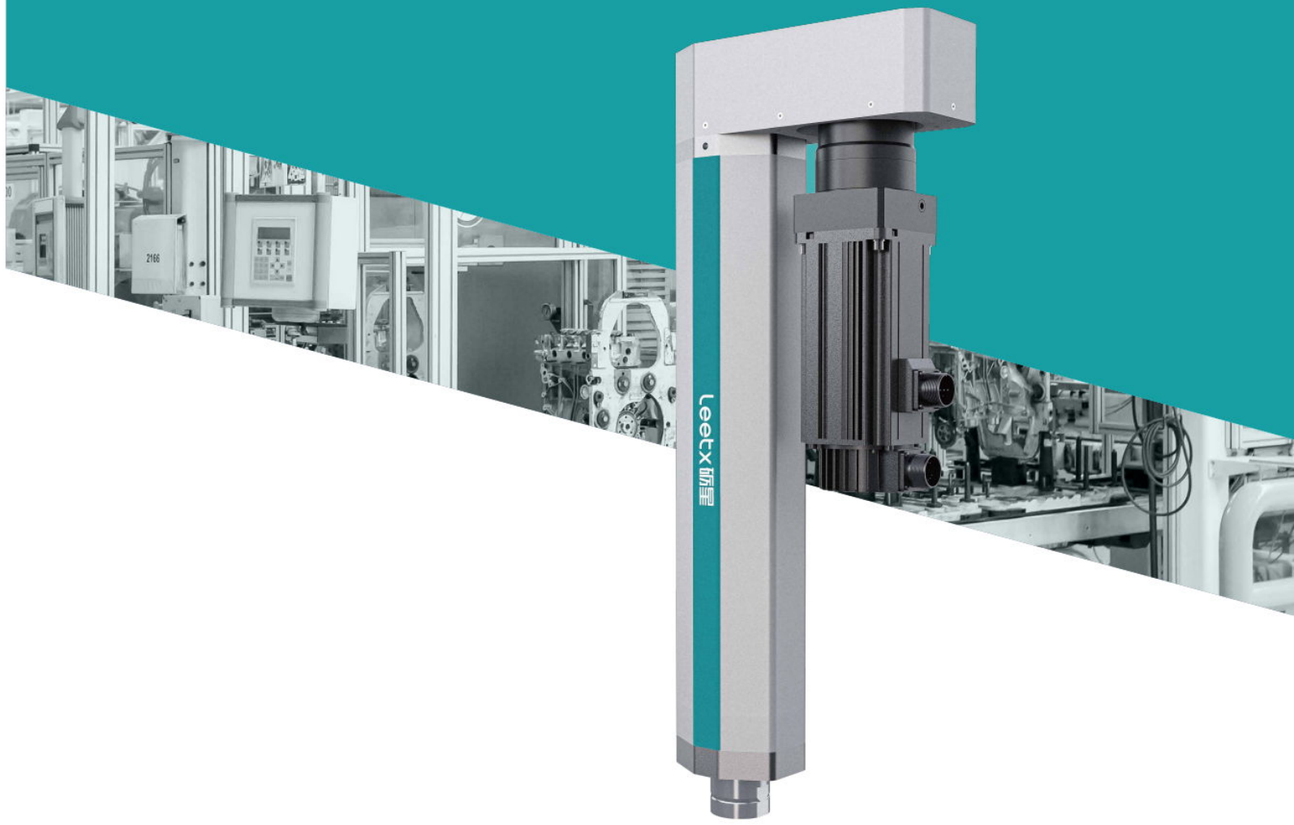
Leetx

Leetx

Intro

EcoMove Electric Pressure Cylinder

General Introduction



Servo Press System

Manufacturer of
High-end Intelligent Assembly Products

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Leetx Smart Assembly Products

COMPANY PROFILE

A Premium Manufacturer of Intelligent Assembly Equipment

Leetx specializes in the in-house R&D, manufacturing, and sales of core equipment for intelligent assembly.

Built around four major product lines—tightening systems, automatic feeding systems, servo press-fitting systems, and dispensing systems—the company has established a high-performance product portfolio covering critical assembly processes. Supported by its self-developed intelligent analytics platform, Leetx enables full-process connectivity across assembly data acquisition, quality traceability, and process optimization. Its products are widely used in high-end manufacturing sectors, including complete vehicles and automotive components, NEV three-electric systems, embodied intelligence and AI, commercial vehicles, home appliances, photovoltaics, energy storage, aerospace, and construction machinery.

All products are developed on a unified technology platform, enabling rapid iteration and deep customization. This allows Leetx to provide customers with broader product options and more agile process support for high-end assembly applications. Headquartered in Shanghai, the company operates multiple R&D and manufacturing bases across China, with overseas subsidiaries and service centers covering major manufacturing regions such as Europe and Southeast Asia, serving customers worldwide.

35%
R&D Personnel Ratio

500+
Elite Team

10,000+
Annual Deliveries Completed (Units/Sets)

Full-Stack In-House Development ·Rapid Iteration

From sensors and controllers to upper-level software, the company adopts a full-chain forward-development approach built on a unified underlying platform. Product performance remains fully controllable in-house, with iteration speed and customization depth leading the industry.

Four Product Lines in Parallel ·Matrix Coverage

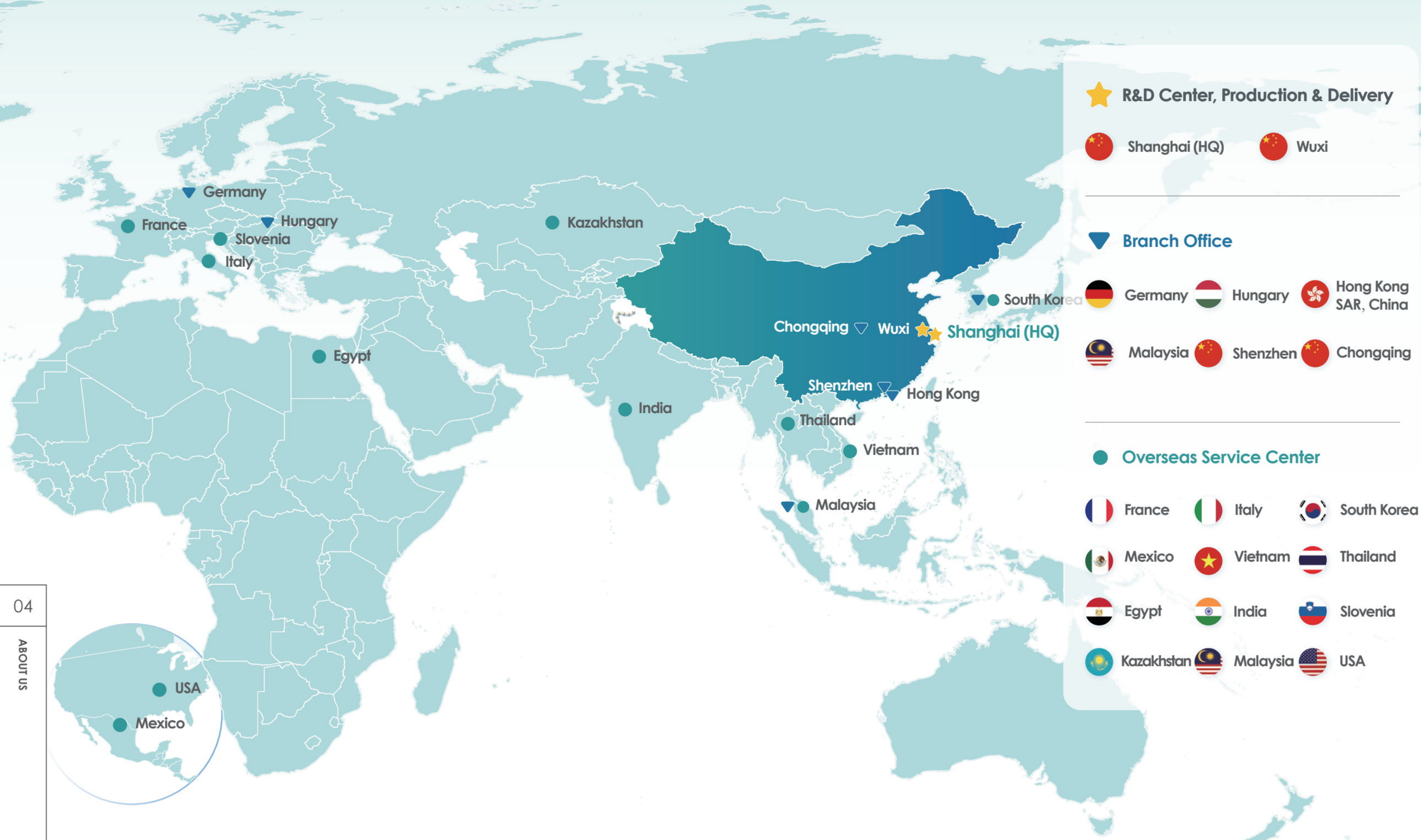
The four major product lines—tightening, feeding, press-fitting, and dispensing—are independently mature and well established. Together with the intelligent analytics system, they enable cross-process data integration and closed-loop quality control, offering customers a comprehensive product selection for critical assembly operations.

Rooted in China ·Serving the World

With R&D and manufacturing operations across multiple locations in China, and overseas subsidiaries and service networks covering key manufacturing regions such as Europe and Southeast Asia, the company provides localized technical support and rapid response to customers worldwide.

Leetx Smart Assembly Products

GLOBAL SERVICE NETWORK



R&D Center, Production & Delivery

Shanghai (HQ)

Wuxi

Branch Office

Germany

Hungary

Hong Kong SAR, China

Malaysia

Shenzhen

Chongqing

Overseas Service Center

France

Italy

South Korea

Mexico

Vietnam

Thailand

Egypt

India

Slovenia

Kazakhstan

Malaysia

USA

Composition of different press-fitting systems

Oil Press
Air-hydraulic Cylinder

Components of hydraulic mechanism:

- Console
- Motor
- Oil Tank
- Electrical Cabinet
- Oil Pipe
- Fluid Reservoir
- Working Cylinder
- Four-column Bench
- Lower Holding Cylinder

Oil Press
Air-hydraulic Cylinder + Sensor + Monitor

Components of systems with force-displacement monitoring function:

- Monitor
- Pressure Sensor
- Displacement Sensor
- Oil Press Or Air-hydraulic Cylinder

Self-built Electric Linear Actuator

Components of self-built electric inear actuator system:

- Pressure Sensor
- Monitor
- Servo Motor
- Servo Drive
- Displacement Sensor
- Screw Rod
- Coupling

EcoMove
Electric Pressure Cylinder

Components of EcoMove:

- Integrated Cylinder Block
- Drive, Controller
- Screen (Optional)

Comparison of different press-fitting systems

Components of EcoMove:

- Integrated Cylinder Block
- Drive, Controller
- Screen (Optional)

Oil Press Air-hydraulic Cylinder

Components of hydraulic mechanism:

- Console
- Motor
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Oil Press Air-hydraulic Cylinder + Sensor + Monitor

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Self-built Electric Linear Actuator

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- Position Sensor
- Screw Rod
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Comparison Table

	Air-hydraulic Cylinder/ HydraulicCylinder/Electric Linear Actuator	EcoMove Smart Electric Cylinder
Integration	Low integration level, necessitating the procurement and assembly of mechanical and electrical components separately	Modular equipment, ready-to-use
Precision	Accuracy not guaranteed	High precision
Flexible Proces	Single process, single station matching single product	The process program can be edited freely and retrieved at any time
Maintenance Cost	Complex maintenance	Maintenance-free
Data Storage	No data storage	Lifecycle data storage
Motion Logic	Simple movement function	Diversified motion logic

	Servo Press	EcoMove Smart Electric Cylinder
Curve Display	Curves can be generated and displayed	Curve options are available
Evaluation Function	Diversified evaluation windows	Evaluation can be conducted by setting limits
HMI	Available	Optional
Function	Diversification	Simple and practical

Advantages of EcoMove Smart Electric Cylinder

Ultimate Cost Performance

No program development is required;
No complex debugging is required;

Reliable Control System

Servo control, more precise, stable and reliable than hydraulic or oil pressure control; standard pressure sensor to achieve precise pressure control; with motion control algorithm and configuration software, pressure, Position and other controls can be realized without codes;

Simple And Convenient Operation Software

Chinese interface, supporting multiple languages; two-layer menu level, concise and clear; simple parameter setting, easy to learn;

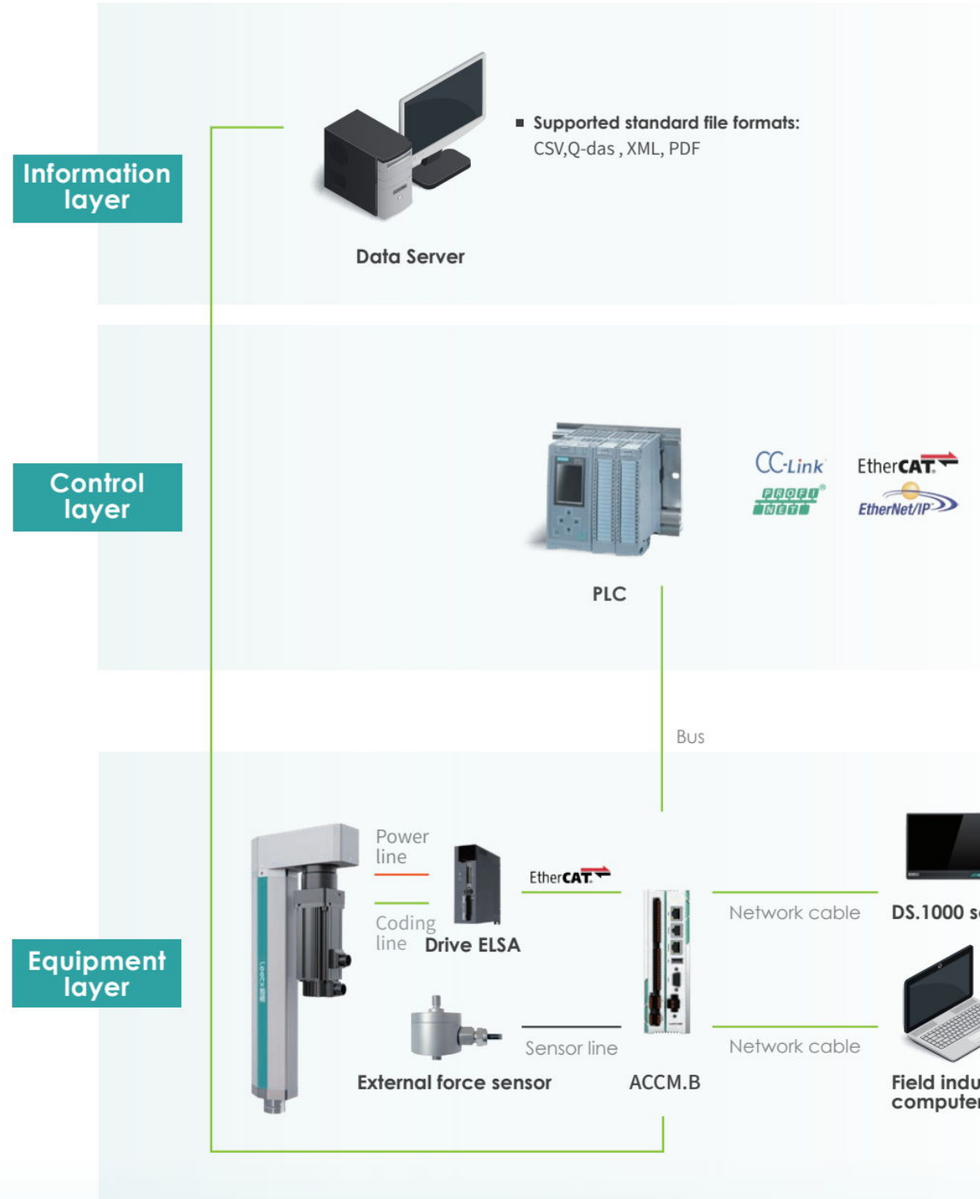
High System Accuracy

Repeated Position accuracy: 0.01mm
Pressure sensor accuracy: 0.5%, system force accuracy: 1%

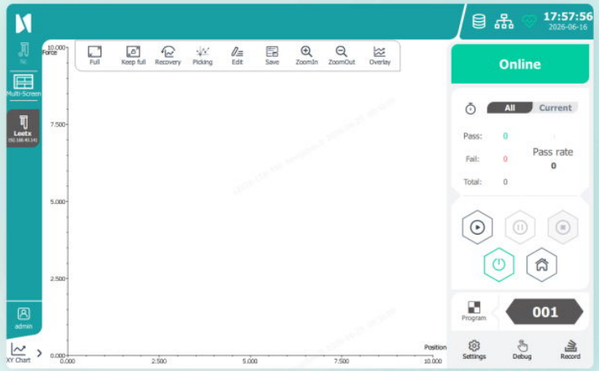
Equipment Stability

8 million times of service cycles, adaptive to high-frequency and high-intensity use environment;

System Framework Diagram

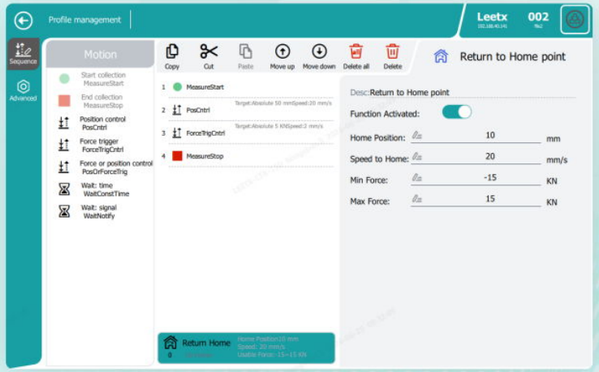


Software Introduction



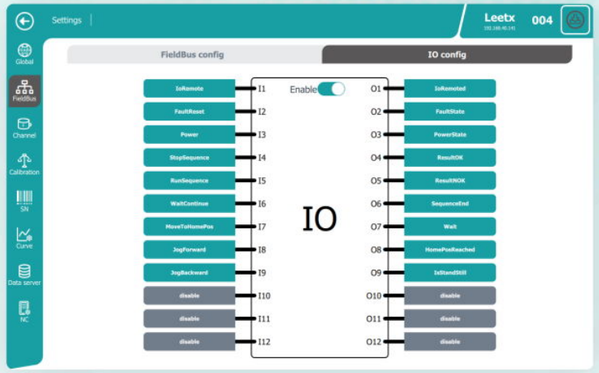
Easy To Use

Clear division of functions
Two-layer menu, enabling convenient operation



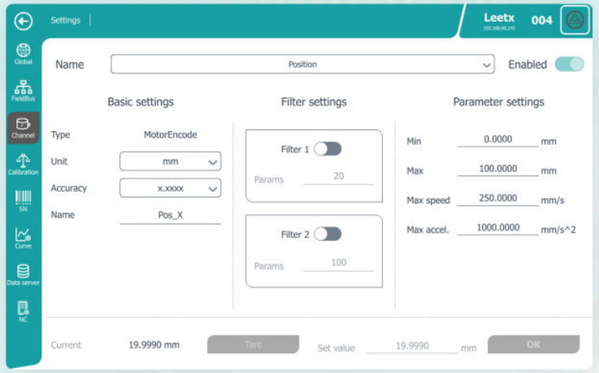
Powerful

Flexible compilation process steps, no need to write programs
Precise motion control, pressure control and other functions



Simple

Extremely friendly configuration logic
One-key switch for complex functions



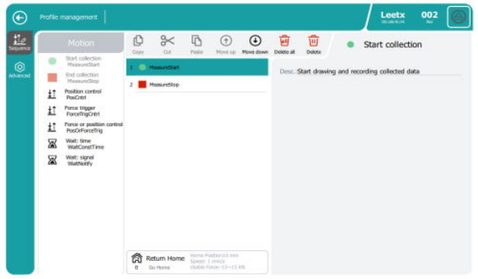
Practical

Simple and friendly debugging

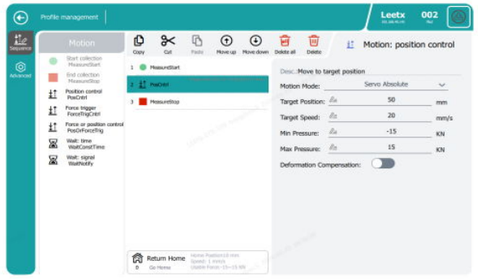
Software Features - Flexible Process Editing

- Flexible, simple and fast editing process
- Up to 32 process programs, achieving quick type change according to the product
- One-key start for automatic operation

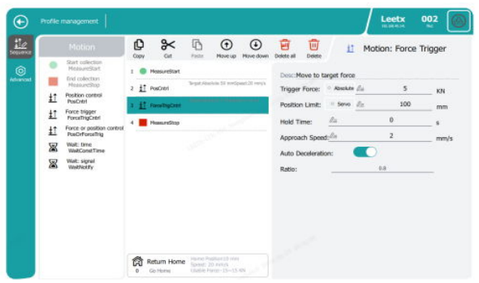
Step 1: Add process program



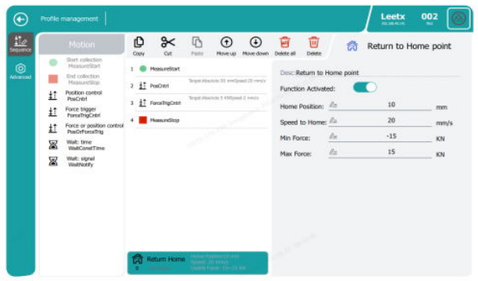
Step 2: Add position control step sequence



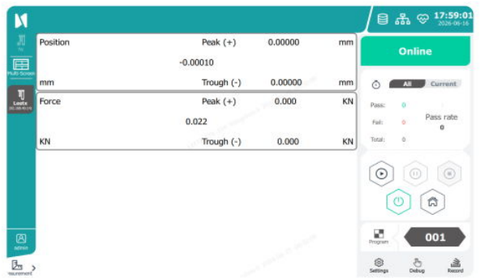
Step 3: Add pressure trigger step sequence



Step 4: Set to return to the home position



Step 5: Start the automatic operation step

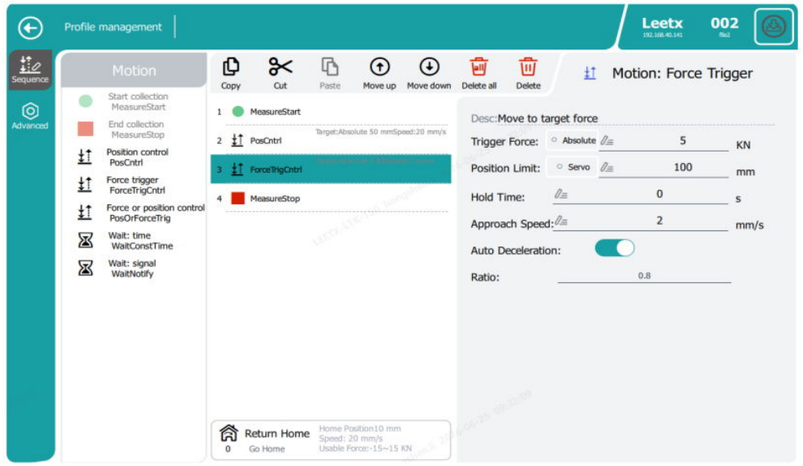


Software Feature - Automatic Speed Reduction

During the press-fitting process, the phenomenon that the actual pressure is greater than the preset pressure is called pressure overshoot.

Factors affecting pressure overshoot: press-fitting speed, product hardness

The adaptive automatic deceleration function of Leetx can ensure small pressure overshoot with high takt, achieving "fast and accurate" press fitting.

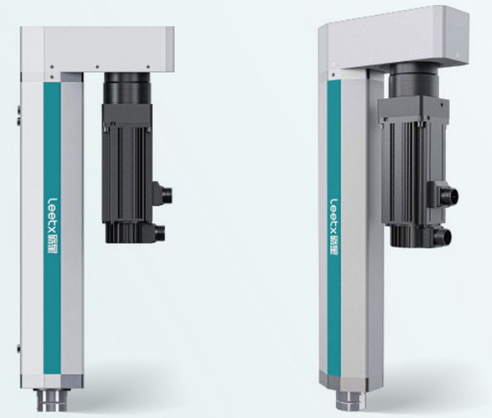


Technical Parameters

Technical parameters of the system	
Channel	1 channel Position, 1 channel force
Sampling cycle rate	10 kHz
Channel sampling rate	24-bit
Offline Data Recording	Supported
Number of offline Data records	5 MILLION RECORDS
Process editing	Supported
Number of processes	32
Fault record	Supported
Installation of software industrial personal computer	Supported
Drive fault cleared by software	Supported
Barcode transmission	Supported
IO channel	12 inputs/12 outputs
Bus type	Profinet / Ethernet IP / EtherCAT / CC-link / Modbus TCP / DeviceNet / CC-link IE / Profibus / CANopen / BACnet / Common EtherCAT/UDP
Motion control function	Position control, pressure control, pressure or Position control, external Position control…

Type	ELPL.010	ELPL.015	ELPL.030	ELPL.060
Rated pressure	10KN	15KN	30KN	60KN
Stroke	150mm/350mm			
Maximum speed	120mm/s	150mm/s		
Maximum allowable tooling (kg)	60	60	80	100
Service life under standard working conditions	More than 8 million times			
Overload capacity	10% rated pressure (10% FS)			
Pressure sensor type	Strain type			
Measurement accuracy of pressure sensor	0.5% rated pressure (⩽ 0.5% FS)			
Pressure linearity error	1% rated pressure (⩽%FS)			
Position sensor type	Absolute value encoder			
Position repeatability accuracy (mm)	0.01			
Minimum Position resolution (mm)	0.001			
Emergency stop	Standard dual-channel STO			
Pressure sensor	Standard configuration			

Product Photos



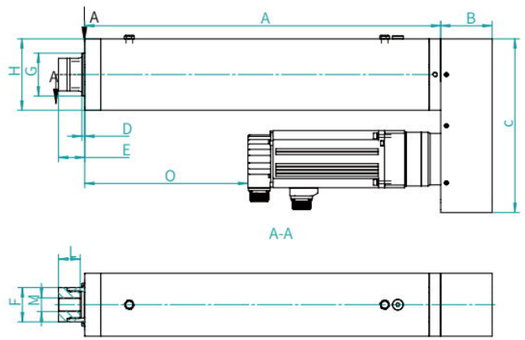
Mechanical body

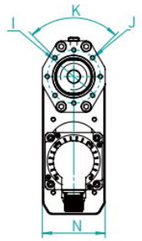
Controller

ELPL Series

Its stable, reliable and easy-to-use characteristics make it widely used in the field of industrial assembly and high-demand consumer electronics assembly;

A good balance can be achieved between cost, ease of use and precision control, so that customers can realize high-precision and high-reliability assembly solutions at a lower cost.





Selection Criteria

ELP	L	30	150
Product series	Connection method	Pressure range	Stroke
ELP series	Compact type	10KN	150mm
		15KN	350mm
		30KN	
		60KN	

Type	Stroke	A	B	C	D	E	F
ELPL.010.150.120	150	340	70	219	4	35	45
ELPL.010.350.120	350	540	70	219	4	35	45
ELPL.015.150.150	150	340	70	219	4	35	45
ELPL.015.350.150	350	540	70	219	4	35	45
ELPL.030.150.150	150	423	90	304	5	46	60
ELPL.030.350.150	350	623	90	304	5	46	60
ELPL.060.150.150	150	494	110	349	10	70	80
ELPL.060.350.150	350	694	110	349	10	70	80

G	H	I	J	K	L	M	N	O
58	94	72	8*M6-10	90°	33	M16*1.5	84	154.5
58	94	72	8*M6-10	90°	33	M16*1.5	84	354.5
58	94	72	8*M6-10	90°	33	M16*1.5	84	154.5
58	94	72	8*M6-10	90°	33	M16*1.5	84	354.5
75	125	93	8*M8-16	90°	38	M24*2.0	110	85.5
75	125	93	8*M8-16	90°	38	M24*2.0	110	285.5
100	155	125	8*M12-24	90°	49	M24*2.0	145	116
100	155	125	8*M12-24	90°	49	M24*2.0	145	3163

* For presses of 100kN and above and other non-standard models, please contact Leetx sales personnel for consultation.

Leetx

EcoMove
Electric Pressure Cylinder

2025