PHARYS OPERATIONS MANAGEMENT

AUTOMATED POUCH PACKING PROCESS & PRODUCTION INTELLIGENCE

All over the world, Automated Pouch Packing Pharmacies are under enormous pressure to perform an ever-increasing amount of work with fewer employees against lower costs. This situation is further emphasized by the fact that regulations are becoming more and more complex and strict.

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 measureable return on investments.

While the VMI INDIVION is a key component for an Automated Pouch Packing Pharmacy, the real genius behind all this is VMI PHARYS. VMI PHARYS is our multi-level software platform that fully supports central fill pharmacies, hospitals and retail pharmacies with the production of pouch rolls, or so called individual medication rolls. It encompasses the entire production process from receipt of your prescriptions (patient orders) to dispatch.

PHARYS is "the brain" of your Automated Pouch Packing configuration, managing and guiding Automated Packing processes. PHARYS enables pharmacies to experience more streamlined operations for automated unit-dose or multi-dose packing, workflow efficiency, pouch verification and pouch corrections. PHARYS is built on an integrated platform from which multiple operations can be performed at the same time. The system is scalable and is designed to expand as your pharmacy grows.

Pharys features

Workflow control for the total order process in one program and one database for all data	Detailed production reports incl. report scheduling
At a glance workflow	Real-time, on-screen order status
Managing orders and repeat Rx's	Order Tracking and tracing
Medicine Assortment Management	Tracking and tracing of all user operations
Customer delivery agreement (between pharmacy and end-customer)	Barcode validation (incl. 2D matrix codes)
Import of national drug databases	The use of load balancing through the whole factory
Deblister Management ▪ Protocol management ▪ Automatic replenishment ▪ Operator guidance	Manage and create various print formats for the pouches by means of a user-friendly interface
Advanced medicine substitution	Operator guidance ▪ Wizards for complex tasks
(Automatic) Production Planning	Software is G(a)MP compliant
Automatic Load Balancing	Automatic Prioritization

PHARYS Operations Management

PHARYS Operations Management plans, controls and supervises the entire dose dispensing process. It offers extensive functionality for processing patient and medication data, either directly entered into PHARYS and/or uploaded from supported data formats such as XML, flat-file, HL7 etc. or sophisticated interfaces with a PMR system.

From a single database, it is possible to control multiple INDIVIONs. PHARYS is also able to control and monitor other devices such as Plate Fill Station, Pouch verification equipment, Correction Stations, etc.

PHARYS is intuitive and very easy to work with. Our solution guides your operators step by step through the execution of their tasks, which they will manage faster and without errors. As our software is easy to use, you can easily reinforce your teams with temporary staff, who will be up and running in no time. Your operators do not have to make business decisions or remember customer agreements; they simply need to execute the tasks indicated.

You will have full control and visibility of all operations providing the following benefits:
- Error-free deliveries
- Ability to accept 'last minute' orders
- Reliable deliveries and traceability
- Optimal use of installed equipment

With its waiting list feature, PHARYS is highly flexible and gives the operator the option to make new orders, put them on hold, break up an order sequence and to continue where he left off.

Pharys Workstation and Installation

The PHARYS software runs on PC workstations with Windows 10 Professional Edition 64-bit Operating System (O/S).

Pre-installed software

The PHARYS system is pre-tested with both the hardware configuration and the O/S configuration, so you can be sure that the PHARYS system will operate correctly.

Choose between PCs and servers to optimize your cost/performance

Depending on the size of your installed operation, you can choose between PCs and servers for best cost/performance.

Plan
Planning of production is based on the electronically received orders and the Service Level Agreements with a specific customer. PHARYS makes sure that, for instance, the correct pouch layout is linked automatically to the specific customer. Production planning is a highly flexible automated process and is taken care of by the PHARYS Management Station.
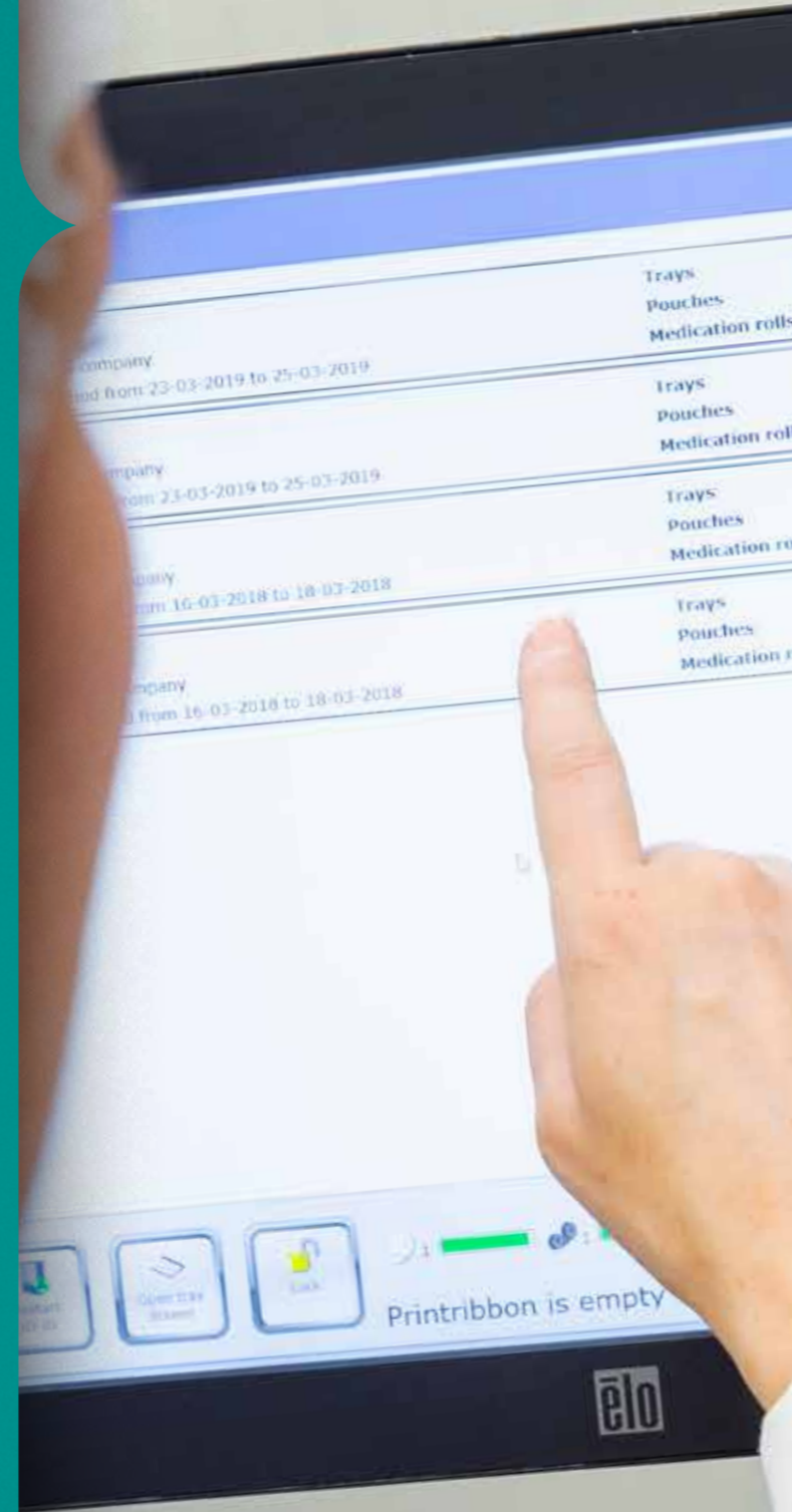
Prepare
In order to ensure a smooth and efficient production, the filling of medicines in canisters and plates is prepared in advance. Most of the medicines (fast runners) are automatically dispensed by means of standard canisters. However, rarely used medicines or medicines with a special shape, such as half tablets or quarter tablets, are supplied to the machine in a special plate.

The Fill Station module guides the operator with (re)filling of the canisters, deblister containers and plates, based on orders from the PHARYS Management Station. When, after releasing an order to production, no or not enough stock is detected in the dispenser, an order list to replenish stock is automatically generated.

Produce
PHARYS guides operators on-screen with their workflow, virtually eliminating errors in deblistering, medicine picking and filling canisters and plates and pouch corrections. VMI Care has automated the process of medication dispensing through the use of barcodes which is key to improving patient safety, as has been proven in pharmacies throughout Europe. The PHARYS barcode scanning solution is a seamless automated process that can make your business more productive, more efficient and improves patient

safety considerably.

Inspect
Pouch verification machines or other high volume pouch checking devices automatically check the content of every single medicine pouch and compares it against the prescription. The user-friendly Visual Inspection software gives the operator useful information such as the reasons for rejection by the checking device. Approved pouch packs (or batches) are ready for further processing and are send to dispatch. Rejected pouch packs are marked for further analysis. Here the operator decides if the rejected pouches contain real errors or not and provides a reason for rejection or approval. The PHARYS software supports the operator with several smart features in order to help them with this important task.

The Visual Inspection software shows the missing, surplus, damaged and incorrect medication per batch, per patient and per pouch. All images of the individual pouches are permanently stored in a central database for easy retrieval when needed, by for example, your customer or your patient.

Correct
During the inspection process, the rejection reason is added to the pouch. The Correction Station guides the operator so no mistakes are made when correcting the pouches. The pouches, as well as the medicines that need to be replaced, are scanned and registered in order to keep track of batch number and expiry date.

Tracking and Tracing
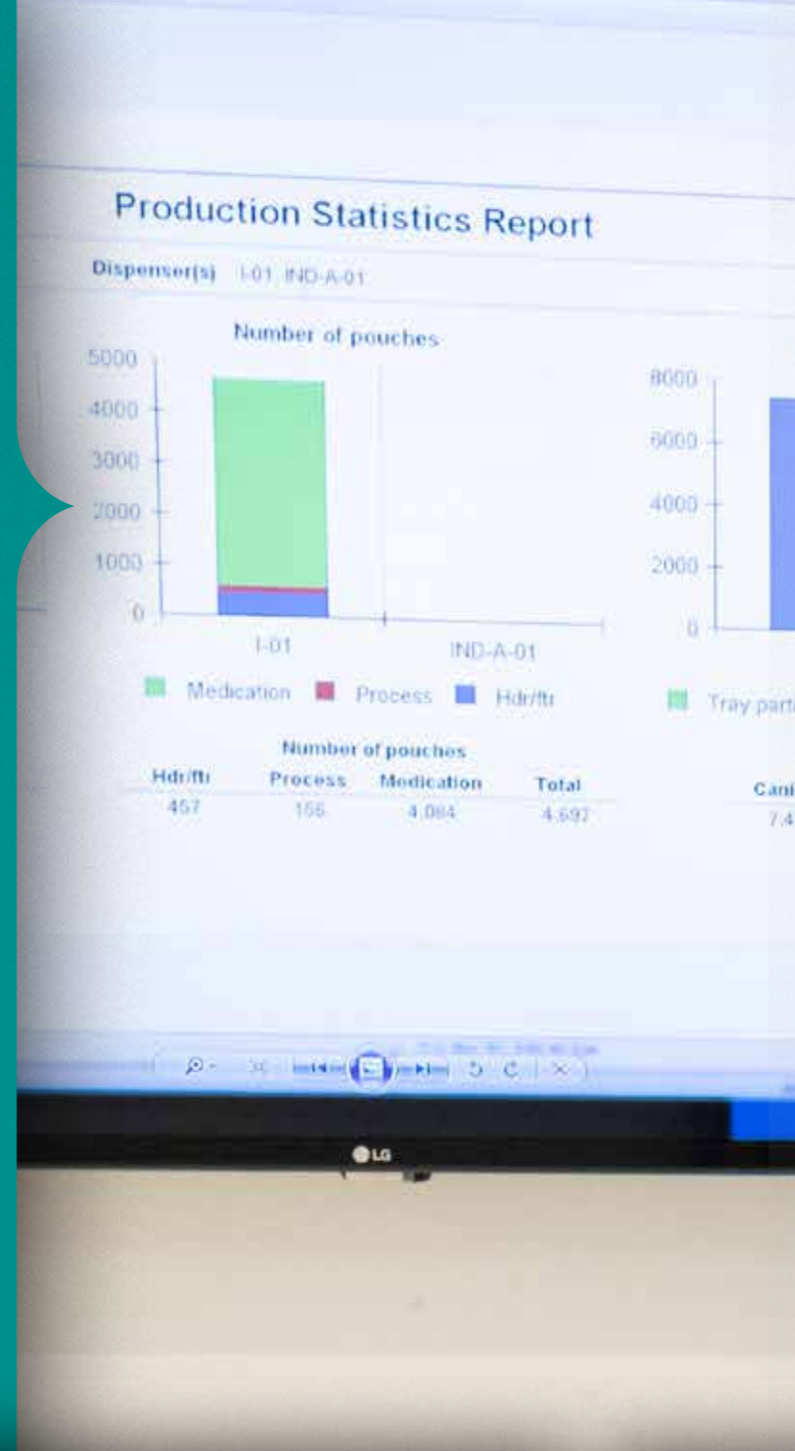
All vital data, such as batch and lot numbers, expiry dates, etc should be adequately registered during the deblistering process by the dispensary. This is of crucial importance to ensure full traceability of every individually dose-dispensed medicine throughout the entire process for the following reasons:

- EU Directive 2011/62/EC, the Falsified Medicines Directive.
- A medicine recall.

This information is accessible in PHARYS.

Reporting

The report function in PHARYS provides a broad scope of statistical functions to allow data to be translated into meaningful information. Reports can be created based on standard available templates or can be fully customized. The reports can be generated as PDF for easy representation and sharing with standard browsers. PHARYS reports are generated either manually or automatically at pre-defined intervals or based on an event type.

Flexibility

Scalability

PHARYS supports management and control of multiple dispensing machines, plate fill, deblister, correction and management stations, making it possible to connect multiple dispensing machines and/or pouch inspection machines to one central database. The highly scalable system has been proven to successfully connect up to twenty dispensing machines to one system.
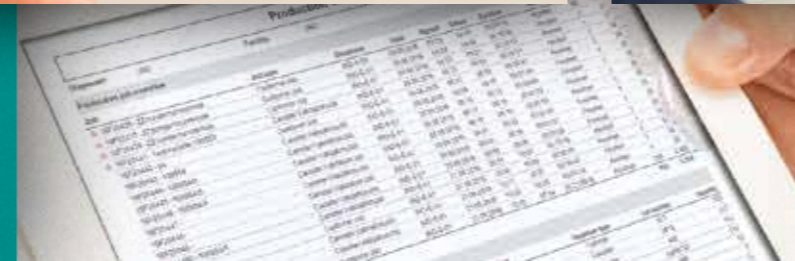
System integration

PHARYS easily integrates with your existing business applications and Pharmacy Information System. PHARYS uses industry (embedded) standards such as XML, FHIR (HL7) as well as several national PMR systems for data interchange to third party products and databases.

Logistics support

PHARYS indicates the stock location of required medicines. The nearest sub-warehouse can be set for each work station. Using location codes instead of medicine names, allows you to organize your warehouse in any order you like. This allows you to store your medicines in a non-alphabetic order leading to less picking errors and improved patient safety.

Customized pouch layout

You can customize the pouch layout by means of 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 etc.

Secure Access to Assets

Authorized access

All privileges for each type of user are specified in the user profiles. By registering which operator is logged on, the software logs what actions have been taken by which operators. Furthermore, some actions can only be executed by authorized personnel which is determined in the security settings.

Remote Guidance by specialists

Production downtime in your pharmacy is not an option. Although VMI's technology is highly reliable, unexpected problems can occur. From our regional support centers, we are able to support you in your time zone, making sure any downtime is reduced to an absolute minimum and that your machines continue to operate according to your requirements.

Regulatory compliance

For the development of PHARYS, GAMP regulations have been taken into account. Documentation is available in order to help you smoothly pass your validation process.

Additionally, PHARYS aligns with the latest Pouch Packing guidelines and Global Supply (GS1) providing a complete electronic audit trail of all prepared doses.

PHARYS

Your pharmacy in good hands

Pouch packing process and production intelligence is all about combining operations data from your installed assets into actionable information. Information that provides the right insights to improve the decision-making process for pharmacists and operational managers in order to plan, optimize and continuously improve operations, to stay competitive in a rapidly changing environment. PHARYS is not simply a product, but a proven strategy for building a digital Pharmacy architecture that can optimize plant performance.

Other PHARYS modules available:

- **PHARYS Quality Control**
  PHARYS Quality Control is designed to perform Falsified Medicines Directive checks on medicine packages. PHARYS Quality Control will verify with European Medicine Verification Systems (EMVS) that the package is valid (or not) and then update the status of that specific package with EMVS.

- **PHARYS Patient Management**
  PHARYS Patient Management centralizes and registers patient and medication information. A list of patients can be managed for e.g. nursing homes. Patient data includes patient number/identification, name, room number, bed and date of birth.

VMI Care Integrated Pouch Packing Solutions

VMI Care is one of the leading companies for medicine dispensing equipment, serving ~200.000 patients on a daily basis. With the INDIVION and PHARYS, VMI Care can provide an integrated Automated Pouch Packing system for any type and any size of pharmacy.

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