



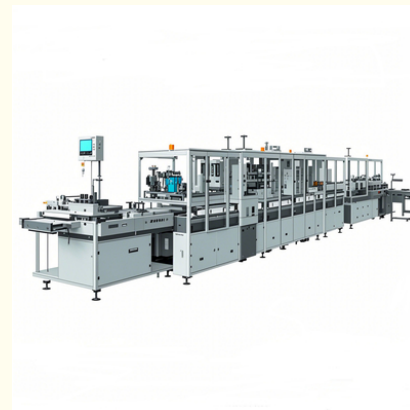
Assembly automation solutions For Thermal Management System

Our Product Introduction

for more products please visit us on automation-assembly.com

Basic Information

- Place of Origin: Shanghai
- Brand Name: Quanstar
- Certification: ISO 9001
- Minimum Order Quantity: 1
- Delivery Time: 120
- Payment Terms: T/T



Product Specification

- Name: Assembly Automation Solutions For Thermal Management Solution
- Software: MES
- Control System: PLC, HMI, RFID
- Appliance: Custom
- Industry: Electric Vehicle
- Cycle Time: 35S / PC
- Function: EOL, Assembly, Testing, Traceability
- Highlight: **EV Thermal Management Assembly Line, Assembly Line**

Product Description

Assembly automation solution for Thermal Management System

A/C system
PTC (Power Train Cooling)
Cooling module
HVAC model
Pipe Assy etc

Thermal management integrated module assembly, testing and packaging production line

The main processes are automatic feeding, laser marking, visual detection, auto tightening, auto press-fit, EOL test, Off-line labeling.

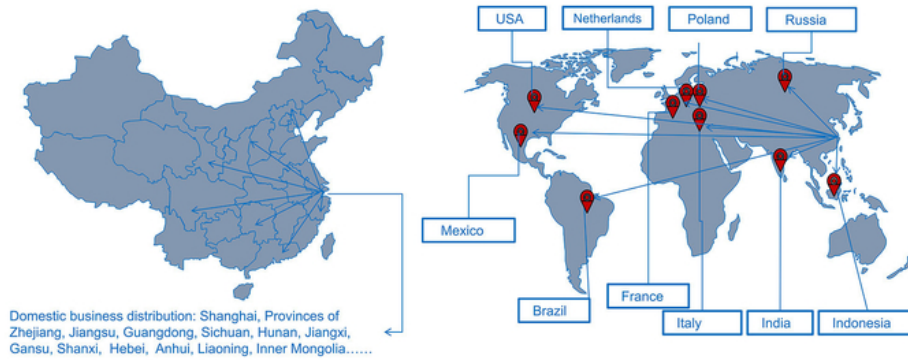
Category	Parameter	Description
Battery Thermal Management	Optimal Temperature Range	20°C to 40°C
	Cooling Methods	Air cooling, Liquid cooling, Phase Change Material (PCM)
	Heating Methods	PTC heater, Heat pump system
Motor & Inverter Thermal Management	Optimal Temperature Range	Below 80°C to 100°C
	Cooling Methods	Liquid cooling, Oil cooling, Air cooling
Heat Pump System	Coefficient of Performance (COP)	Typically 2 to 4
	Operating Temperature Range	-10°C to 40°C
Control Strategy	Temperature Sensors	Placed in key areas (battery, motor, inverter) for real-time monitoring
	Control Algorithms	Adjust cooling/heating power based on sensor feedback
	Predictive Control	Adjusts system based on driving mode, ambient temperature, and battery state
Energy Efficiency	System Power Consumption	Ranges from hundreds of watts to several kilowatts
	Energy Optimization	Optimizes control strategies to reduce energy consumption
Environmental Adaptability	Low-Temperature Performance	Ensures quick heating of battery and motor in cold environments
	High-Temperature Performance	Ensures efficient cooling to prevent overheating
Integrated Design	Modular Design	Integrates thermal management for battery, motor, and inverter
	Waste Heat Recovery	Uses waste heat from motor and inverter to heat the battery
Safety & Reliability	Overheat Protection	Reduces power or shuts down system if temperature exceeds safety thresholds
	Fault Diagnosis	Detects and addresses system abnormalities
Noise Control	Fan Noise	Controls noise from air cooling systems
	Pump & Compressor Noise	Controls noise from liquid cooling and heat pump systems
Cost & Weight	System Cost	Optimized to reduce overall vehicle cost
	System Weight	Lightweight design to minimize impact on vehicle range

Quanstar Intelligent Controls (Shanghai) Co.,Ltd. specialized in creating custom automation solutions tailored to each client's need. We have a high reputation for providing custom automated manufacturing, processing, assembling and packing solutions for all industries including:

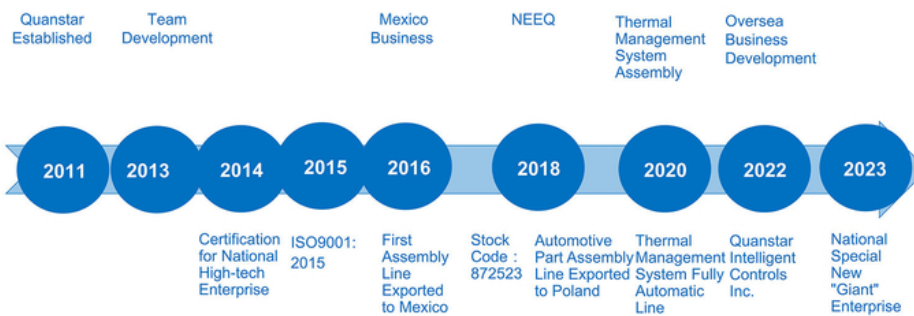
- Automotive
- Electric vehicle (EV)
- Medical
- Healthcare
- Industrial
- Cosmetics
- Commodities

Core competencies of our manufacturing automation solutions:

- Resistance and laser welding
- Ultrasonic and RF Welding
- Industrial robot integration for flexible, multi-axis problems
- Material handling
- Power & free linear transfer systems
- Servo press
- Vision inspection
- Build to print
- Precision machining
- Lean cells
- Leak testing
- 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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