Leetx

Leetx

Tightening Tools and Solutions



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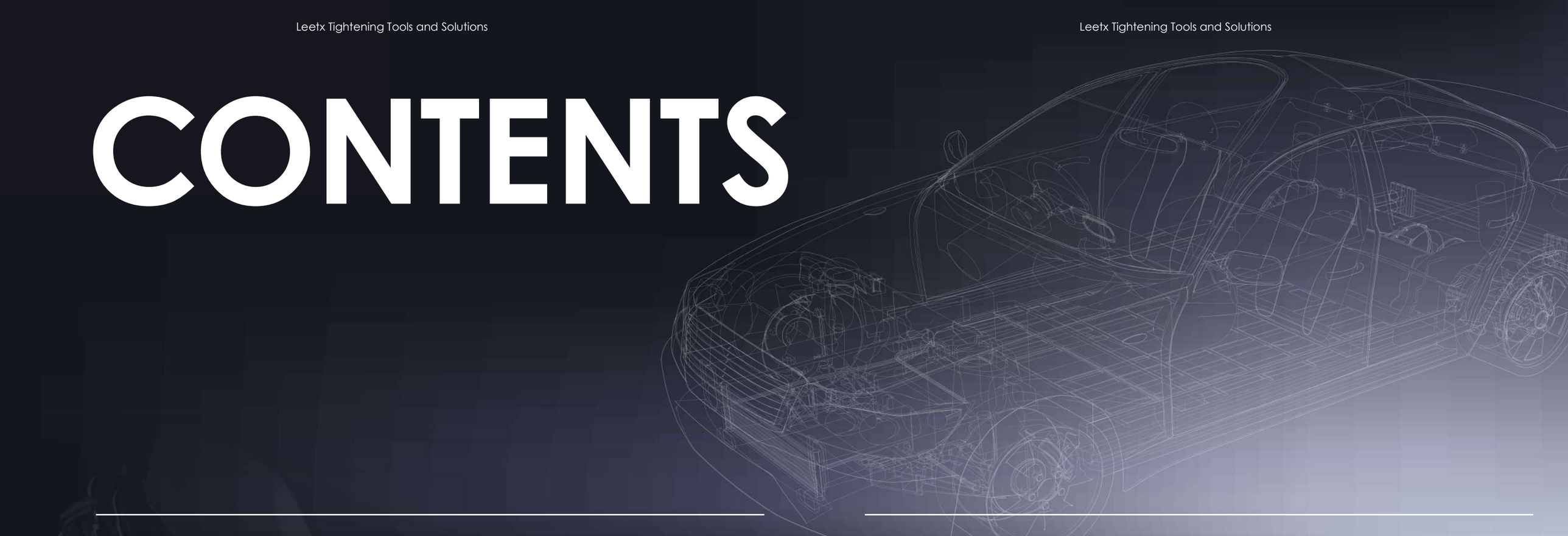
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Leetx Tightening Tools and Solutions

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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)

Leetx Tightening Tools and Solutions

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.

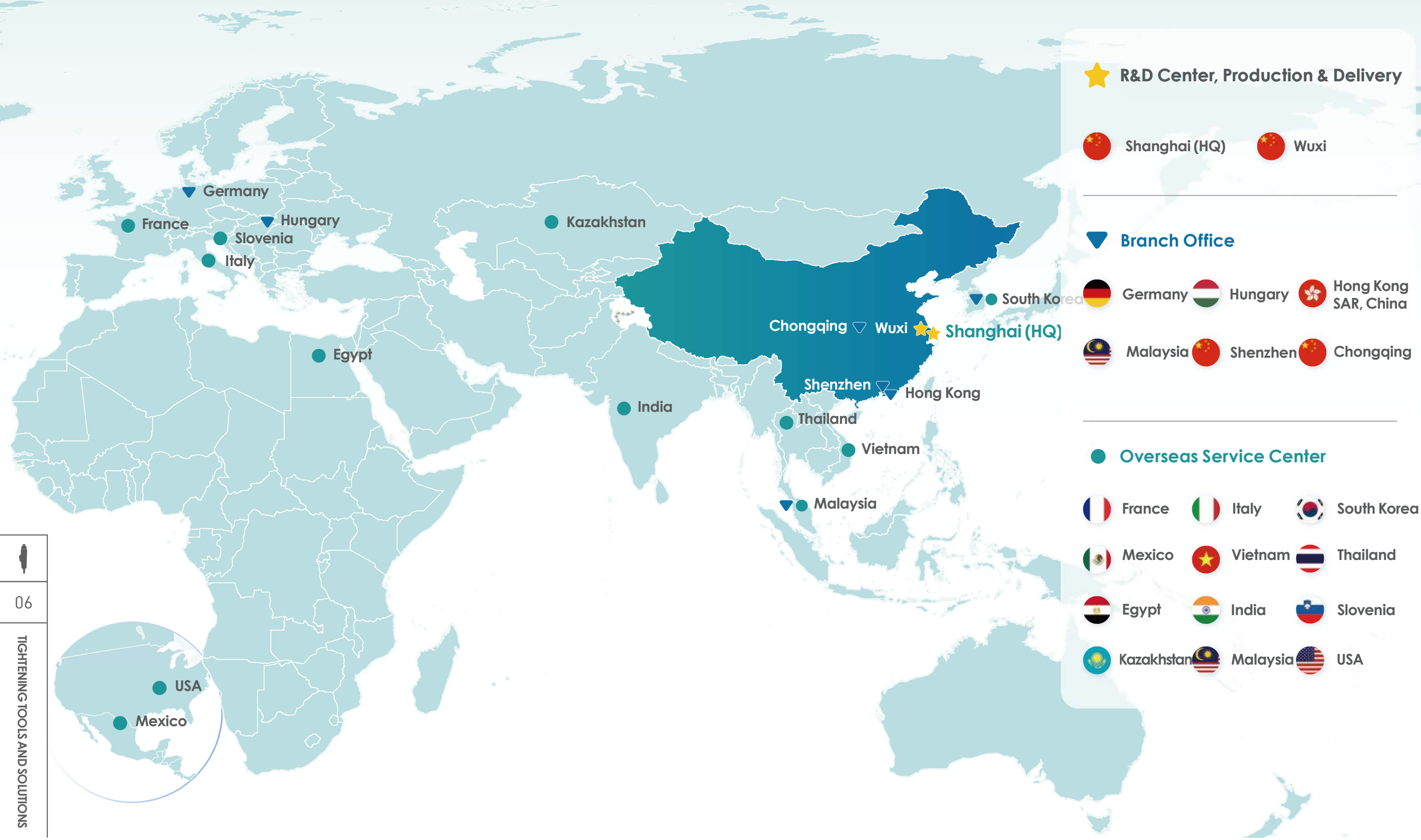
Rooted in China ·Serving the World

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 Tightening Tools and Solutions

GLOBAL SERVICE NETWORK

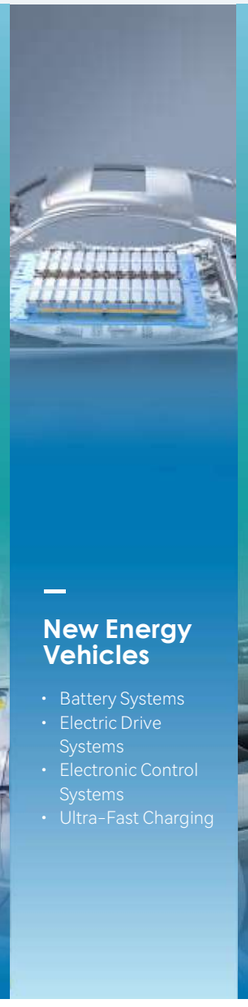


Leetx Tightening Tools and Solutions

INDUSTRY APPLICATIONS

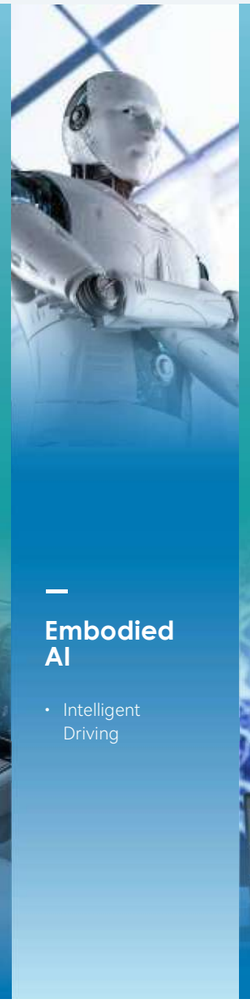
Automotive Industry

- Complete Vehicles
- Automotive Components



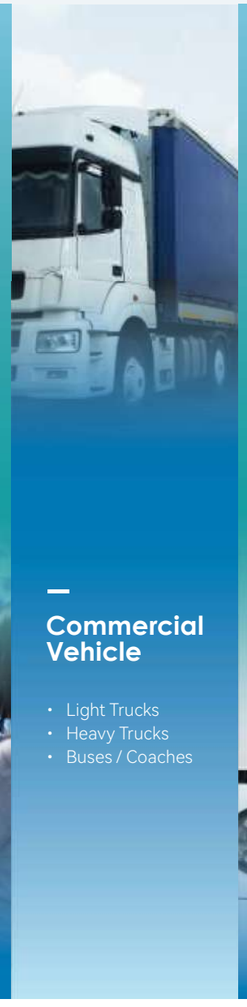
Automotive Electronics

- Intelligent Cockpit
- Chassis & Safety Electronics
- Intelligent Driving

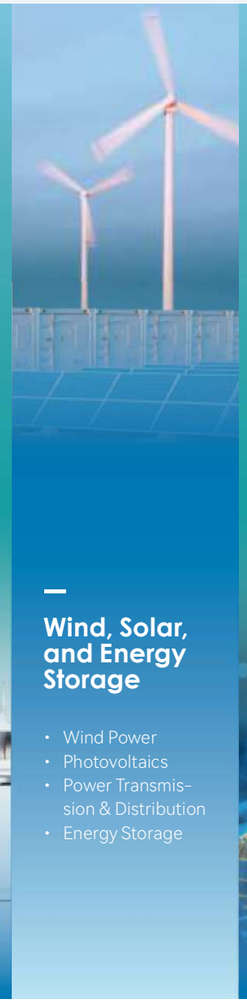


AI

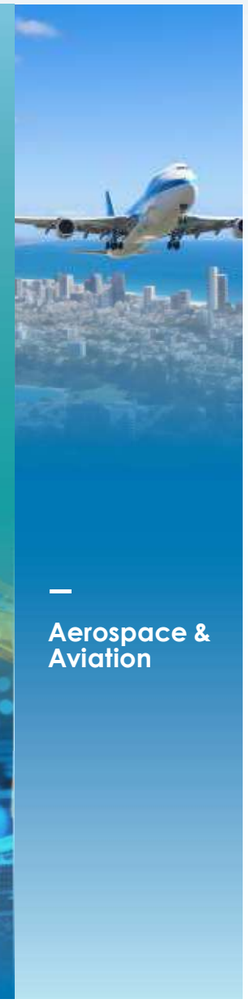
- Intelligent Computing Centers
- Data Centers



Home Appliances



Construction Machinery



New Energy Vehicles

- Battery Systems
- Electric Drive Systems
- Electronic Control Systems
- Ultra-Fast Charging



Embodied AI

- Intelligent Driving



Commercial Vehicle

- Light Trucks
- Heavy Trucks
- Buses / Coaches



Wind, Solar, and Energy Storage

- Wind Power
- Photovoltaics
- Power Transmis-sion & Distribution
- Energy Storage



Aerospace & Aviation

Driven by innovation ,meet tightening requirements in various industries. Safety and reliability in every connection.

We offer manual, semi-automatic and fully automatic tightening solutions to help customers to enhance quality and productivity.

PRODUCT OVERVIEW

In our view, true production efficiency is not defined by brief bursts of peak speed, but by precise and reliable output sustained over continuous operation. Our corded electric tightening tools embody this philosophy. With industrial-grade robust design, deeply integrated intelligent control, and a user-centric operating experience, they provide a solid and dependable assembly foundation for your high-cycle production lines.

Screwdriver controller platform





Nutrunner and spindle controller platform





Leetx Tightening Tools and Solutions

Leetx provides a complete electric assembly solution, including the control unit—tightening controller, the execution unit—tightening tool, as well as other accessories required for tightening stations, such as cables, reaction arms, and data acquisition software. Together, these solutions ensure reliable protection and support for your production line.

We offer a full product portfolio ranging from 0.3 Nm for precision electronics to 4,000 Nm for heavy-duty chassis structures, meeting world-class standards. This ensures that at every critical fastening point, you achieve optimal tightening performance and the lowest total lifecycle cost.

Cordless Tool Controller Platform





Datainsight

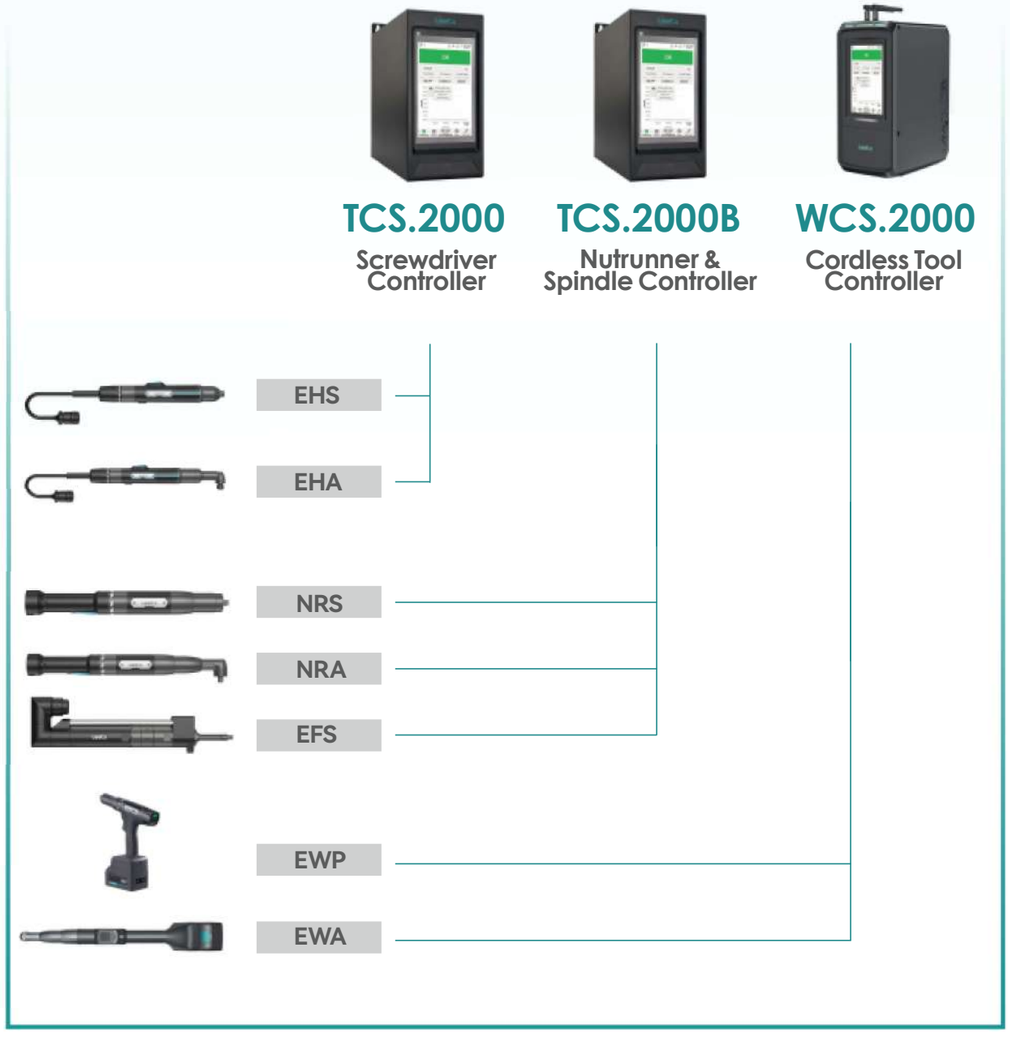


Tightening Solutions

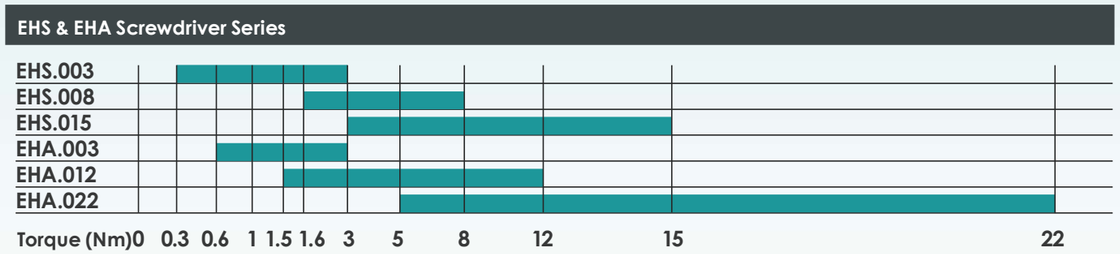


PRODUCT SUMMARY

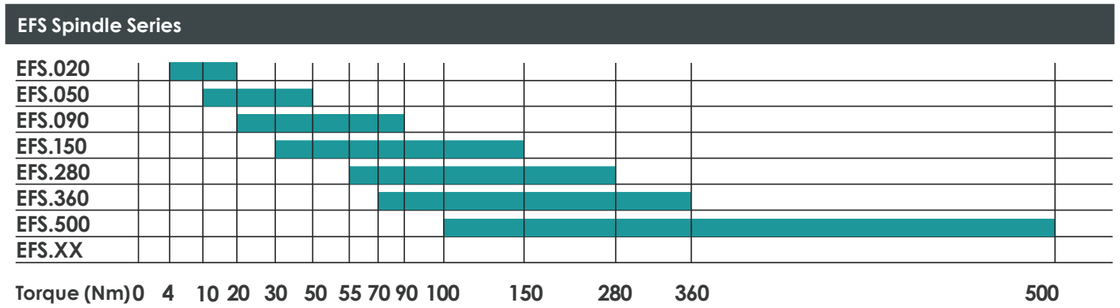
Intelligent Tightening System - 2000 Series

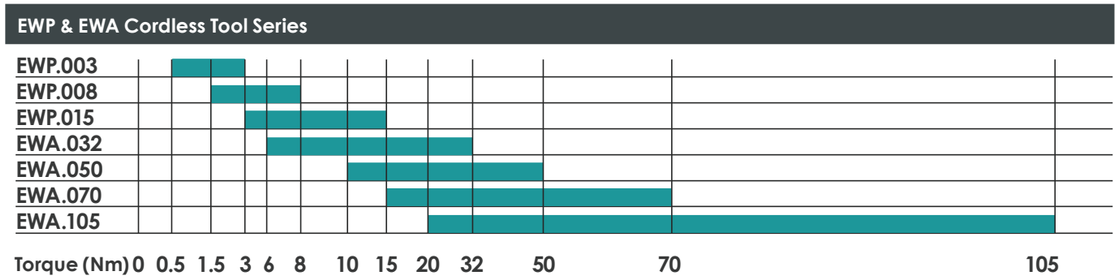


Leetx Tightening Tool Torque Chart





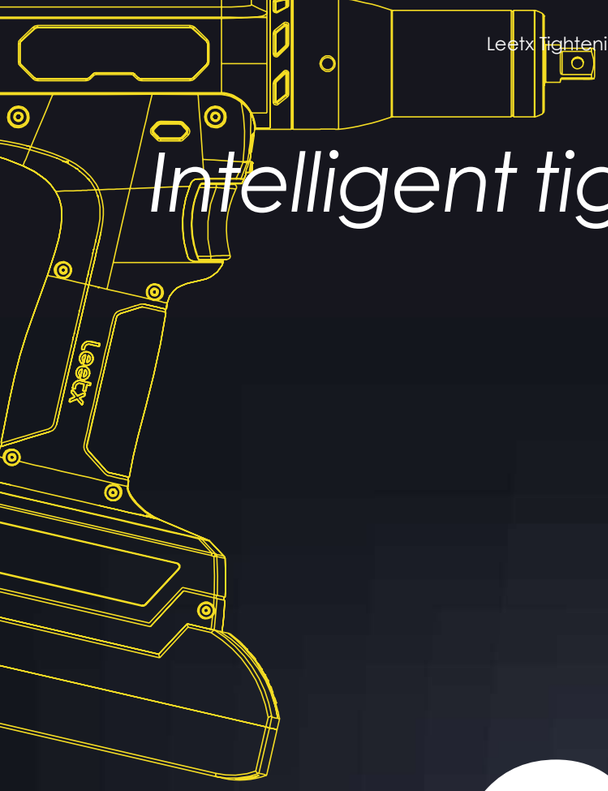


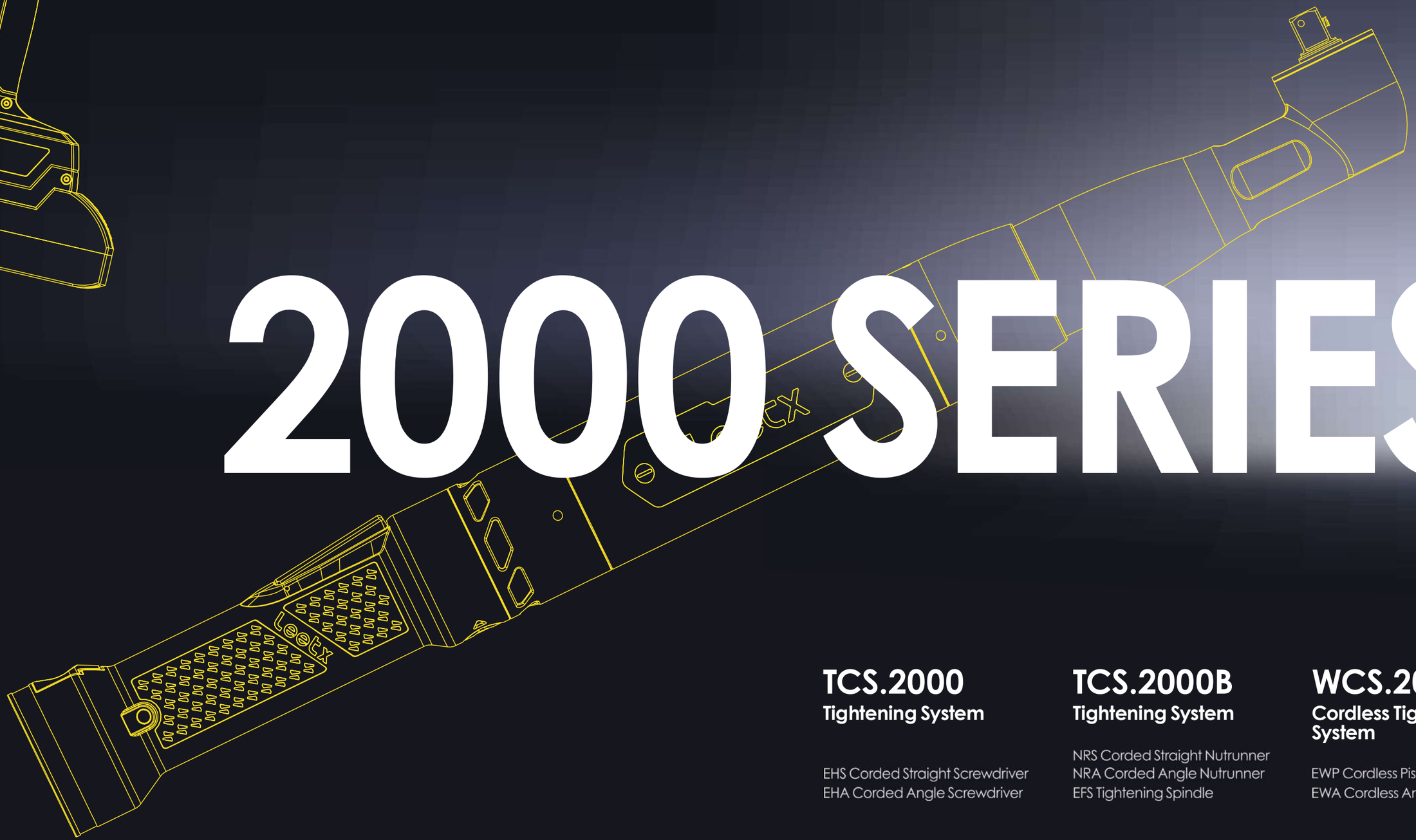


Leetx Tightening Tools and Solutions

Intelligent tightening system

Leetx





2000 SERIES

TCS.2000
Tightening System

EHS Corded Straight Screwdriver
EHA Corded Angle Screwdriver

TCS.2000B
Tightening System

NRS Corded Straight Nutrunner
NRA Corded Angle Nutrunner
EFS Tightening Spindle

WCS.2000
Cordless Tightening System

EWP Cordless Pistol Tool
EWA Cordless Angle Tool

TCS.2000



Screwdriver

TCS 2000 TIGHTENING PLATFORM

Leetx Tightening Tools and Solutions

TCS.2000 Controller

TCS CONTROLLER

Flexible and Efficient

The interface follows user operating logic and is easy to use, greatly reducing training time;
core equipment information and operating status are displayed in real time.

Precision Monitoring

Equipped with full-program functions such as torque/angle monitoring, re-tightening prevention, and seating torque detection;
it generates dynamic segmented curves in real time and displays the result of each tightening step;
it can show the tightening stop reason , helping users directly identify the root cause of nonconformities.

Full Traceability

Supports exporting complete tightening result data via USB;
the data covers full-dimensional parameters including date, time, tool information, program number, torque, angle, and barcode;
it enables a digital closed loop from operation through result recording.

EHA/EHS Screwdriver

EHA/S SCREWDRIVER

More Complete

EHS straight type / EHA angle type, suitable for both automatic stations and manual stations.

More Efficient

The TCS.2000 controller is compatible with multiple tightening tools, raising productivity to a new level. Its high speed combined with an adaptive anti-overshoot tightening strategy improves production efficiency while safeguarding tightening quality.

More User-Friendly

Ergonomic design with low reaction force delivers greater operator comfort.

TCS.2000

Controller

The TCS.2000 controller integrates Leetx's fully self-developed software, process control, data acquisition, and human-machine interaction into one platform.

It provides comprehensive functions, supports multiple communication methods, and features a clear, simple, and easy-to-learn interface that reduces training cost; the interface can display distributed tightening results and dynamically show tightening curves; the data is traceable and supports storage of up to 100,000 tightening results.

Product Features & Advantages

Comprehensive Functions

Supports quick tool change;

Equipped with complete program functions including torque monitoring, angle monitoring, re-tightening prevention, and seating torque detection;

Supports USB export of result data;

Curves are generated in real time.

Clear Interface

Follows user operating logic, is easy to use, and saves training time;

Displays step-by-step tightening results, dynamic segmented curves, and basic equipment information and status;

Torque results include date, time, tool information, program number, torque, angle, barcode, etc.;

Shows the tightening stop reason to help users identify the cause of nonconformities.

Data Storage

100,000 results;

30,000 curves;

Sampling frequency of 1000 Hz with dense curve point collection.

Versatile Communication

WebAPI communication for stable and convenient connectivity;

Standard OP open protocol;

Supports mainstream buses such as PROFINET, EtherCAT, EtherNet/IP, PROFIBUS, and Modbus-TCP;

Standard I/O and serial communication methods.

30,000 items
Historical Curve Displays

100,000 items
Result Queries

1000 Hz
Sampling Frequency



Functional Description

High-resolution 7-inch capacitive touchscreen

Simple, easy-to-learn human-machine interaction

Powerful all-in-one functional integration

Ultra-high-frequency data acquisition



Model	Order No.	Bus Type	Applicable Tool	Voltage (V/AC)	Frequency (Hz)	Weight (kg)	Rated Power (W)
TCS.2000	68080030	N/A	EHA/EHS Electric Screwdriver	180-250	50 - 60	6	1000
TCS.2000.BUS.PN	68080040	ProfiNet		180-250	50 - 60	6	1000
TCS.2000.BUS.EC	68080070	EtherCat		180-250	50 - 60	6	1000
TCS.2000.BUS.EI	68080080	EtherNet/IP		180-250	50 - 60	6	1000
TCS.2000.BUS.MT	68080050	ModBus-TCP		180-250	50 - 60	6	1000
TCS.2000.BUS.PB	68080150	ProfiBus		180-250	50 - 60	6	1000
TCS.2000.BUS.CC	68080010	CC-LINK		180-250	50 - 60	6	1000

Tightening Accessories



A B C D E

Reference Image	Description	Specification	Order No.
A	8-bit I/O expansion box	Cable length 5 m	60000426
B	4-position socket selector	Cable length 3 m	60003147
C	4-position bit selector	Cable length 3 m	60003150
D	8-position socket selector	Cable length 3 m	60003148
E	8-position bit selector	Cable length 3 m	60003152

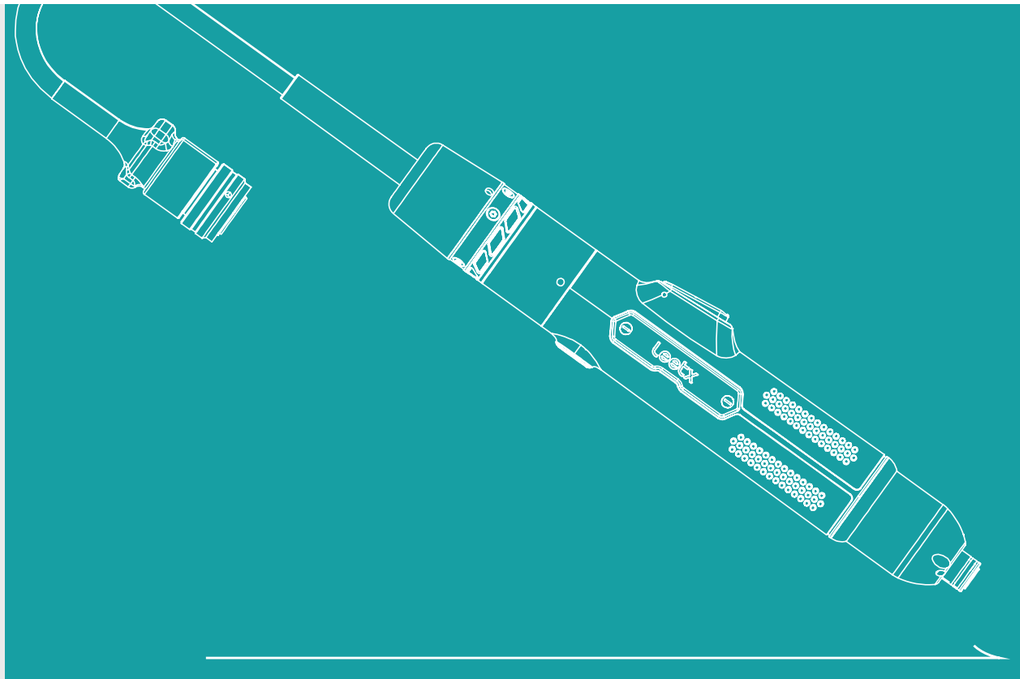
TCS.2000

Tightening Tool

EHA/EHS Series Handheld Screwdrivers

The EHA/EHS series screwdrivers were developed specifically for precision low-torque assembly applications. With innovative drive technology and an ergonomic structural design, they establish a new benchmark for electric screwdriver performance.





Characteristics

Electrostatic Discharge Protection

Suitable for production lines requiring electrostatic protection.

Ergonomic Design

The ergonomic design comprehensively improves operating comfort through an optimized grip contour, lightweight body, and low-noise operation enabled by the motor.

Intelligent Counting Function

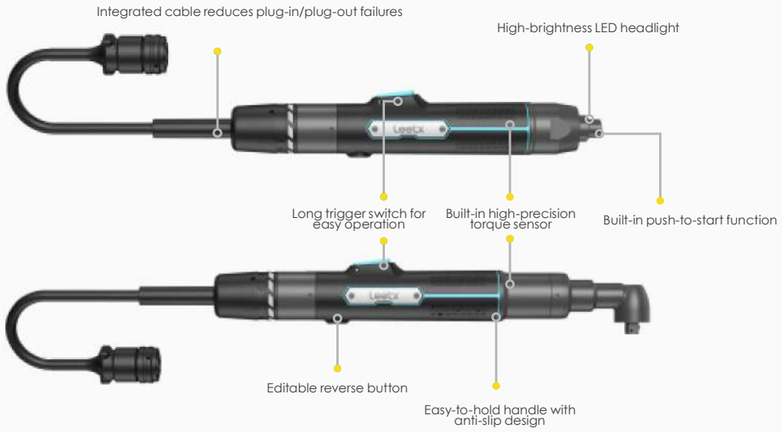
The intelligent counting function accurately records assembly quantities to ensure that no critical process step is missed.

Soft-Stop Technology

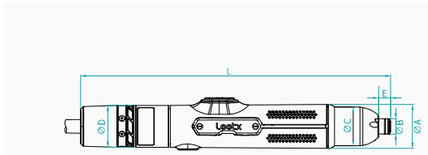
Soft-stop technology effectively protects precision electronic components and fragile plastic parts, preventing assembly damage.

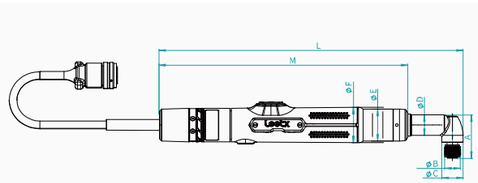
EHA/EHS Series Handheld Screwdrivers

Schematic Diagram



Dimension Drawing





Selection table

Model	A	B	C	D	E	L	F	M
EHS.XXX	40	14	35	38	10.3	271	/	/
EHS.XXX.M20	40		39	38	19	281.7	/	/
EHA.003	49		24	23	36	343.25	40	280.8
EHA012	49		24	23	36	343.25	40	280.8
EHA.022	41	3/8 sq	27.7	25	36	345.1	40	280.8

EHS Corded Straight Screwdrivers

EHS Series - Handheld Straight Screwdrivers



Parameter Diagram

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (Kg, excluding cable)	Cable Length (M)
EHS.003.05	68040120	Hex 1/4F	0.3	3	2500	0.75	5
EHS.003.10	68040250	Hex 1/4F	0.3	3	2500	0.75	10
EHS.003.15	68040340	Hex 1/4F	0.3	3	2500	0.75	15
EHS.008.05	68040160	Hex 1/4F	1.6	8	1200	0.75	5
EHS.008.10	68040170	Hex 1/4F	1.6	8	1200	0.75	10
EHS.008.15	68040180	Hex 1/4F	1.6	8	1200	0.75	15
EHS.015.05	68040080	Hex 1/4F	3	15	900	0.75	5
EHS.015.10	68040100	Hex 1/4F	3	15	900	0.75	10
EHS.015.15	68040110	Hex 1/4F	3	15	900	0.75	15

Parameter Diagram

Model *	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (Kg, excluding cable)	Cable Length (M)
EHS.003.1/4	68040400	Hex 1/4F	0.3	3	2500	0.75	5
EHS.003.1/4	68040650	Hex 1/4F	0.3	3	2500	0.75	10
EHS.008.1/4	68040310	Hex 1/4F	1.6	8	1200	0.75	5
EHS.008.1/4	68040320	Hex 1/4F	1.6	8	1200	0.75	10
EHS.015.1/4	68040390	Hex 1/4F	3	15	900	0.75	5
EHS.015.1/4	68040330	Hex 1/4F	3	15	900	0.75	10

*Ground resistance of this series is <10Ω.

EHS.X.M20 Fixed Screwdriver

Schematic Diagram



Selection table

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (Kg, excluding cable)	Cable Length (M)
EHS.003.M20.05	68040190	Hex 1/4F	0.3	3	2500	0.75	5
EHS.003.M20.10	68040200	Hex 1/4F	0.3	3	2500	0.75	10
EHS.003.M20.15	68040210	Hex 1/4F	0.3	3	2500	0.75	15
EHS.008.M20.05	68040220	Hex 1/4F	1.6	8	1200	0.75	5
EHS.008.M20.10	68040230	Hex 1/4F	1.6	8	1200	0.75	10
EHS.008.M20.15	68040240	Hex 1/4F	1.6	8	1200	0.75	15
EHS.015.M20.05	68040090	Hex 1/4F	3	15	900	0.75	5
EHS.015.M20.10	68040280	Hex 1/4F	3	15	900	0.75	10
EHS.015.M20.15	68040350	Hex 1/4F	3	15	900	0.75	15

*Ground resistance of this series is <10Ω.

Accessory



A B



C

Type	Model	Specification	Order No.
A	Straight screwdriver telescopic assembly	30 mm stroke	60003039
B	Straight screwdriver telescopic assembly	50 mm stroke	60003037
C	Straight screwdriver pistol grip handle	Applicable to the full series	60000299
	Rotary suspension ring	For EHA003/012/022	60003154

EHA Corded Angle Screwdrivers

Schematic Diagram



Selection table

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (Kg, excluding cable)	Cable Length (M)
EHA.003.05	68040030	Hex1/4F	0.6	3	1600	1	5
EHA.003.10	68040300	Hex1/4F	0.6	3	1600	1	10
EHA.003.15	68040360	Hex1/4F	0.6	3	1600	1	15
EHA.012.05	68040010	Hex1/4F	1.5	12	650	1	5
EHA.012.10	68040070	Hex1/4F	1.5	12	650	1	10
EHA.012.15	68040370	Hex1/4F	1.5	12	650	1	15

Schematic Diagram



Selection table

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (Kg, excluding cable)	Cable Length (M)
EHA.022.05	68040020	Sq3/8	5	22	500	1	5
EHA.022.10	68040040	Sq3/8	5	22	500	1	10
EHA.022.15	68040380	Sq3/8	5	22	500	1	15

TCS.2000B



Nutrunner and Spindle

TCS.2000B NUTRUNNER AND SPINDLE

Leetx Tightening Tools and Solutions

TCS.2000B Controller

TCS CONTROLLER

Smart Control & Communication

Versatile communication solutions: supports mainstream gateways (such as PROFINET, EtherCAT, and EtherNet/IP) as well as the standard OP open protocol.
Convenient interaction: uses WebAPI communication for stable system operation and convenient use.

Precision Tightening

Multi-dimensional monitoring: comprehensive program functions including tightening trace monitoring, angle monitoring, re-tightening prevention, and seating trace detection.

Full Traceability

Real-time visualization: operating curves are generated in real time so the running status is clear at a glance.
Easy export and storage: supports rapid export of result data via USB, ensuring hassle-free data retrieval.

NRA/NRS Nutrunner EFS Spindle

NRA/S EFS TOOL

More Complete

NRS straight type / NRA angle type, EFS fixed type.
It innovatively provides a complete solution.
It covers both manual and automated stations, with product performance and diversity reaching an internationally first-class level.

More Efficient

Uses a self-developed high-voltage servo motor with higher speed, significantly improved productivity, and low heat generation.

More User-Friendly

Provides a convenient controller interface .
Combined with intelligent algorithms, it delivers low reaction force and reduces operator fatigue.

TCS.2000B

Controller

The TCS.2000B controller integrates Leetx's fully self-developed software, process control, data acquisition, and human-machine interaction into one platform.

It provides comprehensive functions, supports multiple communication methods, and features a clear, simple, and easy-to-learn interface that reduces training cost; the interface can display distributed tightening results and dynamically show tightening curves; the data is traceable and supports storage of up to 100,000 tightening results.

Product Features & Advantages

Comprehensive Functions

Supports quick tool change;

Equipped with complete program functions including torque monitoring, angle monitoring, re-tightening prevention, and seating torque detection;

Supports USB export of result data;

Curves are generated in real time.

30,000 items
Historical Curve Displays

100,000 items
Result Queries

1000 Hz
Sampling Frequency

Clear Interface

Follows user operating logic, is easy to use, and saves training time;

Displays step-by-step tightening results, dynamic segmented curves, and basic equipment information and status;

Torque results include date, time, tool information, program number, torque, angle, barcode, etc.;

Shows the tightening stop reason to help users identify the cause of nonconformities.

Data Storage

100,000 results;

30,000 curves;

Sampling frequency of 1000 Hz with dense curve point collection.

Versatile Communication

WebAPI communication for stable and convenient connectivity;

Standard OP open protocol;

Supports mainstream buses such as PROFINET, EtherCAT, EtherNet/IP, PROFIBUS, and Modbus-TCP;

Standard I/O and serial communication methods.



Functional Description

High-resolution 7-inch capacitive touchscreen

Simple, easy-to-learn human-machine interaction

Powerful all-in-one functional integration

Ultra-high-frequency data acquisition



Model	Order No.	Bus Type	Applicable Tool	Voltage (V/AC)	Frequency (Hz)	Weight (kg)	Rated Power (W)
TCS.2000A	68080120	N/A	NRA NRS EFS	180-250	50-60	6	1000
TCS.2000A.BUS.PN	68080060	ProfiNet		180-250	50-60	6	1000
TCS.2000A.BUS.EC	68080090	EtherCat		180-250	50-60	6	1000
TCS.2000A.BUS.EI	68080100	EtherNet/IP		180-250	50-60	6	1000
TCS.2000A.BUS.PB	68080170	Profibus		180-250	50-60	6	1000
TCS.2000A.BUS.MT	68080020	ModBus-TCP		180-250	50-60	6	1000
TCS.2000A.BUS.CC	68080880	CC-LINK		180-250	50-60	6	1000
TCS.2000B	68080180	N/A		180-250	50-60	6	1000
TCS.2000B.BUS.PN	68080270	ProfiNet		180-250	50-60	6	1000
TCS.2000B.BUS.EC	68080640	EtherCat		180-250	50-60	6	1000
TCS.2000B.BUS.EI	68080690	EtherNet/IP		180-250	50-60	6	1000
TCS.2000B.BUS.PB	68080670	Profibus		180-250	50-60	6	1000
TCS.2000B.BUS.MT	68080680	ModBus-TCP		180-250	50-60	6	1000
TCS.2000B.BUS.CC	68080320	CC-LINK		180-250	50-60	6	1000

Tightening Accessories



A B C D E

Reference Image	Description	Specification	Order No.
A	8-bit I/O expansion box	Cable length 5 m	60000426
B	4-position socket selector	Cable length 3 m	60003147
C	4-position bit selector	Cable length 3 m	60003150
D	8-position socket selector	Cable length 3 m	60003148
E	8-position bit selector	Cable length 3 m	60003152

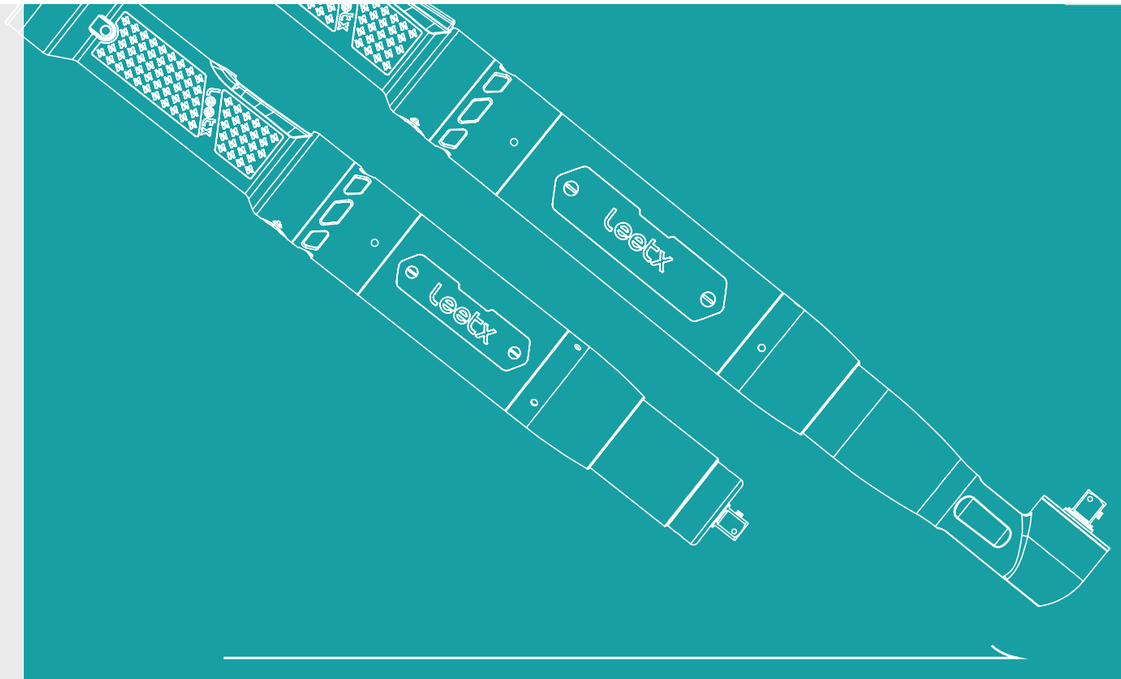
TCS.2000B

Tightening Tool

NRA/NRS Series Handheld Nutrunner

With its innovative power system, the NRA/NRS series achieves a leading power-to-weight ratio and outstanding performance in its class.

The tool uses a compact angle-bevel structure to maintain maneuverability in confined spaces while offering excellent wear resistance and service life. Its unique ergonomic auto-stop function automatically stops after the preset torque is reached, effectively reducing wrist load and long-term operator fatigue. Combined with a multicolor LED lighting system, it provides clear result feedback and operation guidance to ensure a reliable and controllable assembly process.



Leetx Tightening Tools and Solutions



Characteristics

Versatile Communication

Uses WebApi communication for convenient operation and stable connectivity;
Supports standard I/O and serial communication to accommodate various traditional connection needs.
Deeply supports major industrial buses such as PROFINET, EtherCAT, and ModbusTCP;
Follows the standard OP open protocol to enable seamless interconnection between devices.

High-voltage Servo Motor

Delivers better speed and precise process control to ensure production quality and improve takt time.

Precision Monitoring

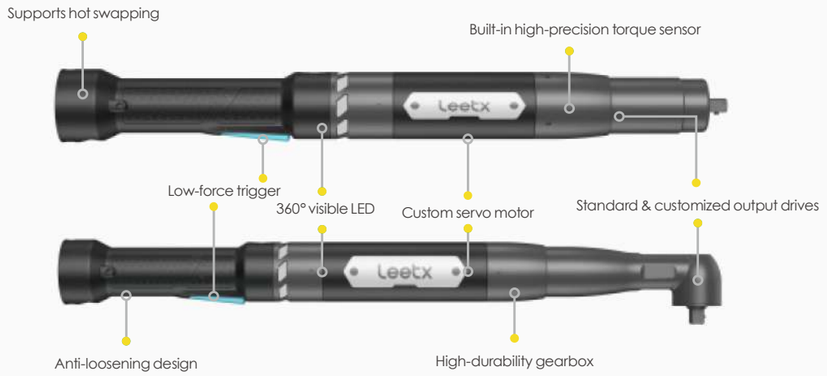
Integrates full-program functions such as torque/angle monitoring, re-tightening prevention, and seating detection;
Supports USB export of complete data to ensure production results are traceable.

Ergonomic Design

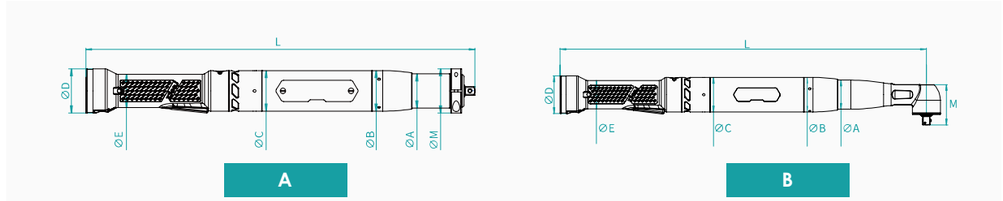
The tool is lightweight, making it comfortable for operators to hold over long periods.

NRA/NRS Series Handheld Nutrunner

Schematic Diagram



Dimension Drawing



Reference Image	Model	Output Drive	A	B	C	D	E	L	M
A	NRS.032	Sq.3/8	37	44	44	48	36	384	35
A	NRS.065	Sq.1/2	48.5	58	44	48	36	460	
B	NRA.032	Sq.3/8	37	44	44	48	36	417	50
B	NRA.050	Sq.3/8	37	44	44	48	36	467	51
B	NRA.070	Sq.1/2		46	44	48	36	493	63
B	NRA.105	Sq.1/2	48.5		44	48	36	495	61
B	NRA.180	Sq.1/2	48.5		48	48	36	545	73
B	NRA.280	sq.3/4	56.5		65.2	48	36	627	89
B	NRA.450	sq.3/4		74	65.2	48	36	651.5	94.5

NRS Series - Straight Nutrunner

Characteristic

- Tool accuracy reaches Six Sigma ±5%
- Simple design and easy operation
- Torque range: 5-65 Nm
- Visible light ring from all angles



Selection table

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (kg)
NRS.032	68060040	Sq3/8	5	32	1100	1.9
NRS.065	68060050	Sq1/2	10	65	800	2.5

NRA Series - Angle Nutrunner

Characteristic

- Tool accuracy reaches Six Sigma ±5%
- Simple design and easy operation
- Torque range: 6-450 Nm
- Visible light ring from all angles

Schematic Diagram



Parameter Diagram

Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (kg)
NRA.032	68060020	Sq.3/8	6	32	900	2
NRA.050	68060010	Sq.3/8	10	50	900	2.2
NRA.070	68060080	Sq.1/2	15	70	800	2.3
NRA.105	68060030	Sq.1/2	20	105	500	2.8
NRA.180	68060060	Sq.1/2	35	180	400	3.6
NRA.280	68060070	Sq.3/4	55	280	235	7.0
NRA.450	68060090	Sq.3/4	90	450	125	10.5

Accessories

Schematic Diagram



A



B

Selection table

Model	Description	Specification	Order No.
A	Nutrunner cable	5m	60000060
A	Nutrunner cable	10m	60000268
A	Nutrunner cable	15m	60000053
A	Nutrunner cable	20m	60000269
A	Nutrunner cable	30m	60000270
B	Rotary suspension ring	NRA.032NRA.050	60003158
B	Rotary suspension ring	NRA.070	60004450
B	Rotary suspension ring	NRA.105	60003156

TCS.2000B

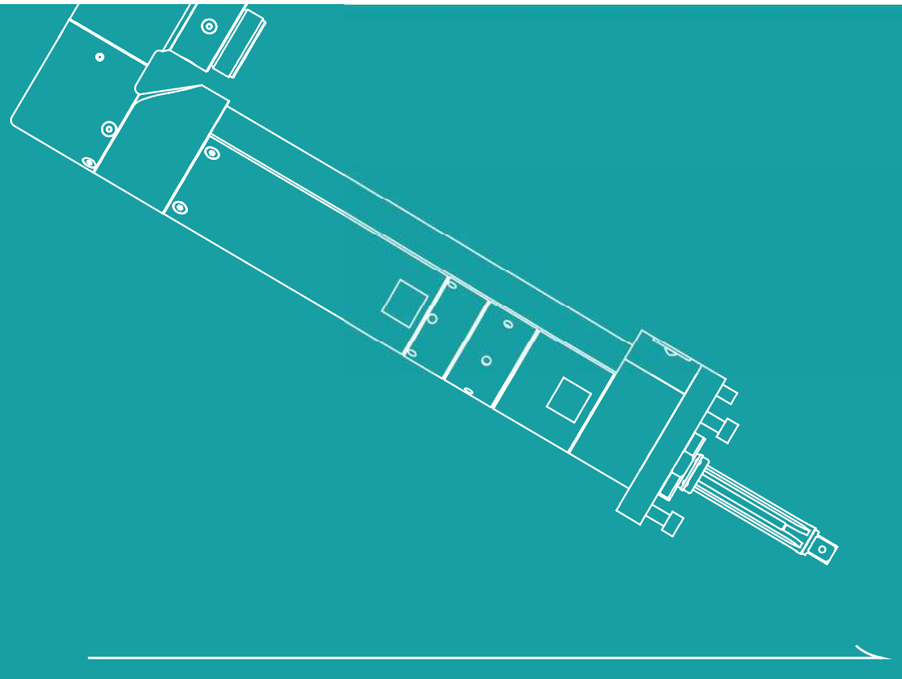
Tightening Spindle

EFS Series Tightening Spindle

To meet the high standards for fixed-position tightening in modern production lines, we provide a complete modular integrated solution. The solution covers everything from basic single-spindle control to complex multi-spindle synchronous systems, precisely matching scenarios ranging from simple assembly to high-takt flexible production.

We also offer two fixed-position tightening solutions, both equipped with intuitive intelligent control software, helping you quickly build stable and reliable automated tightening stations. This turnkey solution ensures efficient deployment and continuous, stable process output.





Characteristics

Versatile Communication

Uses WebApi communication for stable and convenient connectivity;
Supports standard I/O and serial communication for various connection scenarios, and follows the standard OP open protocol.

Universal Compatibility

Deeply supports major industrial buses such as PROFINET, EtherCAT, EtherNet/IP, PROFIBUS, and ModbusTCP;
Enables full interconnection with the production line.

Drive System

The self-developed high-voltage servo motor provides high power in a compact size, with stable tightening process control and low heat generation, meeting the needs of high-takt stations.

Full-Process Control

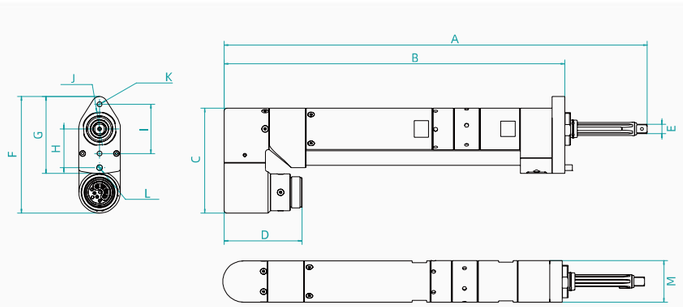
Integrates full-program functions such as torque/angle monitoring, re-tightening prevention, and seating detection; supports synchronous tightening.
Supports data upload to the server to ensure production process traceability.

EFS Series Tightening Spindles

Schematic Diagram



Dimension Drawing



Model	A	B	C	D	E	F	G	H	I	J
EFS.020	417	332	108	80	Sq.3/8	120	79	40	50.8	φ35
EFS.050	437	352	108	80	Sq.3/8	120	80	40	51	φ35
EFS.090	510	399	121	92	Sq.1/2	140	93	35	70.0	φ49.2
EFS.150	510	399	121	92	Sq.1/2	140	93	35	70	φ49.2
EFS.280	536	416	121	92	Sq.3/4	140	93	70	35.0	φ49.2
EFS.360	626	460	121	92	Sq.3/4	143	97	38	77	
EFS.500	720	554			Sq.3/4	176	130	97	45.0	

EFS Corded Tightening Spindles

Characteristic

- Tool accuracy reaches
- Six Sigma ±3%
- Torque range: 4-500 Nm
  Maximum speed up to
  2000 rpm



Selection table

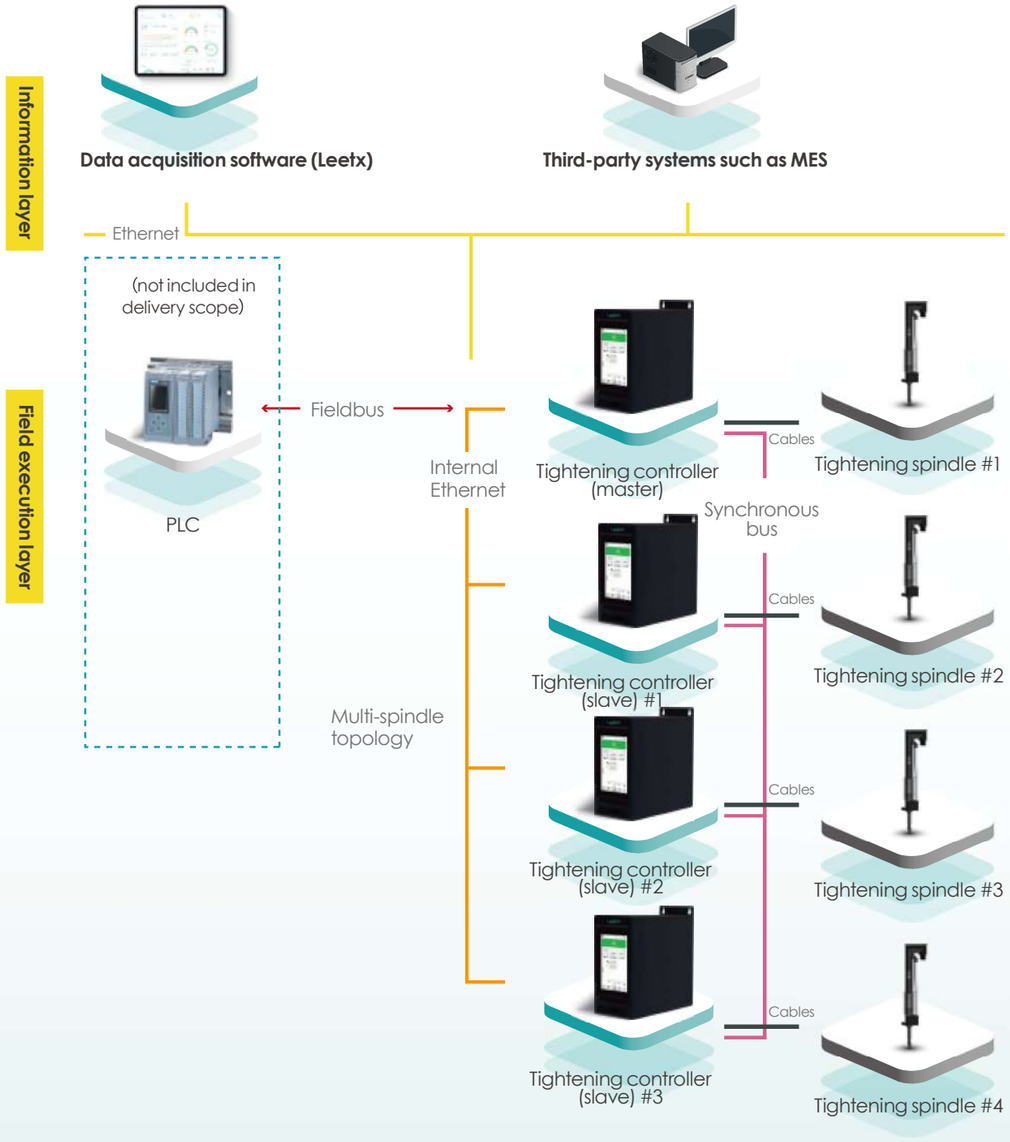
Model	Order No.	Output Drive	Minimum Torque (Nm)	Maximum Torque (Nm)	Speed (rpm)	Weight (kg)
EFS.020	68070140	Sq3/8	4	20	2000	2.2
EFS.050	68070110	Sq3/8	10	50	1100	2.7
EFS.090	68070220	Sq1/2	20	90	675	4.2
EFS.150	68070120	Sq1/2	30	150	470	4.2
EFS.280	68070130	Sq3/4	55	280	180	6
EFS.360	68070150	Sq3/4	70	360	130	7.5
EFS.500	68070160	Sq3/4	100	500	125	19

Spindle Accessories



Description	Specification	Order No.
Spindle cable	5m	60000254
Spindle cable	10m	60000255
Spindle cable	15m	60000256
Spindle cable	20m	60000048
Spindle cable	30m	60000257
10 m extension cable	10m	60003128

EFS Multi-Spindle Hardware Architecture



The master controller can connect up to 19 controllers, enabling control of up to 20 spindles across the entire system.
EFS Multi-Spindle Hardware Architecture

EFS Multi-Spindle Tightening System

In the automotive final assembly industry, faced with the need for highly consistent tightening, multi-spindle tightening systems have emerged to maintain both high quality and high efficiency in the assembly process.
Combined with controllers and software, the system ensures the accuracy and completeness of the assembly process for process analysis and quality record retention.
It is suitable for applications such as engines, transmissions, steering systems, chassis, subframes, and wheel tightening, and is mainly used in manufacturing industries such as automobiles and components, compressors, gasoline engines, and large diesel engines.
Synchronous tightening functionality meets high-quality assembly requirements.



Product Features

- Uses a master-slave architecture
  All parameters are configured only at the master station
- Upper and lower computers are separated
  Low operating delay and fast response
- Provides flexible configuration capabilities
  Suitable for complex tightening conditions
- Comprehensive status monitoring allows real-tir viewing of each tightening spindle's operating status

WCS.2000



Cordless Tools

WCS.2000 WIRELESS TOOLS

Leetx Tightening Tools and Solutions

WCS.2000 Controller

WCS CONTROLLER

Versatile Communication

Supports mainstream industrial channels such as ProfiNet, EtherCat, and EtherNet/IP for flexible integration; provides standard I/O and serial communication for stable communication with higher-level systems. Supports the standard OP protocol.

Efficient Interaction

The controller uses a touchscreen, allowing editing, viewing, and similar functions to be completed directly on the screen.

Precision Monitoring

Full-process tracking: equipped with trace monitoring and angle monitoring to track parameter changes during tightening in real time.
Process error-proofing: built-in re-tightening detection and seating torque detection comprehensively verify the accuracy of program execution.

EWA/EWP Cordless Tool

EWA/P TOOL

Flexible and Efficient

Quick switching: supports quick tool change and hot swapping, greatly reducing battery-change downtime.

Real-Time Feedback

The tool has its own display screen, allowing real-time observation of tool status and providing operators with clear instruction feedback.

Closed-Loop Traceability

Data traceability: supports data upload to meet stringent industrial quality traceability requirements.
Secure storage: systematically records every supplementary data item, providing a solid basis for improved audit quality.

WCS.2000 Smart Controller

The WCS2000 intelligent tightening controller features a user-friendly interface and convenient configuration; it uses special Cordless communication technology for efficient and stable data transmission; it offers strong process capability to meet tightening requirements in different application scenarios; and it provides comprehensive, highly scalable software functions supporting data exchange through buses, open protocols, and more.

Strong Process Capability

Supports multiple advanced tightening strategies;
Rich work steps (fastener recognition, socket release);
Overshoot protection strategy;
Adaptive power adjustment;

Comprehensive Software Functions

Preset programming available;
Can be cascaded through the network port;
Supports breakpoint resume and data retransmission;
Expandable storage available;

Strong Tool Management Capability

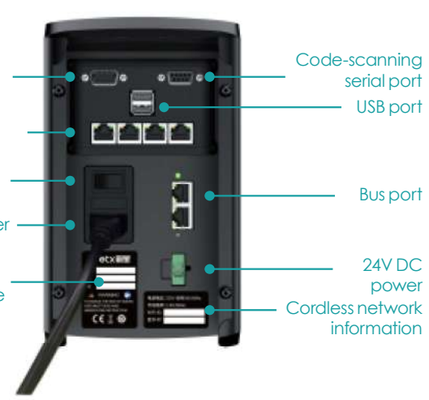
Supports access to multiple tool sets;
Extremely wide coverage range;

Fieldbus (Optional)

EtherNet/IP	ProfiNET	CC-LinkIE
EtherCAT	CC-Link	Modbus/TCP

- High-resolution 5-inch capacitive touchscreen
- Convenient human-machine operating interface
- Industrial-compliant exterior design
- Intelligent control algorithm
- Powerful data storage





Product Specifications

Product Model	Weight (kg)	Volume (L)	External Expandable Storage	Power Supply	Peripherals	Protection Rating	Environmental Requirements
WCS.2000	4.5Kg	5.4	Supported	220V mains frequenc	4 Ethernet ports, 2 serial ports, 2 bus ports, 2 USB ports	IP40	Storage temperature: -20 to 70°C; Operating temperature: 0 to 45°C; Humidity range: 5 to 95% (non-condensing); Altitude: within 2000 m

WCS.2000 Smart Controller



Parameter Diagram

Model	Order No.	Bus Type	Applicable Tool	Voltage (V/AC)	Frequency (Hz)	Weight (kg)	Rated Power (W)
WCS.2000	68080890	N/A	Cordless pistol type	180-250	50-60	6	10
WCS.2000.BUS.PN	68080860	ProfiNet	EWP.XXX	180-250	50-60	6	10
WCS.2000.BUS.EC	68080650	EtherCat	cordless angle type	180-250	50-60	6	10
WCS.2000.BUS.EI	68080930	EtherNet/IP	EWA.XXX	180-250	50-60	6	10

Tightening Accessories



A B C D

Reference Image	Description	Specification	Order No.
A	4-position socket selector	Cable length 3 m	60003147
B	4-position bit selector	Cable length 3 m	60003150
C	8-position socket selector	Cable length 3 m	60003148
D	8-position bit selector	Cable length 3 m	60003152

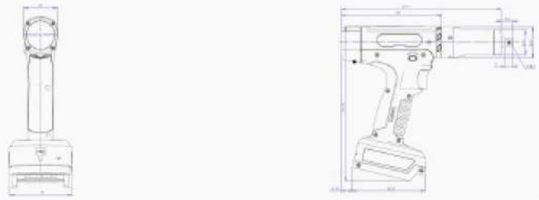
EWP Cordless Pistol Tightening Tools

Characteristic

- Tool accuracy reaches Six Sigma ±5%
- Simple design and easy operation
- Visible light ring from all angles
- Supports hot swapping



Schematic Diagram



Selection table

Model	Order No.	Torque Range (Nm)	Speed Range (rpm)	Output Drive	Weight-Kg		
					Body	18V Battery	36V Battery
EWP.003.W	68090010	0.5-3	2500	Sq.3/8	1.2	0.4	0.7
	68090040	0.5-3	2500	Hex.1/4F	1.2	0.4	0.7
EWP.008.W	68090020	1.5-8	1500	Sq.3/8	1.2	0.4	0.7
	68090050	1.5-8	1500	Hex.1/4F	1.2	0.4	0.7
EWP.015.W	68090030	3-15	900	Sq.3/8	1.2	0.4	0.7
	68090060	3-15	900	Hex.1/4F	1.2	0.4	0.7

Battery



A



B

Product Model	Order No.	Voltage (V)	Capacity (Ah)	Weight (kg)	Charging Time (min)	Applicable Models
Lithium battery	60003876	18V	2.5	0.4	30	EWP.003 EWP.008 EWP.015
Lithium battery	60003775	36V	2.5	0.7	30	All cordless

Product Model	Order No.
Charger	60003788

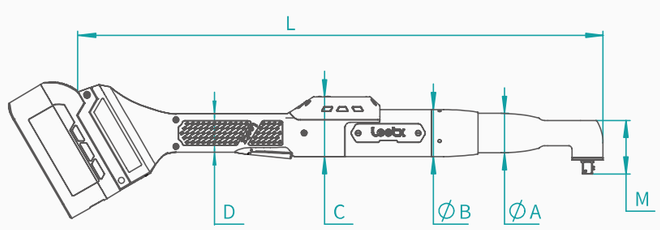
EWA Cordless Angle Tool

Characteristic

- Tool accuracy reaches Six Sigma ±5%
- Simple design and easy operation
- Visible light ring from all angles



Schematic Diagram



Selection table

Model	Order No.	Torque Range (Nm)	Speed Range (rpm)	Output Drive	Weight-Kg		Dimensions-mm (with 18V battery)			
					Body	36V Battery	L	M	A	C
EWA.032.W	60004445	6-32	360	Sq.3/8	1.8	0.7	490	48	37	57
EWA.050.W	60004446	10-50	220	Sq.3/8	1.9	0.7	525	49	37	57
EWA.070.W	60004447	15-70	140	Sq.1/2	3.0	0.7	576	61	49	57
EWA.105.W	68060280	20-105	120	Sq.1/2	3.0	0.7	576	61	49	57

Cordless tool protective cover

Product Model	Order No.	Applicable Models
18V power battery protective cover	60004660	
36V power battery protective cover	60004661	
Pistol tool protective cover	60004637	EWP.003 EWP.008 EWP.015
Cordless nutrunner protective cover	60004944	EWA.032
Pistol tool protective cover	60004969	EWA.050
Cordless nutrunner protective cover	60004971	EWA.070 EWA.105
Cordless controller socket selector assembly	60004989	

Leetx Tightening Tools and Solutions

Data Acquisition Software

Leetx



DATAINSIGHT

It features comprehensive functions, supports multiple communication methods, has a clear interface and simple operation, is easy to learn and reduces learning costs. The interface can display the distribution of tightening results and dynamically show the distribution curve.

DataInsight

Data Acquisition Software

DataInsight Intelligent Tightening Data Analysis Platform

The DataInsight intelligent tightening data analysis platform is a professional system for tightening data acquisition and in-depth analysis. The platform is fully compatible with all series of the company's intelligent tightening systems, including:

- TCS series high-end intelligent tightening tools
- WCS series Cordless tightening tools
- ICS series intelligent screwdrivers
- and other series of tightening equipment

Precision Process Control

Monitors every tightening point throughout the entire process to establish a complete quality traceability

Continuous Quality Improvement

Rapidly identifies process issues based on big-data analysis and drives continuous improvement

Production Efficiency Optimization

Intelligently diagnoses equipment status, warns of potential faults, and minimizes unplanned downtime

Decision Support & Empowerment

Provides data support for management decisions through multi-dimensional statistical analysis



DataInsight

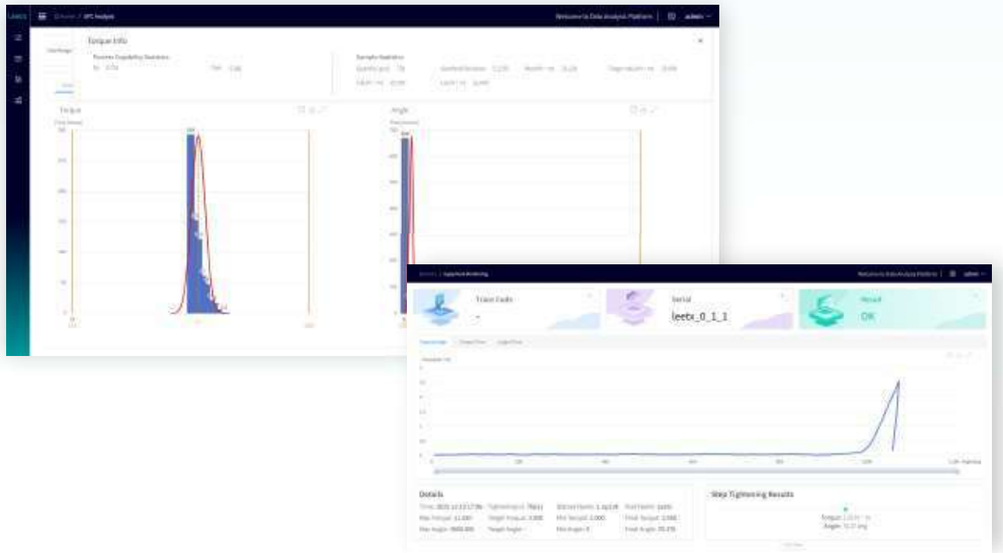
Data Collection Software

Characteristic

- Storage and analysis of tightening curves
- Real-time monitoring of tools
- Supports SPC process analysis to predict potential problems
- Supports breakpoint resume to ensure data security



Schematic Diagram



Selection table

Model	Order No.
DataInsight Data Acquisition Software	60004386
DataInsight USB Drive Component	60002977
DataInsight Dongle	60002980
DataInsight Software Dongle	60004497

Leetx Tightening Tools and Solutions

Tightening Solutions

Leetx

TOTAL SOLUTION

Arm

Positioning Arm

Feeding System

Customized Solutions

Accessory - Reaction Arm

Reduce strain

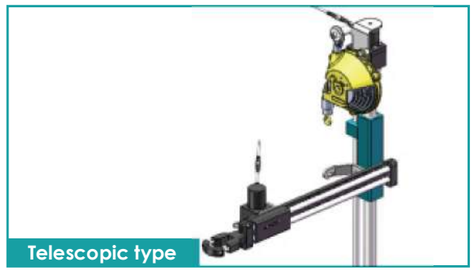
Improve comfort

Reduce error

Using a reaction arm can reduce operator strain, improve tightening comfort, and preserve freedom of movement. It can also reduce tightening errors caused by manual operation and ensure that clamping force reaches the proper level



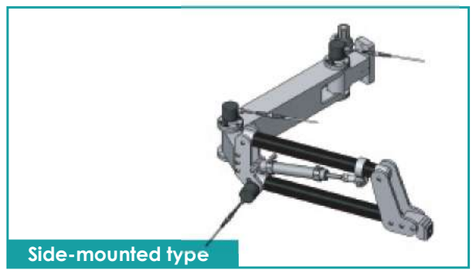
Foldable type



Telescopic type



Carbon-fiber arm



Side-mounted type

Characteristic

Reduce stress, enhance comfort and minimize errors.

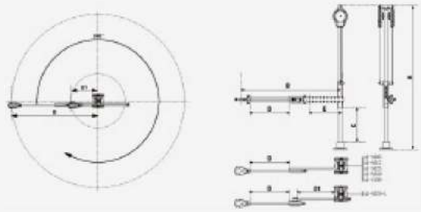
The use of a reaction arm can reduce the pressure on the operator, improve the comfort of the worker when tightening, and can reduce the tightening error caused by manual operation, ensuring that the clamping force reaches the appropriate accuracy.

Tabletop Arm

Telescopic Arm



Dimension Drawing



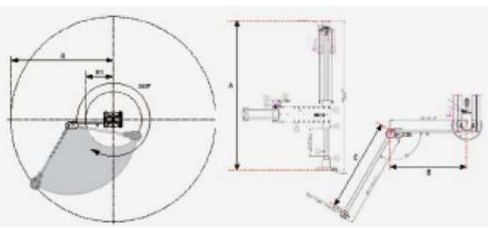
Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Vertical Stroke (mm)	Horizontal Stroke (mm)	Overall Height (mm)	Maximum Working Radius (mm)
A3F.012.NS	60004853	12	1.5	28.5-41	826	425	255	650
A3F.025.NS	60004855	25	2.5	28.5-41	1000	570	300	726
A3F.050.NS	60004857	50	5	To be purchased separately	1000	500	400	920
A3F.100.NS	60004859	100	6	To be purchased separately	1000	500	400	960

Tabletop Arm

Foldable Arm



Dimension Drawing



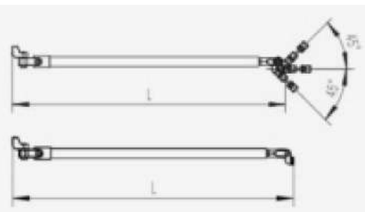
Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Vertical Stroke (mm)	Horizontal Stroke (mm)	Overall Height (mm)	Maximum Working Radius (mm)
A3S.012.NS	60004861	12	1.5	28.5-41	826	425	425	639
A3S.025.NS	60004863	25	25	28.5-41	1000	570	570	685
A3S.050.NS	60004866	50	5	To be purchased separately	1000	500	500	838
A3S.100.NS	60004868	100	6	To be purchased separately	1000	500	500	866

Carbon-Fiber Arm

Carbon-Fiber Arm



Dimension Drawing



Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Telescopic Length Min(mm)	Telescopic Length Max(mm)
A1C.012.NS.1600	60003913	12	4.2	28-50	672	1584
A1C.025.NS.1600	60003927	25	4.4	28-50	672	1584
A1C.025.NS.2100	60003928	25	4.4	28-50	837	2083
A1C.050.NS.2100	60003939	50	4.8	28-50	837	2083
A1C.100.NS.2100	60003987	100	5	To be purchased separately	837	2083

Positioning Error-Proof Tightening System

Tightening Guidance

The positioning arm is equipped with a 10-inch display that guides the tightening sequence and can also display tightening results.

Bolt Positioning

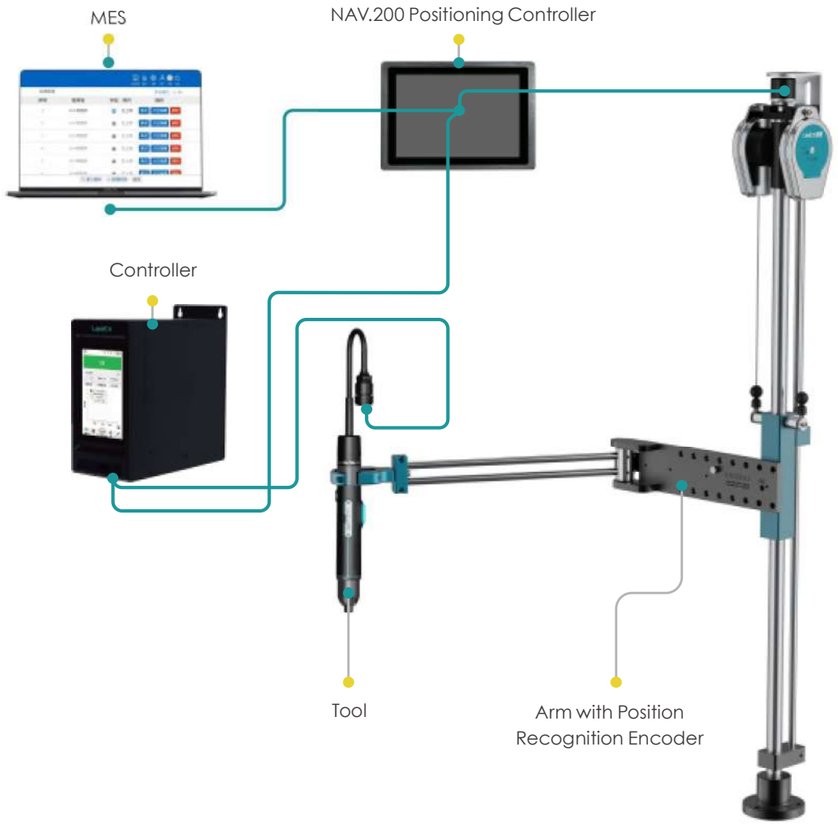
The positioning arm can define a positioning monitoring range; the tool is allowed to start only when the bit is within the defined range.

Strong positioning: strictly controls the bolt tightening sequence; the next bolt can be tightened only after the current bolt is tightened successfully or released by higher-level authorization.

Weak positioning: the tool can start only when aligned with the bolt, but the sequence is not controlled.

Program Switching

When different bolts require tightening programs with different torque values, the system automatically switches to the corresponding tightening program based on the bolt position identified by the positioning arm.

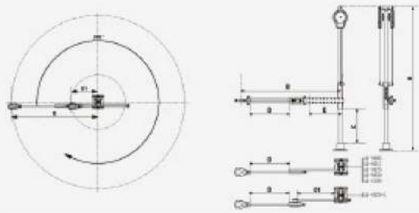


Tabletop Arm

Positioning Foldable Arm



Dimension Drawing



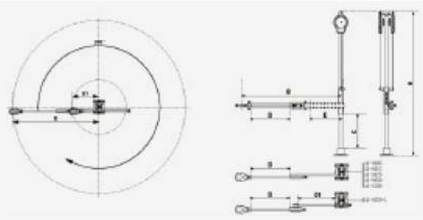
Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Vertical Stroke (mm)	Horizontal Stroke (mm)	Overall Height (mm)	Maximum Working Radius (mm)
A3F.012.PS	60004854	12	1.5	28.5-41	826	425	255	650
A3F.025.PS	60004856	25	2.5	28.5-41	1000	570	300	726
A3F.050.PS	60004858	50	5	To be purchased separately	1000	500	400	920
A3F.100.PS	60004860	100	6	To be purchased separately	1000	500	400	960

Tabletop Arm

Positioning Foldable Arm



Dimension Drawing



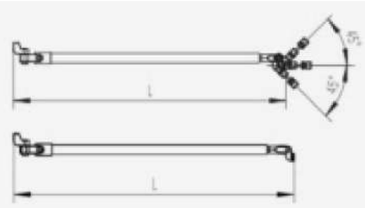
Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Horizontal Stroke (mm)	Overall Height (mm)	Maximum Working Radius (mm)
A3S.012.PS	60004862	12	1.5	28.5-41	826	425	639
A3S.025.PS	60004864	25	25	28.5-41	1000	570	685
A3S.050.PS	60004867	50	5	To be purchased separately	1000	500	838
A3S.100.PS	60004869	100	6	To be purchased separately	1000	500	866

Carbon-Fiber Arm

Positioning Carbon-Fiber Arm



Dimension Drawing



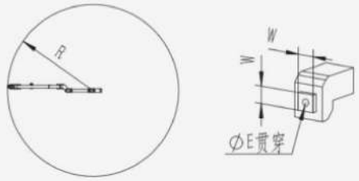
Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Tool Chuck Clamping Range (mm)	Telescopic Length Min(mm)	Telescopic Length Max(mm)
A1C.012.PS.1600	60003924	12	4.2	28-50	672	1584
A1C.025.PS.1600	60003932	25	4.4	28-50	672	1584
A1C.025.PS.2100	60003933	25	4.4	28-50	837	2083
A1C.050.PS.2100	60003942	50	4.8	28-50	837	2083
A1C.100.PS.2100	60003990	100	5	To be purchased separately	837	2083

Positioning Side-Mounted Arm

Positioning Side-Mounted Arm



Dimension Drawing



Model	Order No.	Maximum Torque (Nm)	Maximum Tool Weight (kg)	Vertical Stroke(mm)	Maximum Working Radius (mm)
A1L.100P.SS-800L	60003893	100	10	200	800
A1L.100P.SS-1000L	60003894	100	10	300	1100
A1L.100P.SS-800R	60004594	100	10	200	800
A1L.100P.SS-1000R	60004596	100	10	300	1100

Arm Accessories

Positioning Foldable Arm



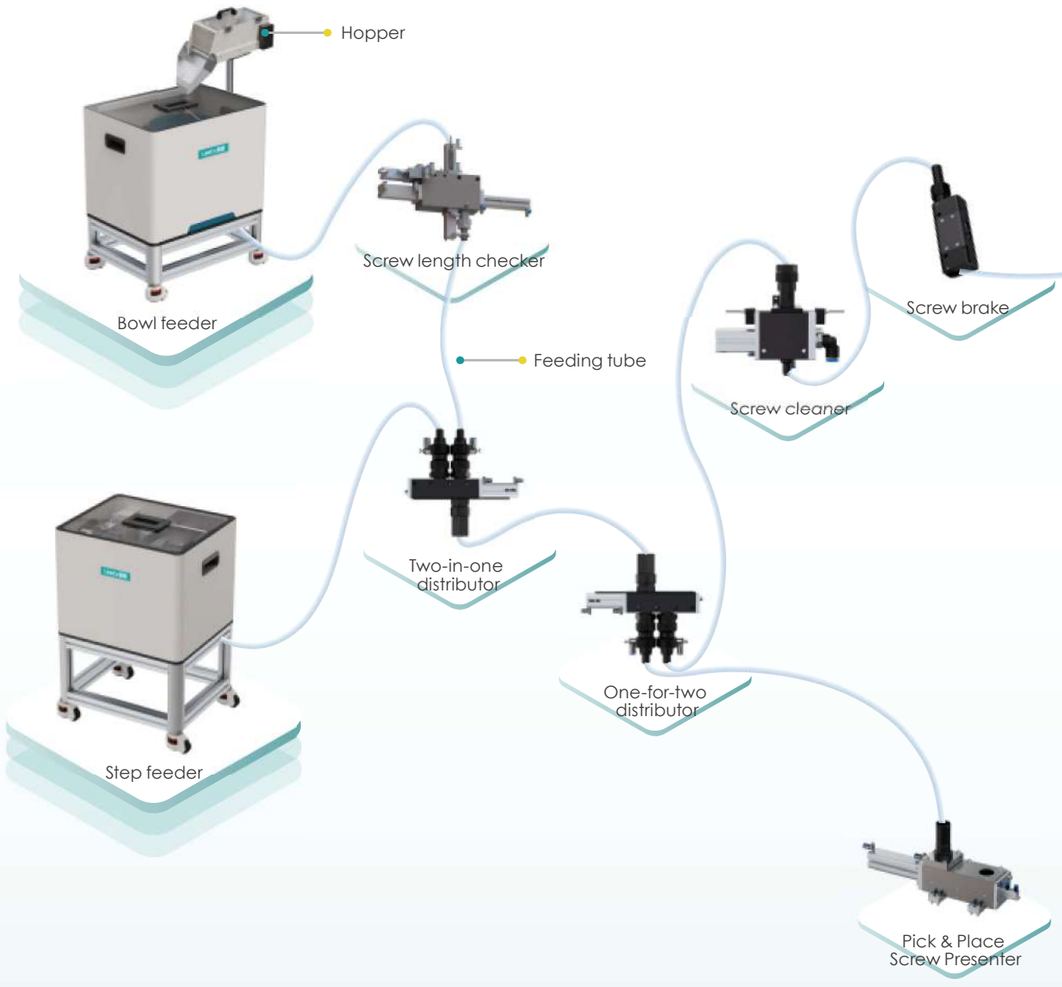
Parameter Diagram

Type	Model	Order No.
A	Vertical handle (with button), 3 m cable	60003910
B	Vertical handle (without button)	60003909
C	Ball-head handle (with button), 3 m cable	60003789
D	Ball-head handle (without button)	60003793
E	Ball-head base	60003911
F	I/O operation panel	60003792
	Four-color signal tower (with buzzer)	60003791

Balancer

Order No.	Model	Name	Description
60003907	C06.17A	Arm chuck	universal chuck for foldable / straight / telescopic carbon-fiber / side-mounted pneumatic carbon-fiber arms below 25 Nm
60003908	C06.32A	Arm chuck	widened chuck for foldable / straight / telescopic carbon-fiber / side-mounted pneumatic carbon-fiber arms at 50-100 Nm
60004590	C01.T2.500365	Arm chuck	for carbon-fiber arms, rotating suspension-ring chuck for 40 mm angle tools (for EHA.003, 012, 022)
60004591	C01.T2.500445	Arm chuck	for carbon-fiber arms, rotating suspension-ring chuck for 44 mm angle tools (for NRA.032, 050)
60004592	C01.T2.500465	Arm chuck	rotating chuck for carbon-fiber arms and angle tools (for NRA.070)
60004593	C01.T2.500585	Arm chuck	rotating chuck for carbon-fiber arms and angle tools (for NRA.105)
60004764	C01.T2.460365	Rotatable fixture for tabletop foldable arm	C01.T2.460365 tabletop foldable arm rotatable fixture
60005214	NAV.100	Positioning arm controller	positioning arm software only, without industrial PC
60003904	NAV. 200	Positioning arm controller	for use with the integrated positioning arm software unit, 15.6-inch display industrial PC (software with computer)
60003906	PCS.100	Positioning arm controller	single-chip guidance controller for arm control, used with positioning arms, 7-inch display
60003905	NAV.200-ZJ	Positioning arm controller	mounting base suitable for NAV.200 industrial PC

Composition of the Automatic Screw Feeding System



Feeding unit

Accessory

Blowing Tightening Module



ASG Standard Module
(Blowing)



AIV-AT Inner Drive Vacuum Module
(Blowing+Suction+Actively Opening)



AOV Outer Drive Vacuum Module
(Blowing+Suction+Searching)



AHB Handheld Standard Module



AHV Handheld Vacuum Module

Pick & place Module



APP Standard Module
(Pick & Place)



APPQ Quick-Exchange Module
(Quick-Exchanging pick & place)



AHP Standard Module



AHPQ Quick-Exchange Handheld Module

Tightening module

CUSTOMIZED SERVICE

We provide customers with customized tightening solutions to meet the assembly needs of manual stations, semi-automatic stations, and fully automatic stations, helping customers comprehensively realize Industry 4.0. Leetx's engineering department operates with standardized, full-process project management—from early planning through on-site implementation to final delivery—providing integrated, highly stable tightening and assembly solutions.



Large mechanical arm



Multi-spindle servo pitch adjustment



Multi-spindle synchronization



Hold and Drive



Special Tools