

Features

EVOLUTIONARY HAND HELD ELECTRIC NUTRUNNER

High Performance and Flexible Hand Held NUTRUNNER

Compact and high durability resolver-based Servo Motor on a proven hardware platform.

**FASTENING****CONTROLLER****TOOL****QUALITY
MANAGEMENT**

- Torque (Angle monitor) or Angle (Torque monitor) Control fastening.
- Judgment by Torque Rate, Time and total rundown revolution monitoring.
- Built in Gyro sensor for ergonomic / safety (Pistol type Tool) operation. Senses grip swing motion.
- Built in simple Sequence function. (Batch count, Multiple parameter.)
- The "Patented Anti Cross Thread Function" is achieved by detecting the level of bolt engagement. (Option) (Patent No. 6412041)
- 64 Parameters Sets. (Selectable)
- Field bus connection. CC-Link, DeviceNet, Ethernet I/P, Profibus and others. (Optional)
- PC base user console (software) connection via Ethernet.
- Single phase power with wide voltage range : 100VAC-240VAC. (Auto sensing)
- Large, bright 6,3,3 digit (7 segment) LED (2 rows) located on front panel with easy to operate cursor function dedicated buttons.
- Built-in PLC Function : Directly control external I/O.
- Motor : Improved dust-proof, oil-proof and reduced sized permanent magnet motor.
- Pre-amplifier : Embedded high-accuracy amplification of torque transducer signal and TOOL-ID system.
- Transducer : All tools include torque transducer for high accuracy fastening
- In-process inspection of the fastening cycle by monitoring torque, angle, torque rate and time.
- Visual (LED) and audio confirmation of fastening.
- Store up to 12,000 cycles of fastening data, 100 curve data and 500 abnormal history automatically.
- Store 1.8 million (8MB CF) fastening resultant data on Compact Flash memory card. (Optional module)

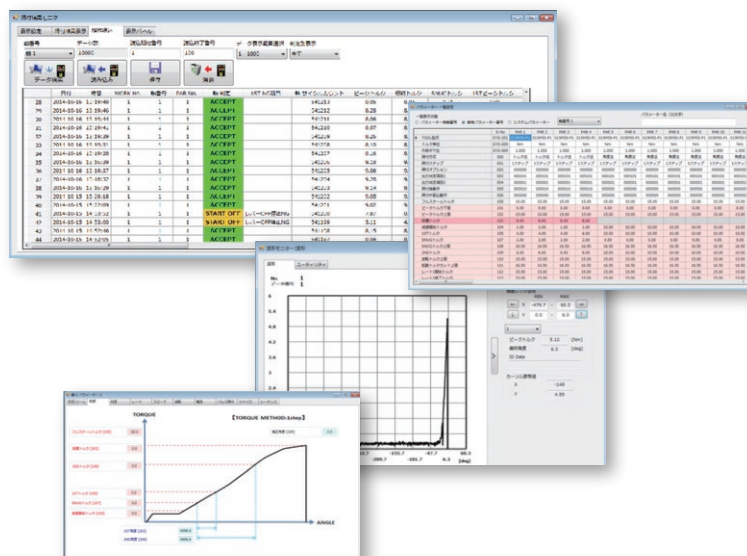
User Console Software

Setup / Monitor Software for Windows (HFC-UC-N)

- ☐ Parameter edit and save.
- ☐ Data Monitor, Stored data (12,000 Cycles) and curve (100 Cycles) can be uploaded.
- ☐ Fastening curve can be displayed and automatically saved.
- ☐ Reject and abnormal report file can be created separately.

*Supported language:

Japanese/English/Chinese/Korean/Indonesian

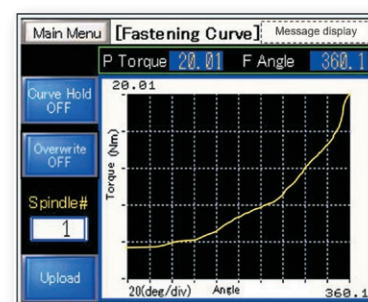


Touch Panel Features

5.7-inch touch panel for HFC3000II (GP-4301TM)

- ☐ Waveform and result data display available
- ☐ Parameters can be displayed and edited
- ☐ Judgment lamp display
- ☐ Equipped with support functions for equipment adjustment (Axis BYPASS, CAL)

Set
Parameters
without PC

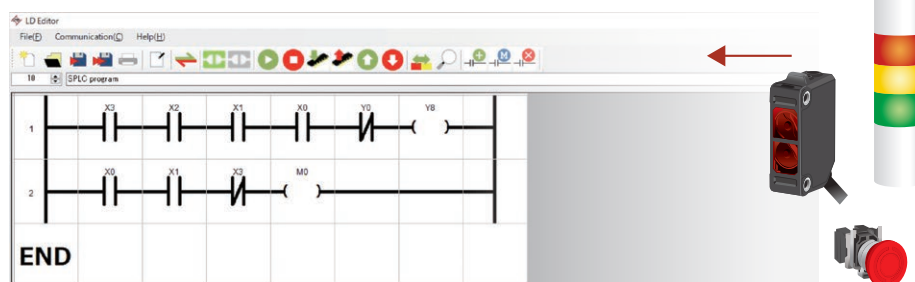


Software PLC

Built-in PLC Function No control panels result in cost savings.

Direct control of lamps, switches, conveyors is possible.
(Input:16 Output:12)

*Dedicated software required.



F Server

HFC3000II can improve reliability of quality control by interfacing to customers database.

Specifications

- ☐ Up to 32 stations can be connected.
- ☐ 100Mbps Ethernet Connection.
- ☐ Works with AFC Systems.

Data Saving

- ☐ TEXT File format.
- ☐ File can be created by Date/Time or Part ID.



F SERVER
system screen sample

Handheld Nutrunner Tools

Ergonomic design.
High speed, Light weight
Tool with built-in
motion (Gyro) sensor for
safety.



For limited space
applications.

Pistol Grip Tool

Tool type	Max. Torque [N·m]	Torque Range [N·m]	Max. Speed [rpm]	Length [mm]	Weight [kg]	Output Drive Size [mm]
HFT-015M50-P1	15	3.8~15	1,190	218	1.1	9.5 (3/8)
HFT-030M120-P1	30	7.5~30	1,540	260	1.8	9.5 (3/8)
HFT-035M80-P1	35	8.8~35	778	242	1.37	9.5 (3/8)
HFT-035M80-P1-X (Top Cable Connection)	35	8.8~35	778	242	1.37	9.5 (3/8)
HFT-050M120-P1	50	12.5~50	869	260	1.8	9.5 (3/8)
HFT-060M80-P1-X	60	15~60	461	275	2.5	12.7 (1/2)
HFT-080M120-P1	80	20~80	570	266	1.9	12.7 (1/2)
HFT-200M120-P1	200	50~200	216	317	3.3	19.0 (3/4)

Angle Tool

Tool type	Max. Torque [N·m]	Torque Range [N·m]	Max. Speed [rpm]	Length [mm]	Weight [kg]	Output Drive Size [mm]
HFT-015M50-A1-20	15	3.8~15	1,215	369	1.6	9.5 (3/8)
HFT-025M80-A1-20	25	6.3~25	1,070	389	1.7	9.5 (3/8)
HFT-040M80-A1-20	40	10~40	648	414	1.93	9.5 (3/8)
HFT-060M80-A-20	60	15~60	446	414	1.95	12.7 (1/2)
HFT-080M120-A-20	80	20~80	557	459.8	3	12.7 (1/2)
HFT-130M120-A-20	130	32.5~130	316	484.8	3.3	12.7 (1/2)
HFT-200M120-A-20	200	50~200	206	512.3	3.7	15.9 (5/8)
HFT-300M120-A-20	300	75~300	144	586	6.2	19.0 (3/4)

*CE compliant models are indicated by "CE" at the end. (e.g., HFT-040M80-A1-20-CE)

*Pistol tools and straight tools with "Anti Cross Thread Function" are indicated by "GA" at the end. (e.g., HFT-030M120-P1-GA)

*Please contact us for more details on angle tools.



For semi/automatic
fixtured & handheld
applications.
(Requires
telescopic torque
tube or mounting
plate mounting)



Automatic start by
pushing Tool down on
fastener.
High speed seating
damper. (Optional)
No torque reaction using a
telescopic torque tube.
Horizontal or Vertical use.

Straight Tool

Tool type	Max. Torque [N·m]	Torque Range [N·m]	Max. Speed [rpm]	Length [mm]	Weight [kg]	Output Drive Size [mm]
HFT-010M50-S1-20	10	2.5~10	1,800	331	1.3	9.5 (3/8)
HFT-015M80-S1-20	15	3.75~15	1,600	351	1.4	9.5 (3/8)
HFT-025M80-S1-20	25	6.25~25	1,000	351	1.43	9.5 (3/8)
HFT-040M80-S-20	40	10~40	694	351	1.43	9.5 (3/8)
HFT-055M120-S-20	55	13.75~55	861	404.5	2.4	12.7 (1/2)
HFT-090M120-S-20	90	22.5~90	488	417.5	2.7	12.7 (1/2)
HFT-130M120-S-20	130	32.5~130	318	417.5	2.7	12.7 (1/2)

Straight Tool (Push to Start)

Tool type	Max. Torque [N·m]	Torque Range [N·m]	Max. Speed [rpm]	Length [mm]	Weight [kg]	Output Drive Size [mm]
HFT-030M80-DP-H	30	7.5~28	980	288	1.8	9.5 (3/8)

Sample
Application



Controller

FRONT PANEL

OK (ACCEPT)

Lights when the fastening result is within all programmed limits.

TOTAL OK (ACCEPT)

Lights when the number of fastening accepts set in the batch program are achieved.

TORQUE

Lights when torque values are selected to be displayed.

6 digit 7 segment LED

Preset data ,result ,other data display.

3 digit 7 segment LED

Work Number (parameter) display.



Work select, Data set cursor button.

SET

Button for setting program changes.



NG (REJECT)

Lights when the fastening result is outside of programmed limits.

ANGLE

Lights when angle values are selected to be displayed.

3 digit 7 segment LED

Cycle count / Data number display.

CAL

Button for manual calibration check.

PRG

Button for selecting Run or Program mode.

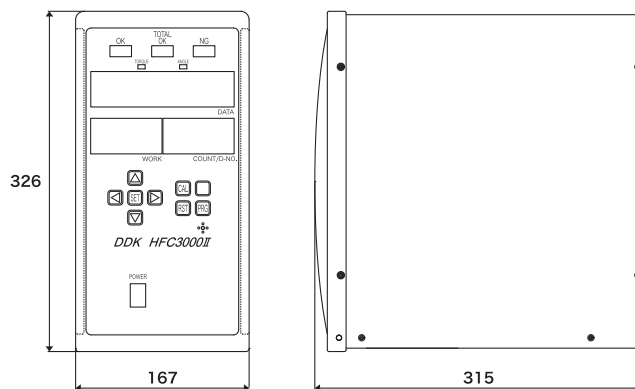
RST

Button for resetting controller.

POWER

Main power switch

Controller type	HFC-B024A
Drivable Motor type	M50 M80 M120
Input Power Voltage	Single phase 100 to 240VAC $\pm 10\%$
Input Power Frequency	Both 50 / 60 Hz
Rated Power Consumption	120W
Peak Current	19A



Tool Cable

Part #	Length [m]	Remarks
C15-F7-M5	5	
C15-F7-M10	10	
C15-F7-M15	15	
C15-EF7-M5	5	Extension
C15-EF7-M10	10	Extension
C30-F8-M5-CE	5	CE
C30-F8-M10-CE	10	CE
C30-F8-M15-CE	15	CE

Highly durable cable is used for all models



*Maximum cable length is 15m.

BOTTOM VIEW

RS232C-2

ID data input.

RS232C-1

Fastening result data Output.
Utilized for connection to a PLC,
printer, personal computer, etc.

TOOL cable connector

T/A MON.

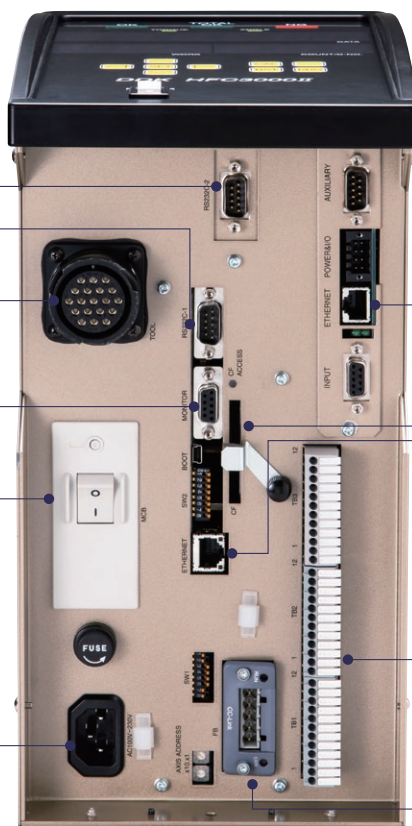
Monitor output for Torque, Angle pulse,
Current, speed.

Electrical Leakage Breaker / Ground Fault detector.

Tool, Cable, Controller ground
leakage sensing for safe operation.
I = On
O = Off

Primary power-supply input connection.

Input for 100~240 VAC single-phase
50/60Hz. +/- 10%
AUTO SWITCHING.



DATA REPORT ETHERNET

Optional Ethernet port for reporting data
in special protocols.
(F-SERVER, QDAS, TOOLSNET, etc)

CF CARD

Fastening result, and curve data can be
stored. (Optional)

ETHERNET

Ethernet port for connecting the HFC3000
Userconsole software PC.

TB1

Discrete I/O (Inputs / Outputs) connection.

FIELDBUS Connection

CC-Link, DeviceNet, Ethernet I/P, Profibus or
others can be added as option.

Controller Model

HFC - B024A - CC - IO - CF - EA - CE

Series Name

Servo Size

Option 1 : Fieldbus

CC	CC-Link V1/V2
DN	DeviceNet
PB	PROFIBUS-DP V1
PI	PROFINET I/O
EI	EtherNet IP
EC	EtherCAT
CI	CC-Link IE Field
FB	Base plate only
N	Without Fieldbus

Option 2 : Terminal

IO	With Terminal
N	Without Terminal

Option 3 : CF card slot Extension RS232C-S input port

CF	With CF card slot
N	Without CF card slot

Option 4 : Optional Ethernet for special data protocols

EA	With F-SERVER Ethernet port
EB	With Open Protocol Ethernet port
EC	With ToolsNet Ethernet port
N	Without data report Ethernet port

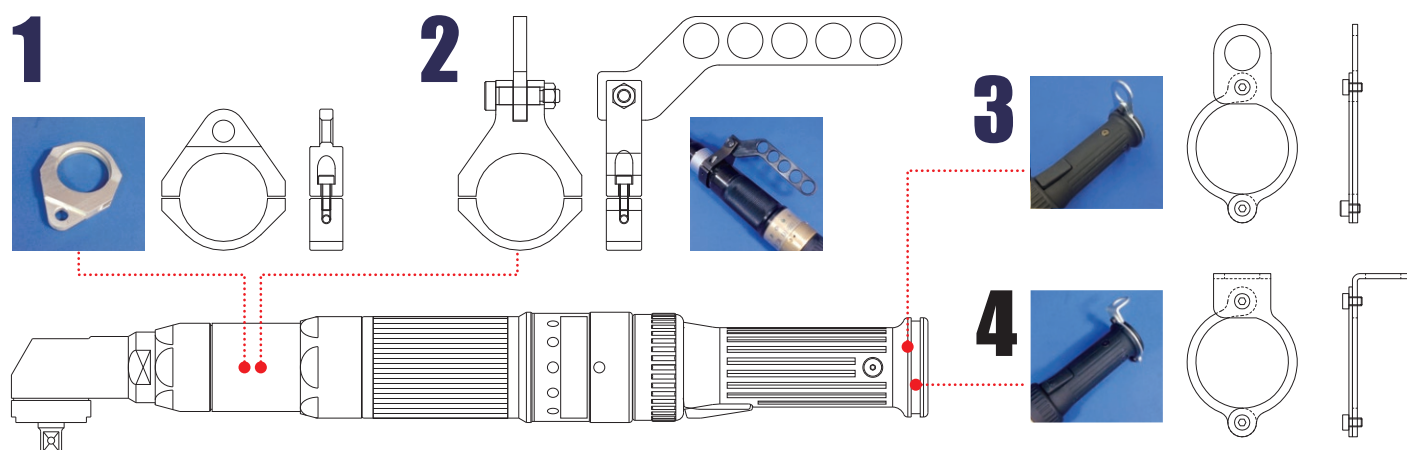
Option 5 : CE compliant

CE	Yes
N	No

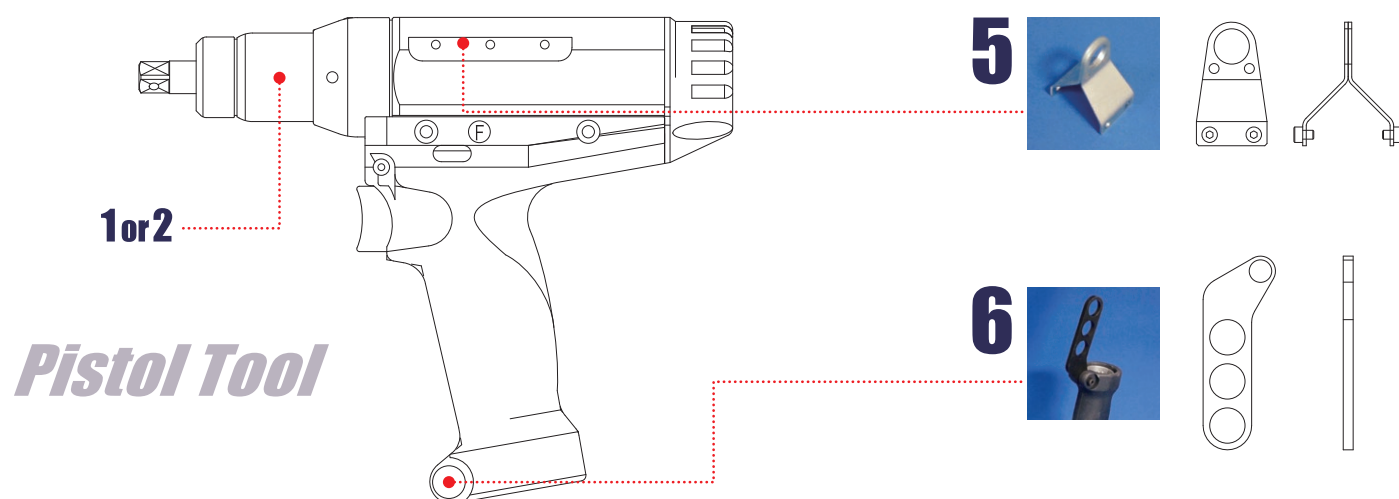


*HFC3000II compliant to CE. Necessary to select with CE compliant.

Accessories/Applications



Angle Tool



Pistol Tool

#	Product Name	Size	Model	Usage	
1	Hanging Hook	φ40	HFA-TF01	Angle Tool under 60Nm,	Straight Tool under 40 Nm
		φ52	HFA-TF02	Angle Tool over 80Nm,	Straight Tool over 80 Nm
2	Hanger Arm	φ40	HFA-TF04	Angle Tool under 60Nm,	Straight Tool under 40 Nm
		φ52	HFA-TF05	Angle Tool over 80Nm,	Straight Tool over 80 Nm
3	Hanging Hook Grip End		HFA-TF06	Commonly used for Angle and Straight tool	
4	L Shape Hanging Hook Grip End		HFA-TF07	Commonly used for Angle and Straight tool	
5	Hanging Hook Grip End		HFA-TF08	Pistol Type Tool	
6	Upside down hanger		HFA-TF09	Pistol Type Tool	
-	L Shape Handle		HFA-HA01	Straight tool under 40 Nm	
-	Torque Reaction Plate		HFA-RP01	Straight tool under 40 Nm	

Accessories/Carbon Torque Tube

**Reduces Torque Reaction /
Improves ergonomics of
manual fastening.**

□ Usability

- Dampens torque reaction and vibration.
- Smooth movement with carbon material.
- Tighten with one hand.

□ Compact

Built-in balancer design.

Part #	Max Torque [N·m]	Stroke [mm]	Max Hanging Weight [kg]	Weight [kg]
TTR060-4100-04	60	1,000	2.0~4.0	5.5
TTR200-4100-05	200	1,000	3.0~5.0	6.0



Sample Application



30Nm Push to start type tool Torque Tube can be used for vertical or horizontal application.



60Nm Pistol Type

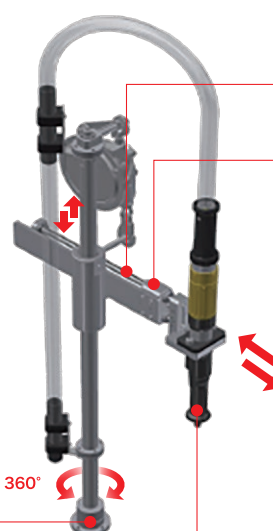
Specifications and designs of the products are subject to change without notice due to improvements.

Accessories/Arm

Swivel Arm



Sliding Arm



Space-saving arm

The arm is compactly held in home position.

Home position holder

Space-saving installation

360°

Selectable grips



Rotary grip switch



Fixed grip switch



Push to start type Fixed grip