



佛山轻子精密测控技术有限公司
Foshan Lepton Precision M&C Tech Co.,Ltd.

TECHNICAL PROPOSAL

FOR MF01-002 MID-SCALE NANOFIBER PRODUCTION LINE



Foshan Lepton Precision M&C Tech Co.,Ltd

Tel : 0757-89956077

Fax : 0757-86687012

E-mail: info@qingzitech.com Web-site: www.qingzitech.net



1. Technical Specifications

1.1 Product Name&Model: Mid-scale Nanofiber Production Line MF01-002

1.2 Equipment Parameters and Standard Configuration

| MF01-002 Standard Configuration Parameters | | | |
|--|---------------------------|--|-------|
| No. | Item | Parameters and Configuration | Qty. |
| 1 | High Voltage Power Supply | -Output voltage DC: 0~50KV, current \leq 2mA | 2 Set |
| 2 | Solution Feeding System | -Precision metering pump provides stable solution feeding -50~100ml/h continuously adjustable | 2 Set |
| 3 | Rewinding device | -Unwinding device, 3 inch air expansion shaft continuous unwinding,maximum winding diameter 300mm,magnetic powder maximum braking torque 12 N.m; -Winding device, 3 inch air expansion shaft continuous winding,maximum winding diameter 300mm,winding tension control range 0-100 N, control accuracy 0.5%; -The winding speed is continuously adjustable within the range of 0-5m/min; -Deviation rectifying device: the winding includes automatic deviation rectifying, and the deviation rectifying precision is 1mm. -The guide rolls directly contacting the fiber membrane are treated as a release; | 1 Set |
| 4 | Spinning Nozzle Device | -Single set of spinning nozzles device: trapezoidal array 16 pins * 4 or 32 pins*2 -128 needles in total for spinning nozzle. | 2 Set |
| 5 | Collection Platform | -The base metal plate is used as a grounding end or a negative electrode, and a continuous non-woven fabric or a melt-blown fabric as a substrate to collect nanofiber continuously; | 1 Set |



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|----|------------------------|---|-------|
| | | <ul style="list-style-type: none"> -The substrate width is 660mm, and the spinning receiving area is $\geq 660\text{mm} \times 600\text{mm}$; -Spinning receiving distance 100-200mm. | |
| 6 | Environmental Control | <ul style="list-style-type: none"> -Temperature control adjustment range: room temperature to 50°C, temperature deviation $\pm 3^{\circ}\text{C}$; -Humidity control adjustment range: indoor humidity to 30% RH, humidity deviation $\pm 3\%$ RH; | 1 Set |
| 7 | Exhaust System | <ul style="list-style-type: none"> -The exhausting method is from bottom to top, silent exhaust; -Exhaust rate is approximately 120 m³/h. | 1 Set |
| 8 | Control System | <ul style="list-style-type: none"> -7-inch color touch screen, Chinese operation interface. -Control the parameters such as the reciprocating movement time, speed and stroke of the spinning nozzle device; -Detecting the temperature and humidity in the spinning chamber and controlling the target parameters; -Controlling the drying temperature and the substrate winding speed control of the rewinding and unwinding device . | 1 Set |
| 9 | Drying Equipment | <ul style="list-style-type: none"> -Accelerate the rapid evaporation of the residual solvent of the nanofiber membrane ; -The drying temperature is adjustable within the range of $0-60^{\circ}\text{C}$; | 1 Set |
| 10 | Power Line | 220V,63A | 1 Set |
| 11 | Dimension of Equipment | 1500mm(L)*1050mm(W)*2000mm(H) | |

1.3 Consumables and Delivery Materials

| Consumables and Delivery Materials | | | | |
|------------------------------------|---------------------|---------------|----------|---------|
| No. | Materials | Specification | Qty. | Remarks |
| 1 | Needles | 22G | 10 boxes | |
| 2 | Luer Joints | As standard | 130pcs | |
| 3 | Use and Maintenance | A4 | 1 Set | |



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|---|--|----|------|--|
| | Manual | | | |
| 4 | Product Qualification Inspection List | A4 | 1Set | |

2. After-sale Service

2.1 Generally, the whole machine free warranty period is one year since debugging and acceptance is over, lifetime paid maintenance, consumables excluded.

2.2 The equipment installation adjustment test is completed, and it cannot be shipped due to customer reasons, thus the warranty period is one year from the date of contract delivery, and provide lifetime maintenance paid service.

2.3 For overseas service like assembly, installation, debugging or training service, etc., if required and necessary, all the expenses would be absorbed by buyer.

2.4 If the users use the product incorrectly or refit the product, the unnatural damage isn't in the range of above free warranty, the users shall pay for the repair cost.