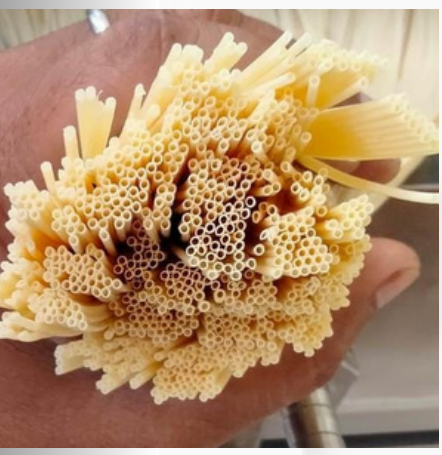
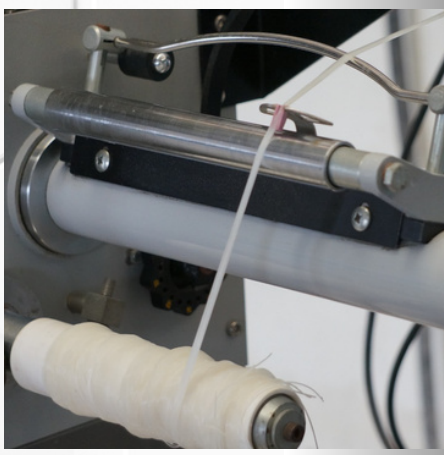
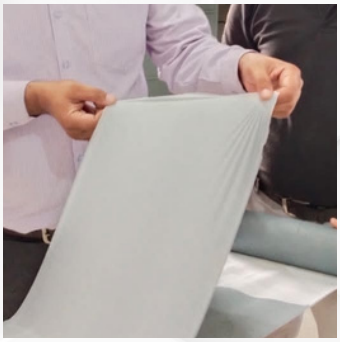
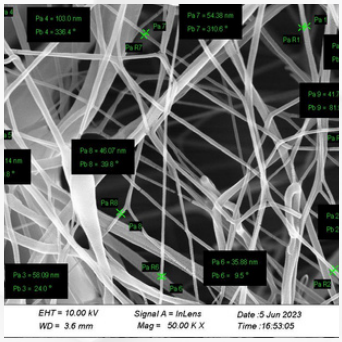
E-SPIN NANOTECH

endowing nano...









PRODUCT CATALOG

Company Information

Spinning innovation into fibers is an art of science and engineering, and that is what we are the best at. Founded in the year 2010 under the aegis of SIDBI, IIT-Kanpur, E-Spin Nanotech Pvt. Ltd. is a leading high-tech enterprise for manufacturing high quality and cost-effective multi-functional nanofibers and other fibers to address the unmet basic needs of the society. The company draws its strength from a strong research and development team working relentlessly in pursuit of improvement and improvisation in performance and quality of our products. On the other hand, E-Spin Nanotech Pvt. Ltd. has also re-engineered conventional spinning and revolutionized the prospects of fibers with the launch of series of advanced spinning units specifically designed to meet sophisticated prerequisites of research organization and industries. The company is working with undeterred commitment to achieve its long-term goal and vision.

Our roller-coaster ride to the top

Our first lab scale prototype of electrospinning equipment was designed in collaboration with Indian Institute of Technology Kanpur and successfully installed in the year 2010 which continues to works in hassle free manner till date. After earning a thumping success in our initial efforts, we set pace to our journey through a learning curve and due course of this time our products constantly evolved along with the need and satisfactions of our growing customers. The two-way exchange of knowledge and service from our customers and prompt response to their needs with the best efforts possible had become a vital stepping stone of our success. Leading on such a holistic approach we have successfully achieved a landmark by selling 50 indigenously developed electrospinning units all across the nation and to overseas organizations in US, Denmark, Saudi Arabia, Egypt, Israel, Bangladesh, France, Malaysia and Spain. Through persistent efforts of our ardent researchers and enthusiastic manufacturing team we have raised ourselves to achieve grand repute of international standards.

GENERAL CORPORATE INFORMATION

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Kanpur U.P., India-208016
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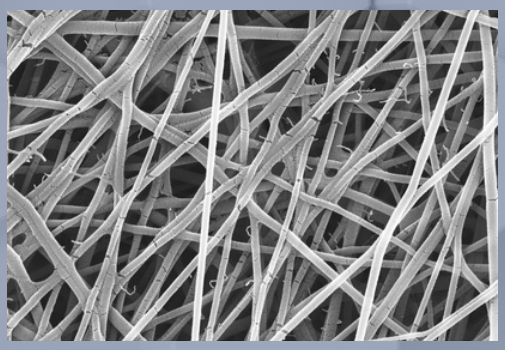
Electrospinning Super Series

E-Spin Nanotech's Super Series of Electrospinning Machines is a game-changer in nanofiber production. With a range of specialized machines, we provide tailored solutions for diverse applications, from precision needs to high-volume production and portability.

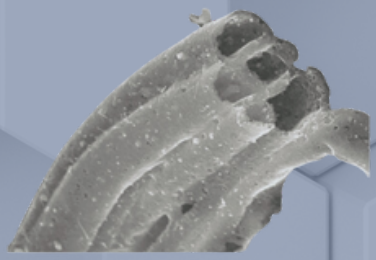
Precision and Versatility:
Our flagship model, built for precision, is ideal for drug delivery, tissue engineering, and advanced filtration materials. It offers cutting-edge syringe pump systems and software for impeccable nanofiber production.

Scalable Production:
For those aiming to scale up production, our powerhouse model with a large working area and customizable spinneret configurations is perfect for industries such as textiles, filtration, and energy storage.



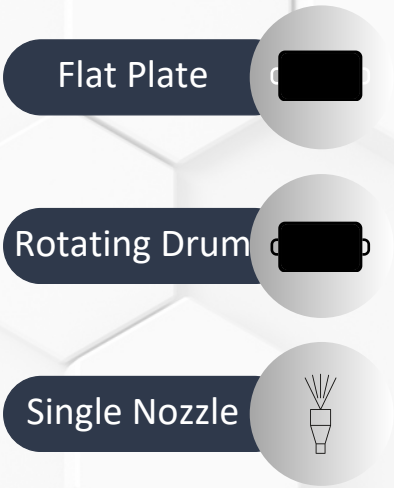
Portability and Flexibility:
The portable innovator is designed for researchers on the move. Its compact, user-friendly design suits applications like wearables, environmental monitoring, and diagnostics.

Budget-Friendly Innovation:
E-Spin Nanotech's budget-friendly pioneer provides essential electrospinning capabilities without straining your budget, making it perfect for startups, educational institutions, and small labs.



E-Spin Nanotech's Super Series empowers nanofiber production, offering solutions for precision, production, portability, and budget constraints. Elevate your nanofiber endeavors with the Super Series and unlock the full potential of this revolutionary technology.

Super ES-1



Spinning Arrangement

- Horizontal spinning
- Adjacent distance between spinneret and collector: Up to 250 mm
- Temperature and Humidity display
- High Speed exhaust blower for protection from hazardous solvent fume
- UV Light: 10 watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.1
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

High Voltage

- Output voltage: 0 to 30 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip- unit shut down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened .

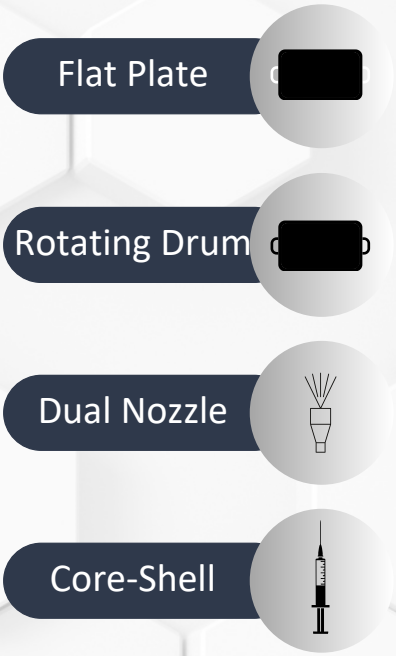
Collectors

- Plate: Width=220 mm Length=150 mm Thickness= 10 mm
- Drum: Diameter =85 mm, Length =165 mm
- RPM: 200-3500

Linear stage

- X-Axis: Switch Automated distance adjustment(distance between spinneret and collector)
- Y-Axis: Switch Automated distance adjustment

Super ES-1A



Spinning Arrangement

- Vertical spinning
- Horizontal spinning
- Co-Spinning
- **Co-axial Spinning**
- Adjacent distance between spinneret and collector: Up to 250 mm
- Temperature and Humidity display
- High Speed exhaust blower for protection from hazardous solvent fume
- UV Light: 10 watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.2
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20 ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G

High Voltage

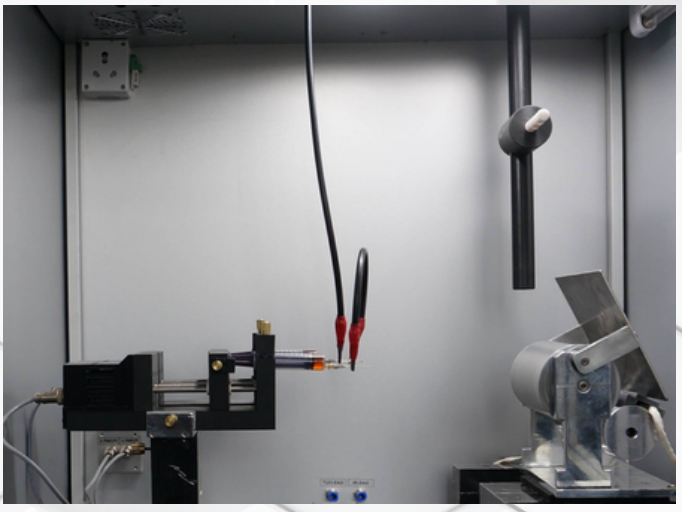
- Output voltage: 0 to 30 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip- unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

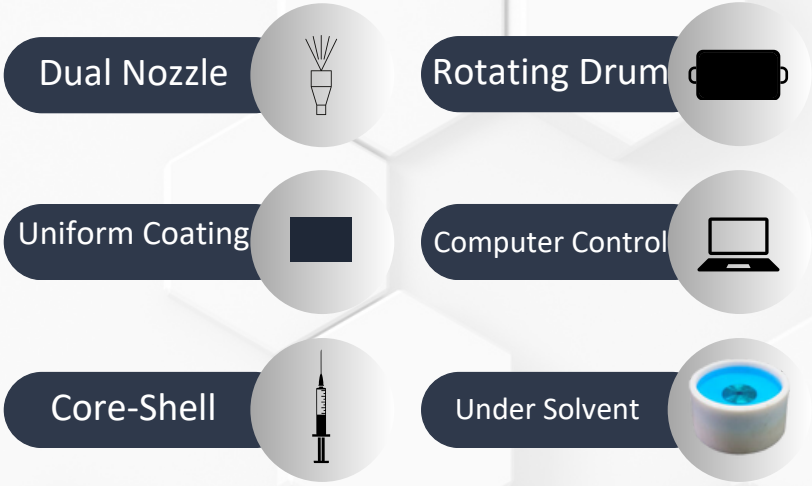
- Plate: Width = 220 mm length = 150 mm Thickness = 10 mm OR Width = 255 mm Length=150 mm Thickness= 10 mm
- Drum: Diameter =85 mm, Length=165 mm OR Diameter = 100 mm, Length = 200 mm
- Drum RPM: 200-3500

Linear stage

- X-Axis: Switch Automated distance adjustment(distance between spinneret and collector)
- Y-Axis : Switch Automated distance adjustment
- Z-Axis: Manual distance adjustment



Super ES-2



Spinning Arrangement

- Vertical spinning
- Horizontal spinning
- Co-Spinning
- Co-axial Spinning
- Multi-Jet Spinning
- Under solvent spinning
- Adjacent distance between spinneret and collector: Up to 250 mm
- Temperature and Humidity display
- High Speed exhaust blower for protection from hazardous solvent fume
- UV Light: 10 watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.2
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20 ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G
- Multi-nozzle(4 changeable needle geometry)

High Voltage

- Output voltage: 0 to 50 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

- Plate: Width = 220 mm Length = 150 mm Thickness = 10mm OR Width = 255 mm Length=150 mm Thickness= 10 mm
- Drum: Diameter =85 mm, Length=165 mm OR Diameter = 100 mm, Length = 200 mm
- Disk: Diameter =85 mm, Length=10 mm OR Diameter = 100 mm, Length = 10 mm
- RPM: 200-3500

Linear stage

- X-Axis: Software Automated distance adjustment
- Y-Axis: Programmable transverse motion Stroke distance: 300 mm Speed :- Three speed adjustment (Slow, Medium and Fast)
- Z-Axis: Manual distance adjustment

Operational Control Branded Laptop with preinstalled software SUPER ES-2 Software USB drivers

Super ES-2A

Dual Nozzle

Rotating Drum

Camera Interface

Touch Screen

Core-Shell

Atmospheric Control

Spinning Arrangement

- Vertical spinning
- Horizontal spinning
- Co-Spinning
- Adjacent distance between spinneret and collector: Up to 250mm
- Digital temperature control (ambient to 60 degrees) to monitor and maintain the process conditions
- Digital humidity control (ambient to 90% RH) to monitor and maintain the process conditions
- High Speed exhaust blower for protection from hazardous solvent fume
- UV Light: 10 watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.2
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G
- Multi-nozzle(4 changeable needle geometry)
- Under solvent spinning (Compatible for water, Acetone, Methanol and other solvents)

High Voltage

- Output voltage: 0 to 50 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

- Plate: Width = 220 mm Length = 150 Thickness = 10 mm OR Width = 255 mm Length=150 mm Thickness= 10 mm
- Drum: Diameter =85 mm, Length=165 mm OR Diameter = 100 mm, Length = 200 mm
- Disk: Diameter =85 mm, Length=10
- mm OR Diameter = 100 mm, Length = 10 mm RPM: 200-3500

Linear stage

- X-Axis: Software Automated distance adjustment
- Y-Axis: Programmable transverse motion Stroke distance: 300 mm Speed :- Three speed adjustment (Slow, Medium and Fast)
- Z-Axis: Manual distance adjustment
- Operational Control HMI/PLC with preinstall software
- Camera Interface

Super ES-2/2A Additional Accessories

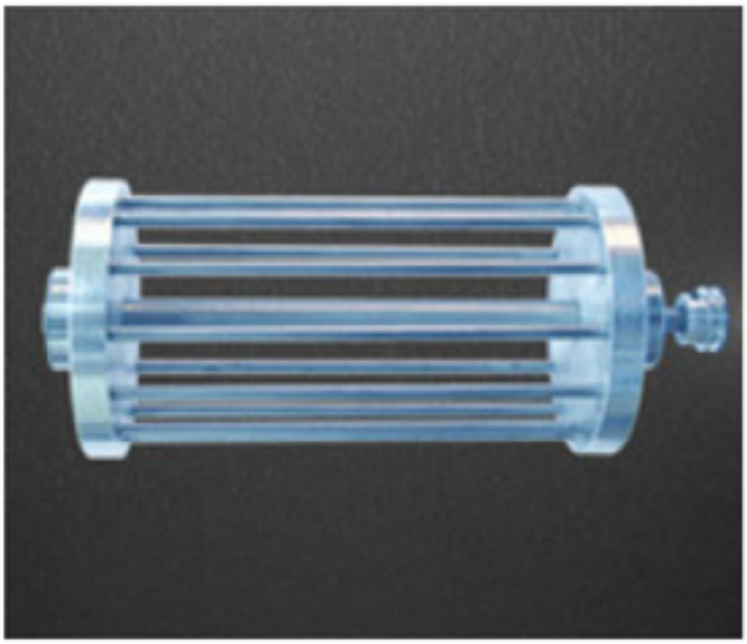
Different Sizes of collector and small roll to roll collector

Additional Core-Shell

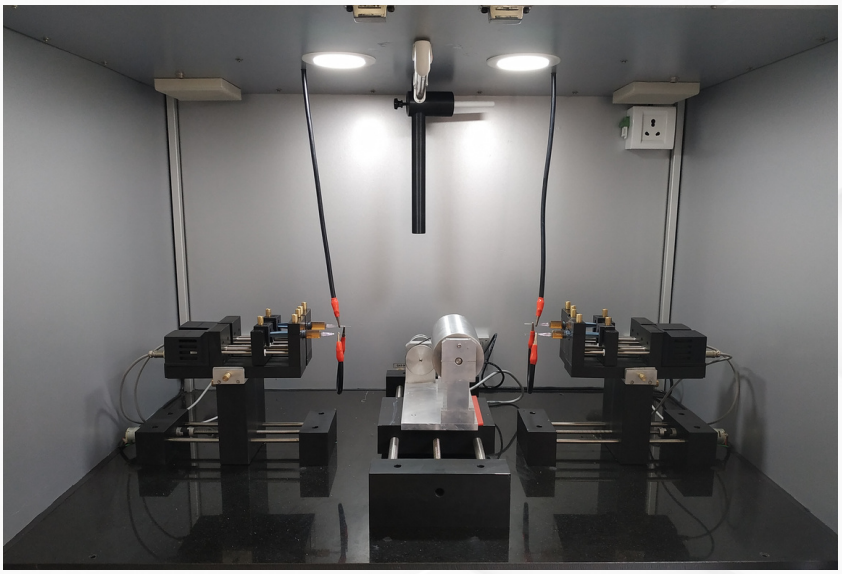
Multinozzle

Ultra-Compact spinning chamber

Dehumidifer



Super ES-3



Dual Nozzle

Both Side Jet

Core-Shell

Bi-Component

Camera Interface

Atmospheric Control

Spinning Arrangement

- Vertical spinning
- Horizontal spinning
- Co-Spinning
- Adjacent distance between spinneret and collector: Up to 250mm
- **Digital temperature control** (ambient to 60 degrees) to monitor and maintain the process conditions
- Digital humidity display
- High Speed blower for protection from hazardous solvent fume
- UV Light: 10 Watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.2
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G
- Multi-nozzle(4 changeable needle geometry)
- Under solvent spinning (Compatible for water, Acetone, Methanol and other solvents)

High Voltage

- High Voltage: Two
- Output voltage: 0 to 50 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

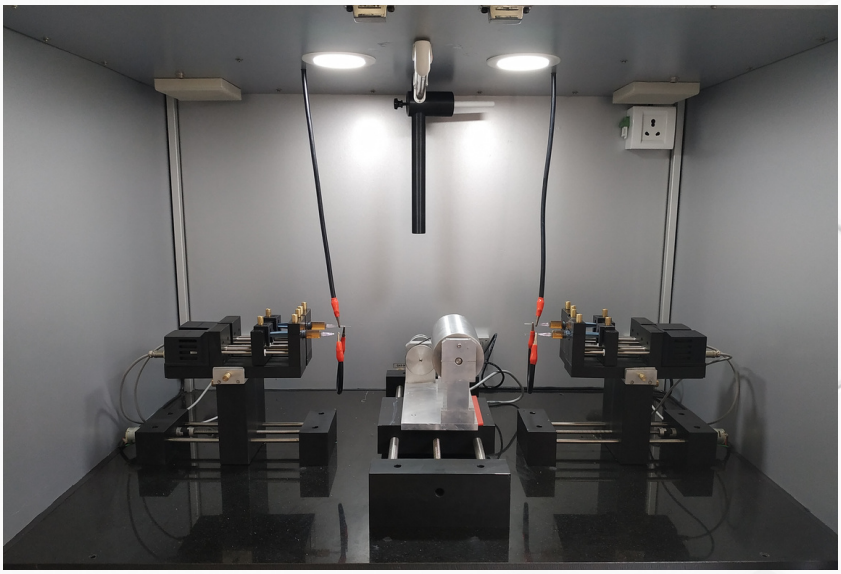
- Plate: Width = 255mm Length=150mm Thickness= 10mm
- Drum: Diameter = 100 mm, Length = 200 mm
- Disk: Diameter = 100 mm, Length = 10 mm RPM: 200-3500

Linear stage Both Side

- X-Axis :- Software Automated distance adjustment
- Y-Axis: Programmable transverse motion Stroke distance: 300 mm Speed :- Three speed adjustment (Slow, Medium and Fast)
- Z-Axis: Manual distance adjustment

Operational Control Branded Laptop with preinstalled software SUPER ES-3 Software USB drivers

Super ES-3A(Yarning)



FourNozzle

Camera Interface

Yarning

Bi-Component

Touch Control

Atmospheric Control

Spinning Arrangement

- Vertical spinning
- Horizontal spinning
- Co-Spinning
- Adjacent distance between spinneret and collector: Up to 250mm
- Digital temperature control (ambient to 60 degrees) to monitor and maintain the process conditions
- **Digital humidity control** (ambient to 90% RH) to monitor and maintain the process conditions
- High Speed Exhaust Blower for protection from hazardous solvent fume
- UV Light: 10 Watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.4
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-20ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G
- Multi-nozzle(4 changeable needle geometry)
- Under solvent spinning (Compatible for water, Acetone, Methanol and other solvents)

High Voltage

- High Voltage: Two
- Output voltage: 0 to 50 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

- Plate: Width = 255mm Length=150mm Thickness= 10mm
- Drum: Diameter= 100 mm, Length= 200 mm Disk: Diameter= 100 mm, Length= 10 mm Rod: Diameter= 100 mm, Length= 220 mm, Window= 10 Number
- RPM: 200-3500

Conveyor Collector:(optional)

- Deposition area: Width = 220 mm; Length = 1000 mm; Conveyor Speed: 0.2 m/min to 2 m/min

Super ES-3A

Yarning System

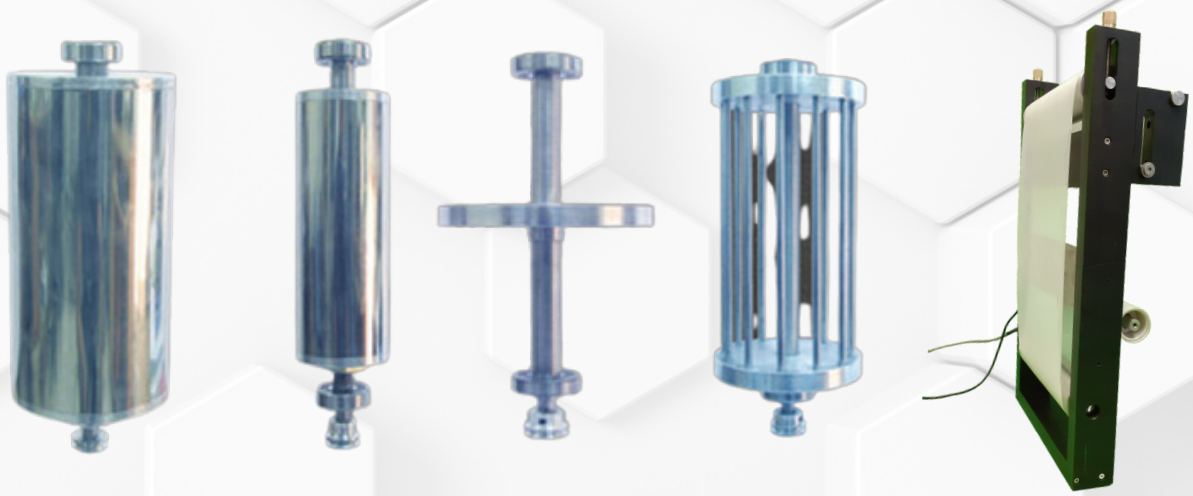
- Yarning collector RPM control (300 to 5000 RPM) Traverse: Software automated Winder: Software automated

Linear stage Both Side

- X-Axis :- Software Automated distance adjustment
- Y-Axis: Programmable transverse motion Stroke distance: 300 mm Speed:- Three speed adjustment (Slow, Medium and Fast)
- Z-Axis: Manual distance adjustment

Operational Control HMI/PLC with preinstalled software

Super ES-3/3A Additional Accessories

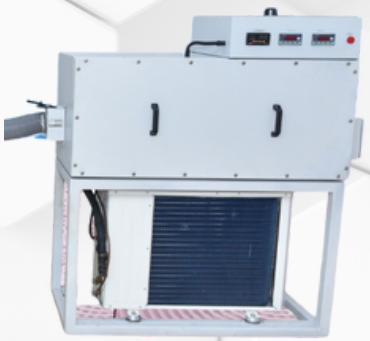


Different Sizes of collector and small roll to roll collector

Additional Core-Shell

Multinozzle

Ultra-Compact spinning chamber



Dehumidifer

Super ES-4 (Roll To Roll)

Semi-Pilot Scale

Patented Technology

Roll to Roll

Batch Opreation

Touch Control

Atmospheric Control

The SUPER ES-4 represents the pinnacle of electrospinning technology, offering cutting-edge features that sets it apart in the field. As a roll-to-roll semi-pilot scale electrospinning machine, it incorporates patented US technology that ensures unrivaled performance. What truly distinguishes the SUPER ES-4 is its lightning-fast nanofiber coating capability, made possible by its air-assisted technology. This innovation not only accelerates production but also ensures uniform and high-quality nanofiber deposition. Designed for large-scale nanofiber production, the SUPER ES-4 redefines the possibilities in various industries, from textiles to advanced materials, by providing an efficient and versatile solution for meeting the demands of today's fast-paced markets.

Spinning Arrangement

- Horizontal spinning
- Roll to Roll setup
- Co-Spinning
- Core-Shell Spinning
- Adjacent distance between spinneret and collector: Up to 250mm
- **Digital temperature control** (ambient to 60 degrees) to monitor and maintain the process conditions
- **Digital Humidity Control(20%RH-90%RH)**
- High Speed Exhaust Blower for protection from hazardous solvent fume
- UV Light: 10 Watts (Sterilization)

Infusion

- Syringe Pump Single Channel: Qty.2
- Air Infused infusion tank.
- Infusion function
- Volume, Time and Flow control
- Acceptable syringe volume: 5 µl-60ml
- Flow rate: 1 µl/min-3 ml/min (±0.05%)

Spinneret

- Single Nozzle
- US Patented nozzle
- Air assisted nozzle
- Co-axial Nozzle: Core 21 G, shell 16 G
- Multi-nozzle(4 changeable needle geometry)

High Voltage 1

- Positive Output voltage: 0 to 100 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Super ES-4

High Voltage 2

- **Negative Output voltage: 0 to -50 KV ± 0.05%**
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip - unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened

Collectors

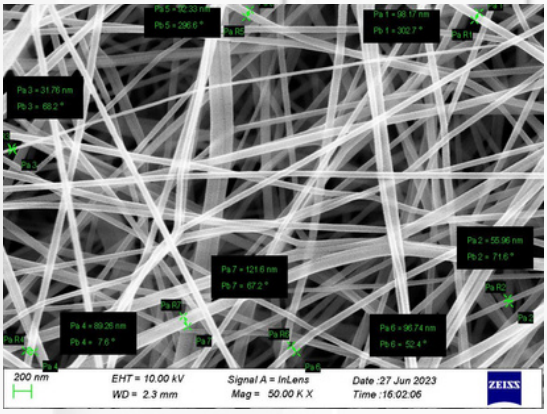
- Plate: Width = 255mm Length=150mm Thickness= 10mm
- Drum: Diameter= 100 mm, Length= 200 mm
- Disk: Diameter= 100 mm, Length= 10 mm
- Rod: Diameter= 100 mm, Length= 220 mm, Window= 10 Number
- RPM: 200-3500
- **Roll To Roll Collector: Deposition area: Width =300 mm; Length = Continuous; Speed: 0.2 m/min to 10 m/min**
- **Winder and re-winder: Continuous process**

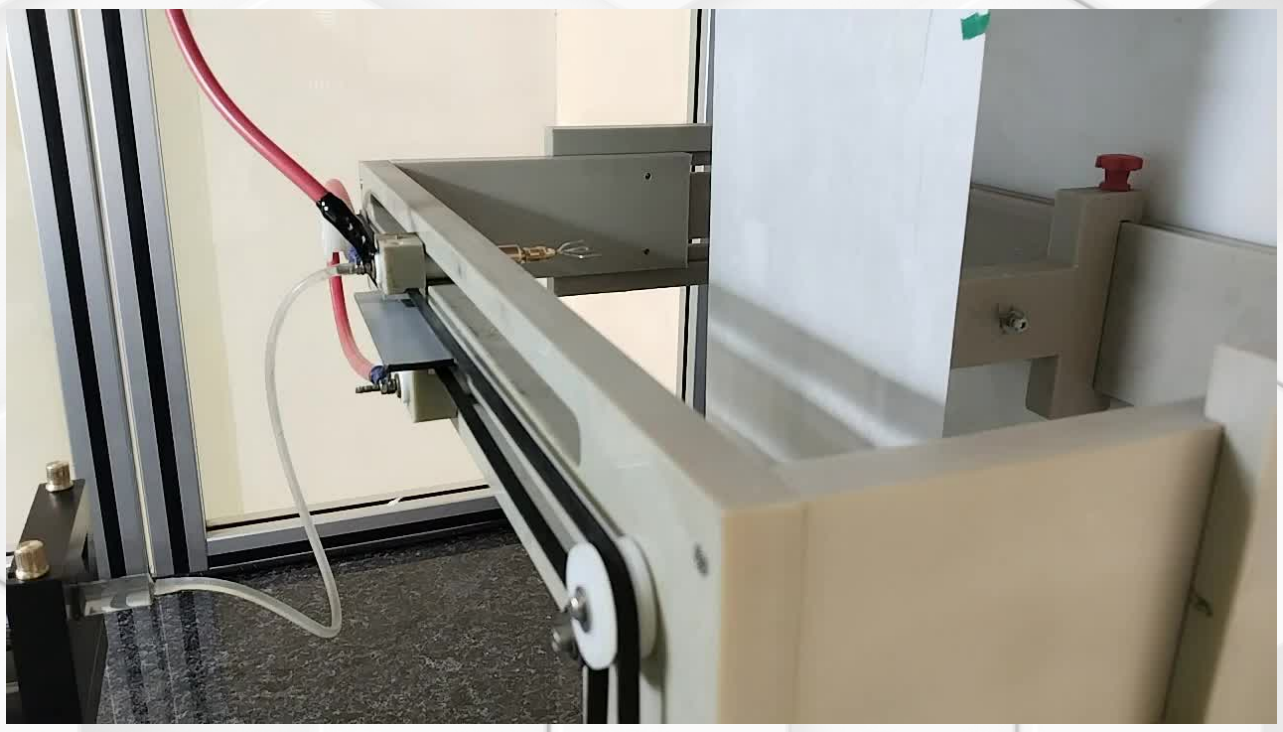
Linear stage

- Both Side X-Axis :- Software Automated distance adjustment
- Y-Axis: Programmable transverse motion
  - Stroke distance: 300 mm
  - Speed:- Three speed adjustment (Slow, Medium and Fast)
- Z-Axis: Manual distance adjustment

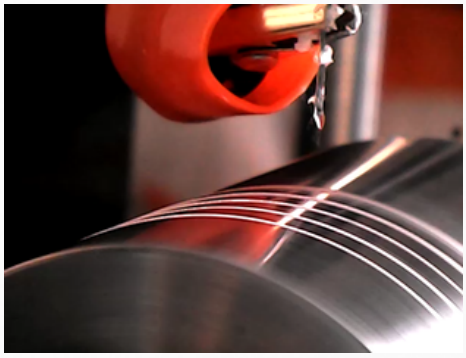
Operational Control

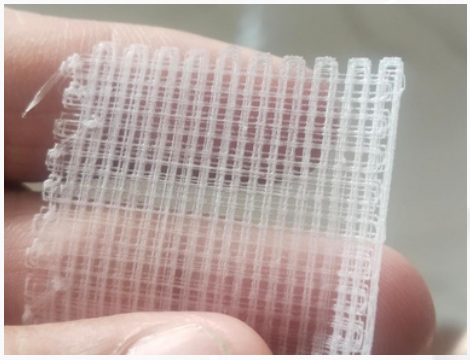
- **HMI/PLC with preinstalled software**

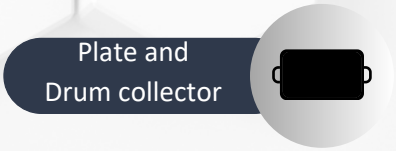




Super NFES-1(Near Field & Melt E-Writing)







Infusion Arrangement
- Syringe Pump control
- 0.2ml/hr-3ml/hr
- Pressure infusion
- 0.1-2 bar
- Digital Display of infusion

High Voltage
- Output voltage: 0 to 30 KV ± 0.05%
- Voltage adjustment: 0.1 KV
- Output current: 0 to 400 µA
- Digital voltage and current monitoring display
- Overload trip- unit shuts down if current exceeds 20% of the maximum output current
- Auto cut high voltage protection when door is opened .

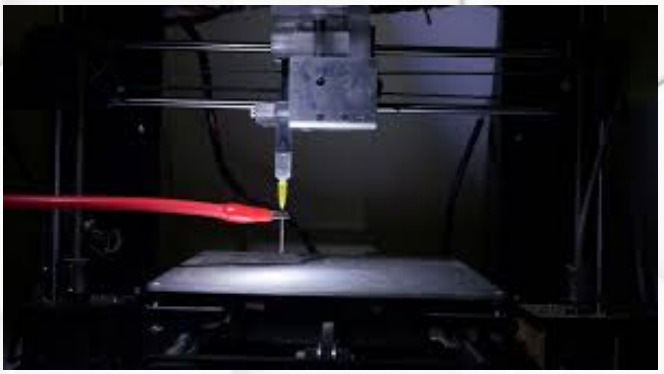
Linear Axis
- 3 Axis motion.
- Z-axis motion for adjusting distance between collector and spinneret.

Collector
- XY axis stage
- 150x150mm
- Precise motion control.
- Rotating mandrel for making scaffolds.

Atmospheric Controls
- Temperature control(ambient to 60°C)
- Solution heating provision up to 150°
- UV curing

Software Control

Super NFES-1 Software with multiple patterns and custom pattern design facility.



Spinning Lines

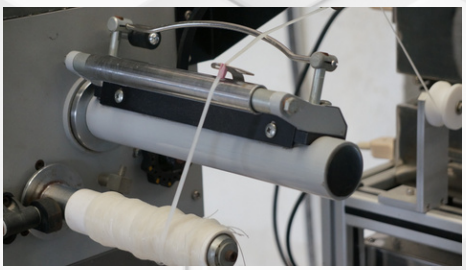
At E-Spin Nanotech, we are the pioneers of cutting-edge spinning technology, offering a diverse range of equipment solutions that cater to a multitude of industrial applications. Our spinning line is a testament to our commitment to innovation, featuring three distinct and remarkable spinning techniques: Wet Spinning, Melt Spinning, and Gel Spinning.

Wet Spinning: Crafting Solid and Hollow Fibers
In the realm of Wet Spinning, we embark on a creative journey, molding both solid and hollow fibers with finesse. This versatile process allows us to create fibers with a broad spectrum of properties, transforming your ideas into reality with precision. Wet Spinning is not just a technique; it's an art form that brings your vision to life in the form of fibers, enhancing industries and products across the board.

Melt Spinning: Forged in the Fires of Strength
When it comes to Melt Spinning, we channel our expertise to craft high-strength fibers, setting the stage for unrivaled durability. Specifically tailored for the production of materials like nylon, our Melt Spinning process ensures that your products exude strength and resilience. We believe that innovation should translate into tangible results, and our Melt Spinning technology does just that - creating fibers that can withstand the tests of time and usage.

Gel Spinning: The Art of UHMWPE Fiber Production
Gel Spinning is where we truly shine, especially in the production of UHMWPE (Ultra-High Molecular Weight Polyethylene) fibers. This is where our creative alchemy meets the high demands of modern applications. These fibers, borne from the magic of Gel Spinning, offer unparalleled strength and durability, becoming the bedrock of safety and performance in applications where exceptional quality is paramount.

At E-Spin Nanotech, our mission is to unlock the potential of fibers in a manner that's as innovative as it is transformative. Our spinning solutions are the canvas on which your ideas take shape, with each fiber spun being a masterpiece of creativity and technology. Join us in this journey of redefining possibilities through the art of spinning, one fiber at a time.



Super WS-1 | Lab Scale | Solid Fiber

Precise Pressure Infusion

SS316 Build

Touch Control

Pressure Infusion
- Precision pressure infusion control.
- Pressure range 0-4Bar
- Digital Display of infusion pressure.
- Over pressure and under pressure indication .

Dope Tank
- 1-3 Litre Capacity dope tank.
- SS316 build.
- Jacketed
- PID temperature controlled.(ambient to 70°C)
- Infusion and width drawl valve.

Coagulation Bath
- SS316 build
- Size: L-24 inch, B-10 inch , H-12 inch
- Temperature control(optional)
- With guide rollers PTFE made.

Spinneret
- Single hole spinneret (0.5-2mm) as per desired specification.
- MOC: SS316 or Brass

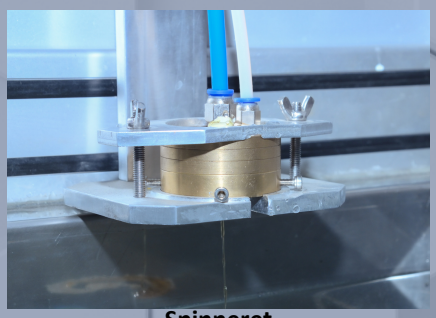
Takeup Roller
- MOC:SS316
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

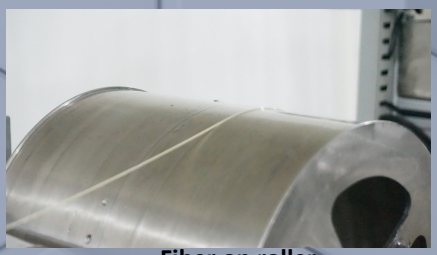
Winder
Speed: 1 -40 RPM
Make: E-Spin/Lexon

Controls
- PLC/HMI based controlling.
- Emergency Stop.

Additional Accessories
Compressor system (oil free)
Required fittings and guide rollers.


Standard winder for tension control


Spinneret


Fiber on roller

Super WS-2 | Semi-Pilot Scale | Solid Fiber

Metering Pump

Temperature Control

Pilot line

Infusion
- Precision infusion control using metering pump.
- Flow control 50ml/hr-1litre/hr(As per required)
- Digital Display of infusion .

Spinneret
- Single hole spinneret (0.5-2mm) as per desired specification.
- MOC: SS316 or Brass

Dope Tank
- 1-5 Litre Capacity dope tank.
- SS316 build.
- Jacketed
- PID temperature controlled.(ambient to 70°C)
- Infusion and width drawl valve.

Coagulation Bath
- SS316 build
- Size: 20-100 Litre capacity
- PID temperature controlled.(5° to 70°C)
- With guide rollers PTFE made.

Takeup Roller
- MOC:SS316
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

Washing Bath
- SS316 build
- Quantity: 2 Nos
- Size: 20-100 Litre capacity
- Optional PID temperature controlled.(5° to 70°C)
- With guide rollers PTFE made.

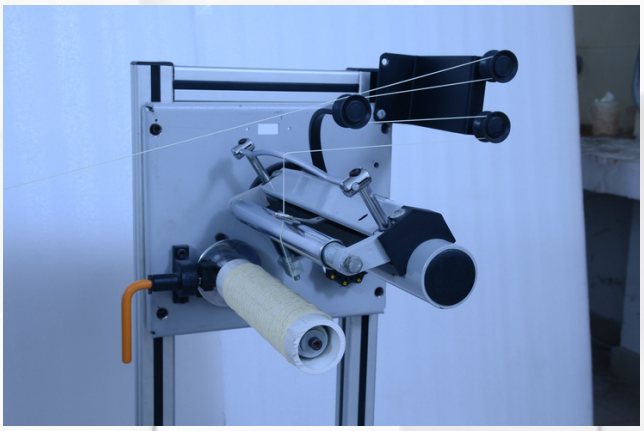
Stretch Roller
- MOC:SS316
- Quantity: 2Nos
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

Drying Unit
- 20-50 cm heating zone.
- SS316 build.
- PID temperature controlled.(ambient to 250°C)

Winder
- Speed: 1 -100 RPM
- Make: E-Spin/Lexon

Controls
- PLC/HMI based controlling
- Emergency Stop

Additional Accessories
- Compressor system (oil free)
- Required fittings and guide rollers.



Super WS-3 | Lab Scale | Hollow Fiber Casting

Precise Pressure Infusion

SS316 Build

Hollow Fiber

Pressure Infusion
- Precision pressure infusion control.
- Pressure range 0-4Bar
- Digital Display of infusion pressure.
- Over pressure and under pressure indication .

Dope Tank
- 1-3 Litre Capacity dope tank.
- SS316 build.
- Jacketed
- PID temperature controlled.(ambient to 70°C)
- Infusion and width drawl valve.

Bore Tank
- 5-15 Litre Capacity dope tank.
- SS316 build.
- Jacketed
- PID temperature controlled.(ambient to 70°C)
- Infusion and width drawl valve.

Coagulation Bath
- SS316 build
- Size: L-24 inch, B-10 inch , H-12 inch
- Temperature control(optional)
- With guide rollers PTFE made.

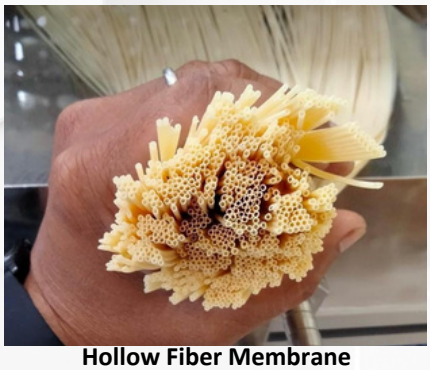
Spinneret
- Core-Shell spinneret (0.5-2mm) as per desired specification.
- MOC: SS316 or Brass

Takeup Roller
- MOC:SS316
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

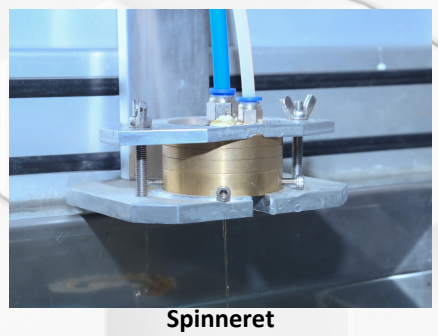
Winder
- Speed: 1 -40 RPM
- 50% dipped in water
- Make: E-Spin

Controls
- PLC/HMI based controlling.
- Emergency Stop.

Additional Accessories
- Compressor system (oil free)
- Required fittings and guide rollers.

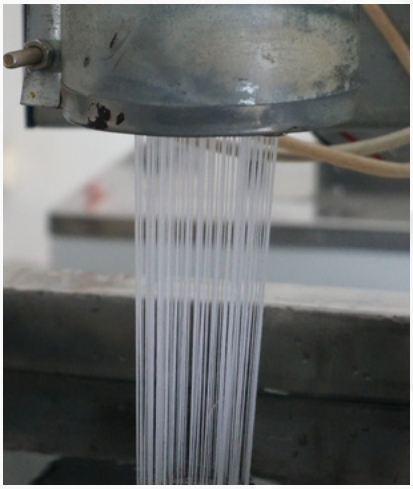


Hollow Fiber Membrane



Spinneret

Super GS-1 | Gel Spinning |UHMWPE



3-Zone Extruder

Liquid Quenching

Drawing Unit

Extruder
- 3/4 Zone extrusion system
- Ambient to 350°C
- PID temperature control
- L/D ratio 25
- Pressure controlled extrusion.
- Up to 300bar pressure
- Motor: 3 kW, 6 Pole, 415V, 50 Hz, 3 phase, Hindustan/ Bharat Bijlee/ Marathon make
- Screen Pack filtering unit
- Hopper unit up to 1kg capacity

Spinneret
- Single hole spinneret (0.5-2mm) as per desired specification.
- Multi-hole spinneret
- MOC: SS316 or Brass

Take-up Rollers
- MOC:SS316
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

Washing Bath
- SS316 build
- Quantity: 2 Nos
- Size: 20-100 Litre capacity
- Optional PID temperature controlled.(5° to 70°C)
- With guide rollers PTFE made.

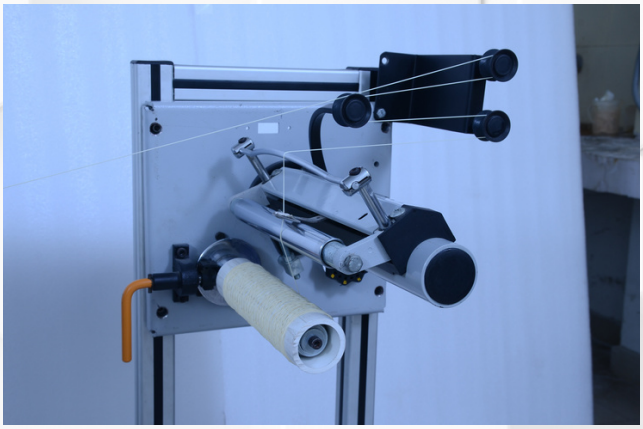
Stretch Roller
- MOC:SS316
- Quantity: 4Nos
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

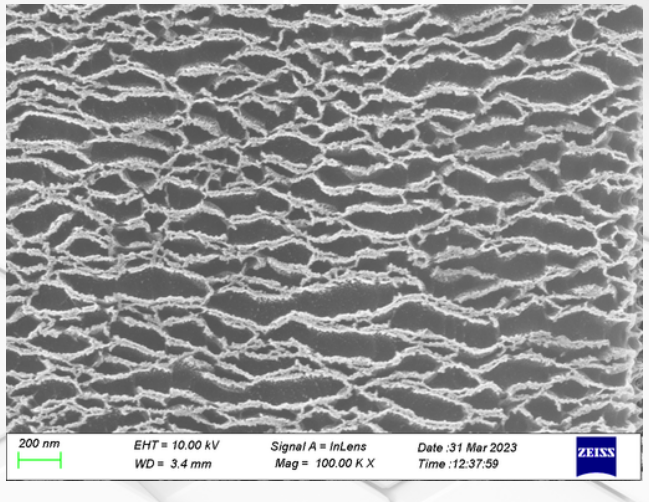
Drying Unit
- 20-50 cm heating zone.
- SS316 build.
- PID temperature controlled.(ambient to 250°C)

Winder
- Speed: 1 -100 RPM
- Make: E-Spin/Lexon

Controls
- PLC/HMI based controlling
- Emergency Stop

Additional Accessories
- **Different Hole spinneret**
- Required fittings and guide rollers.
- Spin Finish (Optional)





Super MS1 | Lab Scale

3-Zone Extruder

Air Quenching

Drawing Unit

Extruder
- 3/4 Zone extrusion system
- Ambient to 350°C
- PID temperature control
- L/D ratio 25
- Pressure controlled extrusion.
- Up to 300bar pressure
- Motor: 3 kW, 6 Pole, 415V, 50 Hz, 3 phase, Hindustan/ Bharat Bijlee/ Marathon make
- Screen Pack filtering unit
- Hopper unit up to 1kg capacity

Spinneret
- Single hole spinneret (0.5-2mm) as per desired specification.
- Multi-hole spinneret
- MOC: SS316 or Brass

Quenching
- Air Quenching
- SS316 build.
- Quenching length 1.5 meter
- Temperature controlled air.

Take-up Roller
- MOC:SS316
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

Winder
- Speed: 1 -100 RPM
- Make: E-Spin/Lexon

Stretch Roller
- MOC:SS316
- Quantity: 4Nos
- Roller Diameter (100-200)mm
- Min speed- 5 mpm
- Max speed- 50 mpm

Controls
- PLC/HMI based controlling.
- Emergency Stop.

Additional Accessories
- Required fittings and guide rollers.
- Spin Finish (Optional)