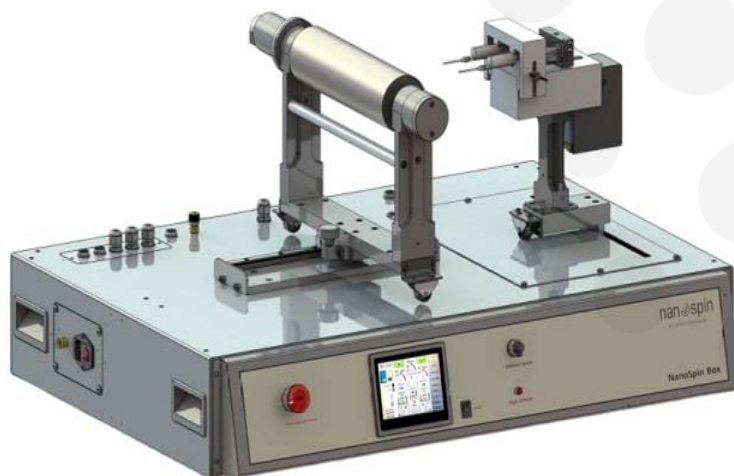


NanoSpinBox (CompactPro Electrospinning System)



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 | <ul style="list-style-type: none"> ▪ Cylindrical Drum ▪ Plate, Mandrel, Single & Multi Wire, Radial, Needle, Wheel & Disk collectors are optional |
| Material | <ul style="list-style-type: none"> ▪ Stainless steel |
| Rotation speed | <ul style="list-style-type: none"> ▪ 300-3000 rpm (Cylindrical drum) |
| Spinning distance | <ul style="list-style-type: none"> ▪ 5-20 cm |
| Size | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 30*30 cm (Cylindrical drum) |
| <p>Attachable to negative high voltage power supply up to -35kV for all Collectors (Optional)</p> | |



General

- | | |
|--------------------------------|---|
| Chamber Body (Optional) | <ul style="list-style-type: none"> ▪ Acrylic/polycarbonate ▪ Transparent front door ▪ Door interlock |
| Input power | <ul style="list-style-type: none"> ▪ 100-240 V AC/50-60 Hz |
| Safety | <ul style="list-style-type: none"> ▪ Voltage cut-off In case of door opening |
| Control Dimensions | <ul style="list-style-type: none"> ▪ 90 cm × 70 cm × 20 cm (L×W×H) |
| Weight | <ul style="list-style-type: none"> ▪ 45 KG |



High voltage power supply

- | | |
|---|---|
| Model | <ul style="list-style-type: none"> ▪ HV35 Positive ▪ HV35 Negative (Optional) |
| Max. output voltage | <ul style="list-style-type: none"> ▪ 35 kV |
| Power | <ul style="list-style-type: none"> ▪ 30 Watt |
| Voltage monitoring | <ul style="list-style-type: none"> ▪ Digital, Accuracy: 0.1 kV |
| <p>One positive high voltage power supplies connected to syringe pumps</p> | |
| <p>One negative high voltage power supply connected to collector</p> | |



Main control

- | | |
|-----------------------|--|
| HMI | <ul style="list-style-type: none"> ▪ 4.3" touch screen |
| Type | <ul style="list-style-type: none"> ▪ programmable logic controller (PLC) |
| Control detail | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ One syringe pump |
| Number of syringes | <ul style="list-style-type: none"> ▪ Up to 2 syringes |
| Configuration | <ul style="list-style-type: none"> ▪ Horizontal (No need for hose) |
| Scanning rate | <ul style="list-style-type: none"> ▪ 0-30 mm/s , adjustable |
| Scanning range | <ul style="list-style-type: none"> ▪ 0-30 cm, adjustable |
| Syringe Pump Rate | <ul style="list-style-type: none"> ▪ 50 μl/h to 500 ml/h |
| Usable syringe size | <ul style="list-style-type: none"> ▪ 1-25 mm (Inner Diameter) |

