

novoFlex[®] 600

Roll-to-roll pilot web coater







Magnetron PECVD

High-rate plasma-activated evaporation

Radiation-heated evaporator

Versatile vacuum coating technologies using a single machine

The *novoFlex*[®] 600 pilot web coater allows coating of polymer films with different materials in any desired sequence.

The web coater includes various vacuum coating technologies which can be combined with each other in different ways. This versatility means that a wide range of coatings and layer combinations can be created.

Customers can also choose from a wide variety of substrates: In addition to polymer films made of PET, polypropylene (PP), and polylactides (PLA), the web coater can also be used to test and coat customer-specific polymer substrates, flexible metals foils and textiles.

The application of barrier layers to packaging films for the food industry is one established area of work. The main benefit is the very high coating rate in order to coat large quantities of film at favorable cost.

The web coater can also be used to apply layers for special applications, for example transparent conducting electrodes and high barrier layers for flexible electronics.

Technical data

Coating width	≤ 600 mm
Web speed	0.1 600 m/min
Web tension	30 1500 N
Substrates	Polymer films (thickness: 3 250 µm)
	Flexible metal foils
	 Other flexible substrates (e.g. textiles) up to a thickness of 6 mm
	Double-sided coating possible
Maximum roll diameter	500 mm
Maximum range of the web edge control	± 10 mm
Subdivided into 5 coating chambers for sim	ultaneous coating using up to 5 in-line processes
	 2 evaporation chambers for boat evaporators and/or electron beam evaporators
	 boat evaporators, 8 boats with each up to 1300 A / 15 V
	 radiation-heated SiO evaporation
	 electron beam evaporator 60 kW / 30 kV
	 3 chambers for reactive pulse magnetron sputtering (PMS)
	(MF up to 50 kHz, power up to 60 kW) or magnetron PECVD
	Pre-treatment via ion source
	 All 5 process chambers differentially pumped (pressure difference up to a factor of 30)
2 coating drums of 750 mm diameter, each	with separate temperature control in the range -20°C +90°C
In-situ measuring technology	Contact-free layer resistance measurement 0.01 40 Ω
	6 channel reflection and transmission spectrometer





Barrier layers for packaging films

Web drive system



Schematic representation of the novoFlex® 600

Technologies

- In-line plasma pre-treatment
- Plasma-activated high-rate evaporation
- Pulse magnetron sputtering (PMS)
- Magnetron PECVD (magPECVD)
- Thermal evaporation
- Electron beam evaporation
- In-situ measurement technology
- Hollow cathode arc PECVD (arcPECVD)

Our offer

- Feasibility studies
- Development of layer systems, products, and coating technologies for vacuum web coating
- Scale-up of coating technologies to large web widths and high web speeds
- Contract coating in the pilot phase of a product
- Technology transfer and fitting web coating plants with key components (magnetrons, plasma sources, reactive gas systems, product and process monitoring systems)

Contact

Fraunhofer Institute for Electron Beam and Plasma Technology FEP Winterbergstr. 28 01277 Dresden, Germany

Contact Steffen Straach Phone +49 351 2586-132 steffen.straach@fep.fraunhofer.de

Dr. Nicolas Schiller Phone +49 351 2586-131 nicolas.schiller@fep.fraunhofer.de

www.fep.fraunhofer.de

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