



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 **43 meters/min (PA6 0.03 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 - 2500 ml/h

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: 550 mm

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

Effective Coating Width: 550 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 Approx.: 650 kg

Dimensions: W: 2200 mm L: 1350 mm H: 2247 mm

