of the solution and improvement of production organization.** The palletizer was capable of picking products only from one production line, which forced manual palletization for the remaining production lines by operators supervising the process. This generated production disorganization, thereby limiting current efficiency.
- **Limited space.** The client had very limited space for the realization of the station due to important communication routes in the plant.

Solution

The project was carried out in cooperation with Hitmark, which adapted its technological solutions to the specific requirements of DR Retter EC. In the process, a **Fanuc M-710iC/45M robot equipped with a two-section vacuum gripper** was used, which allowed for the effective automation of the palletizing task for products from two to three possible production lines simultaneously. The project also included creating efficient operating logic for the station, implementing the DCS (Dual Check Safety) system, and installing protections from a renowned manufacturer, ensuring safe working conditions even in very limited space.

"I highly, highly recommend Hitmark as a reliable supplier of palletizing systems."

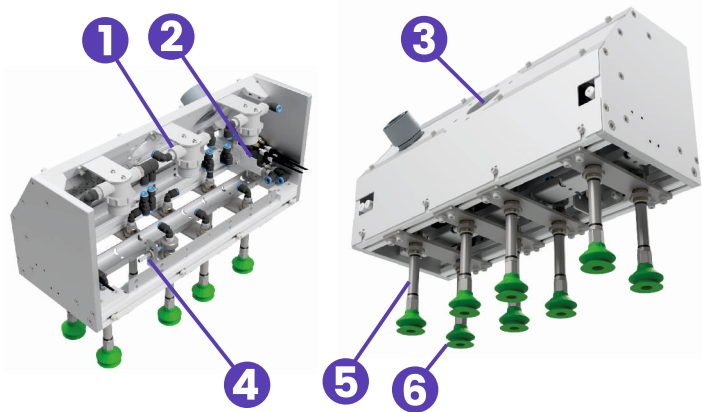
Włodysław Retter



Technical parameters:

Efficiency:	Up to 18 cartons/min
Maximum product weight:	Up to 20 kg
Application of interlayers:	Yes
Number of serviced lines:	3
Type of pallets handled:	1200 x 800 mm
Footprint of the station:	≈ 15 m ²

Construction of gripper



1. Air filter
2. Ejector
3. Gripper mounting to the robot flange
4. Inductive sensor
5. Gripper height compensation
6. Suction cup

Results

The implementation of the robotized palletization system brought DR Retter EC a series of benefits:

- The implemented application is **completely safe** thanks to the use of the best available components and European safety standards,
- **Improvement of production organization** (automatic solution for up to 3 production lines),
- **Increase in palletizing efficiency by 200%** (from 6 to 18 cartons per minute),
- **Raising employees' competencies** through training.

Conclusions

The palletization automation project at DR Retter EC proved that investment in modern robotic technologies can significantly contribute to increasing efficiency, safety, and innovation in the cosmetics industry, even in very limited space.

Implementation

The implementation of the robotized palletizing station required a detailed analysis of the production space and customization of non-standard robot arm motion paths to avoid collisions with hall elements. The station was designed and constructed in a completely safe manner (meeting all the most important EU safety directives and standards). The entire project lasted only 6 months, and the final stage - **implementation at the Client's site took 2 weeks**. The station occupies an area of only **2.5m x 6m**.