scia systems

scia Batch 350

3D-COATINGS IN BATCHES

Features & Benefits

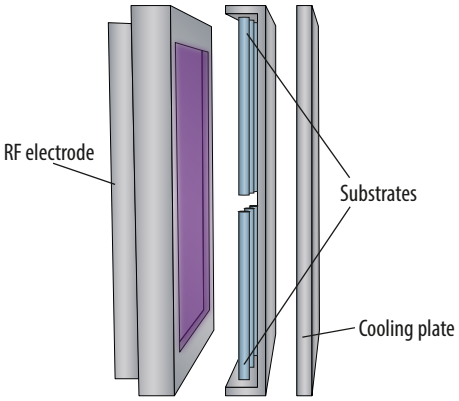
- Coating of different substrate sizes and quantities in batches due to carrier loading
- Two independent RF electrodes for high throughput
- Homogeneous "all-around coating" by individual rotation of each substrate
- Superior barrier performance and fully cohesive film, also during mechanical deformation
- Combination of heating, plasma pre-treatment and PECVD coating
- Flexible gas and RF conditions

Applications

- 3-dimensional barrier coating of biocompatible films for medical implants (pacemakers, stents)

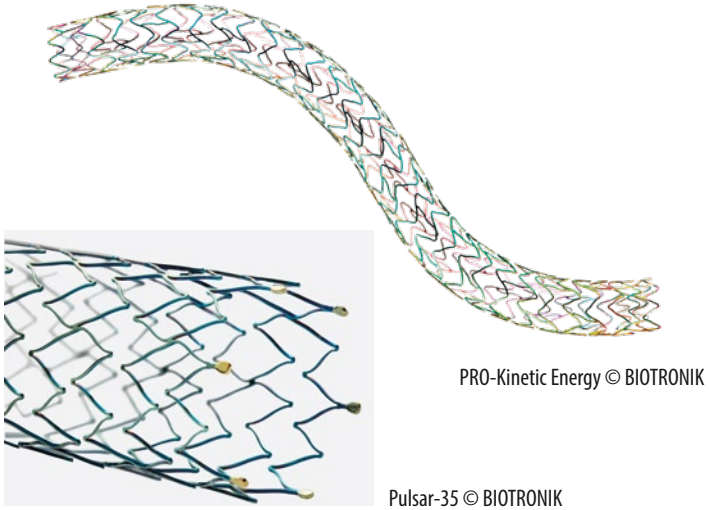
Principle

- Plasma Enhanced Chemical Vapor Deposition (PECVD)
  - RF parallel plate arrangement with rotation of each substrate for a uniform coating of all sides



Application Example

- Stents for vascular intervention

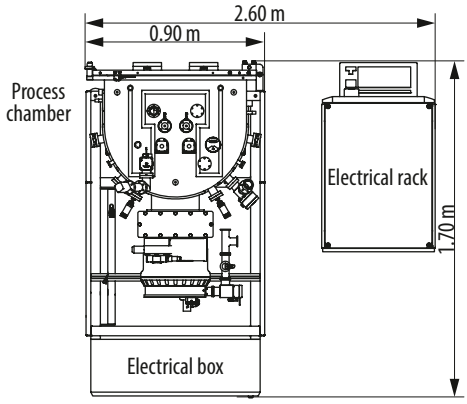


PRO-Kinetic Energy © BIOTRONIK

Pulsar-35 © BIOTRONIK

Technical Data

Substrate size	Individual sizes loaded on 2 carriers, carrier size up to 350 mm x 240 mm
Substrate carrier	Water-cooled, pulsed DC bias (2 kV, 400 mA)
Plasma source	RF parallel plate arrangement, 13.56 MHz
Power Supply	RF power max. 2 x 600 W
Electrode setup	Temperature: Heating up to 400 °C Distance: Adjustable between 50 mm and 150 mm
Operation modes	Independent or coupled electrodes
Typical deposition rate	SiC: 5 nm/min
Base pressure	< 5 x 10^{-7} mbar
System dimension (W x D x H)	0.90 m x 1.70 m x 2.10 m (without electrical rack and pumps)
Configuration	Single chamber with manual loading in batches
Software interfaces	SECS II / GEM, OPC



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