

## High Flexibility Instead of Capital Expenditure

# Packaging as a Service (PaaS) by GREIF-VELOX

In times of rising costs, increasing automation, and a growing shortage of skilled labor, companies in the processing and packaging industry face the challenge of making their production processes and machine availability more flexible, plannable, and efficient.

A solution that has proven effective in the software industry is now gaining traction in industrial applications: “as a Service” – the provision of technologies and services without extensive initial investments.

## Comprehensive End-to-End Solution for Powder Bagging

GREIF-VELOX has transferred this principle into a practical, holistic model specifically designed for the industrial bagging of ultra-lightweight powders. The new Packaging as a Service (PaaS) model combines machine provision, financing, maintenance, consumables (e.g., paper bags), as well as spare and wear parts – all bundled into a fixed monthly rate. The result is a complete end-to-end solution that goes beyond traditional industry offerings.

The goal is to significantly relieve customers while improving planning reliability, efficiency, and supply security. The model will also be expanded in the future to include other equipment types, such as the A-DOS-P1 liquid filler and the BVP gross pneumatic packer.

## 1. The GREIF-VELOX PaaS Approach

### From Machine Purchase to Integrated Solution

While existing Packaging-as-a-Service models often focus on simple cardboard packaging or reusable containers, GREIF-VELOX takes it a step further: its model includes complex bagging systems for ultra-lightweight powders – complete with all relevant components. Customers receive a well-rounded package at a fixed monthly price.

“Many companies today are looking for ways to make costs more flexible, avoid large investments, and secure equipment availability,” says Sebastian Pohl, Managing Director at GREIF-VELOX. “That’s exactly where our PaaS model comes in: it turns large upfront investments into plannable monthly costs – and also relieves our customers of the burden

of maintenance, spare parts, and consumables. This gives them more freedom to focus on what matters most: their core business.”

The GREIF-VELOX PaaS model transforms the entire packaging process into a true end-to-end solution. Tasks that were previously distributed among various service providers – from financing and maintenance to material procurement – are now centrally managed and coordinated.

## **2. Operational Advantages for Industry**

### **Avoid CAPEX, Protect Budgets**

With the PaaS model, large upfront investments (CAPEX) are no longer necessary. This reduces capital commitment and makes budget planning significantly easier. At the end of the contract period, customers have the option to purchase the machine – enabling long-term investments if desired.

### **Planning Reliability Through Fixed Prices**

Customers benefit from a flexible and predictable cost structure: all relevant services – from machine provision and maintenance to spare parts and materials – are bundled into a single monthly fee. This not only provides transparency and predictability but also relieves internal resources and allows companies to focus on their core operations.

### **Reduced Operational Effort**

Customers no longer need to independently procure spare parts or consumables. GREIF-VELOX handles all services – from installation and regular maintenance to ongoing material supply – significantly reducing operating expenses and downtime.

### **Measurable Efficiency and Cost Benefits**

Companies benefit from considerable savings across the entire process chain – thanks to a seamless combination of technical and service-based components:

- Up to 40 % reduction in paper bag consumption
- Up to 75 % lower storage and logistics costs
- Improved product protection
- Increased OEE (Overall Equipment Effectiveness)
- Higher brand reputation through clean, intact packaging

These advantages make PaaS not just a service model, but a strategic lever for increasing efficiency and optimizing packaging costs.

### **3. Technological Core: VeloVac and SAFEDyVac – Efficient, Reliable, and Process-Stable**

#### **VeloVac – Dust-Free Vacuum Bagging**

The VeloVac technology from GREIF-VELOX is specifically designed to meet the challenges of bagging ultra-lightweight powders such as carbon black, silica, pesticides, or pigments. These powders are characterized by extremely fine particles (60–110 nanometers), low bulk density, and high air retention – making them difficult to handle with conventional systems. Issues like dust emissions, leakage, and inefficient compaction often lead to material loss, high cleaning and logistics costs, and risks to workers.

VeloVac solves these problems through a fully sealed vacuum chamber process:

- Product is drawn directly into a valve bag using negative pressure.
- No dust emissions occur, as filling is done without mechanical compression or pre-compaction.
- An integrated detection system identifies leaking bags during the process and halts filling before material escapes.
- Excess particles are automatically extracted and returned to the process.

Additional features like ultrasonic sealing (ValvoSeal) ensure clean packaging free of residue on bags and pallets – a decisive factor for industries with stringent cleanliness requirements, such as battery production.

The measurable benefits include:

- Fourfold product compaction (from 30 to 120 g/l)
- Up to 75 % reduction in storage and transport costs
- Over 50 % fewer containers required
- Lower CO<sub>2</sub> emissions during storage and shipping
- Up to 2.5x faster filling compared to conventional systems

## **SAFEDyVac – The Ideal Bagging Solution by dy-pack**

In close cooperation with paper bag manufacturer dy-pack Verpackungen Gustav Dyckerhoff GmbH, GREIF-VELOX developed SAFEDyVac – a bag solution precisely tailored to the vacuum process. As machine and packaging must work in harmony, SAFEDyVac is a critical component for optimal results.

SAFEDyVac is available in three variants:

- ECO: sustainable, fully recyclable
- Advanced: for standard industrial use with enhanced protection
- Professional: with optimal moisture barrier, dangerous goods approval, and special venting for industries like battery production

Key benefits of SAFEDyVac include:

- Dust-free filling and palletizing
- Shape-stable, optimally compacted bags with clean pallet appearance
- Fewer abrasion-related defects thanks to bag-to-product alignment
- Better product protection and fewer damages
- Lower inventory and safety stock requirements through demand-driven supply

Standardized formats shorten development cycles for new applications by up to 50 %. Consistent results, validated packaging performance, and the use of stocked products ensure both speed and cost efficiency.

Combined with VeloVac, this creates powerful synergies:

- Maximum efficiency from a fully harmonized system
- High product safety via compacted, stable packaging
- Up to 40 % less material usage and logistics cost
- Lower carbon footprint thanks to optimized container utilization
- Improved production planning through digital integration and increased OEE

## **4. Remote Service and Supply Security**

### **Remote Support with VeloXpert**

The VeloXpert service package ensures fast diagnostics and targeted support via secure remote connections – regardless of plant location. This enables efficient remote maintenance and minimizes downtime.

### **Reliable Supply Through Inventory Management**

In addition to remote support, GREIF-VELOX offers consignment stock setups for spare and wear parts – filled based on demand and regularly reviewed. This ensures stable supply chains and maximum machine uptime.

Material supply for consumables and paper bags is also precisely aligned with actual usage. Together with dy-pack, GREIF-VELOX applies a data-driven logistics concept based on operational insights and continuous analysis. Replenishment is proactive, automated, and aligned with customer workflows – cutting storage costs and ensuring reliable production planning.

## **5. Strong PaaS Partnerships for System Stability**

### **Defined Roles, Seamless Execution**

The PaaS process is clearly structured: GREIF-VELOX delivers the packaging system, manages installation, commissioning, remote service, and ongoing supply. Siemens Financial Services acts as financing partner, while dy-pack ensures tailored delivery of paper bags. Additional services are billed as needed.

## **6. Three Tailored PaaS Packages**

The GREIF-VELOX PaaS model is modular and adaptable to specific customer needs:

- **Total Care:** Includes financing, service, bags, spare and wear parts
- **Essential Care:** Service, bags, spare and wear parts without financing
- **Individual Care:** Custom combinations of available services

This allows companies of all sizes to assemble a package that fits their operational and financial requirements.

## Conclusion

With its PaaS model for ultra-light powder bagging, GREIF-VELOX offers a reliable and forward-looking solution to the industry's most pressing challenges. The model combines reduced investment costs, full cost control, supply security, and cutting-edge technology in one integrated system. Thanks to a modular structure and strong partners like Siemens Financial Services and dy-pack, customers can stay focused on what matters most: their core business.

