



# Integrated Module Automation Assembly Line For EV Thermal Management System

#### **Basic Information**

Place of Origin: ShanghaiBrand Name: QuanstarCertification: ISO

Packaging Details: wooden boxPayment Terms: L/C,T/T



### **Product Specification**

Product Name: Elecctric Vehicle Thermal Management

Assembly And Test Line

• Field Of Application: Electric Vehile Manufacturing Automation

Assembled Products: Thermal Management System

Operation Mode: Fully Automated Or Semi-automated

Control System:
PLC

Place Of Origin: Shanghai China

• Highlight: Integrated Module Automation Assembly Line,

EV Thermal Integrated Module Assembly Line, Thermal Module Automation Assembly Line

#### **Product Description**

#### Electric vehicle Thermal Management System Integrated Module Assembly Line

The assembly and inspection line for electric vehicle thermal management assemblies has the following important functions:

I. Functions in assembly

Improve production efficiency:

Realize automated flow production and quickly assemble various parts of the thermal management assembly according to the predetermined process flow. Compared with manual assembly, it greatly shortens the assembly time and increases the output per unit time.

Each assembly station has a clear division of labor and simultaneously performs different assembly tasks, reducing waiting time in the production process and making the entire production process more compact and efficient.

Ensure assembly accuracy:

Using high-precision automated equipment and tooling fixtures can ensure that the installation positions of parts are accurate. For example, when installing key components such as heat exchangers and water pumps, precise positioning can ensure the connection sealing and fluid channel patency between them.

Automated equipment can strictly control parameters such as torque and pressure during the assembly process, avoid problems such as too tight or too loose caused by human factors, and improve product consistency and reliability.

Reduce labor costs:

Reduce the dependence on a large amount of manual labor and reduce the enterprise's labor cost expenditure. The automated assembly line only requires a small number of technicians to monitor and maintain the equipment, greatly saving human resources

At the same time, automated assembly also reduces the scrap rate and rework cost caused by human operation errors.

II. Functions in inspection

Ensure product quality:

Comprehensively inspect various performance indicators of the thermal management assembly, including sealing performance, pressure testing, flow testing, temperature control accuracy testing, etc. Only products that pass strict inspections can enter the market, ensuring the reliability and stability of the electric vehicle thermal management system.

Timely discover quality problems in the assembly process, such as part defects and improper installation, and handle them in a timely manner to avoid defective products flowing into the next process or market, improving the overall quality level of the product.

Optimize production process:

Through the analysis of inspection data, we can understand the performance of the thermal management assembly under different working conditions and provide a basis for optimizing product design and assembly process. For example, adjust the tolerance fit of parts and optimize the assembly sequence according to the inspection results to improve product performance and quality.

The inspection line can also compare the quality of products of different batches, discover potential problems in the production process, take timely measures for improvement, and continuously improve the production process level.

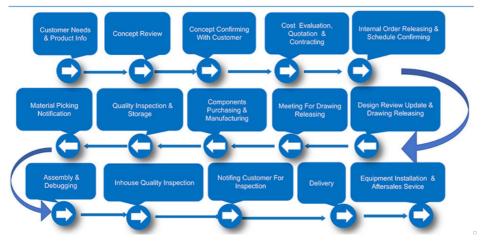
| Function       | automatic feeding, assembly, testing & packaging   |
|----------------|----------------------------------------------------|
| Production     | integrated module for EV thermal management system |
| Defective rate | below 0.5%                                         |
| Processes      | laser marking                                      |
|                | visual detection                                   |
|                | screwing                                           |
|                | EOL test                                           |
|                | sevo press                                         |
|                | greasing detection                                 |
|                | Helium detection                                   |
|                | labelling                                          |
|                | packaging                                          |
| Features       | automated MES system, real time monitoring status  |
|                | whole line A level traceability                    |



#### Development History



We are committed to providing customers with high-quality, competitive products and services. A project cooperation process usually includes the following key steps.



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