



**HIGH THROUGHPUT**  
**PRODUCTION OF NANOFIBERS**



## Industrial Scale **Open Surface** Electrospinning Unit

---

- **High Production Rate:** 5 to 15 times higher than conventional electrospinning systems.
- Up to **12 meters/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.**

**Model:** SS550 Stream Spinner

**Description:** Industrial Scale Open Surface Electrospinning Unit

**Spinning Type:** Bottom up Spinning

### CONSTRUCTION

**Chassis:** Electrostatic Painted Sheet Metal

Exhaust Fan

**Atmosphere Control:** Humidity & Temperature

### HIGH VOLTAGE POWER SUPPLY:

**Voltage Range:** For the spinneret anode 0- (+) 60 kV

For the collector cathode (-) 40 kV - 0 kV

**Voltage Precision:** 0.1 kV

**Maximum Current:** 2.5 mA

### FEEDING AREA:

**Open Surface Spinnerets:** 3 thin-slit rod pcs

**Dynamic Feeding System:** Adjustment of the speed, feeding rate and waiting time of the spinneret.

**Thin-Slit Electrode Dimensions:**

Electrode Length: 550 mm

**Slit Diameters:** 2 mm Depth, 4 mm Width

### PUMP SYSTEM:

Three independent peristaltic pump units: Individually connected to the spinnerets.

**Tubing:** Silicone tube of 5 mm ID, 8 mm OD

**Flow Rate:** 0.01 - 40 ml/min

**Flow Rate Precision:** 0.01 ml/h

**Tank Capacity:** 10 L

### SPINNING DISTANCE:

**Distance between Rods and Collector:** 150 - 300 mm

**Distance Adjustment Precision:** 1 mm

### PRODUCTION RATE:

Polymers	Total Flow rate	Total Production (0.5GSM)
TPU	600 ml/hr	4.8 m/min
PVDF	330 ml/hr	3.2 m/min
PA6	300 ml/hr	2.8 m/min
HA	180 ml/hr	1.0 m/min
PAN	285 ml/hr	1.4 m/min
PHB	2400 ml/hr	5.5 m/min

### COLLECTOR AREA:

Roll-to-roll collector

Width of the collector: 500 mm

Substrate Winding Speed: min 0.1 m/min - 20.0 m/min

Effective Coating Width: 500 mm

**UNIQUE USER INTERFACE** 12" Touch screen control panel with well designed user friendly interface fully able to control all parameters saving & recalling all parameters via recipe & recall function.

**SAFETY FUNCTION:** Safe Door, Emergency Button & Safety Relay, HV Warning Light, Electrical Isolated & Grounded Cabinet, Over Current Protection.

### TECHNICAL REQUIREMENTS:

**Power:** 110-120 VAC [3 ~ 208 V] @ 20A 4000 W  
220-240 VAC @ 20A 4000 W Max.

**Grounding:** External Grounding Line

**Air Compressor:** Required for tightening shaft @ Pressure 3-4 bar

**Min. Gas Tank Volume:** <10 L

**Ventilation:** Hose channel and ventilating system to evacuate the evaporated solvents

### WEIGHT AND DIMENSIONS:

**Total weight:** 1080 kgs

**Dimensions:** W: 2080 mm L: 2850 mm H: 2150 mm

