

VA INDIGO

VA PROCESSMASTER

Process control in large-area coating is usually a non-automated task. It requires permanent monitoring of online measurements by human operators to detect deviations from a given reference spectrum. Such deviations result from different sources.

Typically, the operator must decide which process parameters need to be adjusted. Therefore, the operator's experience is crucial for achieving fast results. Closed loop control is available for individual layers in the coating stack, but not yet for full stacks.

Now, VON ARDENNE offers a new system relying on the optical information that is already available in the form of spectral measurements.

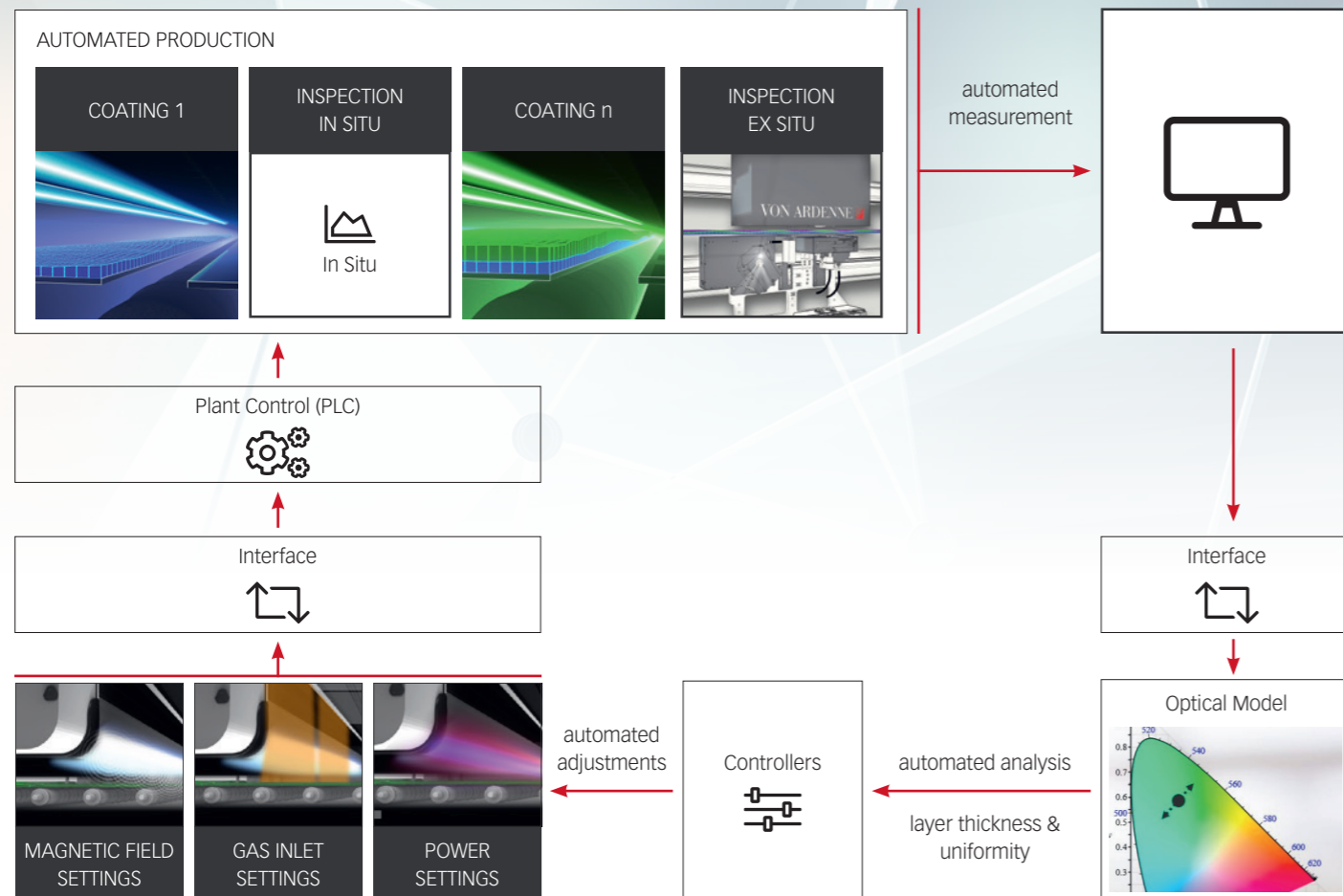
The **VA PROCESSMASTER** is the ideal solution for automated process setting and control for all layer systems. It follows a novel approach in process control and leads to best results without operator interaction. It also allows for a fully-automated stabilization of the sputtering process and improves product quality.

This tool enables our customers to create complex and attractive product recipes. It also helps them increase the uptime of their coating equipment, as it enables a faster adjustment to a new recipe.

ALGORITHM

The **VA PROCESSMASTER** is based on an innovative, newly developed control algorithm that connects available optical information to control plasma power, gas flow and magnet bar settings. This algorithm can be applied to various other input and output parameters that are available in real-time and whose correlation with the machine settings follows predictable rules.

The algorithm ensures a predictable and repeatable action when process deviations occur. This allows our customers to control their product within the smallest possible window of specification, avoid productivity losses due to false interpretation of process changes and minimize human error.



FEATURES

- Defined and predictable**
 - Process correction follows best-practice algorithm, not individual operator experience
- Permanent action and 24/7 operation**
 - Process deviations minimized instead of waiting for threshold violation
 - No „sawtooth“ curves upon startup
- Full overview**
 - Simultaneous control of all magnetrons
 - Simultaneous mean value control of layer thickness and uniformity
- Glass thickness compensation**
 - Flexibility for using different substrates

BENEFITS

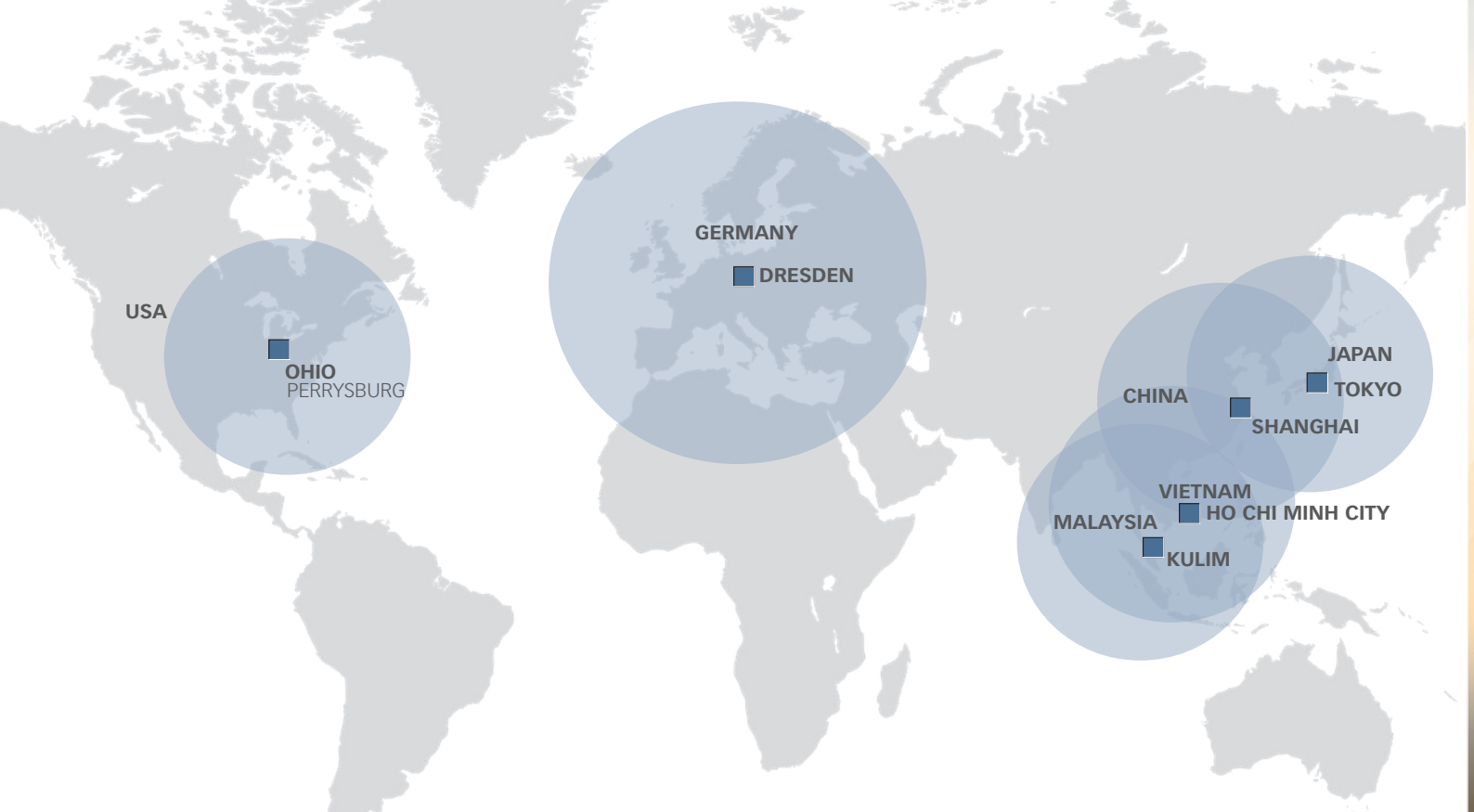
- Increased yield & reduced cost of quality & claim management by
 - Improved quality by stabilized sputter process, reduced product variation and out-of-spec losses
 - Larger product portfolio with more profitable products
 - More output by accelerated product recipe changes in order to gain production up-time
 - Stable operating points over long periods
 - Very high homogeneity of individual layers and layer stacks (color)
- Simplified operation
- Larger product portfolio with more profitable products

PRODUCT BUNDLES

- VA PROCESSMASTER License Levels**
- BASIC:** indication of layer deviation, open loop
 - BASIC+:** indication of parameter change for layer deviation, open loop enabling manual correction
 - PROFESSIONAL:** closed loop control of layer deviation excl. adjustable magnet bars
 - PROFESSIONAL+:** closed loop control of layer deviation incl. adjustable magnet bars

SYSTEM REQUIREMENTS

- System requirements**
- PLC Siemens S7 Version 5.6 or newer
 - VA coaters built in or after 2012
 - Measurement SW with network and/or database interface; e.g., VA Ex-Situ version 12 or newer
 - Other control systems need significant interface programming; can be performed by customer according to VA requirement



PRODUCT TOPICS



PRODUCT INDEX



COMPONENTS



www.vonardenne.biz

WHO WE ARE & WHAT WE DO

VON ARDENNE develops and manufactures industrial equipment for vacuum coatings on materials such as glass, wafers, metal strip and polymer films. These coatings give the surfaces new functional properties and can be between one nanometer and a few micrometers thin, depending on the application.

Our customers use these materials to make high-quality products such as architectural glass, displays for smartphones and touchscreens, solar modules and heat protection window film for automotive glass.

We supply our customers with technologically sophisticated vacuum coating systems, extensive expertise and global service. The key components are developed and manufactured by VON ARDENNE itself.

Systems and components made by VON ARDENNE make a valuable contribution to protecting the environment. They are vital for manufacturing products which help to use less energy or to generate energy from renewable resources.



SALES CONTACTS



SERVICE CONTACTS

WORLDWIDE SALES AND SERVICE

VON ARDENNE GmbH (headquarters) | Am Hahnweg 8 | 01328 DRESDEN | GERMANY

Sales: ☎ +49 (0) 351 2637 189 | sales@vonardenne.biz

Service: ☎ +49 (0) 351 2637 9400 | support@vonardenne.biz

VON ARDENNE Vacuum Equipment (Shanghai) Co., Ltd. | ☎ +86 21 6173 0210 | 📠 +86 21 6173 0200 | sales-vave@vonardenne.biz; support-vave@vonardenne.biz

VON ARDENNE Malaysia Sdn. Bhd. | ☎ +60 4408 0080 | 📠 +60 4403 7363 | sales-vama@vonardenne.biz; support-vama@vonardenne.biz

VON ARDENNE Japan Co., Ltd. | Tokyo office | ☎ +81 3 6435 1700 | 📠 +81 3 6435 1699 | sales-vajp@vonardenne.biz; support-vajp@vonardenne.biz

VON ARDENNE North America, Inc. | Ohio office | ☎ +1 419 386 2789 | 📠 +1 419 873 6661 | sales-vana@vonardenne.biz; support-vana@vonardenne.biz

VON ARDENNE Vietnam Co., Ltd. | ☎ +60 124 23 7353 | sales-vavn@vonardenne.biz; support-vavn@vonardenne.biz