 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.

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.

Modules and heat protection window film for automotive glass.

Reflectors for lighting systems, displays for smartphones and touchscreens, solar architecutral glass, absorbers and absorber tubes for solar-thermal power plants.

Our customers use these materials to make high-quality products such as architectural glass, absorbers and absorber tubes for solar-thermal power plants, reflectors for lighting systems, displays for smartphones and touchscreens, solar modules and heat protection window film for automotive glass.

Coatings give the surfaces new functional properties and can be between one nanometer and a few micrometers thin, depending on the application.

Coatings on materials such as glass, wafers, metal strip and polymer films. These systems make a valuable contribution to saving energy or to generate energy from renewable resources.

Our customers use these materials to make high-quality products such as architectural glass, absorbers and absorber tubes for solar-thermal power plants, reflectors for lighting systems, displays for smartphones and touchscreens, solar modules and heat protection window film for automotive glass.

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**T-SERIES MAGNETRONS**

SPUTTERING & PUMPING SOLUTION IN ONE KEY COMPONENT

VON ARDENNE has combined the magnetron sputter source technology with turbomolecular pumps to create a new key component class - the T-Series Magnetrons.

Furthermore, we have equipped the rotatable magnetrons of the T-Series with the new X-Series end blocks.

Into the T-Series Magnetrons such as the Rotatable Dual Magnetron RDM, we have integrated the state-of-the-art sputter sources with their superior coating uniformities and turbomolecular pumps with the needed pumping speed in close proximity of the process. The result is an independent sputtering and pumping unit.

Similar to the Rotatable Dual Magnetron RDM, we also offer Wide Single Magnetrons WSM, for planar targets.

**ADVANTAGE OF INTEGRATION: REDUCED FOOTPRINT**

1. Thanks to the combination of sputtering and pumping, an indefinite number of sputtering processes can be placed next to each other if they are working in the same mode (metallic or reactive) and within a similar pressure range.

2. This concept has been proven during several large-scale installations in the field, both for Low-E applications and in the photovoltaic industry for a wide range of applications.

3. T-Series Magnetrons are suitable for a wide range of DC and AC processes ranging from 10 kW to 180 kW.

4. The T-Series features a fully integrated binary gas manifold with up to 6 segmented trim gas delivery systems with a precise gas mixture and balance and fast reaction times.

5. The single layer uniformity achievable with a RDM, 3750 is below +/-1.0 % depending on the process parameters and the target material.

**T-SERIES MAGNETRONS IN A NUTSHELL**

- Increase the coating speed
- Reduce the machine footprint
- Improve the layer uniformity
- Suitable for AC and DC processes
- Available for rotatable and planar magnetrons

- Suitable for a wide range of applications
- Available for retrofits and integration into existing coating systems
- Reduce the cost of ownership

**SPUTTERING SECTION**

**WITH PUMPED MAGNETRONS**

Pumping section and sputtering section (Classic concept)