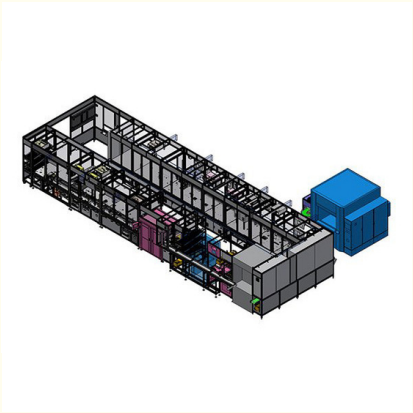
Auto Parts Production Line For Electric Vehicle Thermal Management Sub Parts

Our Product Introduction

Basic Information

- Place of Origin: Shanghai
- Brand Name: Quanstar
- Certification: ISO
- Packaging Details: wooden box
- Payment Terms: L/C,T/T



Product Specification

- Name: Eletric Vehicle Air Conditioning Expansion Valve Automatic Assembly And Testing Line
- Application: Electric Vehile Manufacturing Automation
- Assembled Products: EXV
- Operation Mode: Fully Automated
- Control System: PLC
- Place Of Origin: Shanghai
- Highlight: **Thermal Management Auto Parts Production Line**
, **Thermal Management Sub Parts PLC Line**, **EV Thermomanagement Auto Parts Production Line**

Product Description

assembly line for electric vehicle thermal management sub-parts

Automatic feeding system:

Automated equipment such as vibration plates, conveyor belts, and robots are used to transport various sub-components of the thermal management assembly, such as radiators, water pumps, expansion valves, pipelines, etc., from the warehouse or the previous process to the assembly station.

The visual recognition system detects and classifies parts to ensure the accuracy and consistency of feeding.

Assembly station:

Multi-axis robots are responsible for grabbing and assembling parts. The robots are equipped with high-precision fixtures and can accurately install each sub-component at a specific position of the thermal management assembly and ensure firm installation.

Automated welding equipment welds the pipelines to ensure stable and reliable welding quality.

Screw tightening equipment tightens the screws at each connection part to ensure the structural stability of the thermal management assembly.

Inspection station:

Sealing inspection: Put the assembled thermal management assembly into the sealing inspection equipment and detect the sealing performance of the thermal management assembly by filling it with gas at a certain pressure. Ensure that there will be no leakage problem in the thermal management assembly during operation, which will affect the performance and safety of electric vehicles.

Pressure test: Conduct a pressure test on the thermal management assembly to detect its performance under different working pressures. Ensure that the thermal management assembly can withstand various pressure changes during the operation of electric vehicles and ensure the stability and reliability of the system.

Flow test: Use professional flow test equipment to test the coolant flow of the thermal management assembly. Ensure that the thermal management assembly can provide sufficient cooling flow for key components such as batteries and motors of electric vehicles to ensure that they operate within the normal working temperature range.

Control system:

An advanced PLC control system is adopted to automatically control the entire assembly line. The control system can achieve precise control of each equipment to ensure stable and reliable operation of the equipment.

Equipped with a human-machine interface to facilitate operators to operate and monitor the equipment. The human-machine interface can display information such as equipment operation status and detection results. Operators can perform operations such as parameter setting and fault diagnosis through the human-machine interface.

III. Advantages of assembly line

Improve production efficiency:

The automated assembly process greatly shortens the production cycle and improves production efficiency. Compared with traditional manual assembly methods, the automated assembly line can achieve continuous production, reducing the time and error of manual operations and improving production efficiency.

Improve product quality:

High-precision assembly equipment and strict detection methods ensure the quality stability and reliability of products. The automated assembly line can achieve precise assembly of parts and comprehensive detection of product performance, reducing the impact of human factors on product quality and improving the product qualification rate.

Reduce production costs:

The introduction of automated equipment reduces the demand for manual labor and reduces the labor cost of enterprises. At the same time, the automated assembly line can achieve efficient production, reducing waste in the production process and reducing production costs.

Enhance enterprise competitiveness:

Advanced automated assembly lines can improve the production efficiency and product quality of enterprises and enhance the competitiveness of enterprises in the market. Enterprises can win more customers and market share by providing high-quality products.

IV. Case effect:

After the automotive parts manufacturing enterprise introduced the automated assembly line for sub-components of electric vehicle thermal management assemblies, remarkable results have been achieved:

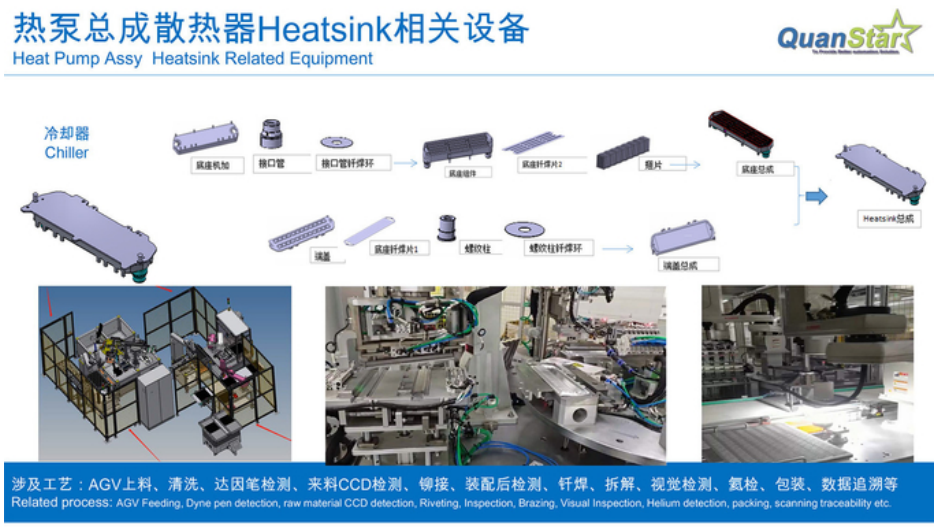
The production efficiency has increased by more than 60%, greatly shortening the product delivery cycle.

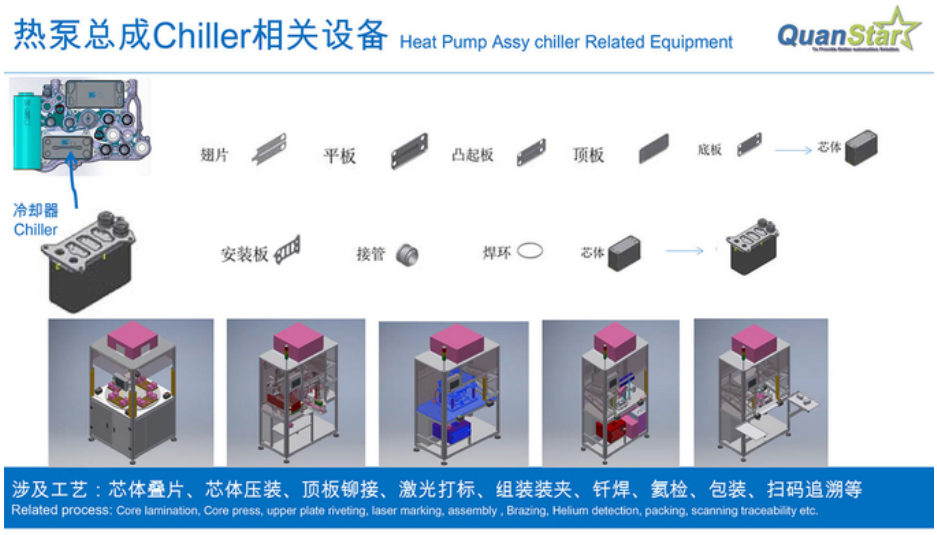
The product quality has been significantly improved, and the qualification rate has increased from 90% to more than 98%.

The labor cost has been reduced by more than 40%, and the economic benefits of the enterprise have been significantly

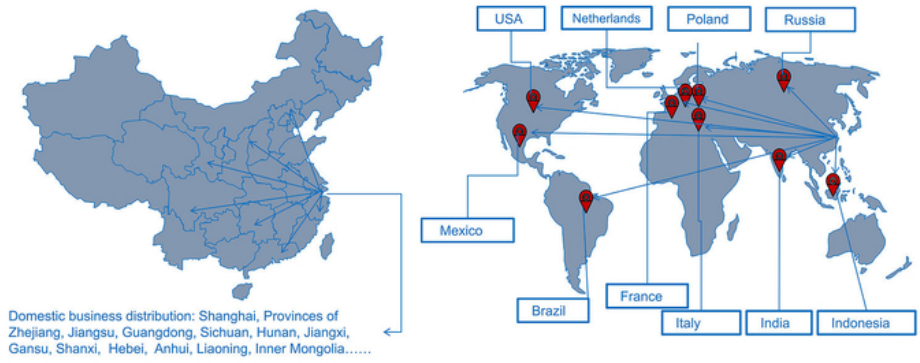
improved.

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

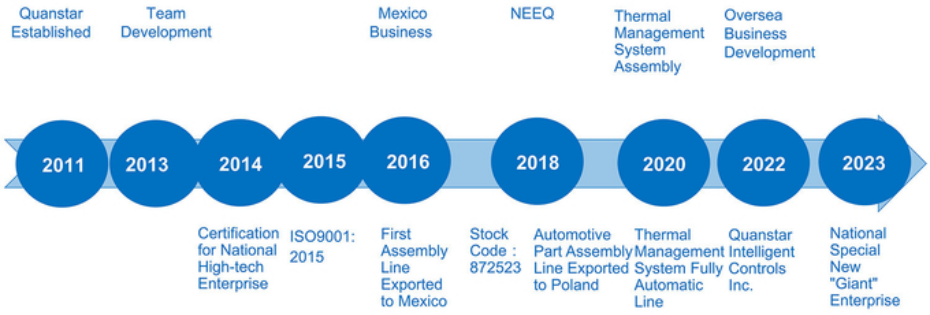




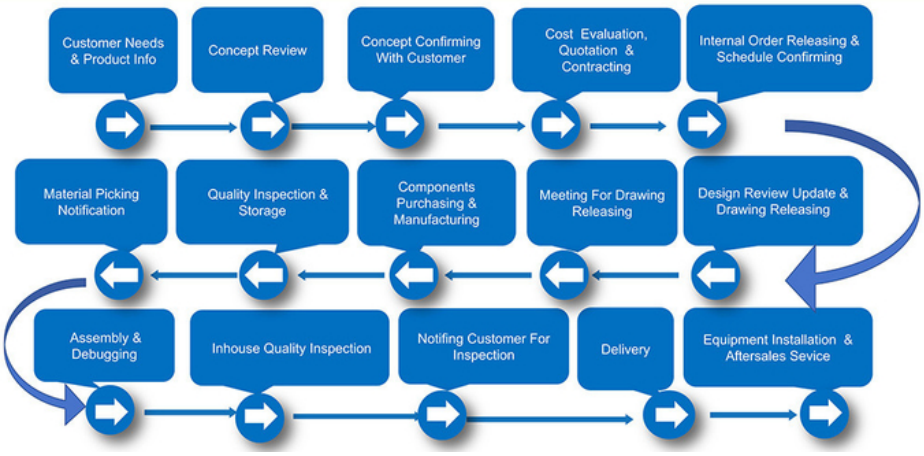
Business Global Service



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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