



JP : www.estic.co.jp
EN : www.estic.co.jp/en/
CN : www.estic.co.jp/cn/

 www.linkedin.com/company/estic-corporation
 www.youtube.com/user/EsticCorporation

1905 QSSG 080EN

Handy 2000 Series GENERAL CATALOG



Fastening Solutions



ESTIC is a highly acclaimed provider of state-of-the-art nutrunner systems for the automotive and aircraft industries and beyond. The name, ESTIC, reflects our commitment to creating electric servo technology that delivers exceptional performance. As part of this, our mission is to provide top-quality, reliable fastening solutions for all types of torque tightening needs. ESTIC developed its first electric handheld nutrunner for commercial use almost twenty years ago and has been evolving ever since. Today, the manufacturing industries we serve are undergoing major changes, as indicated by current trends in IoT and Industry 4.0. To adapt to these new challenges and to continue meeting our customers' demands, we promise to deliver products and services that always exceed expectations, while building an ever-stronger bond with our customers through the ESTIC brand.

Handy 2000 Series

The ESTIC Group is a pioneer in pulse fastening technology and a global leader in innovation for the fastening industry. At ESTIC, we strive for the ultimate level of user-friendliness by meeting our clients' demands for products that are light, fast, and easy to use. Here, in our Handy 2000 Series of electric handheld nutrunners, we offer the perfect expression of this ambition in what is ESTIC's foremost brand.

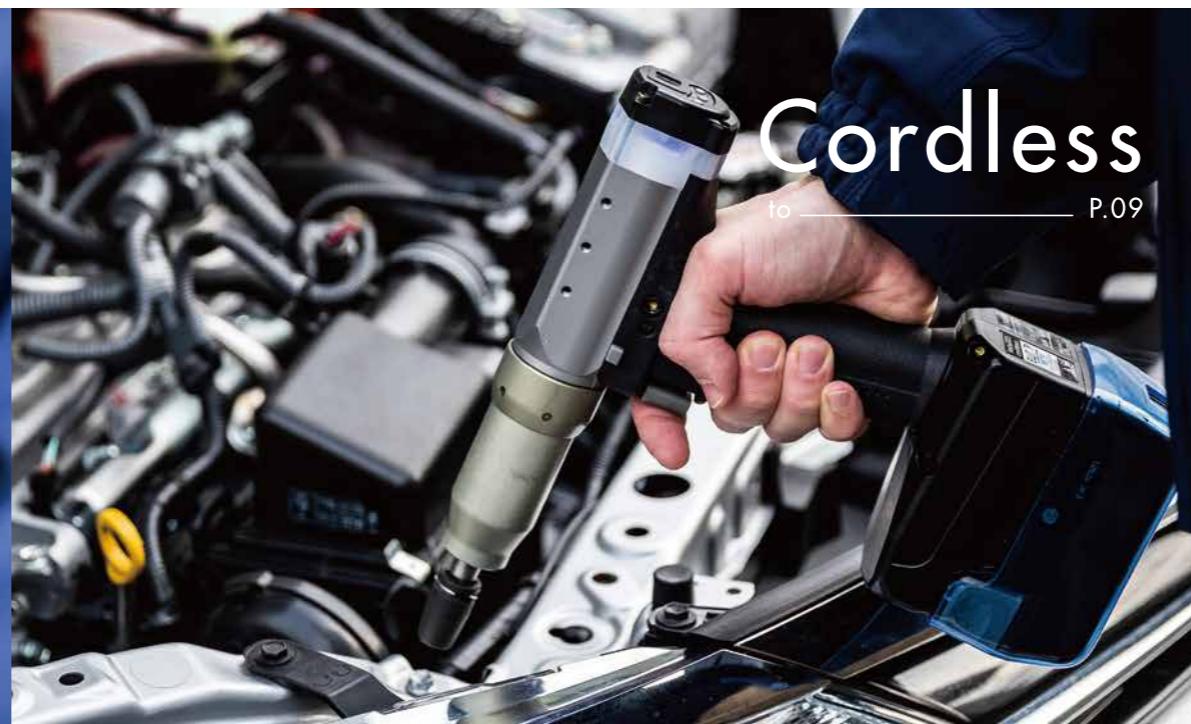
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Direct Technology

1Nm - 600Nm

Whether for engines, transmissions, or EV batteries, our high-speed, high-precision direct fastening technology provides reliable traceability and steadfast support for those critical parts and components that demand optimal accuracy and repeatability.

Combine with a tracer arm for a user-friendly fastening setup with no reaction force.

Use a direct-only tool to execute high-torque fastening where pulse technology cannot be used.

ISO
5393

Traceability

ISO
9001

High-level Quality Control

A/D
CONVERSION

High-speed Sampling
and Response

The torque and angle readings are monitored every 1/2000 second to control the target values.



Pistol Tools

1Nm - 120Nm

Torque Range



Right Angle Tools

4Nm - 600Nm

Torque Range



Straight Tools

1Nm - 420Nm

Torque Range

Pulse Technology



Eliminate Torque Reaction Devices

Thanks to ESTIC's patented motor control system, our pulse fastening technology has achieved an unprecedented reduction in reaction forces. Torque data is continuously processed every 1/2000 of a second to control the overall fastening strength and ensure safe and highly accurate tightening with minimal reaction force. What's more, the tool's ergonomic design and advanced pulse fastening technology allow for single-handed operation in certain situations, dramatically reducing the strain placed on the operator.



ESTIC PULSE

Patented in Japan, USA and China



Pulse Fastening

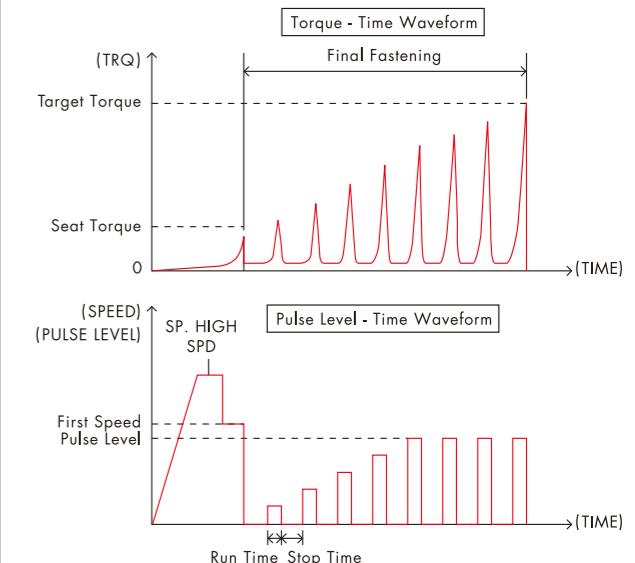
By tightening using intermittent impact force like hitting with a hammer, users receive little reaction force.

Direct Fastening

Tightening by continuous motion, users receive a large reaction force.

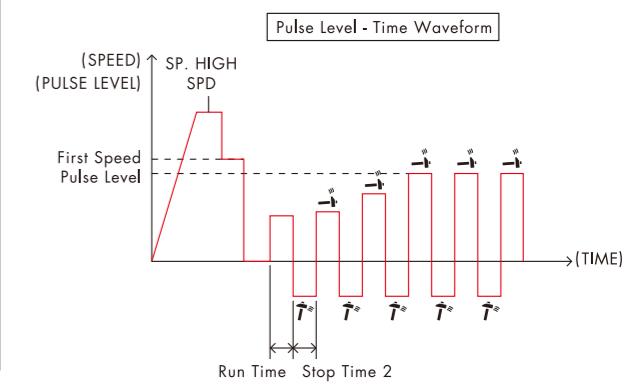
HS High Speed

ESTIC PULSE HS has been outfitted with a proprietary motor control mechanism to achieve accelerated pulse operations. This dedicated high-speed pulse fastening model comes equipped with both a high-speed 200V AC boost mode and a dramatically-improved 100V AC standard fastening mode to deliver the exact speed and torque you require.

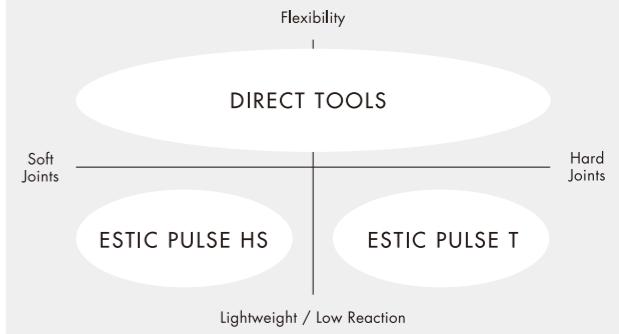


T For Hard Joints

Incorporating the latest technology, ESTIC PULSE T is fitted with an original hammer mechanism that allows torque control by adjusting the hammer's impact strength. This model achieves unprecedented usability with a lighter and smaller body and a dramatic reduction in reaction forces through our signature pulse technology.



Positioning Map



Cordless



Micro



Technology

Exceptional Quality and Ease of Use

ESTIC is committed to improving both the quality and ease of the bolt fastening process. Thanks to ESTIC's cordless technology, one can achieve the same degree of fastening precision as corded systems, all while remaining mobile. Eliminate troublesome cables when fastening hard-to-reach parts around a vehicle's wheels or when tightening interior components such as seat belts. Of course, our high-speed pulse fastening technology is included in the cordless product line. Let our cordless technology revolutionize your production processes.

Features

- Wireless Communication
- Lightweight
- ESTIC PULSE Models Available

Minimum Torque 0.1Nm

An ever-growing number of small screws are being used to fasten electronic components in the automotive, aircraft, and aerospace industries. For critical security parts such as sensors, cables, and airbags, traceability is essential, even at low torque. Handy 2000 Micro, the latest model in our Handy 2000 Series, meets this demand with torque rates down to 0.1Nm.

Technology

Features



ESD Safe

Detectable Fastening Errors

- | | | |
|----------------|----------------|--------------|
| Cross-thread | Missing Screw | Jammed Parts |
| Floating Screw | Damaged Thread | Unfastened |
| Missing Parts | Broken Screw | |

Control Station

The Handy 2000 Series Controller is a control station that provides powerful assembly support. It controls not only the tool itself but also various accessories while communicating with the host network. Experience the pinnacle of productivity, quality and user-friendliness.

Tool Control

This ensures the connected tool is functioning correctly and delivering precision fastening.

Accessory Control

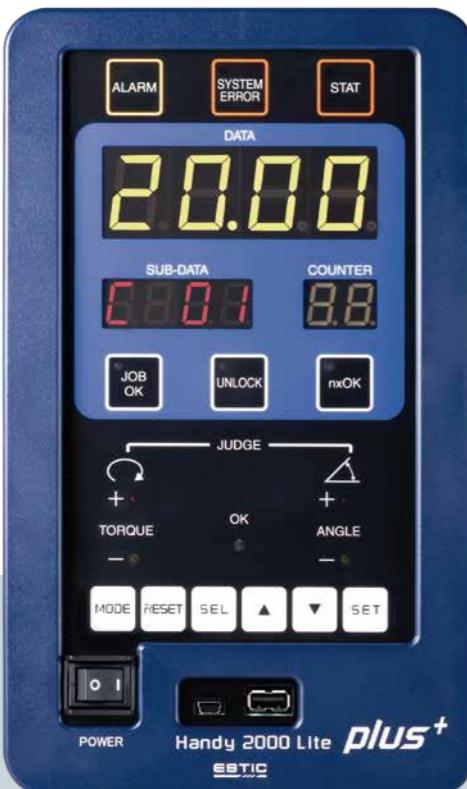
Improve the productivity of production processes by connecting various useful accessories.

- / Socket Tray
- / NET I/O
- / Signal Tower
- / Barcode Reader
- / Touch Panel Display
- / Serial Printer

Communication Control with Host Network

Simple and seamless integration with the main production system.

- / Industrial Ethernet
- / Fieldbus
- / Open Protocol
- / Other Protocols



Handy 2000 Lite plus



Handy 2000 Touch



Handy 2000 Cordless



Handy 2000 Micro

This is the entry level model for the Handy 2000 Series. The display panel comes equipped with large 7-segment LEDs for improved visibility, and green and red color-coded judgement indicators to clearly inform the operator if all is okay (green) or something is not within specifications (red).

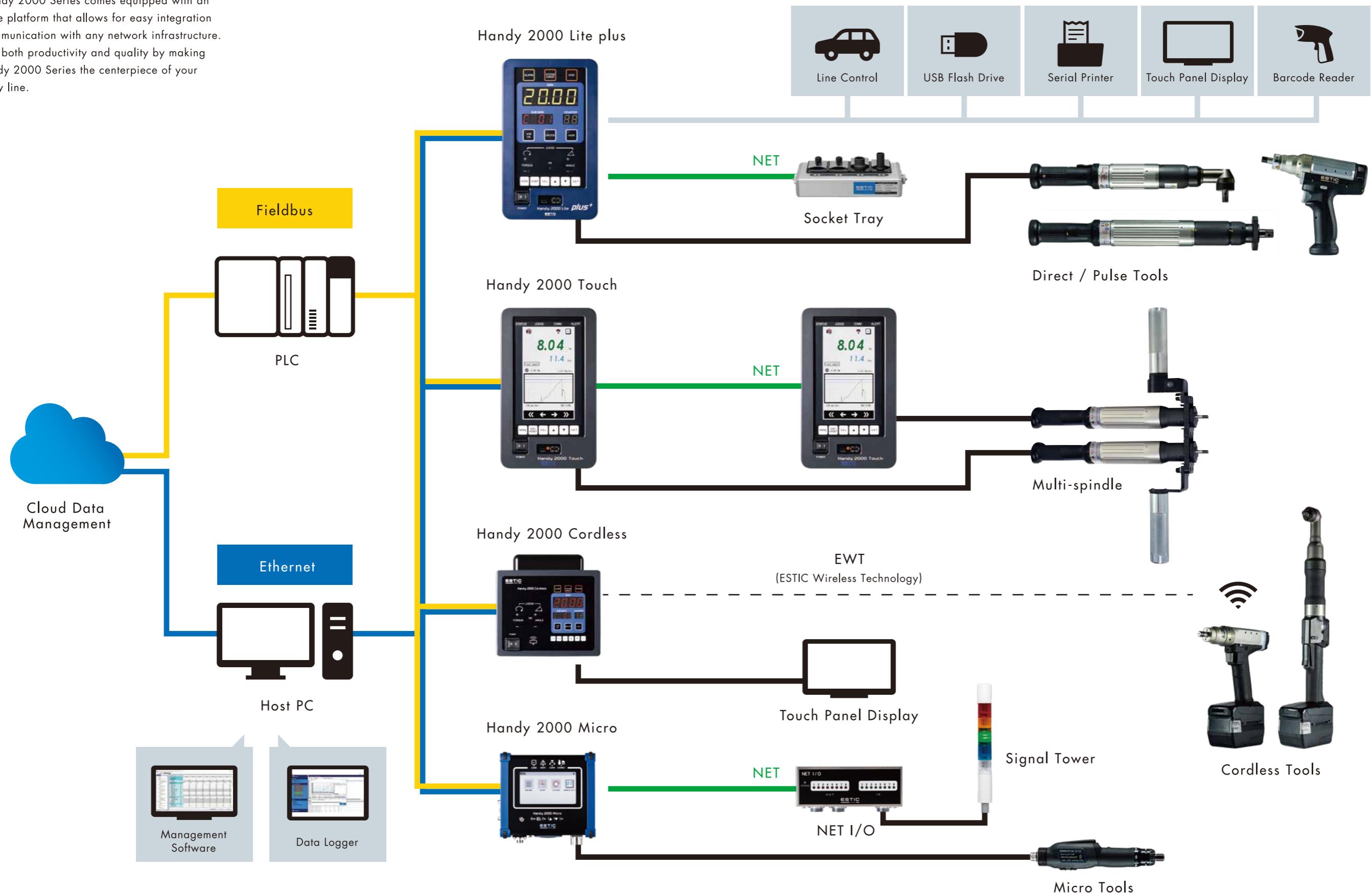
This advanced model improves upon the performance of the Light plus with increased storage capacity and the addition of a touch panel for intuitive operation. The operator can also easily enter or change precise settings and values from the face of the controller.

A dedicated interface unit for cordless tools; this model features EWT wireless transmission technology, which complies with the international standards set forth under IEEE 802.15.4. Tools can be set up quickly and easily through infrared communication.

A dedicated controller for micro tools; the 4.3-inch color touch panel features a compact design with all of the network functionality of our other controller models. Top of the line in its industry, this model achieves exceptional performance and easy operation in a compact packaging.

Communication Technology

Our Handy 2000 Series comes equipped with an all-in-one platform that allows for easy integration and communication with any network infrastructure. Improve both productivity and quality by making the Handy 2000 Series the centerpiece of your assembly line.

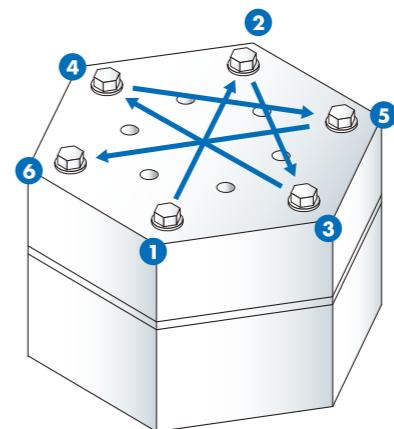




Smart Arm Solution

ESTIC's smart support arm not only cancels out reaction forces during fastening but also provides guidance on the positioning and order of fastening. Thanks to the support arm's smart functionality, you will never have to worry about untightened screws and bolts, or the fastening order and position again.

Fastening Sequence

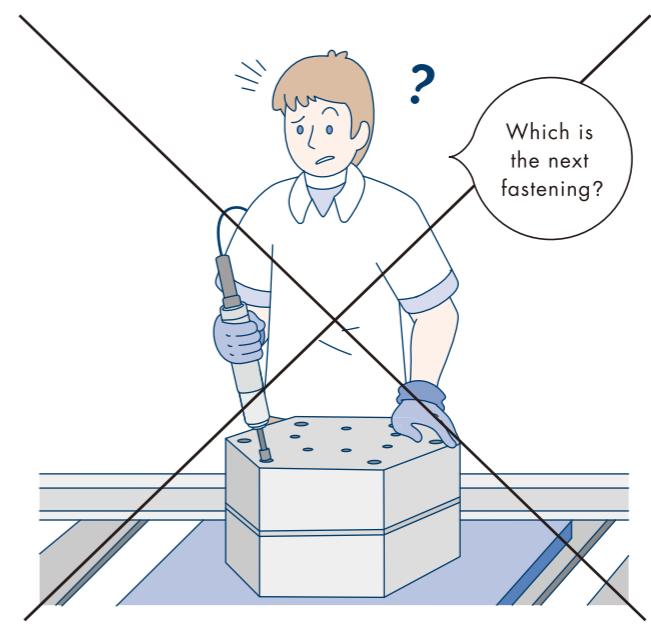


STEP

#01 CH1 Pretightening with 21 Nm at 6 locations
START 1 ▶ 2 ▶ 3 ▶ 4 ▶ 5 ▶ 6 END

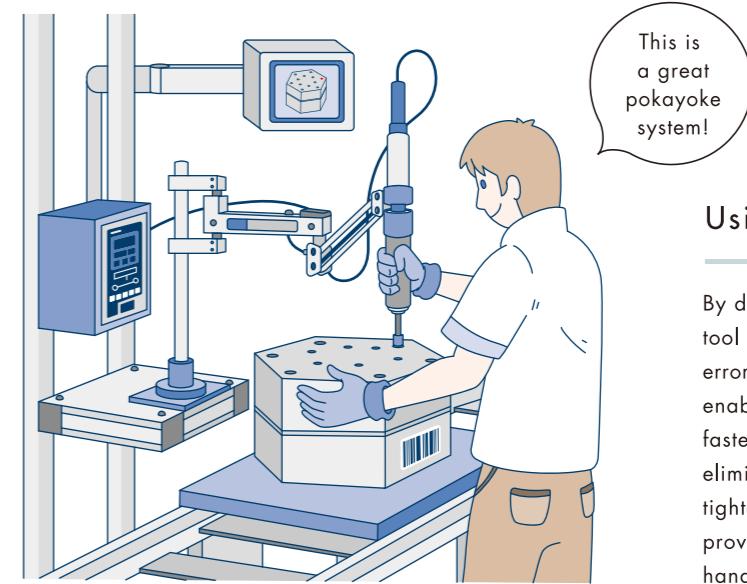
#02 CH2 Loosening with 90 degrees at 6 locations
START 1 ▶ 2 ▶ 3 ▶ 4 ▶ 5 ▶ 6 END

#03 CH3 Final tightening with 49 Nm at 6 locations
START 1 ▶ 2 ▶ 3 ▶ 4 ▶ 5 ▶ 6 END



Without a Tracer Arm

When fastening, operator errors such as incomplete fastening, fastening the incorrect position, or fastening in the incorrect sequence can occur. And tool maneuverability may be difficult, causing operator tool handling concerns.



Using a Tracer Arm

By detecting the location of the tool at all times, our Tracer Arm error proofing system (pokayoke) enables total control over the fastening sequence and eliminates the possibility of tightening mistakes. This provides better operator tool handling and ergonomics.



Engine Assembly
— Intake Manifold —
— Exhaust Manifold —

Suspension Assembly
— Front Suspension Arm —
— Rear Suspension Arm —

Electric Power Steering Assembly

Tire Mounting

Direct / Pulse Technology



Micro Technology



Transaxle Assembly

Battery Assembly

Power Control Unit Assembly

Harness Mounting



Steering Mounting

Seat Belt Mounting

Seat Mounting



Cordless Technology

In the automotive industry, the tools we select for our assembly operations have a dramatic impact on overall productivity and quality. With ESTIC, you can flexibly choose from an extensive array of cordless and corded models that cover a wide range of torque values and tool configurations such as pistol, right angle and straight. All of our tools are able to link up with any of ESTIC's control stations; thereby, ensuring reliable traceability and safe storage of all relevant fastening data.

Applications and Solutions

Custom-made Solutions



Open End



Crowfoot Gear



Flush Socket

Specification Table



Closed End



Multiplier Unit



Reaction Bar Unit

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33 – 34 ↗ Tracer Arm Specifications



Trombone



Multi-spindle

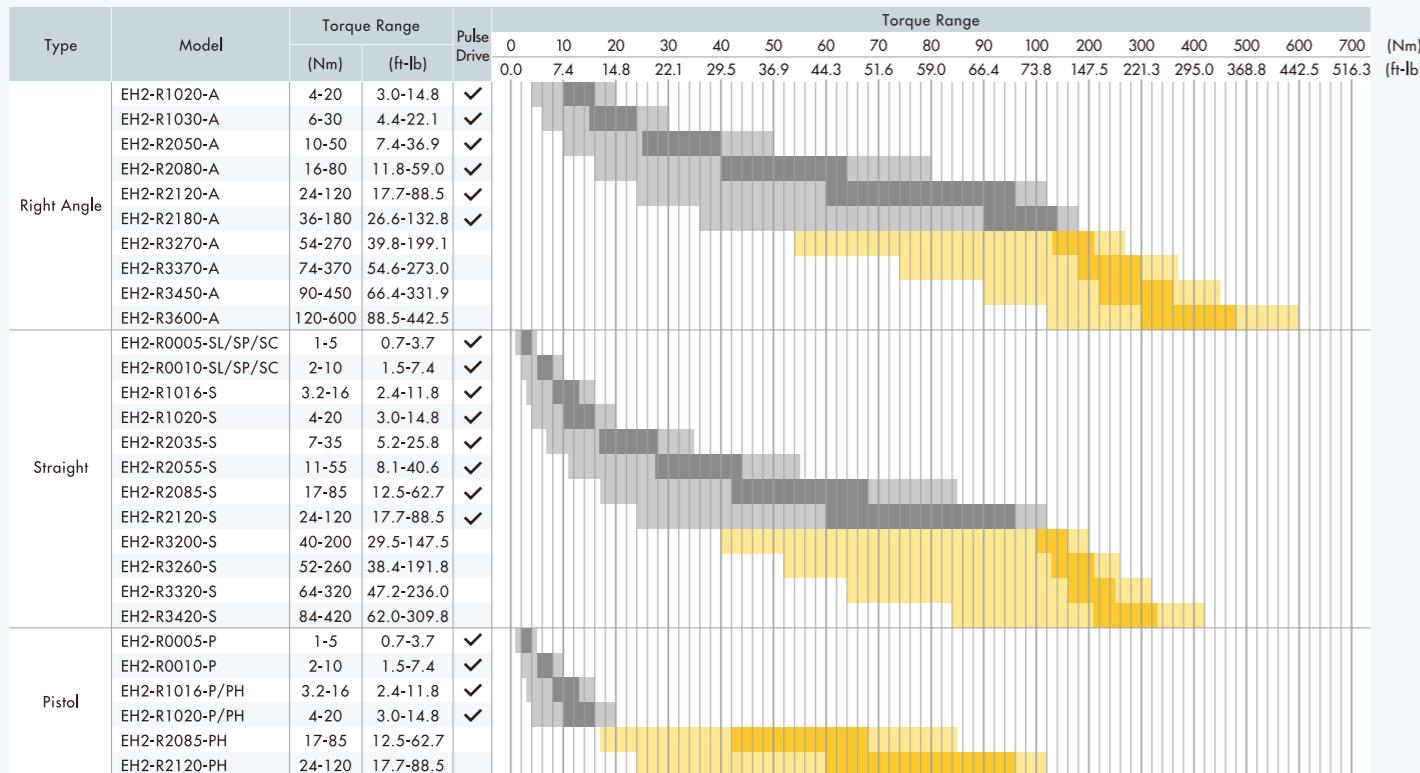


Top-mounted Cable

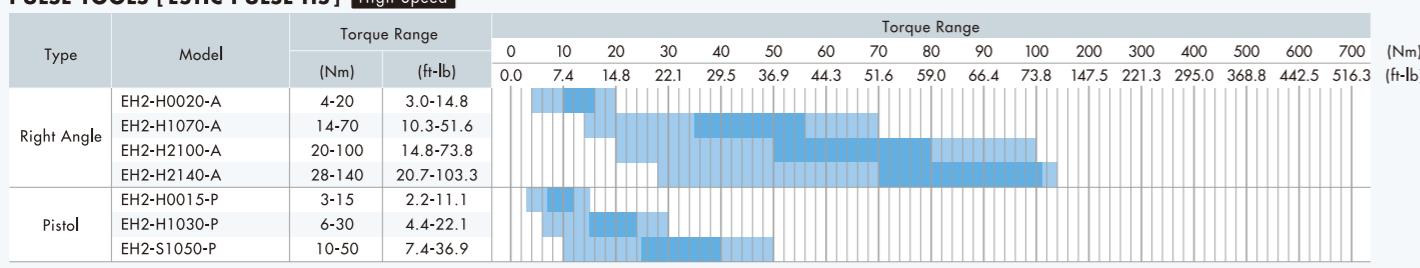
Torque Range Quick Reference Chart



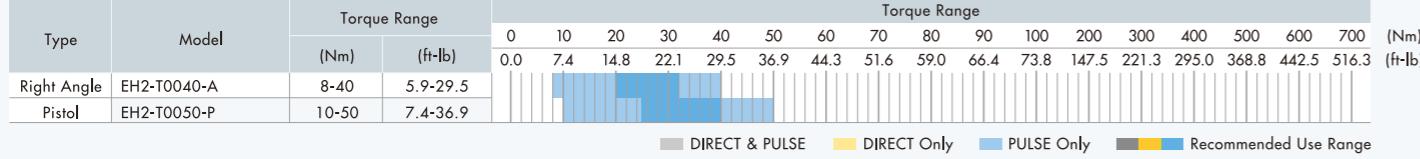
DIRECT TOOLS



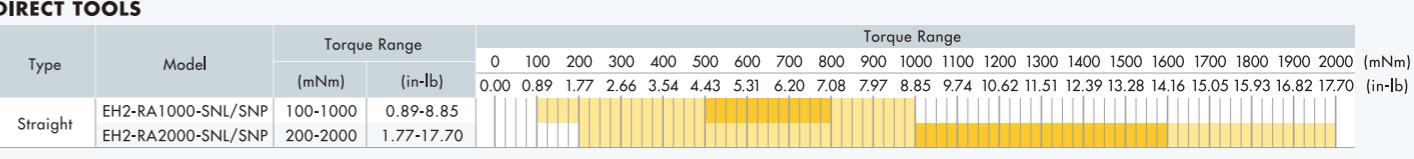
PULSE TOOLS [ESTIC PULSE HS] High Speed



PULSE TOOLS [ESTIC PULSE T] For Hard Joints



DIRECT TOOLS



Controller Port Description

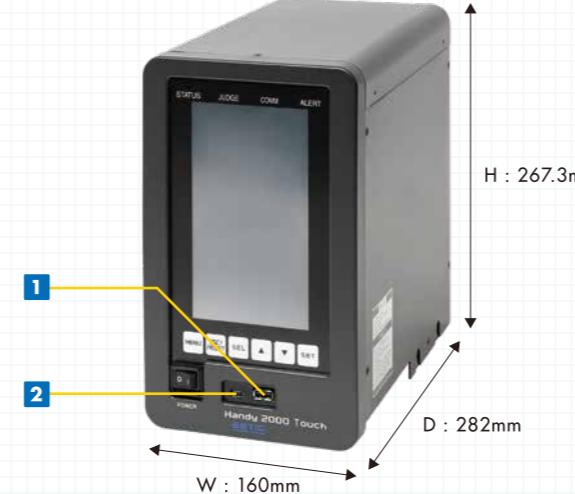
CAD data can be downloaded from our website.
<https://www.estic2.com/caddata/>



Handy 2000 Lite plus



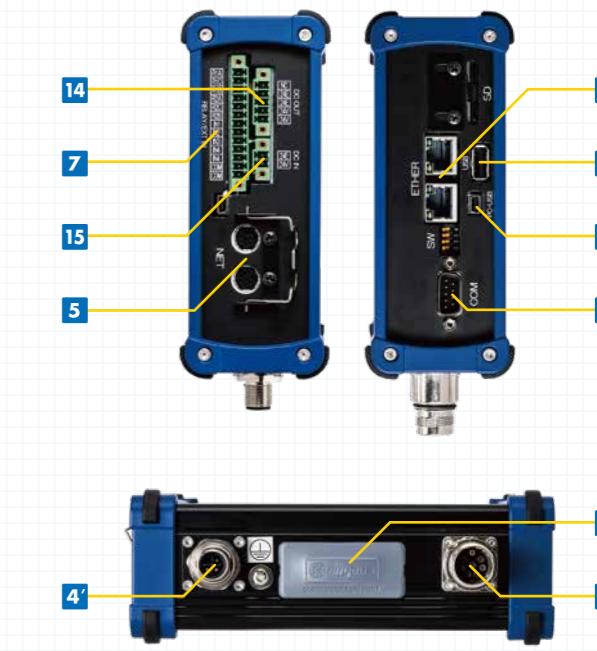
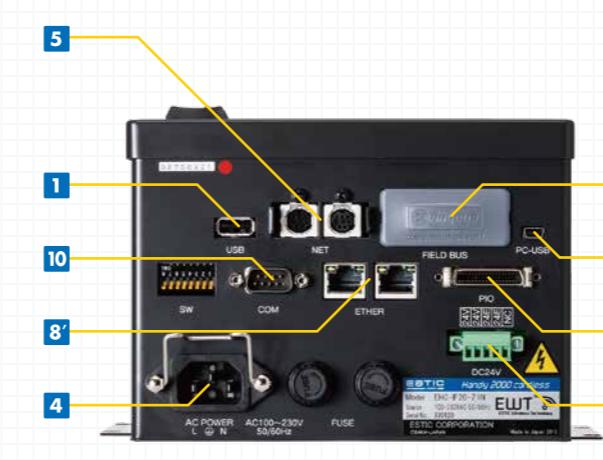
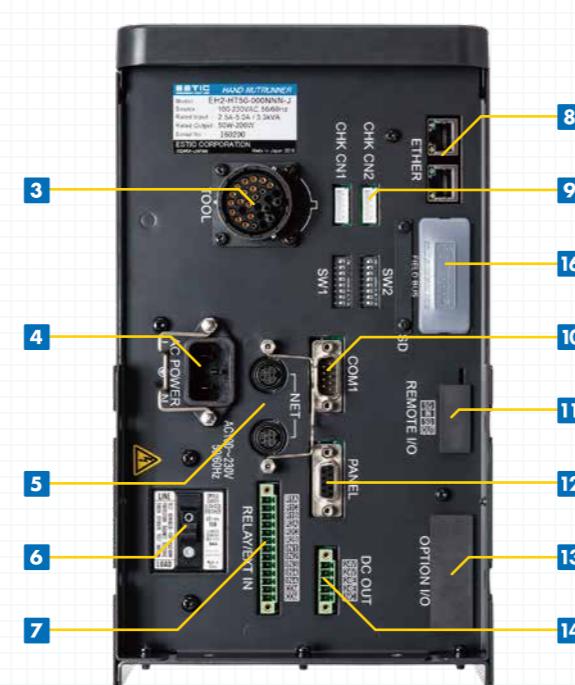
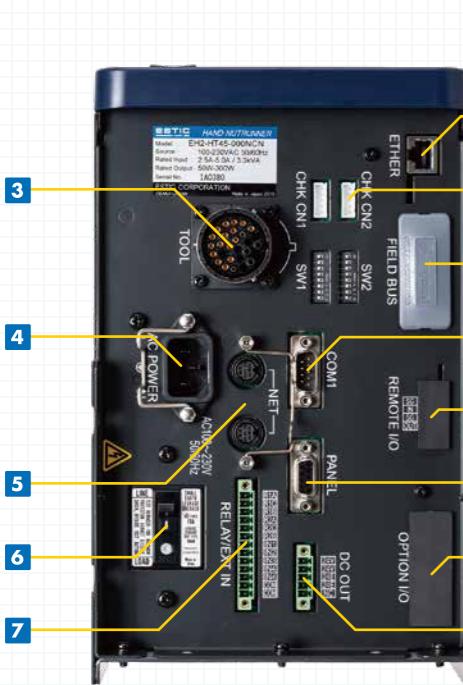
Handy 2000 Touch



Handy 2000 Cordless



Handy 2000 Micro



1 USB (Type A)

USB flash drive port.

2 PC-USB (Mini-B)

USB port to be connected with Handy 2000 management software.

3 Connector for the Tool Cable

The system is automatically recognized when the tool is connected.

4 Connector for the AC Power Supply

Connector for 100V AC and 200V AC power supply cables.

5 Power Cable Connector

Connector for 48V DC power supply cables.

5 Network Connector

Used to control the multi-spindle, Socket tray and NET I/O unit.

6 Ground Leakage Breaker for the Main Power Supply

The ground leakage breaker conforming to various international standards.

7 RELAY / EXT IN

Relay (Output 2)
Non-voltage contact (Input 4)

8 Ethernet 1 Port

Ethernet 1 Port

9 CHK CN1 / CN2

9 CHK CN1 / CN2

Connector for monitor output.

10 RS-232C (COM1)

Handy 2000 management software, Barcode reader, ASCII data out.

11 Remote I/O (Option)

Remote I/O (Input 16/Output 16)
* OMRON Remote I/O modules are required.

12 Panel

RS-422 to communicate with HMI.

13 I/O (Option)

I/O (Input 16/Output 16)
* Handy 2000 Cordless : Standard spec.

14 DC OUT

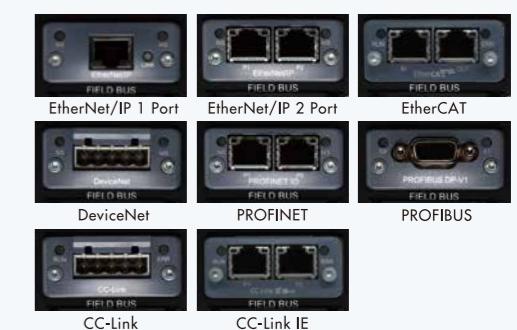
24V DC power supply connector.
(24V DC 1A)

* Handy 2000 Micro can be used by inputting 24V DC power supply to DC IN.

15 DC IN

24V DC power supply input connector.

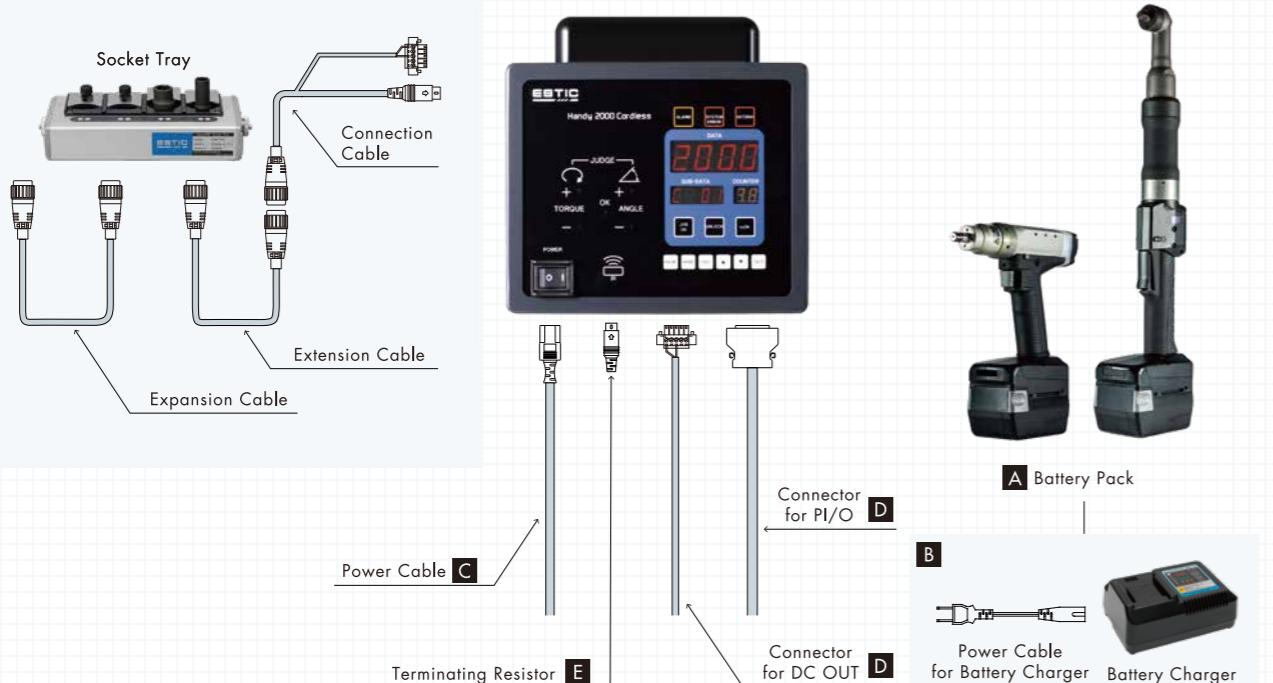
16 Fieldbus (Option)



Accessory List

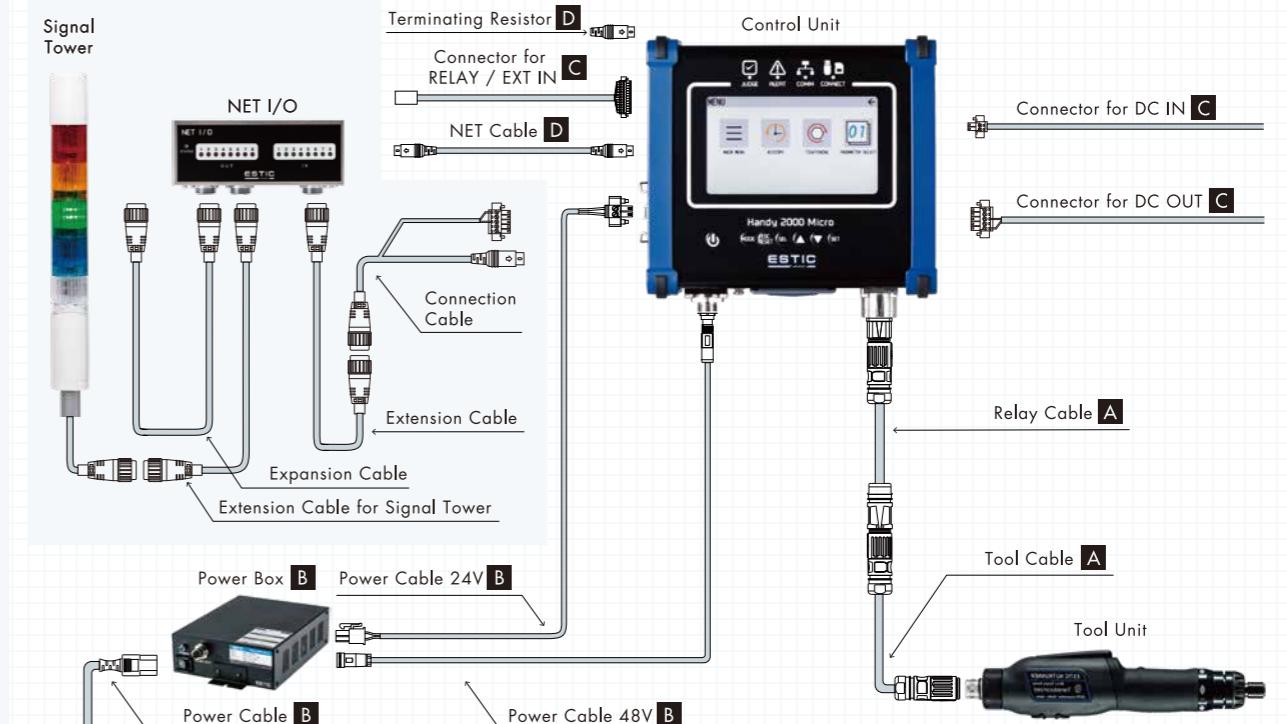
Handy 2000 Cordless

Extended Optional Products (Please refer to P.32.)



Handy 2000 Micro

Extended Optional Products



A Battery Pack



B Battery Charger



Model	Voltage	Ampere-hour	Weight (kg)	Remarks
1 BPL-2510ES	25.2V DC	1.0Ah	0.40	For Pistol Tools
2 BPL-2520ES	25.2V DC	2.0Ah	0.54	For Pistol Tools
3 BPL-3620ES	36V DC	2.0Ah	0.68	For Right Angle Tools

Model	Suitable Battery	Rated Input	Rated Output	Charging Time
BC1475ES	BPL-2510ES BPL-2520ES BPL-3620ES	100-240V AC 50/60Hz	2A±0.2A 2A±0.2A 1.6A±0.2A	45min. 75min. 90min.

Power Cable for Battery Charger		
Model	Length (m)	Remarks
EHC-CP01-UL1	1	100V AC
EHC-CP02-AC	1	200V AC

C Power Cable



Model	Length (m)	Remarks
1 EH2-CP02-UL1	2	For Japan and USA 100V AC
2 EH2-CP02-CN1	2	For China 200V AC
3 EH2-CP02-UK1	2	For UK 200V AC
4 EH2-CP02-EU1	2	For Europe 200V AC
5 EH2-CP02-TH1	2	For Thailand 200V AC
EH2-CP02-CE2	2	No Plug 200V AC

D Connectors

Model	Description
EH2-FCN5-DC	Connector for DC OUT (24V DC Output)
ENRZ-CN36-EX	Connector for PI/O (Parallel I/O)

E Terminating Resistor

Model	Description
EH2-CNST	Terminating Resistor

A Tool Cable / Relay Cable

Model	Length (m)	Remarks
ECV-T01SS015-S	1.5	Tool Cable
ECV-T01SS030-S	3	
ECV-T01SS100-S	10	
ECV-T01SS030-E	3	Relay Cable
ECV-T01SS060-E	6	
ECV-T01SS100-E	10	

B Power Box / Power Cable

Power Box	Model	Power Supply	Input Voltage
EACC-PS48V+24V	100-240V AC±10% 50/60Hz	0.15kVA/Spindle	
Power Box	Model	Length (m)	
Power Cable 24V	ECV-P24V-050	5	
Power Cable 48V	ECV-P48V-050	5	
Power Box	Model	Remarks	
EH2-CP02-UL1	2	For Japan and USA 100V AC	
EH2-CP02-CE2	2	No Plug 200V AC	

C Connectors

Model	Description
EH2-FCN13-RL	Connector for Relay/EXT IN
EH2-FCN5-DC	Connector for DC OUT (24V DC Output)
EH2-FCN2-DCIN	Connector for DC IN (24V DC Input)

D NET Cable / Terminating Resistor

Model	Description
EH2-CVNK-005	For Trace Control Unit : 0.5m
EH2-CVNK-010	For Trace Control Unit : 1m
EH2-CVNK-030	For Trace Control Unit : 3m

Extended Optional Products

NET I/O	Model
Installation Image	EH2-NIO8
Signal Tower	
	EH2-NIOT-L

* Note : Includes the L-shape Bracket.

Socket Tray	Model	Remarks
EH2-ST4	4 Sockets Type (4 Holders)	
EH2-ST8	8 Sockets Type (8 Holders)	
Cables		
Model		Length (m)
Connection Cable (Standard Accessory)	EH2-CVST-005	0.5
Expansion Cable	EH2-CVST2-010	1
Extension Cable	EH2-CVST3-050	5
	EH2-CVST3-100	10
	EH2-CVST3-150	15
Extension Cable for Signal Tower	EH2-CVNST-030	3

Global Network

3

Affiliates

27 Authorized
Dealers

(As of 2019)

Founded in 1993, ESTIC has quickly grown to become a major worldwide company with operations in over 20 countries spearheaded by a network of three affiliates and twenty-seven authorized dealers. With our global reach, we guarantee that, wherever our clients are, we will be on-site with localized service and support.



ESTIC America, Inc.

Head Office (Kentucky Office)

ESTIC America was established in Erlanger, Kentucky, in 2014 as our North American product support center, servicing our customers in the United States, Canada and Mexico.

ESTIC Product Sales/Troubleshooting and Support/Repairs and Calibration

1895 Airport Exchange Blvd, Suite 220, Erlanger, KY 41018, U.S.A.
Phone : +1-859-746-8800
E-mail : support@estic-america.com

Novi Technical Center (Michigan Office)

We have recently opened the ESTIC America – Novi Technical Center in 2019, to further support our customer's manufacturing development needs in and around Southeast Michigan.

ESTIC Product Sales/Troubleshooting and Support

25901 Meadowbrook Rd. Novi, MI 48375, U.S.A.
Phone : +1-248-719-7622

ESTIC (Thailand) Co., Ltd.

Head Office

In 2012, we established a sales company in Bangkok, Thailand, to offer increased support to the incredibly fast-growing Southeast Asian market. From this hub, we support our clients across Southeast Asia and beyond, from Vietnam to India.

ESTIC Product Sales/Troubleshooting and Support/Repairs and Calibration

19 Naradhiwas Rajanakarin Road, Chong Nonsi, Yannawa, Bangkok 10120, Thailand
Phone : +66-2-678-0171
E-mail : sales@estic.co.th

Shanghai ESTIC Co., Ltd.

Head Office

In 2001, we established a sales, R&D, and manufacturing center in Shanghai, China. Our operations there cover nutrunners, servo presses, as well as fastening and press fitting machines and other automated equipment.

Fastening and Press Fitting Machines and other Automated Equipment/ESTIC Product Sales/Troubleshooting and Support/Repairs and Calibration

No.6, 51 Gate, 1159 Lane, Kangqiao East Road, Pudong, Shanghai 201315 P.R.C
Phone : +86-21-6813-0333
E-mail : ecc@estic.cn



Service and Support System

ESTIC is a powerful partner in your assembly processes. Combining high-quality made-in-Japan products with a global support network, we offer our clients an unparalleled commitment to quality and satisfaction. We dedicate ourselves to constant innovation and harness a flexible and open approach to further boost client productivity. At ESTIC, when our partners succeed, we succeed.

#01



Quality Assurance

Our products are both devices used in assembling processes as well as instruments for measuring and guaranteeing fastening quality. Strict quality assurance is essential in the design, production, and sourcing of parts as well as in assembly procedures and shipping inspections. Our R&D, Quality Assurance, Production, and Product Service divisions work continuously with our suppliers to improve quality and ensure the products we deliver around the world leave our customers satisfied.

#02



Production System

Because our clients require products to be high in quality, competitive in cost, and delivered on demand, we focus our manufacturing operations on the three areas of quality, cost, and delivery (QCD) and constantly evolve our production systems accordingly. To meet the world's ever-increasing requirements, we will continue to strengthen our production capability and deliver the stable supply of the products you need.

#03



After-purchase Support

Nutrunners require product support both during setup and in the operations to follow. They must also undergo regular maintenance to ensure optimal performance. In addition to Japan, ESTIC offers services covering product maintenance, repair, and calibration in over 20 countries and regions through its network of authorized dealers. Our system of rapid customer support guarantees your peace of mind when using our products.

Company Profile

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Together with our domestic and international sales teams, ESTIC's worldwide R&D, manufacturing, product support, and quality control operations provide flexible, rapid responses to the needs of the global market.

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Fax : +81-45-474-3037
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Aichi 444-0044, Japan
Phone : +81-564-66-0510
Fax : +81-564-66-0515
E-mail : chubu_office@estic.co.jp

History

- | | |
|------|--|
| 1993 | Became independent from TAIYO, LTD. through an Employee Buy-out |
| 1994 | Established the Tokyo office in Yokohama City |
| 1998 | Established the Chubu office in Okazaki City |
| 1998 | Renovated our main office and built a new factory |
| 2001 | Founded Shanghai ESTIC as a joint venture in Shanghai, China |
| 2003 | Acquired a multilateral patent (Japan, USA, and China) for pulse fastening |
| 2003 | Acquired ISO9001:2000 Certification through JQA |
| 2006 | Increased capital to 557,000,000 yen |
| 2006 | Listed on the Mothers section of the Tokyo Stock Exchange |
| 2006 | Expanded our main office and opened a technical center |
| 2009 | Acquired ISO9001:2008 Certification through JQA |
| 2012 | Founded our Thai subsidiary, ESTIC (Thailand) Co., Ltd. |
| 2014 | Founded our American subsidiary, ESTIC America Inc. |
| 2016 | February : Opened the Togo Plant |
| 2016 | Listed and changed to the second section of the Tokyo Stock Exchange |
| 2019 | Opened the ESTIC America - Novi Technical Center |

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