

**HIGH THROUGHPUT  
PRODUCTION OF NANOFIBERS**



## + SS1600

- + Industrial scale high-throughput electrospinning or electrospraying system
- + Open surface – needleless solution feeding mechanism
- + Bottom-up horizontal processing.

- + **High Production Rate:** 60% higher than SS1000
- + Up to **36 m<sup>2</sup>/min (PA6 0.1 GSM)** production of nanofibers.
- + **Smart Dynamic Feeding System:** Provides an extremely homogeneous production, and precise adjustment of the flow rate.
- + **Smart Winding System:** The software sets the desired thickness by automatically adjusting the flow rate and winding speed.
- + **Compatibility to work** with a wide viscosity range of polymeric solutions.
- + **Patent Pending Technology.**

#### + CONSTRUCTION

Electrostatic painted sheet metal chassis  
Exhaust fan system to remove solvent vapors  
Air conditioning system for temperature and humidity control  
Weight: 1000- 1500 kgs  
Dimensions: W: 4470 mm L: 2470 mm H: 1990 mm

#### + HIGH VOLTAGE SYSTEM

Positive and negative high voltage power supply system  
For the spinneret 0 - 80 kV positive high voltage module  
For the collector 0 - 40 kV negative high voltage module  
Voltage Adjustment Precision: 0.1 kV  
Maximum Current: 1.87 mA

#### + SOLUTION FEEDING SYSTEM

Three streamspinner open surface spinnerets,  
Three peristaltic pumps set individually connected to the spinnerets, All the spinnerets can be fed with different solutions to obtain composite structures,  
Spinneret Length: 1800 mm  
Tubing: Silicone Tubing ID:5mm x OD:8mm and PE Tubing of ID:4mm x OD:6mm  
Flow Rate of Peristaltic Pumps: 0.1- 40 ml/min  
Flow Rate Precision: 0.1 ml/min

#### + SPINNING DISTANCE

Distance between Rods and Collector: 150 - 350 mm  
Distance Adjustment Precision: 1 mm

#### + COLLECTOR

Roll-to-roll collector, Width of the collector: 1700 mm  
Substrate Winding Speed: min 0.2 m/min - 30.0 m/min  
Effective Coating Width: 1600 mm

#### + PROCESSING

Throughput mainly depends on polymer type but also solution and process parameters,  
Available for 24/7 operation,  
Easily cleaning of spinnerets and production area surfaces of the machine,  
15 minutes of starting up time required,  
65 L tank capacity for batch mode operation for solution feeding,  
Minimum maintenance requirement.

#### + AUTOMATION

PLC Controlled, 12" Touch screen control panel,  
Well-designed user-friendly interface,  
Data saving and calling, Automatic winding speed adjustment depending on the process and solution parameters to achieve the desired coating thickness.

#### + SAFETY AND REGULATIONS

Safety door feature, Emergency Button & Safety Relays, HV Warning Light,  
Electrical Isolated & Grounded Cabinet,  
Over Current Protection,  
Meets regulatory standards under CE Certification,  
Static discharge bar.

#### + SITE REQUIREMENTS

Power: 110-120 VAC [3 ~ 208 V] @20A  
4000W or 220-240 VAC @20A 4000 W Max.  
External Grounding line is required  
Pressurized air (3-4 bar) for winding-rewinding shafts  
Ventilation: Hose channel and ventilating system to evacuate the evaporated solvents  
Space requirement: 4 m x 6 m

