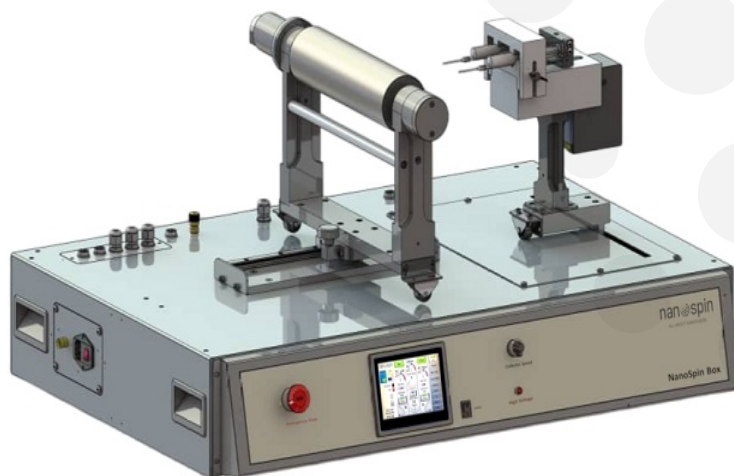


NanoSpinBox (CompactPro Electrospinning System)



The **NanoSpinBox** is a **compact, cost-effective lab-scale electrospinning system** designed for versatile nanofiber fabrication. It combines **precision control, modular collector options,** and **integrated safety features** to support a wide range of R&D applications, from **filtration media** to **biomedical research**, while maintaining a **small footprint** ideal for desktop labs.

This lab-scale unit features a user-friendly control panel that allows precise adjustment of key electrospinning parameters, including:

- ❖ **Injection Parameters**
- ❖ **Electrospinning scan system**
- ❖ **High voltage power supply**
- ❖ **Collector drum rotation speed**
- ❖ **Operation time**
- ❖ **Electrospinning distance**



Main Features

4.3" touch-screen HMI panel	for precise control
Emergency stop button	for enhanced safety
User-friendly operation and maintenance	
1 syringe pump	(supports up to 2 syringes)
1 automated scan system	
1 manual distance adjuster	
1 positive high-voltage power supply	
1 optional negative high-voltage power supply	
Compact Design (Space-saving layout for benchtop use)	
Optional Enclosed Chamber	
Without Dead Volume Solution with direct injection	
Compatibility with multiple collector types	
Programmable ventilation fan (with chamber)	
Machine alarm notification	



Collector

Type	- Cylindrical Drum - Plate, Mandrel, Single & Multi Wire, Radial, Needle, Wheel & Disk collectors are optional
Material	Stainless steel
Rotation speed	300-3000 rpm (Cylindrical drum)
Spinning distance	5-20 cm
Size	- Negative Cylindrical: 8 or 10(ø) cm × 30(L) cm - Plate: 30(L) cm × 30(W) cm - Multi Wire (Optional): 8(ø) cm × 25(L) cm - Single wire (Optional): Tensioned cable (20+ μm cables) - Needle Collector (Optional): Replaceable needle - Disk (Optional): Diameter: 3,5 & 10 cm - Radial (Optional): Diameter: 2, 3, and 5 cm - Wheel Collector (Optional): Diameter: 20cm Thickness: 1,2 & 4 cm - Mandrel (Optional): Length: 25 cm Diameter: 2, 4, 6, 8 and 10 mm
Nanofiber coverage area	30*30 cm (Cylindrical drum)
Attachable to negative high voltage power supply up to -35kV for all Collectors (Optional)	



General

Chamber Body (Optional)	- Acrylic/polycarbonate - Transparent front door - Door interlock
Input power	100-240 V AC/50-60 Hz
Safety	Voltage cut-off In case of door opening
Control Dimensions	90 cm × 70 cm × 20 cm (L×W×H)
Weight	45 KG



High voltage power supply

Model	- HV35 Positive - HV35 Negative (Optional)
Max. output voltage	35 kV
Power	30 Watt
Voltage monitoring	Digital, Accuracy: 0.1 kV
One positive high voltage power supplies connected to syringe pumps	
One negative high voltage power supply connected to collector	



Main control

HMI	4.3" touch screen
Type	programmable logic controller (PLC)
Control detail	- Start and end position of nozzle(s) - Injection rate of syringe pump - Electrospinning time - ON/OFF timer for exhaust fan - Rotational speed control of collector from HMI - Alarm after desirable volume of injection and after finishing the solution in syringe



Spinneret

Number of syringe pumps	One syringe pump
Number of syringes	Up to 2 syringes
Configuration	Horizontal (No need for hose)
Scanning rate	0-30 mm/s , adjustable
Scanning range	0-30 cm, adjustable
Syringe Pump Rate	50 μl/h to 500 ml/h
Usable syringe size	1-25 mm (Inner Diameter)

