### **OUR STRENGTHS**



### IN-HOUSE TECHNOLOGY & **APPLICATION CENTER**

- Sample coatings of customer applications
- Development of customized layer stacks
- Product & process verification and optimization
- Testing of new technologies and components



### **GLOBAL PROJECT EXPERIENCE**

VON ARDENNE equipment is used in over 50 countries.

We have established an installed base of hundreds of coating systems worldwide, ranging from small tools to equipment for large-area coating applications for several markets.



### **CLOSE PARTNERSHIP**

VON ARDENNE has a network of partners for even more profound R&D work and to identify future technologies. It consists of:

- Fraunhofer Institutes such as IPMS, FEP, IST and ISE
- ♠ Institutes of the Helmholtz Association (Jülich, Berlin)
- (> Universities (Kiel, Dresden, Sheffield)
- Companies such as FAP GmbH, scia Systems GmbH



### PROFESSIONAL SIMULATION SUPPORT

We offer professional simulation technology to ensure best process quality with regards to plasma, heat and cooling. Furthermore, our simulation tools help demonstrate, develop and improve layer properties and define or optimize processes, details and the performance of our systems.



### COMPREHENSIVE SERVICE PORTFOLIO

- **!** VON ARDENNE service hubs around the world
- On-site service
- Premote access by our technology department
- Regular technical and technological trainings
- Spare & wear part warehouse close to customers
- Lifecycle extension of wear parts



### **UPGRADES & RETROFITS**

As soon as your business is growing, your VON ARDENNE equipment will grow accordingly - thanks to its modular design and the upgrades we provide. We will also supply you with the necessary technology upgrades if you decide to change your

Furthermore, when your equipment is ageing, we will retrofit your systems with new components, no matter if they are VON ARDENNE or third-party machines.



WHO WE ARE & WHAT WE DO

heat protection window film for automotive glass.



VON ARDENNE develops and manufactures industrial equipment for vacuum

coatings give the surfaces new functional properties and can be between one

architectural glass, displays for smartphones and touchscreens, solar modules and

nanometer and a few micrometers thin, depending on the application.

Our customers use these materials to make high-quality products such as









We supply our customers with technologically sophisticated vacuum coatings on materials such as glass, wafers, metal strip and polymer films. These coating systems, extensive expertise and global service. The key components are developed and manufactured by VON ARDENNE itself.

> contribution to protecting the environment. They are vital for manufacturing products which help to use less energy or to generate energy from renewable resources.





### WORLDWIDE SALES AND SERVICE

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Systems and components made by VON ARDENNE make a valuable



VON ARDENNE

HISS

HORIZONTAL

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# HIGHLY FLEXIBLE & **SCALABLE INLINE SYSTEMS**

## FOR HORIZONTAL SUBSTRATE TRANSPORT

The HISS is a modular coating system for the horizontal coating of substrates. It is the perfect choice if you are looking for highly flexible production equipment with a small or medium throughput equipped with proven

Thanks to its modular design, the HISS can be configured according to your needs. We offer various basic configurations of the system such as the single-ended version for a smaller production scale.

The system offers a high process flexibility for sputter processes and thermal evaporation.

The flexible and dynamic design of the system with standardized modules enables custom-made configurations. That means that the system can be adapted to new processes or requirements. Therefore, our customers are able to act very dynamically and can adapt to the evolution of their product.

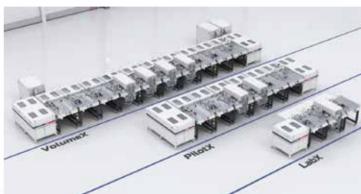
Double-sided or single-sided coating to suit your substrate & process requirements

High process flexibility

due to compatibility with various process units

Easily adaptable to your requirements through flexible configuration options









ADVANCED PANEL-LEVEL PACKAGING



METALLIC BIPOLAR PLATES





HETEROJUNCTION



POWER ELECTRONICS





PRINTED CIRCUIT **BOARDS** 



TOPCON SOLAR CELLS



PEROVSKITE TANDEM **SOLAR CELLS** 





### **BASIC FACTS**

Subject to change without notice due to technical improvement.

### **Substrates**

Glass, polymers, metals, silicon wafers

### Coating area

Up to 1000 mm x 600 mm

### **Deposition arrangement**

Double-sided or single-sided

### Substrate temperature

RT ... 250°C

### **Deposition technology**

Magnetron sputtering, linear evaporation, pre- and post-treatment

#### Transport type

Carrier or glass transport

### Loading & unloading

Optional automation by robot

### System control

Siemens SPS and WinCC

