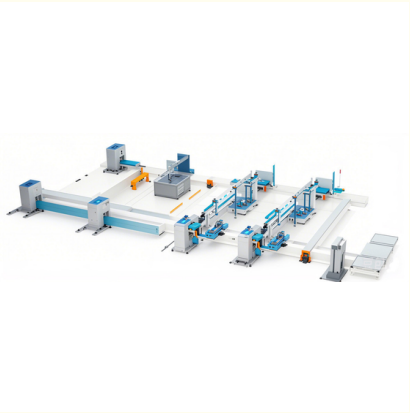
Automated Assembly Solution For Automotive Parts

Our Product Introduction

Basic Information

- Place of Origin: Shanghai
- Brand Name: Quanstar
- Certification: ISO
- Packaging Details: wooden box
- Delivery Time: 90 days
- Payment Terms: L/C,T/T



Product Specification

- Name: Automated Assembly Solution For Automotive Parts
- Application: Automotive
- Assembled Products: Thermal Expansion Valve (EXV)
- Operation: Fully Automatic
- Control System: PLC Programmer
- Cycle Time: Customized
- Highlight: **Automated Assembly Solution for Automotive Parts**
, **Automotive Parts Assembly Solution**,
Automated assembly solution

Product Description

Automated Assembly Solution for Automotive Parts

Automated assembly solutions for automotive parts are designed to enhance production efficiency, ensure precision, and maintain consistent quality in the manufacturing of vehicle components. These systems integrate advanced robotics, precision tooling, and intelligent control systems to handle complex assembly tasks, such as engine components, transmission systems, electrical systems, and interior/exterior parts. Below is an overview of the key features and parameters of such systems:

Key Features

High Precision Assembly:

Utilizes robotic arms with high repeatability (e.g., ±0.02mm) for accurate part placement and fastening.

Equipped with vision systems and sensors for real-time alignment and quality inspection.

Flexibility:

Modular design allows for quick reconfiguration to accommodate different automotive parts.

Compatible with various materials, including metals, plastics, and composites.

Scalability:

Can be integrated into existing production lines or expanded for higher throughput.

Quality Assurance:

In-line inspection systems detect defects such as misalignment, cracks, or missing components.

Data logging and traceability for compliance with automotive industry standards.

Efficiency:

Reduces cycle times and minimizes human error, leading to higher productivity.

Energy-efficient components and optimized workflows lower operational costs.

Safety:

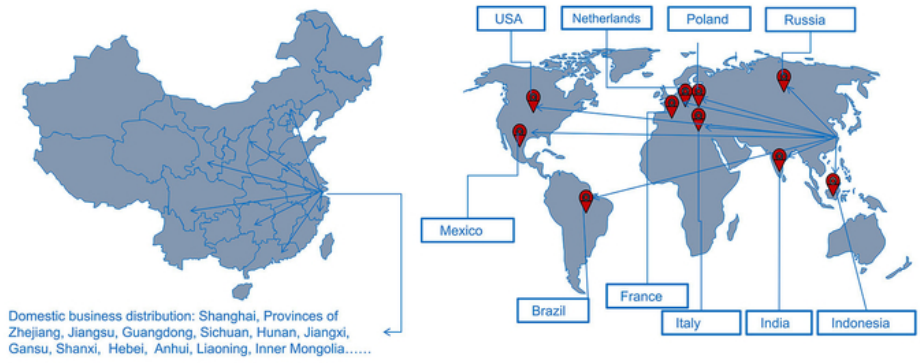
Equipped with safety guards, emergency stop buttons, and collision detection systems.

Complies with ISO and OSHA safety standards.

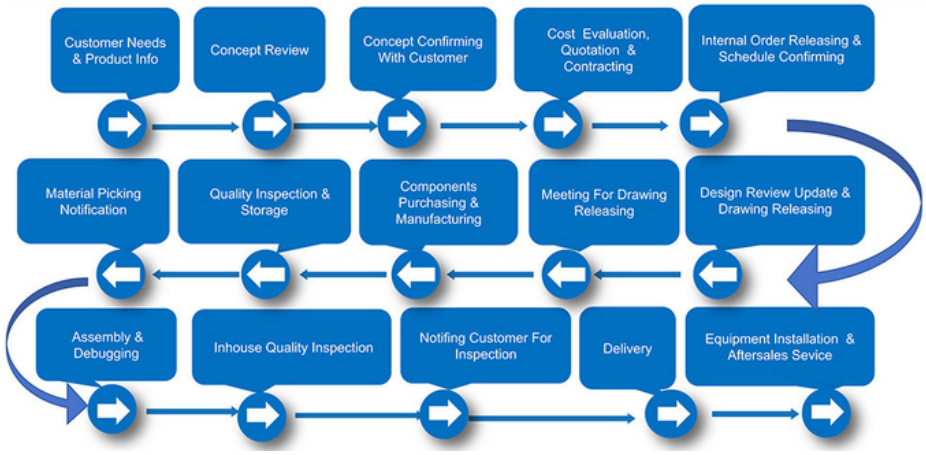
Key Parameters

Category	Parameter	Description
General Specifications	System Type	Robotic assembly system with integrated automation
	Application	Engine components, transmission systems, electrical parts, interior/exterior parts
	Power Supply	220V/380V, 50/60Hz
	Air Pressure Requirement	0.5-0.7 MPa
	System Dimensions	Customizable based on production line layout
	System Weight	Varies by configuration (e.g., 1000kg to 5000kg)
Performance Parameters	Production Capacity	50 to 500 parts per hour (depending on complexity)
	Repeatability	±0.02mm to ±0.05mm
	Cycle Time	10 to 60 seconds per part (depending on assembly complexity)
Robotic System	Robot Type	Articulated, SCARA, or delta robots
	Payload Capacity	5kg to 50kg (depending on robot model)
	Degrees of Freedom (DOF)	4 to 6 DOF for flexible movement
Control System	Human-Machine Interface (HMI)	Touchscreen PLC interface for easy operation and monitoring
	Automation Level	Fully automatic with minimal manual intervention
	Data Logging & Reporting	Records production data for quality control and analysis
Material Handling	Part Compatibility	Metals, plastics, composites, and hybrid materials
	Feeding System	Vibratory feeders, conveyors, or robotic pick-and-place systems
Safety Features	Emergency Stop	Instantly halts system operation in case of emergency
	Safety Guards	Enclosed safety guards to protect operators
	Collision Detection	Sensors to detect and prevent collisions during operation
Maintenance & Durability	Maintenance Requirements	Regular lubrication and part replacement as per manufacturer guidelines
	System Lifespan	Designed for long-term use with durable components
Customization Options	Part Size Range	Adjustable for small to large automotive components
	Integration with Other Systems	Can be integrated with upstream/downstream production lines

Business Global Service



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



FAQ

1.Q: Are you trading company or manufacturer?
A: We are a manufacturer with over 10 years of production and development experience.

2.Q: What are your major products?
A: We are an assembly automation solution provider specialized in customized automatic machinery for production. For example, we provide customized asembly line, testing and packaging solutions to several electric vehicle (EV) manufacturers, such as component-level lines for battery packs, thermal management systems, steerings and so on.

3. Q: How long is your delivery time?
A: Usually 3 months is a production cycle, the specific delivery date should be arranged according to the product's complexity and real-time production schedule. Please contact us for the latest delivery date.

4.Q: How about your price?
A: Show us your parts and we will be glad to find solutions and provide a suitable scheme, and offer the most competitive price to you.

5.Q: What is your terms of payment ?
A: 40% deposit and 60% balance payment before delivery.

6.Q: What is the package for you machine?
A: We have standard wooden case package.

7.Q: How long is the warranty?
A: Our aftersale service is one year free warranty, and life-time maintenance guaranteed.

8.Q:What partners do you work with?
A: We can both work with customer's designated partners and propose other components partners at customer's request. Some of our technical partners as below:

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