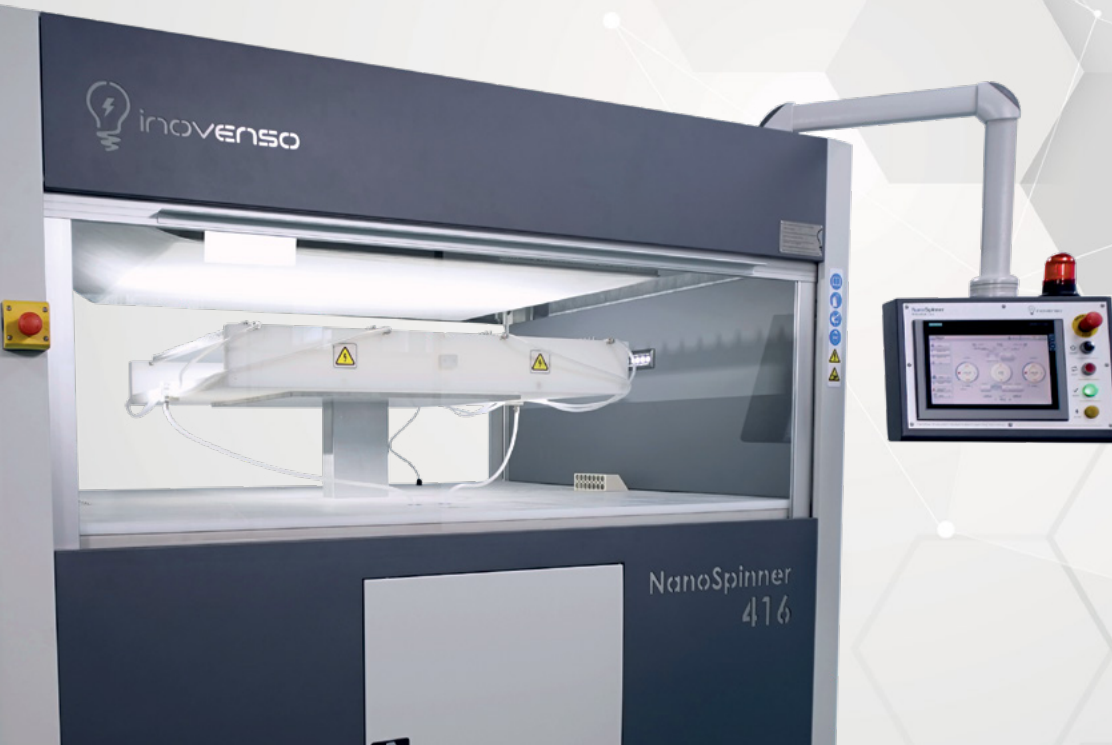


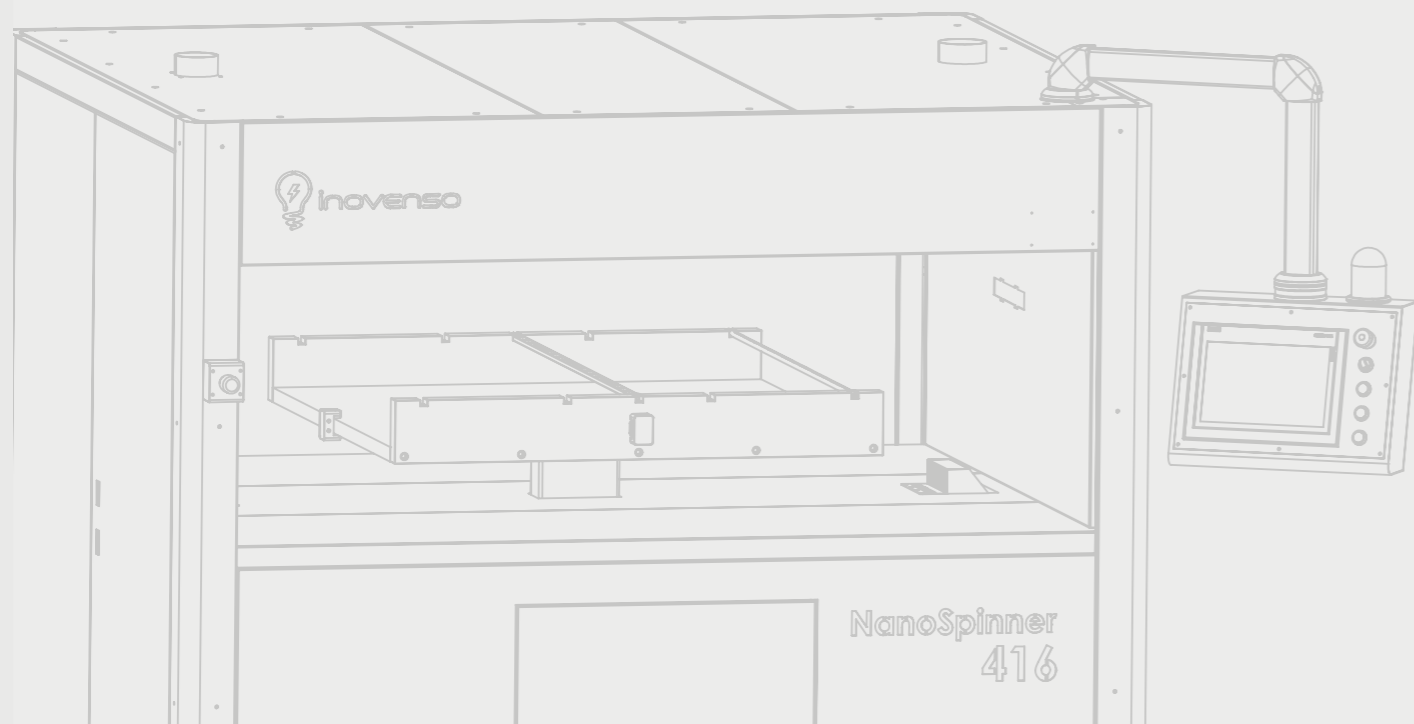
NanoSpinner

Industrial Line NS416



NS 416

Nanospinner 416 Industrial Electrospinning/Spraying



About **INOVENSO**

We started our academic activities in 2007 working on nanotechnologies under the Nano Fiber Membrane Group (NanoFMG). After focusing on improving Nanofiber quality during Electrospinning process, we established our born global company Inovenso in 2010. Our name is acronym of Innovative Engineering Solutions. We aimed to developed very efficient electrospinning machines and accelerate nanofiber science. We quickly become a bridge company between academia and industry and proudly contributed to hundreds of scientific projects using polymer nanofibers for wide variety of applications such as biomedical tissue,engineering, pharmaceutical, energy, filtration, material sciences, textile, agriculture, cosmetics.

We brought new innovative approaches to overcome many common obstacles in the nanofiber production field such as scalability, flexibility, standardization and reproducibility with develops customized electrospinning devices all the way from any lab scale desktop starter kits to industrial scale electrospinning machines. It was only possible with working very closely with our clients, understanding their real needs and sharing their concerns and problems.

For more info visit: www.inovenso.com



About **NS416**

NANOSPINNER416 is Inovenso's Advanced Manufacturing line of Nanofibers, it enables an industrial continuous electrospinning process, on 1-meter width fabrics with 50-400 nm (0.05-0.4 μm) diameter nanofibers.

The industrial nanofiber membrane product quality. Industrial Scale Nanofiber Membrane Production Unit The Nanospinner416 is the ongoing industrial project which waits for today's electrospinning projects as tomorrow's nanofiber products.

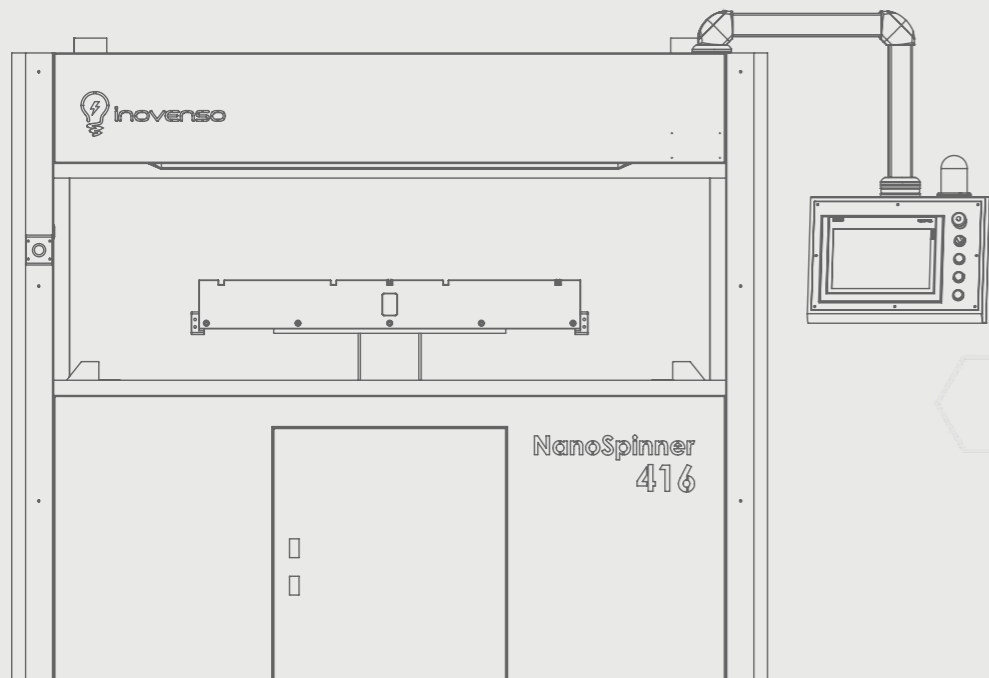
In accordance with the customized product properties and nanofiber coating level (g/m^2), the output of **NanoSpinner416** can vary 180 m^2/day to 5.000 m^2/day nanofiber membrane coating. The net nanofiber production capacity of NanoSpinner416 is approximately 5.000 g nanofiber daily.



NanoSpinner
Industrial Line **NS416**

The NS416 is equipped with **204** electrospinning nozzles, allowing the surface to be uniformly and continuously at a width of 1 m. Thanks to its advanced automation system and air conditioning equipment, it enables continuous production at the determined quality even under changing environmental conditions.

PRODUCT DESCRIPTION



NanoSpinner
Industrial Line NS416

- **Production Rate**

- PA 6 – 0.03 GSM – 18% concentration:

- 464 ml/h (total flow rate)

- 45m²/min >>> 2700m² /h >>> 63450m²/day (23.5h/day)

- 18.273.600 m²/year**

- **Single and Multi Nozzle Operation**

- Up to 204 Nozzles during full operation

- Possible to work with single nozzle

- Standard Different Diameters Nozzles can be attached optionally

- 2 precise peristaltic pumps

- 1 High voltage power suppliers (60kV). Each of them charges different pipe sets.

- **Advanced Automation System**

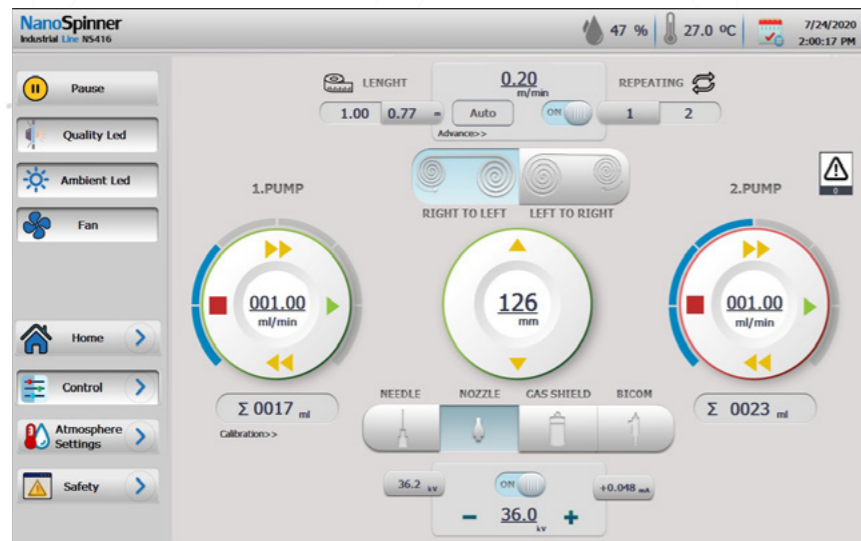
- Full control of the process and system via 12 inches touch screen panel saving all important parameters and recall when needed. Equipped with extra safety features such as spark protection, safety-door option, and integrated safety-relays.

- **Roll to Roll Collector:**

- Fiber Deposition Width: 1000 mm

- Substrate Winding Speed: 0,2 m/min - 20 m/min

UNIQUE USER INTERFACE



USER FRIENDLY

Specially designed control panel with user-friendly interface makes operations much easier.

ACCURATE CONTROL

Operator will have the full control of all parameters.

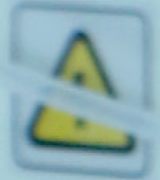
RECIPE RECALL

The recipes recall function enables users to save parameters and recall instantly.





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NanoSpinner
Industrial Line

SIEMENS

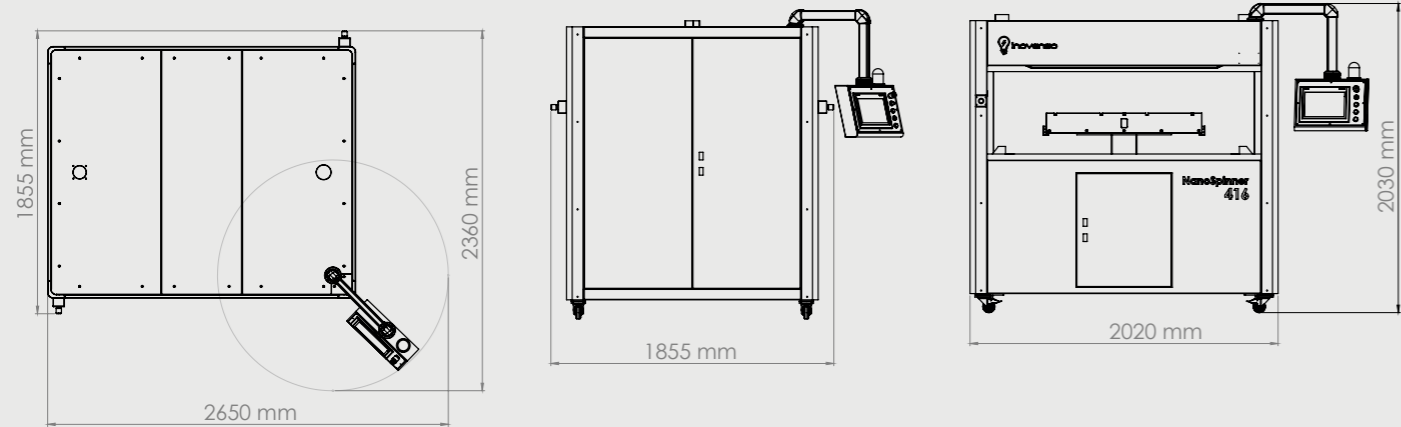
NanoSpinner
Industrial Line

Pause

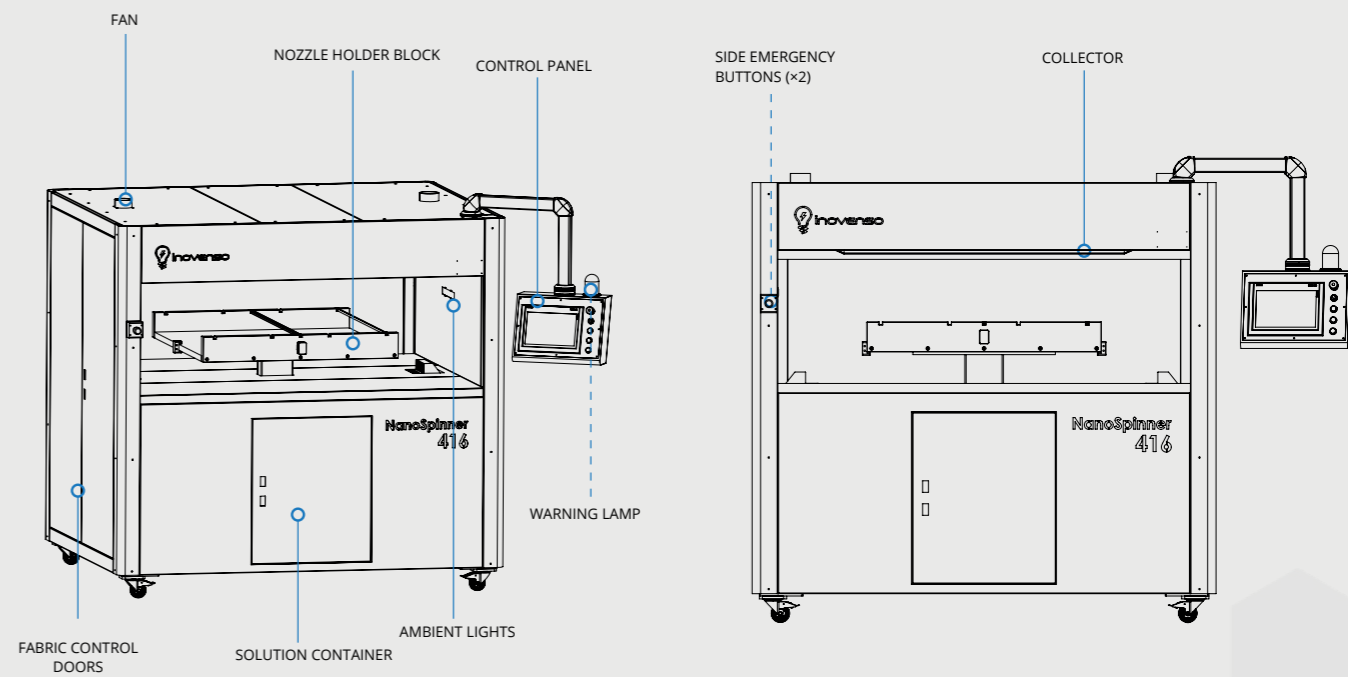
Quality Led

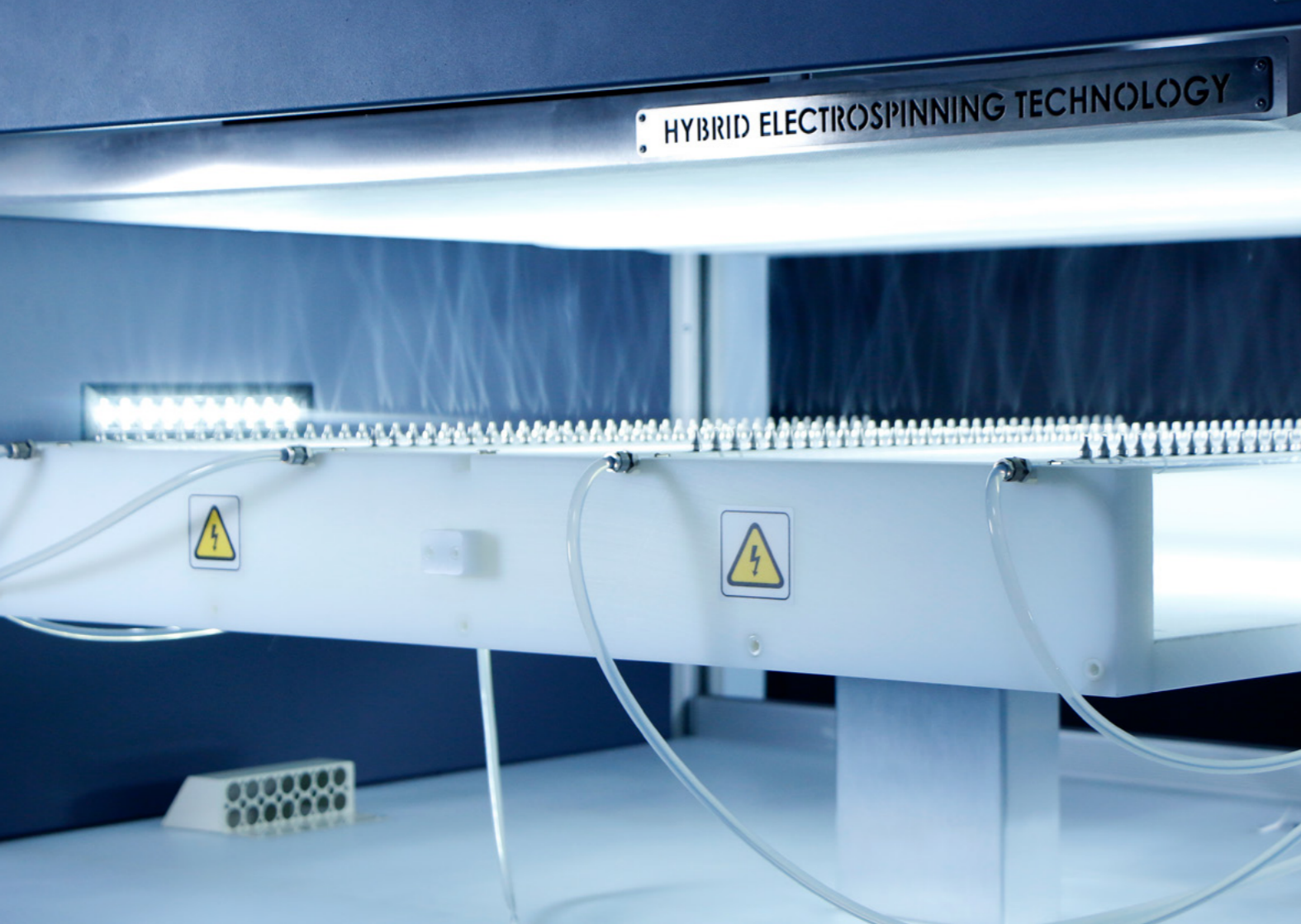
Ambient Led

LENGTH
200.00 0.00

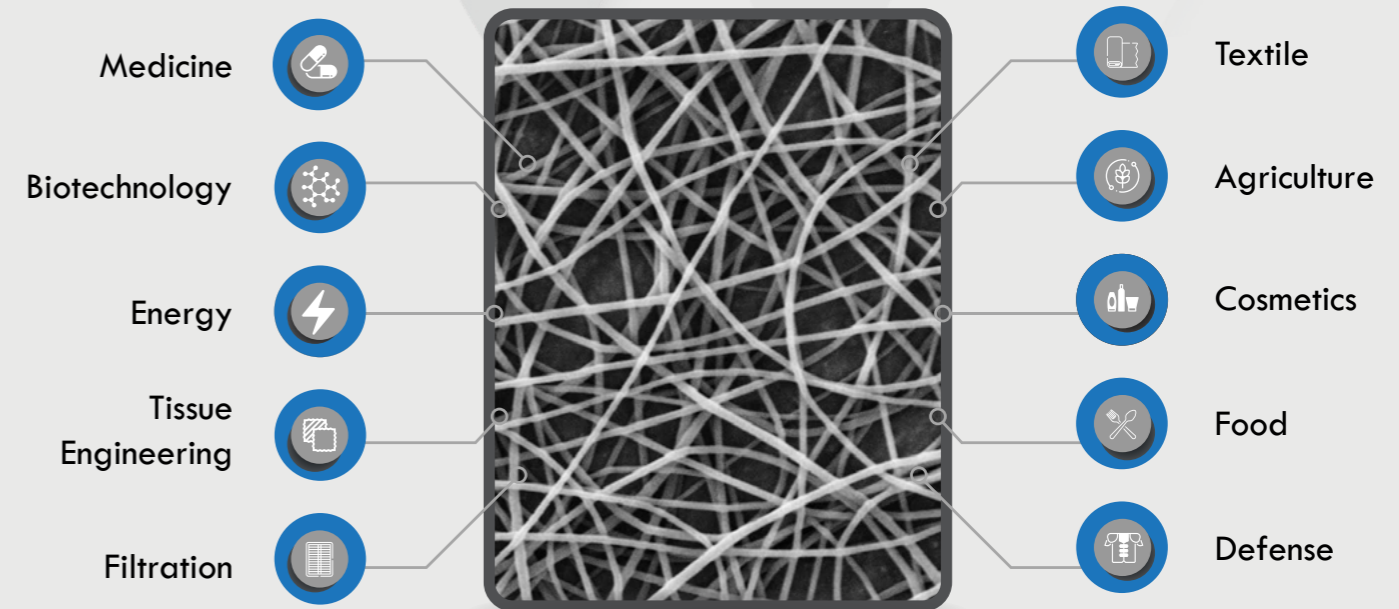


TECHNICAL DRAWING





APPLICATION AREAS





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