INDIVION & PHARYS

PACKAGING OF SOLID ORAL MEDICATIONS

In personalized strip pouches, accurately and reliably.
At high speed, with high quality and cost-efficiency.

"VMI...
technology meets success.

VMI is a world leader in production automation, with specialized business lines and a strong reputation for the Tire, Care Pharma, Rubber and Can sectors. With 1800 highly skilled personnel around the world, almost 15% dedicated to original research, VMI uses innovation to help its customers gain competitive advantage in their industries.

VMI solutions are engineered to meet exact customer requirements, and are customized to the unique operating needs of each individual business. VMI's team of experts work with customers to fine tune advanced technologies to provide the right solutions for today, with a clear development path to the future.

VMI machines are produced in state-of-the-art manufacturing and services facilities in the Netherlands, Germany, Brazil, Poland and China. With service support that is both local, with centers in the USA, Malaysia and Thailand, and global, with the same high standards everywhere, VMI is always there, ready to assure you continued success.

TIRE   **RUBBER**   **CAN**   **SERVICES**   **CARE**

A NEW DIRECTION IN AUTOMATED MEDICINES PACKAGING

A changing market

The pharmacy marketplace is being transformed by a combination of factors: aging populations, growing numbers of patients with multiple chronic diseases, together with pressure on health budgets and the emergence of new technologies that enable personalized treatments.

To effectively manage budgets and address these challenges, pharmacies must centralize and integrate their operations. Most importantly, pharmacies must automate key dispensing processes to minimize human error, reduce staff involvement in repetitive tasks, and free up qualified personnel to focus on higher-value activities.

As a result, the market is shifting towards personalized compliance packaging, which improves medication adherence, contributes to better patient health, and supports operational efficiency of the pharmacy. The VMI INDIVION offers the ultimate solution for compliance packaging in pouches, resulting in improved patient outcomes and reduced healthcare cost.

To maximize the value of automation, it is crucial to choose a trusted partner with the right technology and expertise. VMI products service more than 200,000 patients daily world-wide.
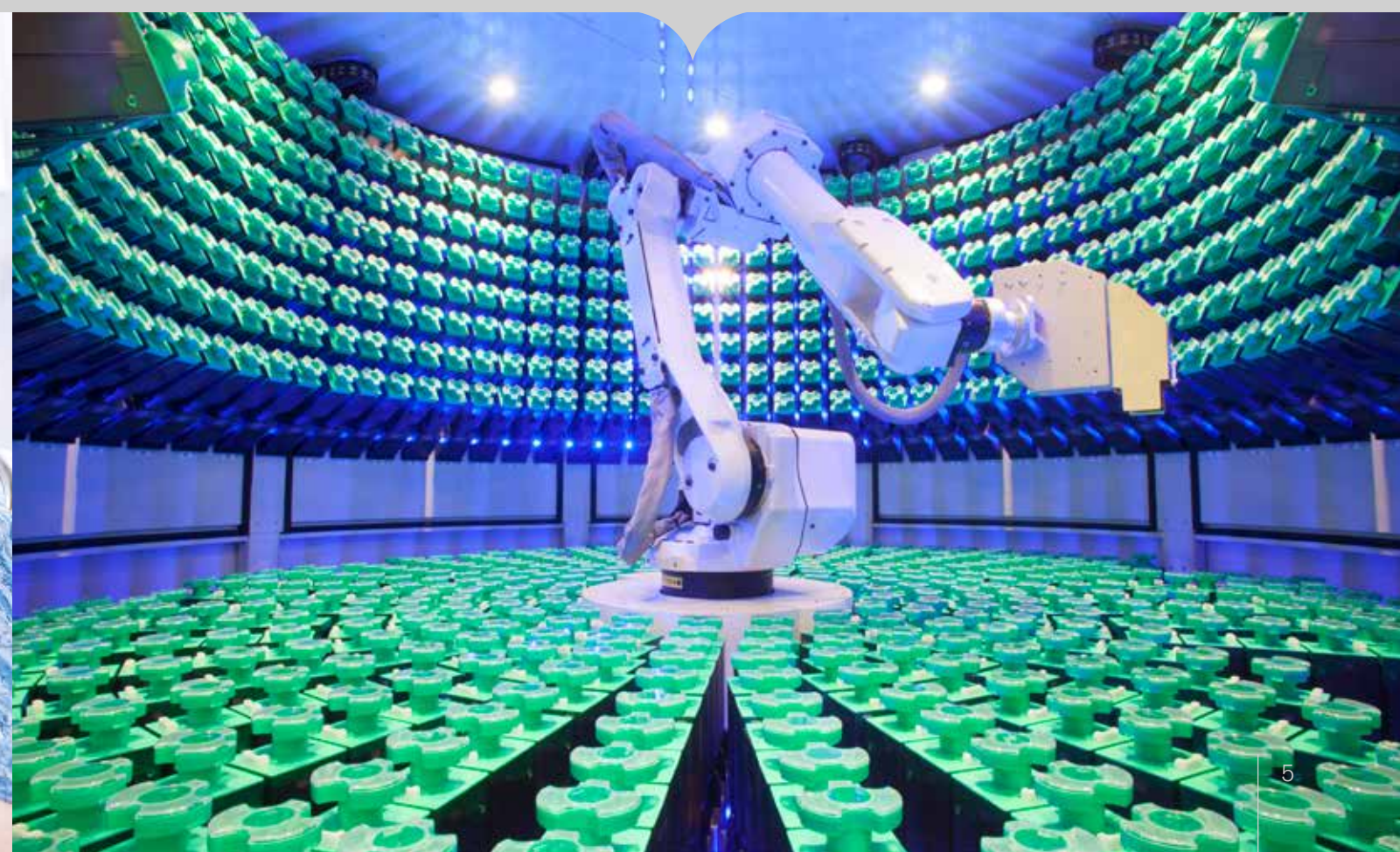The highly qualified team of VMI with more than 20 years of experience in pharmacy automation, is the partner to consider!

" VMI's Expertise in Industrial Production Machinery.

VMI Care Pharma has extensive experience in machine-based pouch packaging in the global pharmacy market. With its technical expertise, solid economic foundation, and global reach, VMI is a reliable long-term partner. VMI's INDIVION/PHARYS solution is a logical choice for pharmacies.

VMI has an 80-year history of delivering quality, service, and innovation. VMI has become a world leader in smart machines and automation, with extensive experience in developing and manufacturing industrial production machines. VMI's expertise spans various industries, including tire, can, hygiene, and care. With over 15% of our staff dedicated to R&D, VMI holds many patents in areas such as computer vision systems, automated handling, and emerging AI.

POUCH PACKAGING GOES INDUSTRIAL

INDIVION KEY FEATURES

"**VMI's innovative approach revolutionizes high volume pouch packaging and directly addresses the challenges of today.**

In recent decades, pouch packaging has evolved from manual repacking to large-scale automation in central-fill and mail order pharmacies. VMI responded to this shift by developing the INDIVION machine for large-scale pouch packaging and PHARYS, a system to manage and control the entire process. It

was designed in collaboration with leading pharmacists from the world's largest central fill pharmacies, ensuring it meets the needs of the industry.

After thorough testing in several countries, INDIVION is now the new standard in accuracy, speed, and cost-efficiency.

- **Highest Reliability and Availability**
  - Designed for 24/7 production
  - Canisters and plates can be changed without stopping the machine
  - Easy service & maintenance
- **Exceptional Quality**
  - An industrial food-grade robot manages canisters within the INDIVION
  - 99.97% average dispensing accuracy resulting in 3x less pouch repairs
  - Maximum speed of over 10.000 pouches/hour
- **Minimized Cross-Contamination**
  - Short drop distance of tablets < 22cm (8.6 inches)
  - Patented hopper design
  - Continuous internal air filtration
  - Continuous monitoring of dust accumulation
  - Less contact points between canister and pouch
  - Easy access and process for cleaning
- **Lowest FTE**
  - Less pouch repairs
  - Less operators needed, resulting in lowest cost per pouch
  - Operators receive direct commands from the PHARYS control software

TECHNICAL DATA

Dimensions (LxWxH)	4.47 x 2.87 x 2.7 m (14.67 x 9.42 x 8.86 ft)
Weight	Approx. 5.000 kg (11.023 lbs)
	(on 17 adjustable machine feet)
Speed (pouches/hr)	Unit-dose ~ 10.000
	Multi-dose (@3.4 tablets/pouch) ~ 6.500
Avg. dispensing accuracy	99.97% per tablet
Number of canisters in INDIVION	1.069
Number of plates in INDIVION	5
Canister dimensions and volume	320 x 92 x 75 mm ~700cc
	or (12.6 x 3.62 x 2.95 in ~ 42.7 in³)
Color	RAL 7035 grey
Supply voltage	400 Vac/3-ph+PE/50 Hz
	or 460 Vac/3-ph+PE/60 Hz
Total installed power	5 kVA / 6.7 hp
Air pressure/consumption	6 Bar - 2 Nl/min

PHARYS

Optimizing the Pouch Packaging Process

VMI Care helps pharmacies improve their operations and prepare for the future by means of automation and process control technologies that enhance patient safety and efficiency, reduce costs and provide measurable return on investment.

While the VMI INDIVION is a key component for an Automated Pouch Packaging Pharmacy, the VMI PHARYS, our multi-level software platform controls the entire pouch packaging operation. VMI PHARYS fully supports central fill pharmacies, hospitals and mail-order pharmacies by encompassing the entire production process from receipt of prescriptions (patient orders) to dispatch of the patient rolls.

As a new generation, AI & ML (Artificial Intelligence & Machine Learning) enabled management application, PHARYS offers easy integration with standalone apps and operational technology orchestration platforms, providing a competitive advantage today and into the future.
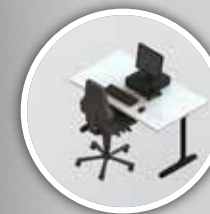
PHARYS Operations

PHARYS Operations oversee the entire dose dispensing process, handling patient and medication data either directly or via supported formats like XML and flat-file. It interfaces with PMR systems and controls multiple INDIVIONs, Plate Fill Stations, Pouch verification equipment and Correction Stations.

PHARYS is user-friendly and guides operators step-by-step, reducing errors and training time for temporary staff. Operators simply execute tasks indicated by the system, ensuring:

- Error-free deliveries
- Acceptance of last-minute orders
- Reliable deliveries and traceability
- Optimal equipment use

Its waiting list feature allows for flexible order management, including holding and resuming order sequences.

PHARYS Process Flow

Plan
Production planning is based on electronic orders and Customer Service Level Agreements. PHARYS automatically links the correct pouch layout to each customer, with flexible automated production planning managed by the PHARYS Management Station.

Prepare
The Fill Station module guides operators in refilling based on PHARYS Management Station orders, generating replenishment lists when stock is low. To ensure efficient production, medicines are pre-filled in canisters and plates. Standard canisters handle common medicines, while special plates are used for rare or uniquely shaped medicines.
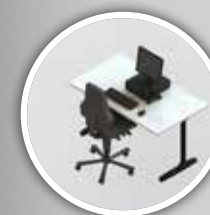
Produce
PHARYS minimizes errors in deblistering, medicine picking and filling through barcode scanning, enhancing patient safety. This automated process has proven effective in pharmacies around the world.

Inspect
Pouch verification machines check the contents of each medicine pouch against prescriptions. Visual Inspection software provides reasons for rejection, helping operators to determine the validity of rejections. Images of individual pouches are stored for easy retrieval.

Correct
During inspection, rejection reasons are added to pouches. The Correction Station guides operators to avoid mistakes, tracking batch numbers and expiry dates for full traceability.

Tracking and Tracing
All vital data, such as batch and lot numbers, expiry dates and other relevant information should be accurately registered during the deblistering process by the dispensary. This is a key requirement for full traceability of every individually dose-dispensed medicine throughout the entire process, ensuring:

- Compliance with the EU Directive 2011/62/EC, the Falsified Medicines Directive
- Efficient handling of medicine recalls

PHARYS makes this information easily accessible, at all times.

Reporting
The report function in PHARYS offers a wide range of statistical functions, enabling data to be translated into actionable information. Reports can be created using standard templates or fully customized to meet specific needs, and can also be generated in PDF format for easy sharing and viewing with standard browsers. PHARYS reports can be generated manually or automatically at pre-defined intervals or based on specific events.

FLEXIBILITY AND SCALABILITY OF PHARYS

Scalability

PHARYS supports management and control of large-scale pouch packaging operations with multiple INDIVIONs and management stations. This highly scalable system allows for connection of several INDIVIONs, plate fill, deblister, correction and management stations to one central database. It has the capability to easily support 10 or more INDIVIONs, serving a population of 200,000 patients, without compromising performance or reliability.

System Integration

PHARYS easily integrates with existing business applications and Pharmacy Information Systems. It uses industry standards such as XML, FHIR and national PMR systems for data interchange with third-party products and databases.

Logistics Support

PHARYS indicates the stock location of required medicines, allowing for organized and error-free warehouse management. The nearest sub-warehouse can be set for each work station, and location codes can be used instead of medicine names. This enables storage of medicines in a non-alphabetic order, reducing picking errors and improving patient safety.

Customized Pouch Layout

The pouch layout can be customized using an easy-to-use drag-and-drop function. Users can adapt label design to their specific needs, including vertical and horizontal lettering, variable fonts and sizes, pictures, logos, icons, barcodes, and more.

Secure Access to Assets

PHARYS assigns user privileges and logs actions, ensuring only authorized personnel can perform certain tasks.
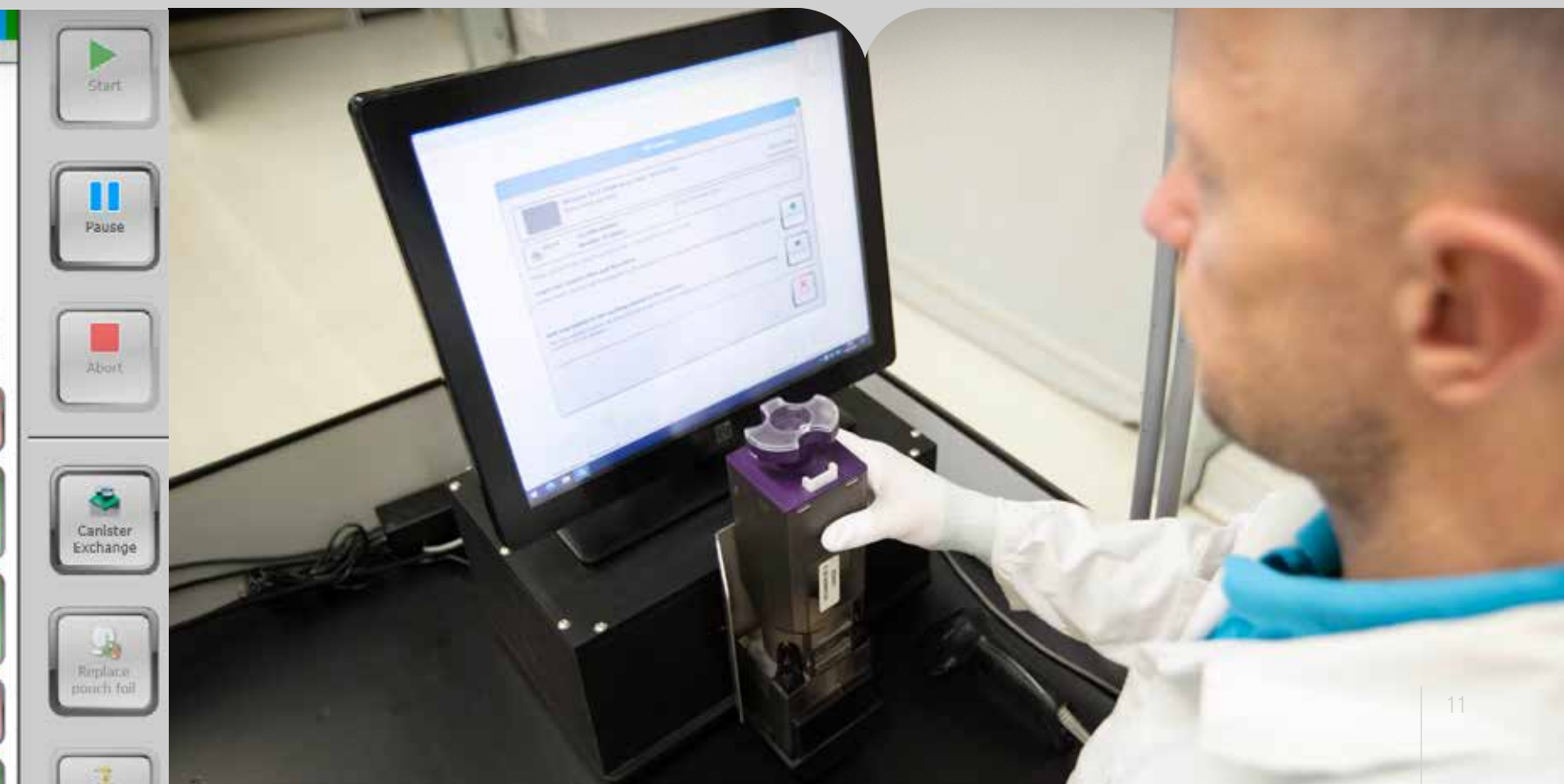
Regulatory Compliance

PHARYS complies with GAMP regulations and aligns with the latest Pouch Packaging guidelines, providing a complete electronic audit trail.
Optional PHARYS Features available:
- PHARYS Quality Control: Performs Falsified Medicines Directive checks and updates EMVS status.
- PHARYS Patient Management: Centralizes patient and medication information, ideal for nursing homes.

CONSUMABLES

VMI's consumables, CERTAFOIL and CERTARIBBON, are designed to keep the production process running smoothly and efficiently. With foil rolls of 610 meters, changeovers are minimized, contributing to higher productivity.

The white side of VMI foil provides a perfect background for clear readability, similar to traditional labels, while the transparent side is ideal for inspection machines.

VMI's CERTAFOIL and CERTARIBBON offer an excellent balance between price, quality, and non-permeability of moisture and oxygen. Our foil is suitable for various packaging cycles, from 7 days up to 3 months. The foil is designed with safety in mind: child-resistant, yet easy to open for the elderly.

At VMI Care, we develop our consumables in-house, ensuring product quality and compatibility.

Our suppliers are located on several continents, providing rapid delivery, and the necessary flexibility in case of unforeseen circumstances. Additionally, all materials come with a Declaration of Conformity, compliant with GMP requirements, ensuring they are safe for use in pouch packaging.

VMI Services
"Gaining maximum value from your investment.

In the pharmacy sector, VMI's commitment to delivering reliable, high-quality solutions is especially important, as it directly impacts patient care and safety. VMI delivers the right level of support through:

Immediate Self-Support
VMI's modular solutions enable customers to quickly and easily troubleshoot and resolve issues, with minimal downtime and cost, using guided self-support methodology.

Helpdesk and Maintenance
VMI's Helpdesk is always available to provide high-quality, rapid on-site support, 24 hours a day, 7 days a week, ensuring that you receive the help you need, when you need it. They collaborate with you to schedule maintenance and minimize downtime, with regular equipment checks, personalized recommendations, and a comprehensive service package that includes overhauls, upgrades, and integration with new machines.

Remote Support
VMI provides remote support to minimize production downtime, ensuring continuous operation.

GROUP

09 / 2024