SS1000 Stream Spinner

Industrial Scale Open Surface Electrospinning Unit

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 **15 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.**

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SS1000

Stream Spinner

Model: SS1000 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- (+) 80 kV
For the collector cathode (-) 40 kV - 0 kV
Voltage Precision: 0.1 kV
Maximum Current: 1.85 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: 1000 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: 15 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	1200 ml/hr	5.3 m/min
PVDF	660 ml/hr	3.9 m/min
PA6	600 ml/hr	3.1 m/min
HA	360 ml/hr	1.1 m/min
PAN	570 ml/hr	1.6 m/min
PHB	4800 ml/hr	6.2 m/min

COLLECTOR AREA:

Roll-to-roll collector
Width of the collector: 1000 mm
Substrate Winding Speed: 0.1 m/min - 25.0 m/min
Effective Coating Width: 1000 mm
Max Roll Diameter: 600 mm

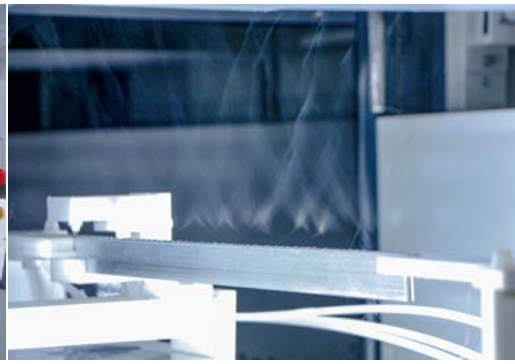
UNIQUE USER INTERFACE 12" Touch screen control panel with well designed user friendly interface fully able to control all parameters saving & recalling all parameters via recipe & recall function.
SAFETY FUNCTION: Safe Door Emergency Button & Safety Relay, HV Warning Light, Electrically Isolated & Grounded Cabinet, Over Current Protection.

TECHNICAL REQUIREMENTS:

Power: 110-120 VAC [3 ~ 208 V]@ 20 A
4500 W Max.
220-240 VAC @ 20 A 4500 W Max.
Grounding: External Grounding Line
Air Compressor: Required for tightening shaft @ Pressure 3-4 bar, Min. Gas Tank Vol. <10 L.
Ventilation: Hose channel and ventilating system to evacuate the evaporated solvents.

WEIGHT AND DIMENSIONS:

Total weight: 1620 kgs
Dimensions: W: 2650 mm L:3530 mm H: 2215 mm



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