



Product Catalog

Experience a Whole New Level

Listening, Understanding, Solving

HAKKO Stands with Every Customer

At the heart of HAKKO's manufacturing philosophy—passed down since our founding—is a steadfast commitment to listening to our customers' concerns, identifying hidden challenges through on-site feedback, and working collaboratively to resolve them.

We continuously explore the most effective ways to respond to our customers' voices. Every department operates as a unified team, deepening its expertise to deliver swift and reliable solutions.

By leveraging our advanced soldering temperature control technology and integrating feedback gathered from a global sales network spanning more than 50 countries, we remain dedicated to creating new value and driving innovation.

《《《《 WORLDWIDE NETWORK 》》》》

For more details on HAKKO affiliates and distributors, visit the official HAKKO website at www.hakko.com



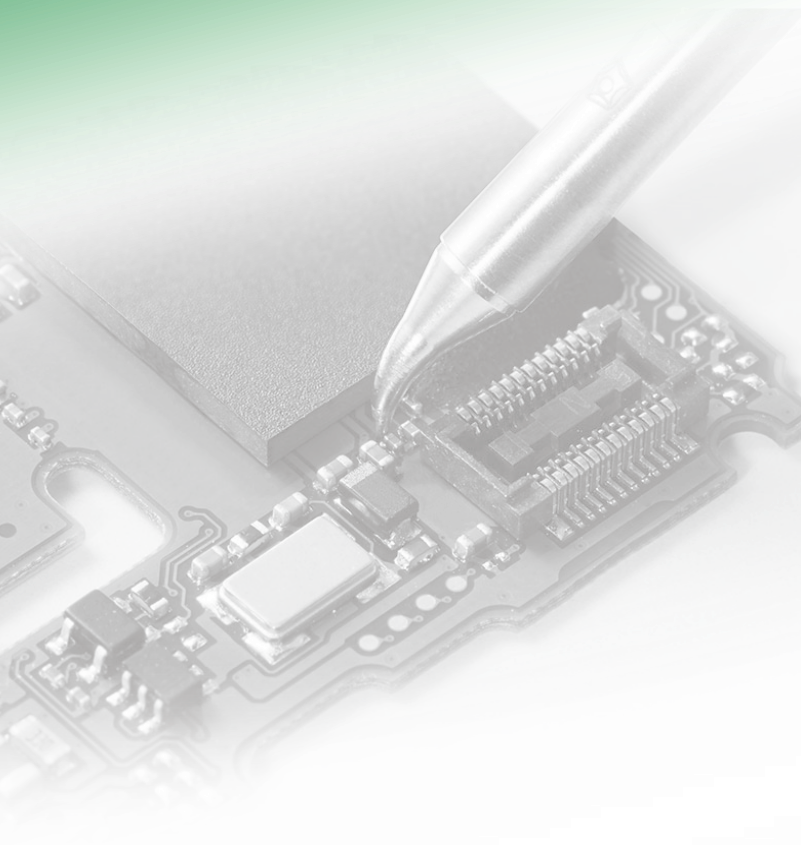
Pioneering the Next Generation

**AUTO-
SOLDERING**

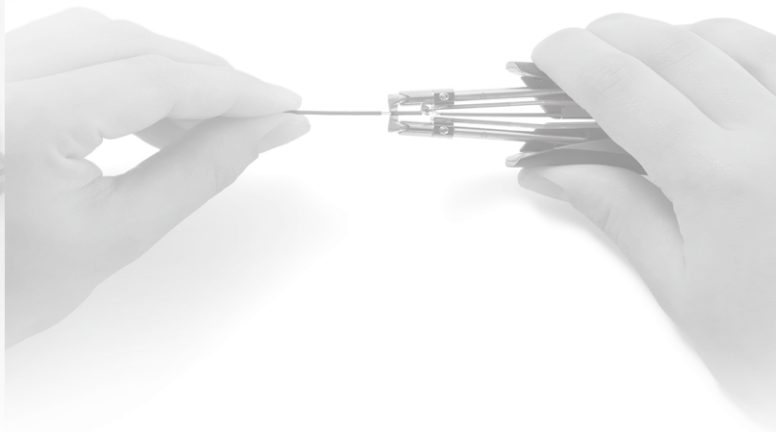
**POWER
SOLDERING™**



MICRO SOLDERING



WIRE HARNESS ASSEMBLY




» Navigating This Catalog

[Find by Challenge] Pages


This section introduces examples of solutions to common customer issues. It is designed to support not only issue resolution, but also improvements in efficiency and workplace conditions.

Hakko Solutions for Common Challenges in Soldering Work

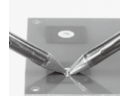
No suitable tip available for soldering ultra-fine components.



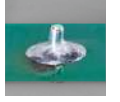
Pinpoint soldering accuracy is required for fine-pitch and multi-pin connectors, as well as QFP leads.




Insufficient power results in longer work time and the need for multiple soldering irons.




Prolonged heating causes damage such as land(pad) lifting.




High component density leads to tip interference with adjacent parts.




Increased PWB layers make soldering time-consuming.



Large components absorb heat, requiring higher temperature settings for proper soldering.




Heavy nichrome heater soldering irons reduce work efficiency.



Micro Soldering Iron for Precision Work

Ultra-Fine and Super Lightweight!

Featuring a tip body diameter of just 3mm and a minimum tip size of 80.1mm, this soldering iron enables precise, high-density soldering that was previously unattainable. Despite weighing only around 15g, it delivers an industry-leading power output of up to 70W.




FX-9703
231

Heavy-Duty Soldering Iron

High Power, Yet Lightweight!

Achieve rapid tip-heating that allows for lower temperature settings and shorter operation times. Despite its powerful 400W output, this soldering iron features a lightweight design that ensures easy handling.



FX-8004
231

Info Ni Soldering Irons are recommended for MLCs (Multilayer Ceramic Capacitors). MLCs are sensitive to thermal stress. Our Ni Soldering Irons are designed to preheat both the land(pad) and the capacitor, effectively reducing thermal shock during soldering and minimizing the risk of cracking.

FX-9704
231

Auto Soldering System

Soldering Iron

Accessories & Replacements

Preheater

Soldering Pot

Thermometer & Soldering Station

Fluxing Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Diagnostic Tool

Station Type

IoT System

Solder Paste Dispenser

Tip Cleaner & Maintenance Kit

Component Solder Paste

Nichrome Heater Type

Non-Holder / Holderless Heaters

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[Find by Function] Pages

This section highlights useful product features. Function availability is indicated by pictogram-style icons in the selection guide and on product pages.

Useful and Practical Features for Soldering Irons

Automatic Power Management

 Auto Shut-Off


 Auto Sleep

When not in use, the soldering iron automatically lowers its temperature or turns off power. This helps reduce tip oxidation and wear, extending tip life and preventing accidental power-on.

Error Detection for Insufficient Heat


Low Temperature Error Setting


If the tip temperature drops below the set threshold, an error message appears on the LCD along with a buzzer alert. Soldering under these conditions may result in defects due to insufficient heating, making this feature effective for identifying potential issues.



Example: Soldering defects caused by insufficient heat.

Tip Replacement Notification

 Tip Load Count Alarm (FN-1010)



 Tip Energization Time Alarm (FX-100)

When the preset load count or tip energization time is reached, an alert is triggered by buzzer and LCD display. Check the tip condition and replace it as needed to maintain optimal performance.

Safe and Easy Tip Replacement

Tip Replacement Using the Iron Holder

Tips can be replaced quickly and safely using the iron holder - no tools required.





Removal of tip Insertion of tip


One-Touch Temperature Control


Preset (Temperature Registering Function)

Frequently used temperature settings can be registered and recalled with simple button operation.




Automatic Temperature Control

 Automatic Temperature Correction

 Infrared Communication

Measured tip temperature is transmitted via infrared to the station, enabling automatic correction based on the deviation from the set temperature.



HAKKO CONTROL SOFTWARE


Software

Easy Setting Change

Easily configure temperature and other parameters via software. Settings can be saved in CSV format and duplicated to other devices.


Visualized Temperature Data

Tip sensor temperatures during operation can be monitored in graph form. Logged data can be saved and used to review settings for enhanced quality control.



Zero Human Error Management


Tip temperature is automatically calibrated, and the results of measurement, calibration, and correction are recorded on a PC.



Traceability in Soldering!

IoT Communication

Data such as tip temperature changes is collected in real time during soldering and automatically saved to a PC or server.



Prevent Unintended Setting Changes

Lock

Prevents changes to key parameters such as set temperature by locking the configurations.

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[Selection Guide]

A side-by-side comparison of product specifications and features. Useful for evaluating and selecting the most suitable product.

Station Soldering Iron Selection Guide				
	FN-1010	FX-971	FX-972	FX-100
Model No.				
Page	P.24	P.25	P.25	P.26
Features				
Temperature range	50 ~ 450°C	50 ~ 450°C	50 ~ 450°C Non Heavy Duty soldering iron connected 50 ~ 550°C	350°C/400°C/450°C
Number of Ports	1	1	1	2
Power consumption	100 W	100 W	200 W	28 ~ 85 W
Tip/Heater	T26 Series - Integrated type	T26 Series - Integrated type	T29 Series - Integrated type	T31 Series - Integrated type
Soldering Iron				
Micro Soldering Iron				
Heavy Duty Soldering Iron				
Solder Feed				
Tweezers				
Micro Tweezers				
Output	AC 21 V	AC 24 V	AC 24 V	70 V
Frequency	—	—	—	15.5 kHz
Dimensions	1000 x 180 x 120 mm	800 x 150 x 110 mm	1000 x 150 x 100 mm	1270 x 150 x 100 mm
Weight	1.0 kg	1.2 kg	1.2 kg	1.0 kg
Power consumption	100 W	100 W	200 W	28 ~ 85 W
Heater	Composite heater	Composite heater	Composite heater	H-Freq. Frequency/Inverter Heating Type
Total length*	180 mm	200 mm	200 mm	180 mm
Weight**	51 g	51 g	51 g	51 g
Tip included	Tip not included	Tip not included	Tip not included	Tip not included

* Attaching the part to the handpiece and combining it with Model 373 or 374 enables automatic solder feed.
 ** Also compatible with the handpiece for automatic soldering gun FX-8803.
 *Total length and weight include the tip but exclude the cord.

[Application List]

A side-by-side comparison of product specifications and features. Useful for evaluating and selecting the most suitable product.

Soldering Iron Application List						
Soldering Iron						
Model No.	FN-1101	FX-9701	FX-1001	FX-8801	FX-8805	FX-8806
Part No.	FN101-01 Handpiece only	FX9701-01 Handpiece only	FX1001-01 Handpiece only	FX8801-01 Handpiece only	FX8805-01 Handpiece only	FX8806-01 Handpiece only
Part No.	—	FX9701-011 Conversion kit	—	—	—	FX8806-011 Conversion kit
Appearance						
Tip	Tip shape: T26 Series (C233) T29 Series (C232)	Tip shape: T26 Series (C233) T29 Series (C232)	Tip shape: T31 Series (C231)	Tip shape: T18 Series (C233)	Tip shape: T19 Series (C232)	Tip shape: T22 Series (C231)
Tip shape	18 tip shapes	45 tip shapes	15 tip shapes	34 tip shapes	15 tip shapes	24 tip shapes
Temperature range	50 ~ 450°C	50 ~ 450°C	50/400/450°C	50 ~ 480°C	50 ~ 480°C	50 ~ 480°C
Power consumption	95 W	95 W	—	65 W	65 W	65 W
Height	180 mm	200 mm	190 mm	227 mm	227 mm	207 mm
Weight	51 g	51 g	51 g	45 g	52 g	49 g
Compatible Stations	FX-100 (C233) FX-971 (C232) FX-972 (C232)	FX-971 (C232) FX-972 (C232)	FX-100 (C231)	FX-8801 (C233) FX-889 (C233) FX-701 (C233) FX-702 (C233)	FX-8801 (C233) FX-889 (C233) FX-701 (C233) FX-702 (C233)	FX-8801 (C233)
No Soldering Iron						
Model No.	FN-1102	FX-9702	—	FX-8802	—	—
Part No.	FN102-01 Handpiece only	FX9702-01 Handpiece only	—	FX8802-01 Handpiece only	—	—
Part No.	—	FX9702-011 Conversion kit	—	—	—	—
Appearance			—		—	—
Tip	Tip shape: T18 Series (C233)	Tip shape: T19 Series (C232)	—	Tip shape: T18 Series (C233)	—	—
Tip shape	18 tip shapes	50 tip shapes	—	16 tip shapes	—	—
Temperature range	50 ~ 450°C	50 ~ 450°C	—	50 ~ 450°C	—	—
Power consumption	95 W	95 W	—	65 W	—	—
Height	180 mm	227 mm	—	237 mm	—	—
Weight	40 g	49 g	—	52 g	—	—
Compatible Stations	FX-100 (C233)	FX-971 (C232) FX-972 (C232)	—	FX-8801 (C233) FX-889 (C233) FX-701 (C233) FX-702 (C233)	—	—

* Total length and weight include the tip and handle, but exclude the cord and box.
 ** Maximum weight is based on Model 402.

[Product] Pages

Each product page outlines key features. Scan the QR code to access the website for more detailed information.

Model Name

FN-1010

Soldering iron with IoT connectivity for process traceability

Real-time collection and storage of soldering information (data)
Data such as tip temperature changes is collected in real time during soldering and automatically stored on a PC or server.
No manual work is required.

Centralized Management of Multiple Soldering Irons
By connecting via a LAN interface card, multiple soldering irons can be centrally managed from a single PC, including status monitoring, setting adjustment, soldering operation data, and temperature measurement data.

Interface Card for FN-1010
Choose an appropriate card based on the number of soldering irons to be connected and the available ports on your PC or server.

Model No.	Specifications	Connectable numbers	Compatibility with PC	Sequence control
B210	With USB specification cable	1 soldering iron per 1 PC	○	○
B211	With RS-232C specification cable	1 soldering iron per 1 PC	○*	○
B212	LAN specification	Multiple soldering irons per 1 PC	○	○

*From PC to PC, you need support RS-232C connection. Please check connection port on software.

FX-971

Compact & High Power 1-Port Station

Highly Visible Display
Set temperature, tip sensor temperature, preset settings, and other information are displayed in a large and easy-to-read manner. A wide viewing angle and high-brightness display ensure excellent visibility.

Tip Adjustment for Better Visibility and Operability
This station features a 18° mechanism that allows for clear screen visibility and operability to match the installation environment, such as on or under a workbench, or on a rack.

Cycle Time Reduced by Approx. 40%
Soldering can be completed in a shorter time, improving work efficiency.

Equipped with New Composite Tip (Patented)
The improved sensor sensitivity and optimized heat transfer from the heater to the tip ensure stable tip temperature, enabling more reliable soldering.

FX-972

Compact & High Power 2-Port Station

Large, Easy-to-Read Display
Equipped with a large display that clearly shows the tip sensor temperature, preset temperature, and connected applications for each of the 2 ports.

Priority channel
The handpiece built in sensor detects which handpiece is in use and automatically switches the channel. The unused handpiece remains on standby at the set temperature.

» About Pictograms

Feature Pictograms



Auto Shut-Off

Automatically cuts power to the heater when the soldering iron (handpiece) is placed on the iron holder for a certain period of time.



Auto Sleep

Lowers the tip temperature and enters standby mode when the soldering iron (handpiece) is placed on the iron holder for a set period. Picking it up again will reach the set temperature.



Lock

Function to lock changes to parameter settings such as the set temperature.



Low Temperature Error Setting

Monitors the tip temperature range during operation. If the tip temperature drops below the threshold, an alert is triggered via buzzer and LCD display.



Preset

Function to pre-register multiple temperature settings. The set temperature can be changed with simple button operation.



IoT Communication

Data such as tip temperature changes is collected in real time during soldering and automatically stored on a PC or server.



Software

Supports dedicated software

- Changing parameter settings
- Saving parameter settings as a CSV file
- Duplicating saved parameter settings to other devices
- Monitoring tip sensor temperature as a graph
- Saving results of AUTO CAL as CSV files

These and other features are available.



Automatic Temperature Correction Infrared Communication

Function to transmit the measured temperature of the tip from the thermometer via infrared to the station for automatic correction when it differs from the set temperature.



Auto Calibration (AUTO CAL)

Function to automatically calibrate the tip temperature and record the results of temperature measurement/calibration/correction on a PC.



Infrared Communication

Function to transmit measurement results such as tip temperature to the station via infrared.



Tip Load Count Alarm Tip Energization Time Alarm

Function to notify via buzzer and LCD when the set number of loads or tip energization time is reached.



Tip Replacement Using the Iron Holder

A product that enables safe and easy tip replacement without directly touching the tip.



Nozzle Replacement with Nozzle Quick Changer

A product that enables quick and easy nozzle replacement without directly touching the nozzle.



Automatic Cooling

Function to automatically blow air for a set time after hot air use to cool down the unit.



Vacuum Pickup

Function to automatically lift the component when the solder melts, after setting the nozzle and vacuum pipe on the target component and starting heating.



Temperature Profile Creation

Function to create optimal heating profiles for work by setting temperature, time, airflow, and other parameters. 2 types are available: a simplified temperature profile and a more advanced profiling function.



Valve Function + Anti-Clogging Function

Function to remove solder using high suction pressure. Helps reduce solder clogging.

Handpiece Pictograms



Soldering Iron



Solder feed



N₂ Soldering Iron



Desoldering tool



Micro Soldering Iron



Hot Tweezers



Micro N₂ Soldering iron



Micro Hot Tweezers



Heavy-Duty Soldering Iron



Hot Air



Heavy-Duty N₂ Soldering Iron

Other Pictograms



Based on the static decay test (MIL-STD-3010A Test Method 4046), products with a charging voltage of 50 V or less when grounded are considered ESD SAFE products.



Products recommended for work using lead-free solder



Products that comply with the regulated values of 10 substances prohibited by the European RoHS Directive

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P.10 Auto-Soldering System

Auto-Soldering System

FU-500  P.10	HF-600  P.11	FN-1010  P.24	FX-971  P.25	FX-972  P.25	FX-100  P.26	FX-805  P.27
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P.24 Soldering Iron

IoT Capable Type Station Type

Station Type

FX-838  P.27	FX-888DX  P.28	FX-889  P.28	FX-780  P.29	FX-781  P.29	FX-791  P.29	375  P.40
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N₂ System

Solder Feed Unit

Solder Feed Unit

Tip Cleaner

Maintenance Kit

Tip Cleaner

373  P.40	611  P.40	FT-720  P.41	FT-710  P.41	FT-700  P.42	FS-100  P.42	599B  P.42
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Ceramic Heater Type

Nichrome Heater Type

FX-600D  P.43	FX-600  P.43	FX-601  P.43	PRESTO  P.44	FX-901  P.44	RED  P.44	MATCHLESS  P.45
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P.54 Desoldering & Rework

Iron Holder

Heat Sink

Desoldering Tool

Rework Station

Iron Holder  P.45	610  P.45	FR-410  P.54	FR-400  P.54	FR-301  P.55	FX-973  P.55	FR-701  P.56
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Rework Station

Hot Air

Desoldering Wire

Simple Desoldering Tool

FR-702  P.56	FR-810B  P.60	FR-811  P.60	FR-850  P.60	WICK  P.68	SPPON/DS01  P.68
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P.69 Preheater

Preheater

FR-830



P.69

FR-870B



P.70

FR-872



P.70

P.73 Soldering Pot

Soldering Pot

FX-305



P.73

FX-301B



P.73

FX-300



P.73

P.74 Thermometer & Soldering Tester

Thermometer & Soldering Tester

FG-100B



P.74

FG-101B



P.74

FG-102



P.75

P.77 Fume Extractor

Air-Purifying Type

FA-430



P.77

FA-431



P.77

Desktop Type

FA-400



P.77

P.80 Static Control

Footwear Tester

FG-465



P.80

Wrist Strap Tester

FG-470



P.80

Static Level Meter

FG-450



P.80

Static Eliminator

FE-510



P.81

Wrist Strap

442B



P.81

Outlet-powered Pick-Up Tool

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P.82

Vacuum Pick-Up Tool

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P.82

Vacuum Pick-Up Tool

393



P.82

Anti-Static Mat

FE-302



P.83

Finger Stall

499



P.83

Finger Stall

566



P.83

Finger Stall

568



P.83

Finger Stall

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P.83

P.87 Tool for Lead & Wire

Thermal Wire Stripper

FT-802



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FT-630



P.87

Hand Tools

Cutting Pliers/Pliers



P.88

Lead Forming Tool

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P.89

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P.89

152B



P.90

DIPLINER



P.90

P.91 Heating Gun

Lead Forming Tool

SOLEIDO



P.90

Heating Gun

FV-310



P.91

P.92 MELTER

MELTER

MELTER 804



P.92

FU-500

Low-Cost Auto-Soldering Unit for Custom Automation Lines



ESD
SAFE

RoHS

for
LEAD
FREE



Packing List

- Main Unit
- Feeder Unit
- Solder Reel Stand
- Feeder Cable: 5 m
- Tube Unit
- Power Cord

Specifications

Model	Feeder Unit Straight Type	Feeder Unit L Type
Power consumption	35 W	
Applicable solder diameters	Φ0.3 mm, Φ0.5 mm, Φ0.6(0.65) mm, Φ0.8 mm, Φ1 mm, Φ1.2 mm, Φ1.6 mm	
Number of registered soldering conditions	Point soldering: 100 Drag soldering: 100	
Dimensions	145(W) × 100(H) × 230(D) mm	
Weight	2.3 kg	

Refer to our website for detailed specifications.

Easy Connection and Operation

The FU-500 can be easily integrated with robots or PLCs via a simple I/O connection (13 inputs, 6 outputs), enabling diverse soldering automation.

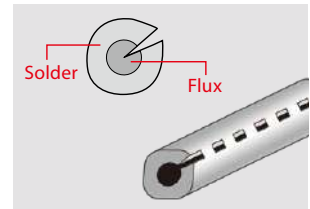
Solder Feed Error Detection

Optical sensors detect solder movement, allowing for detection of issues such as "solder clogging" and "solder run-out".

Equipped with a standard mechanism to prevent solder ball scatter

Equipped with a standard mechanism that forms a V-groove in the solder to reduce flux and solder ball scatter.

By cutting into the solder while solder feeding, slippage is eliminated and reliable solder supply is ensured.



HF-600

Low-Cost Auto-Soldering Unit for Custom Automation Lines



Packing List

- Main Unit ● Handpiece Part No. FU6001-01X or Part No. FU6002-01X
- Iron Unit Fixing Assembly ● Tip Adjustment Jig Units (for TX1 series and TX2/TX3 series)
- Iron Cable: 5 m ● Heat Resistant Pad ● Connecting Cable ● Filter ● Power Cord

- Tip not included TX1 Series Tip >P.12
 TX2 Series Tip >P.13
 TX3 Series Tip >P.14-15

Specifications

Model	Handpiece FU-6001 Straight Type	Handpiece FU-6002 L Type
Power consumption	460 W	
Temperature range	50-500°C	
Temperature stability	±5°C (At idle temperature)	

Refer to our website for detailed specifications.

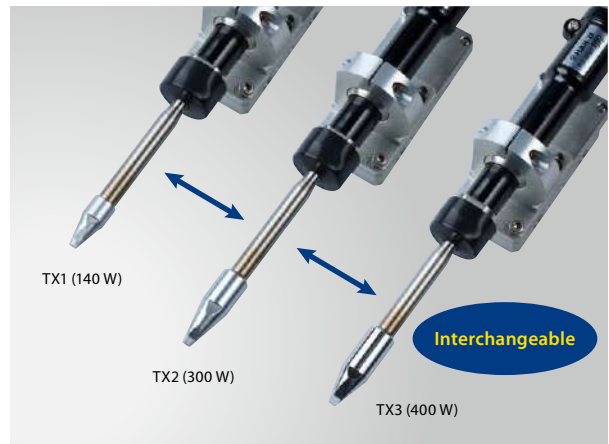
400 W Ultra Power

20% performance increase compared to previous models. HF-600 improves work efficiency for workpieces that were previously difficult or time-consuming.



Three types of tips available

TX1 (140 W), TX2 (300 W), TX3 (400 W) can be used interchangeably based on the workpiece. The display shows the tip in use.



External output function

Ethernet communication, allowing for remote configuration changes and data output such as tip temperature during soldering. (LAN cable is not included)



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

TX1 Series Tip

Applicable Handpiece

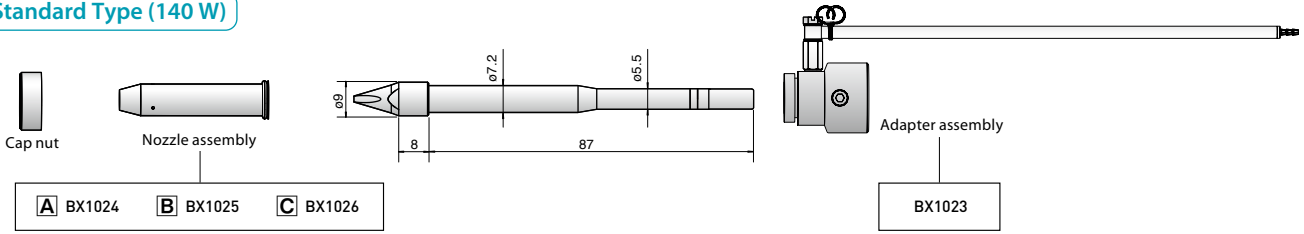


HF-600

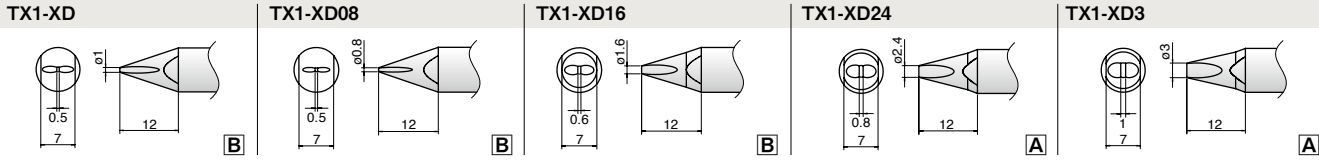
N₂ soldering requires an adapter assembly and a nozzle assembly. Use a nozzle assembly that matches the tip.

Unit: mm

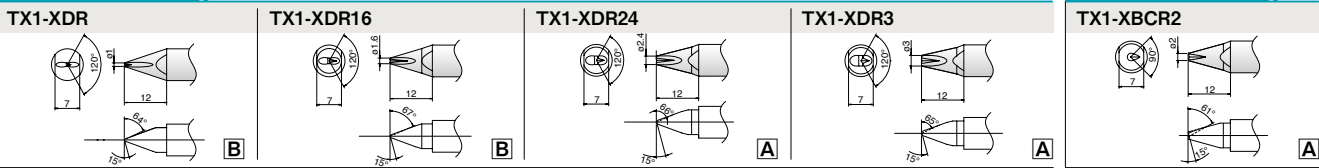
Standard Type (140 W)



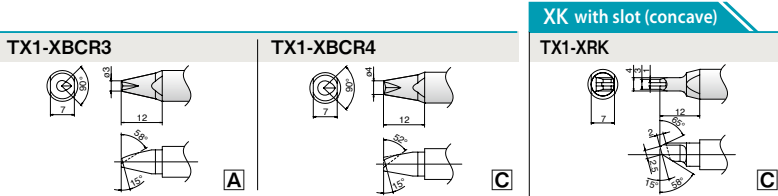
XD



XD with V-groove



XBC with V-groove



XK with slot (concave)

TX2 Series Tip

Applicable Handpiece

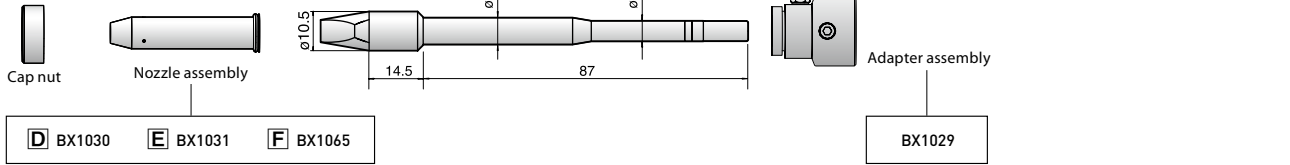


HF-600

N₂ soldering requires an adapter assembly and a nozzle assembly. Use a nozzle assembly that matches the tip.

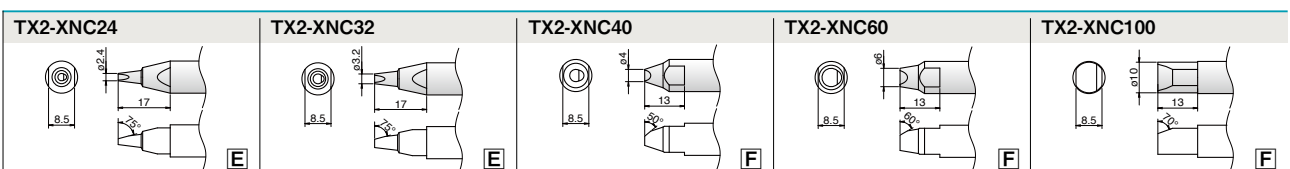
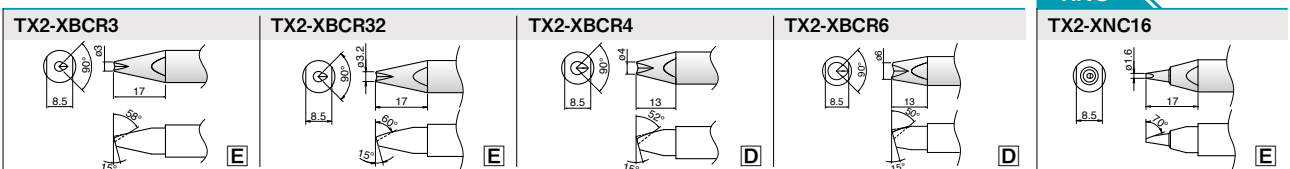
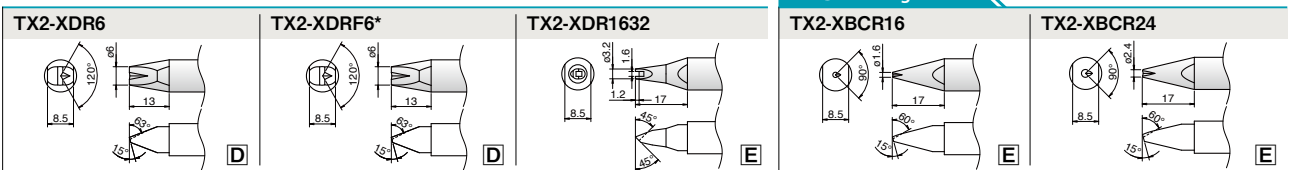
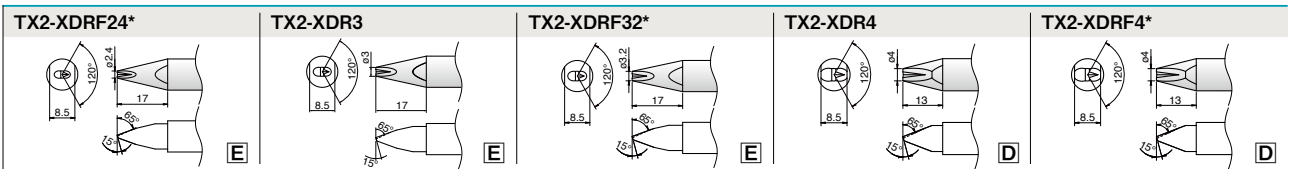
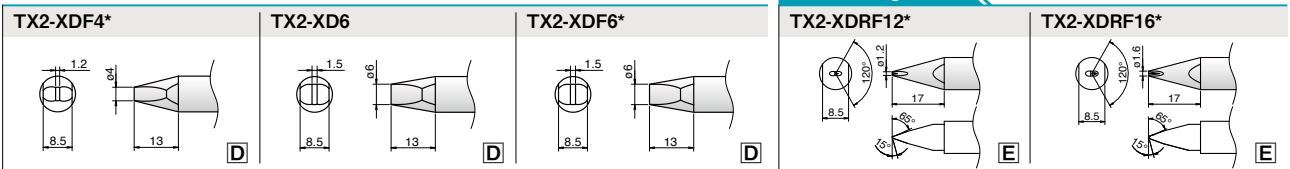
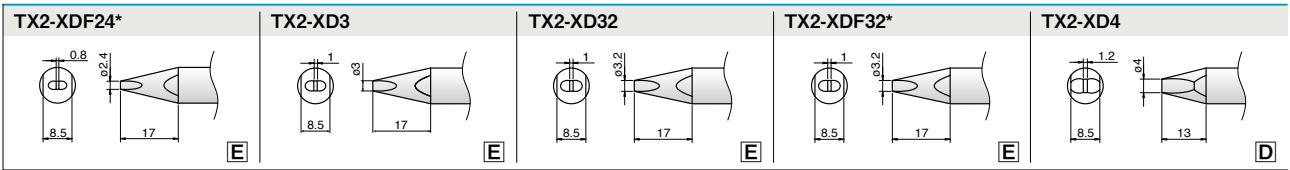
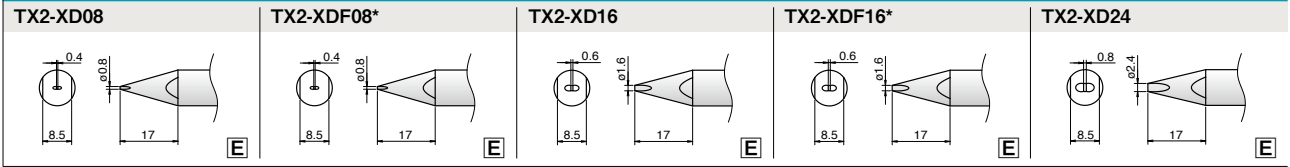
Unit: mm

High-Power Type (300 W)

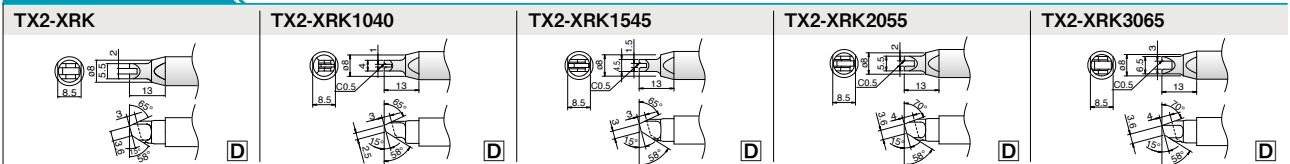


XD

Tips marked with * are solder-plated on one side only.



XK with slot (concave)



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

TX3 Series Tip

Applicable Handpiece

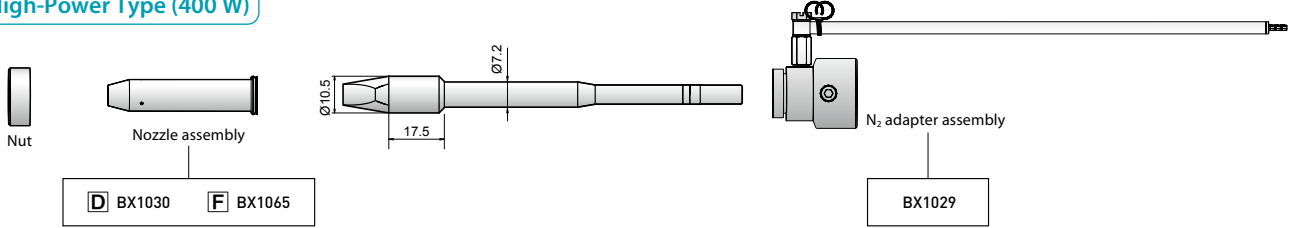


HF-600

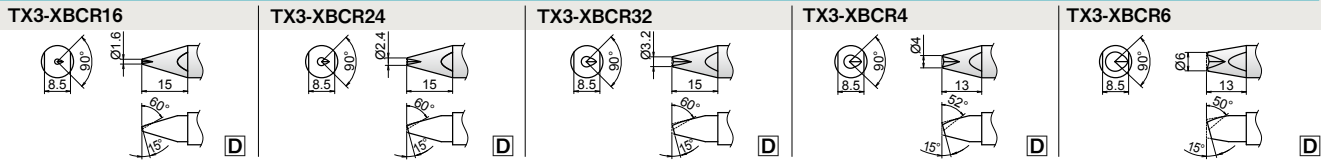
N₂ soldering requires an adapter assembly and a nozzle assembly. Use a nozzle assembly that matches the tip.

Unit: mm

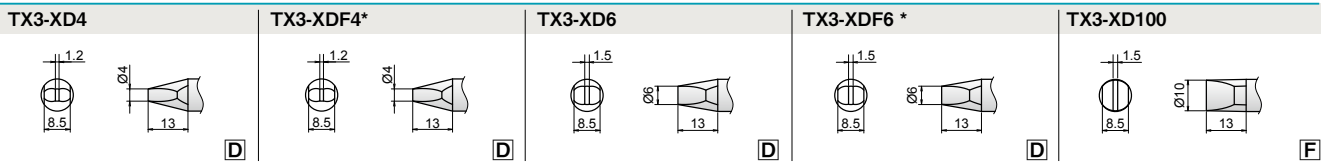
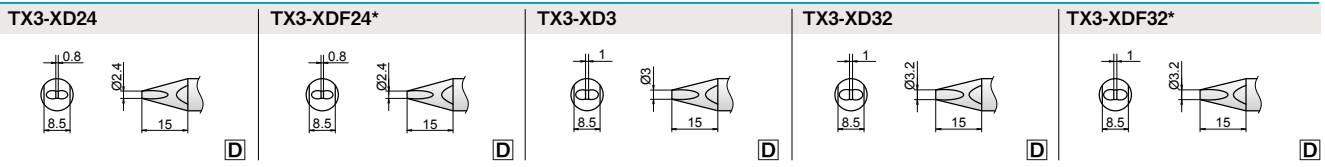
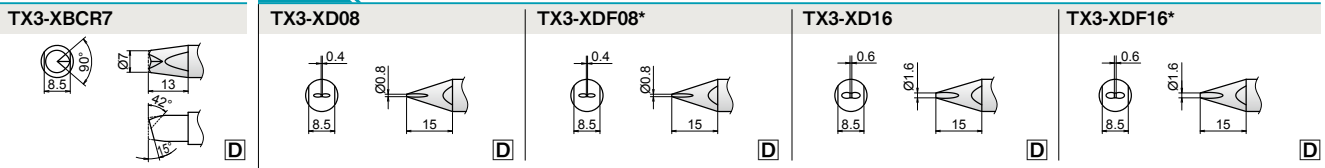
High-Power Type (400 W)



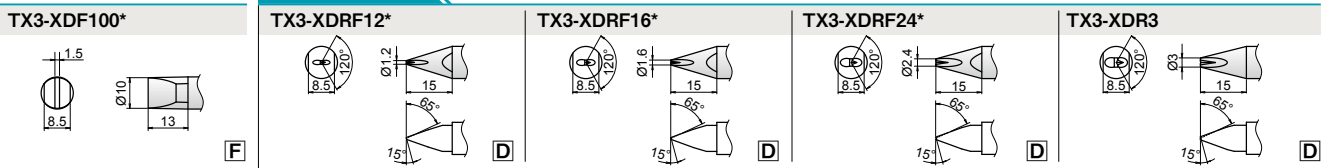
XBC w/V-groove

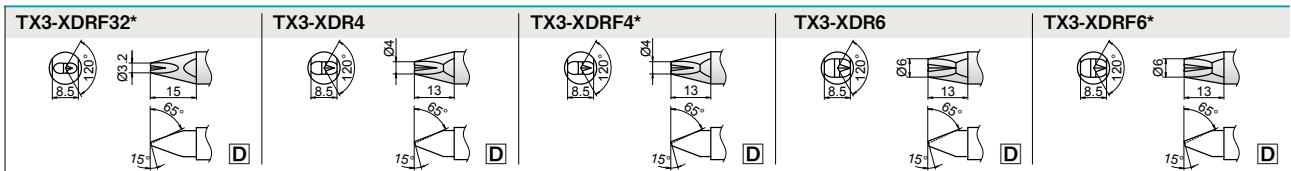


XD Tips marked with * are solder-plated on one side only.

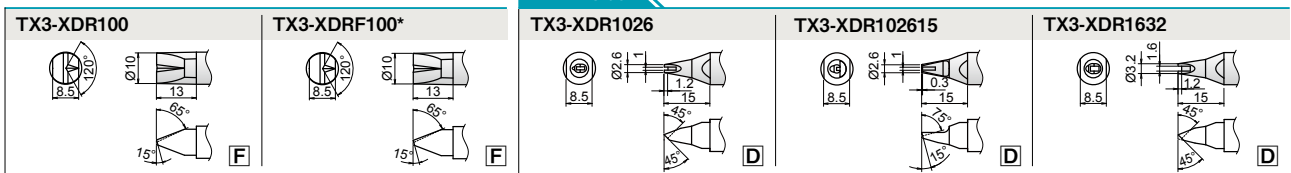


XD w/V-groove Tips marked with * are solder-plated on one side only.

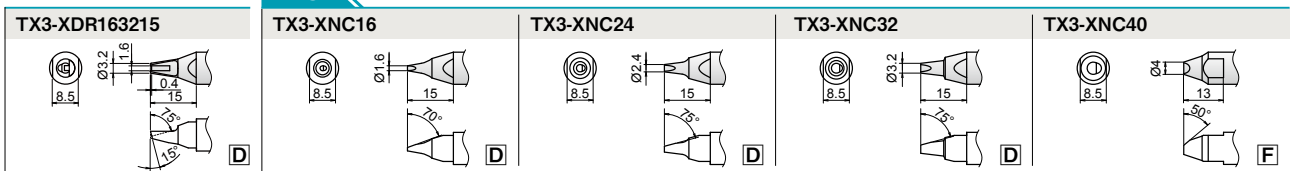




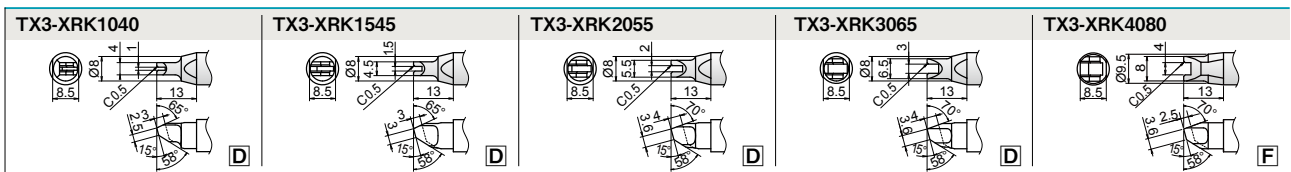
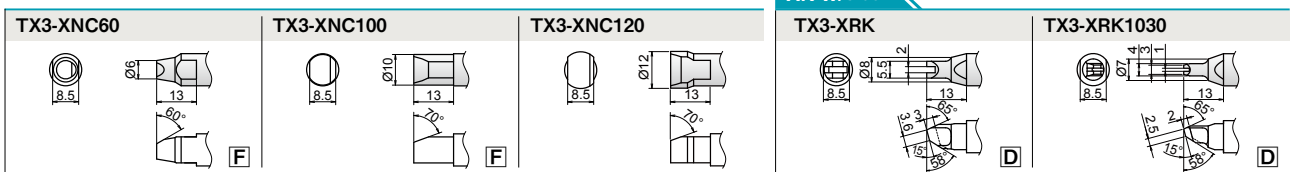
XD w/slot



XNC

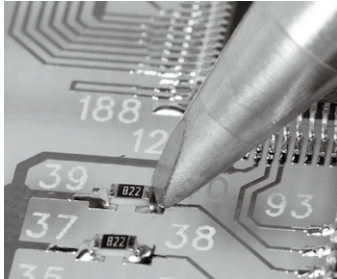


XK w/slot

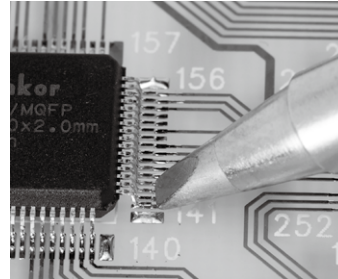


Hakko Solutions for Common Challenges in Soldering Work

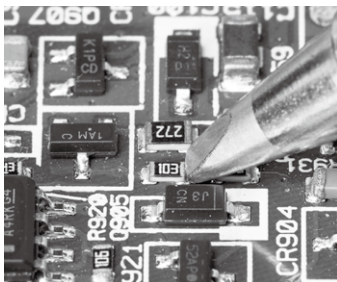
No suitable tip available for soldering ultra-fine components.



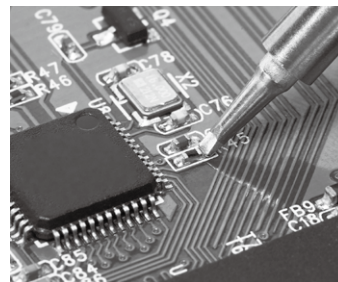
Pinpoint soldering accuracy is required for fine-pitch and multi-pin connectors, as well as QFP leads.



High component density leads to tip interference with adjacent parts.



Increased PWB layers make soldering time-consuming.

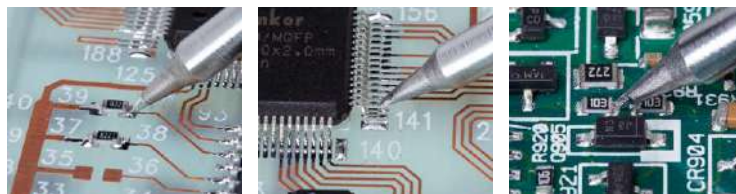


Here's the Solution!

Micro Soldering Iron for Precision Work

Ultra-Fine and Super Lightweight!

Featuring a tip body diameter of just 3mm and a minimum tip size of R0.1mm, this soldering iron enables precise, high-density soldering that was previously unattainable. Despite weighing only around 15g, it delivers an industry-leading power output of up to 70W.



FX-9703
P.31

Info

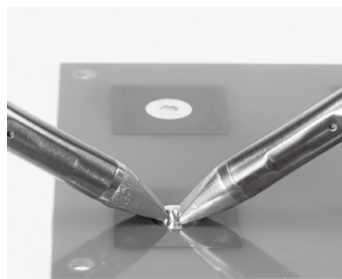
N₂ Soldering Irons are recommended for MLCCs (Multilayer Ceramic Capacitors)

MLCCs are sensitive to thermal stress. Our N₂ Soldering Irons are designed to preheat both the land(pad) and the capacitor, effectively reducing thermal shock during soldering and minimizing the risk of cracking.

FX-9704
P.31



Insufficient power results in longer work time and the need for multiple soldering irons.



Prolonged heating causes damage such as land(pad) lifting.



Large components absorb heat, requiring higher temperature settings for proper soldering.



Heavy nichrome heater soldering irons reduce work efficiency.



Here's the Solution!

Heavy-Duty Soldering Iron

High Power, Yet Lightweight!

Achieve rapid tip heating that allows for lower temperature settings and shorter operation times. Despite its powerful 400W output, this soldering iron features a lightweight design that ensures easy handling.



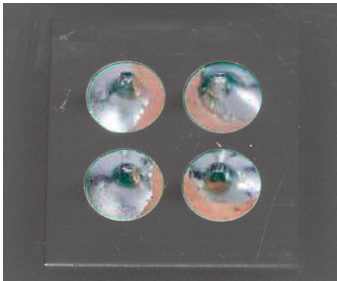
FX-8004
P.31

Ideal for :

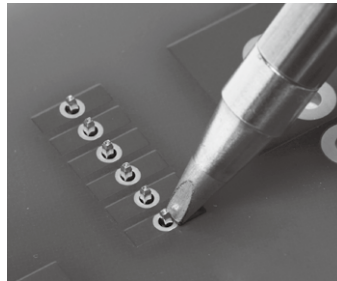
- Large components
- Multi-layer PWBs
- Heavy-duty harnesses

Hakko Solutions for Common Challenges in Soldering Work

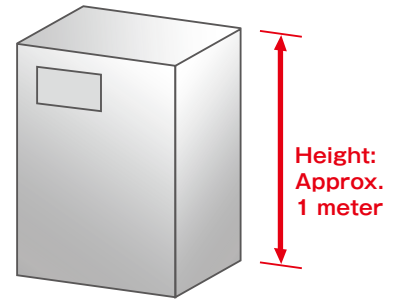
Poor solder wetting and spreading.



Heat is absorbed by components and PWBs, making soldering time-consuming.



No space available to install a large nitrogen generator.



Here's the Solution!

N₂ system

Boost Your Soldering Iron with the Power of Nitrogen!



A lightweight, compact nitrogen generator that fits easily into any workspace. Preheat with heated nitrogen gas for smoother soldering operations. Its anti-oxidation effect enhances solderability.



N₂ **FX-9702**
P.30

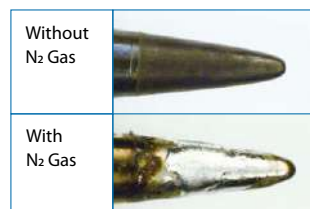
Preheat effect



Scan the QR code to watch the video on N₂ effects

Anti-oxidation effect

When solder is fed and cleaned



Unable to identify the root cause of defects due to the lack of 5W1H process.



Desire to store daily temperature control data.



Here's the Solution!

IoT Integration

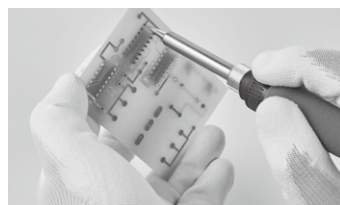
Introducing Traceability into Your Soldering Workflow!



Data is linked to operator IDs to track who worked on which PWB, when, and how. All collected data is securely stored on a designated server.



One hand is occupied fixing components or lead wires, making it difficult to feed solder.



Solder amount varies depending on the operator, affecting consistency.



Here's the Solution!

Solder Feeder

Automatic and Stable Solder Feeding!

Heating and solder wire feeding can be completed with just one hand. Preset amounts of solder are automatically fed, ensuring consistent and high-quality soldering results.



*Reference Image



373 P.40



FX-8803 P.31



Useful and Practical Features for Soldering Irons

Automatic Power Management



Auto Shut-Off



Auto Sleep

When not in use, the soldering iron automatically lowers its temperature or turns off power. This helps reduce tip oxidation and wear, extending tip life and preventing accidental power-on.

Error Detection for Insufficient Heat



Low Temperature Error Setting

If the tip temperature drops below the set threshold, an error message appears on the LCD along with a buzzer alert.

Soldering under these conditions may result in defects due to insufficient heating, making this feature effective for identifying potential issues.



Example: Soldering defects caused by insufficient heat

Tip Replacement Notification



Tip Load Count Alarm (FN-1010)

Tip Energization Time Alarm (FX-100)

When the preset load count or tip energization time is reached, an alert is triggered via buzzer and LCD display. Check the tip condition and replace it as needed to maintain optimal performance.

Safe and Easy Tip Replacement



Tip Replacement Using the Iron Holder

Tips can be replaced quickly and safely using the iron holder – no tools required.



Removal of tip



Insertion of tip

One-Touch Temperature Control



Preset (Temperature Registering Function)

Frequently used temperature settings can be registered and recalled with simple button operation.



Automatic Temperature Control



**Automatic Temperature Correction
Infrared Communication**

Measured tip temperature is transmitted via infrared to the station, enabling automatic correction based on the deviation from the set temperature.



HAKKO CONTROL SOFTWARE



Software

Easy Setting Change

Easily configure temperature and other parameters via software. Settings can be saved in CSV format and duplicated to other devices.



Visualized Temperature Data

Tip sensor temperatures during operation can be monitored in graph form. Logged data can be saved and used to review settings for enhanced quality control.



Zero Human Error Management

Tip temperature is automatically calibrated, and the results of measurement, calibration, and correction are recorded on a PC.



Traceability in Soldering!



IoT Communication

Data such as tip temperature changes is collected in real time during soldering and automatically saved to a PC or server.















































Prevent Unintended Setting Changes



Lock

Prevents changes to key parameters such as set temperature by locking the configurations.






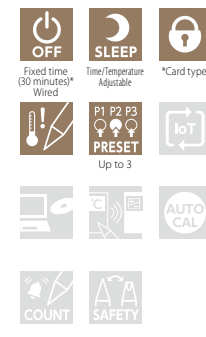
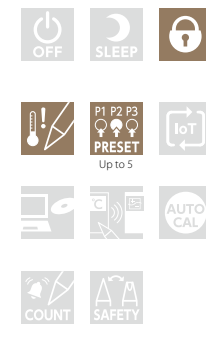
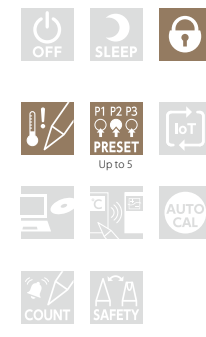


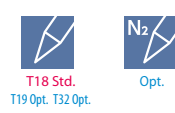





















Station Soldering Iron Selection Guide

		FN-1010	FX-971	FX-972	FX-100	
Model No.						
Page		P.24	P.25	P.25	P.26	
Features		   	   	   	   	
Temperature range		50 ~ 450°C	50 ~ 450°C	50 ~ 450°C When Heavy-Duty soldering iron is connected 50 ~ 500°C	350°C/400°C/450°C	
Number of Ports		1	1	2	1	
Power consumption		100 W	100 W	200 W	28 - 85 W	
Tip/Heater		T36 Series - Integrated type	T39 Series - Integrated type	T39 Series - Integrated type	T31 Series - Integrated type	
Soldering Iron connectable	Soldering Iron N ₂ Soldering Iron					
	Micro Soldering Iron N ₂ Micro Soldering Iron					
	Heavy-Duty Soldering Iron N ₂ Heavy-Duty Soldering Iron					
	Solder Feed Compatible*1					
	Tweezers					
	Micro Tweezers					
Specifications	Station	Output	AC 21 V	AC 24 V	AC 24 V	50 W
		Frequency	—	—	—	13.56 MHz
		Dimensions	100(W) × 138(H) × 152(D) mm	93(W) × 126(H) × 133(D) mm	126(W) × 151(H) × 149(D) mm	127(W) × 150(H) × 167(D) mm
		Weight	1.9 kg	1.2 kg	2.8 kg	3 kg
	Handpiece (Soldering Iron)	Power consumption	95 W	95 W	95 W	—
		Heater	Composite heater	Composite heater	Composite heater	IH (High Frequency Induction Heating Type)
		Total length*	180 mm	206 mm	206 mm	190 mm
		Weight*	32 g	31 g	31 g	31 g
Tip included	Tip not included	Tip not included	Tip not included	Tip not included		

*1 Attaching the part to the handpiece and combining it with Models 373 or 374 enables automatic solder feed.

*2 Also compatible with the handpiece (manual-feed soldering gun FX-8803).

*Total length and weight include the tip but exclude the cord.

FX-805	FX-838	FX-888DX	FX-889
			
P.27	P.27	P.28	P.28
			
50 ~ 500°C	200 ~ 500°C	50 ~ 480°C	50 ~ 480°C
1	1	1	2
460W	158W	100W	135W
T37 Series - Integrated type	T20 Series - Integrated type	T18 Series - Separate type	T18 Series - Separate type
			
			
			
			
			
			
AC 30 V	AC 27 V	AC 26 V	AC 26 V
—	—	—	—
143(W) × 107(H) × 218(D) mm	110(W) × 110(H) × 205(D) mm	100(W) × 120(H) × 125(D) mm	157(W) × 121(H) × 149(D) mm
3.9 kg	3.2 kg	1.2 kg	2.1 kg
390 W	150 W	65 W	65 W
Composite heater	Ceramic heater	Ceramic heater	Ceramic heater
244 mm	175 mm	217 mm	222 mm
54 g	31 g	46 g	52 g
Tip not included	Tip not included	T18-B	T19-B

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

FN-1010

Soldering iron with IoT connectivity for process traceability



Std. FN-1101 > P.30 Opt. FN-1102 > P.30 Opt. 373 > P.40



Real-time collection and storage of soldering information (data)

Data such as tip temperature changes is collected in real time during soldering and automatically stored on a PC or server.
*An interface card is required.



The following information (data) is stored in the memory chip of the tip:

- Tip shape
- Tip serial number
- Number of loads
- Total time of power supplied
- Load sensitivity
- Type of solder alloy (Lead-free/Lead)
- Count alarm

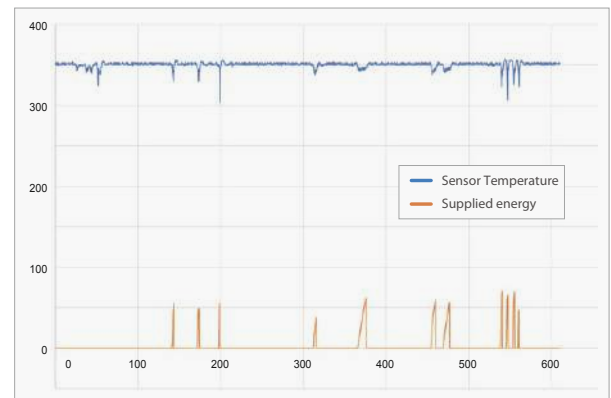
Packing List

- Station
- Handpiece
- Iron Holder
- Tip Cleaner (with Cleaning Wire)
- Power Cord
- Instruction Manual

Tip not included T36 Series Tip > P.35

Management by Visualizing

The energy supplied from the tip during soldering is digitized and can be visualized. Collected data can be used to optimize soldering conditions.



Centralized Management of Multiple Soldering Irons

By connecting via a LAN interface card, multiple soldering irons can be centrally managed from a single PC, including status monitoring, setting adjustment, soldering operation data, and temperature measurement data.

Interface Card for FN-1010

Choose an appropriate card based on the number of soldering irons to be connected and the available ports on your PC or server.

Part No.	Specifications	Connectable numbers	Compatibility with PC	Sequence control
B5210	With USB specification cable	1 soldering iron per 1 PC	○	-
B5211	With RS232C specification cable	1 soldering iron per 1 PC	△*	○
B5212	LAN Specification	Multiple soldering irons per 1 PC	○	-

*Some PCs may not support RS232C connections. Please check connection port in advance.

FX-971

Compact & High Power 1-Port Station

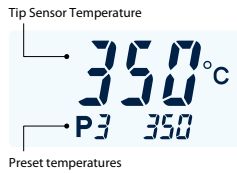


Std. FX-9701 >P.30 Opt. FX-9702 >P.30 Opt. FX-9703 >P.31 Opt. FX-9704 >P.31 Opt. 373 >P.40



Highly Visible Display

Set temperature, tip sensor temperature, preset settings, and other information are displayed in a large and easy to read manner. A wide viewing angle and high-brightness display ensure excellent visibility.



Tilt Adjustment for Better Visibility and Operability

This station features a tilt mechanism that allows for clear screen visibility and operability to match the installation environment, such as on or under a workbench, or on a rack.



Packing List

- Station ● Handpiece (FX-9701)
- Iron Holder (FH-215, with Cleaning Sponge and Cleaning Wire) ● USB Cable
- Power Cord ● Instruction Manual

Tip not included T39 Series Tip >P.37

Equipped with New Composite Tip (Patented)

The improved sensor sensitivity and optimized heat transfer from the heater to the tip ensure stable tip temperature, enabling more reliable soldering.

Cycle Time Reduced by Approx. 40%

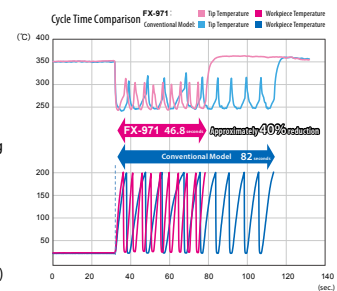
Soldering can be completed in a shorter time, improving work efficiency.

Test Criteria:

Time measured to complete soldering at 10 points until the workpiece temperature reaches 200°C.

Workpiece Used:

Copper plate, $\varnothing 6 \text{ mm} \times 1.5 \text{ mm}$ thick
Set Temperature: 350°C
Solder Used: Lead-free solder (Sn-Ag-Cu)



FX-972

Compact & High Power 2-Port Station



Std. FX-9701 >P.30 Opt. FX-9702 >P.30 Opt. FX-9703 >P.31 Opt. FX-9704 >P.31 Opt. FX-9707 >P.31 Opt. FX-9708 373 >P.31 Opt. FX-9705 >P.40 Opt. FX-9706 >P.57



Packing List

- Station ● Handpiece (FX-9701)
- Iron Holder (FH-215, with Cleaning Sponge and Cleaning Wire) ● Color Band: 2 pcs
- USB Cable ● Power Cord ● Instruction Manual

Tip not included T39 Series Tip >P.37

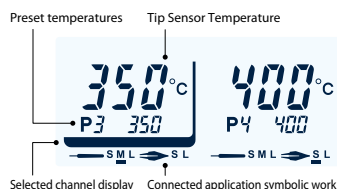
Handy 2 ports

8 types of applications can be connected to any port.



Large, Easy-to-Read Display

Equipped with a large display that clearly shows the tip sensor temperature, preset temperature, and connected applications for each of the 2 ports.



Priority channel

The handpiece built-in sensor detects which handpiece is in use and automatically switches the channel. The unused handpiece remains on standby at the set temperature.



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

FX-100

The highest-level IH Soldering Iron



OFF SLEEP LOCK COUNT ESD SAFE RoHS for LEAD FREE

Std. FX-1001 >P.30 Opt. FX-1002 >P.31 Opt. 373 >P.40 Opt. FX-1003 >P.57

GOOD DESIGN



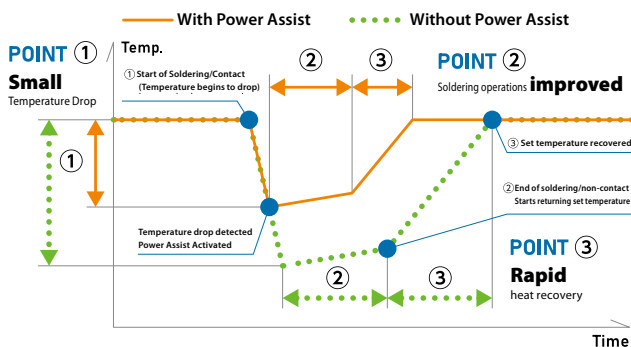
Superior Thermal Characteristics Achieved by High-Frequency Induction Heating (IH) Technology

The IH (High-Frequency Induction Heating) principle, which directly heats the tip, realizes excellent thermal characteristics. Even with a smaller tip, it delivers consistent heating power - ideal for precision microsoldering.



Equipped with Power Assist

Constantly monitoring the output of the high-frequency current enables quick detection of tip temperature drops during soldering and increases the output accordingly. This function minimizes tip temperature loss and enables faster temperature recovery, leading to improved soldering efficiency, higher productivity, and better soldering quality.



Packing List

- Station ● Handpiece (FX-1001, with Sleeve (yellow))
- Iron Holder (FH-800, with Cleaning Sponge and Cleaning Wire)
- Sleeve (green) ● Sleeve (gray) ● Heat Resistant Pad ● Power Cord
- Instruction Manual

Tip not included T31 Series Tip >P.34

No Need for Temperature Adjustment or Calibration

The set temperature is determined by the tip series, allowing for immediate use without adjustment. Additionally, there is no need for calibration because there is no temperature change due to heater degradation.



Handpiece	FX-1001	FX-1002	FX-1003
Temperature Range			
450°C	T31-01 Series	—	—
400°C	T31-02 Series	T35-02 Series	T38-02 Series
350°C	T31-03 Series	T35-03 Series	T38-03 Series

Intuitive Interactive Interface

Various information and operation menus are displayed on the screen, making operation simple and stress-free. During soldering, a real-time output graph is displayed that fluctuates in synchronization with the heater's thermal output.



3 Types of Applications are supported

Suitable for soldering and rework of even finer components. Its lightweight and compact design ensures excellent operability, even under a microscope.

Soldering Iron
FX-1001
Standard

Micro Soldering Iron
FX-1002
Options

Micro Hot Tweezers
FX-1003
Options

FX-805

400 W Ultra Power Heavy-Duty Soldering Iron



Incredible Ultra Power that Easily Melts Bar Solder

Equipped with HAKKO's most powerful 400 W composite heater for rapid heating. Ideal for soldering transformers and coils on power supply PCBs that handle large currents, as well as shield cases for communications equipment.



Compact Design and Excellent Operability Reduce Work Stress

Despite its 400 W power, the handpiece weighs only about 50g - one of the lightest in the industry. The handpiece cord has been made approximately 10% thinner*, significantly improving operability.
*Compared to the FX-801 (300 W handpiece)



Packing List

- Station ● Handpiece (FX-8004)
- Iron Holder (FH-220, with Cleaning Sponge and Cleaning Wire) ● USB Cable
- Power Cord ● (Replacement) Filter ● Instruction Manual

Tip not included T37 Series Tip >P.36
T33 Series Tip >P.36

Equipped with New Composite Tip

Equipped with a new composite tip developed to achieve 400 W of ultra-high power. Heavy-Duty Soldering productivity increases by 120%* compared to the previous model.

*Compared to the FX-801 (300 W soldering iron)



① Improved sensor sensitivity

Improving sensor sensitivity and positioning the sensor closer to the edge of the tip enables temperature measurement closer to the soldering point.

② Designed that ensures smooth heat transfer from the heater to the tip

Without changing the outer diameter of the tip, the heater body volume has been increased by 113%* compared to the previous model, improving thermal conductivity.

*Compared to the FX-801 (300 W soldering iron)

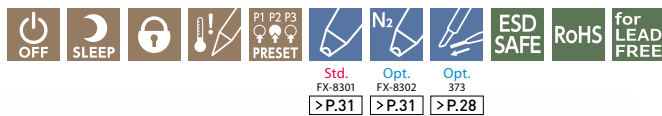
300 W tips can also be used

Both newly developed T37 Series (400 W) and conventional T33 Series (300 W) tips are supported. For more information, visit our website.



FX-838

150 W Heavy-Duty Soldering Iron



Packing List

- Station ● Handpiece (FX-8301) ● Iron Holder (FH-200, with Cleaning Wire)
- Tip Cleaner ● Heat Resistant Pad ● Connecting Cable ● Card ● Power Cord
- Instruction Manual

Tip not included T20 Series Tip >P.33

Powerful Thermal Recovery Feature

With 150 W of high power and power-mode setting, this model delivers exceptional thermal recovery.

Capable of smooth soldering even on components that require significant heat, such as power supply PCBs, heat sinks, and shield cases.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

FX-888DX

1 Port Station



			Std. FX-8801	Opt. FX-8805	Opt. FX-8806	Opt. FX-8802	Opt. FX-8803	Opt. 373			
			>P.30	>P.30	>P.30	>P.30	>P.31	>P.40			>P.57



Packing List

- Station ● Handpiece (FX-8801)
- Iron Holder (FH-800, with Cleaning Wire and Cleaning Sponge)
- Instruction Manual

Tip included T18-B T18 Series Tip >P.32

Rotary Encoder



Easy operation.
Easy operation: turn to "Select",
press to "Set".

3 color variations



Blue & Yellow

Titanium Silver

Sunflower Yellow

Compatible with 95 W soldering iron applications.

A cost-efficient soldering iron with
a separate tip and heater design.



Soldering Iron
FX-8806

T32 Series Tip >P.34

FX-889

2 Port Station



			Std. FX-8801	Opt. FX-8805	Opt. FX-8802	Opt. FX-8803	Opt. 373	Opt. FX-8804			
			>P.30	>P.30	>P.30	>P.31	>P.40	>P.57			



Packing List

- Station ● Handpiece (FX-8801)
- Iron Holder (FH-801, with Cleaning Sponge and Cleaning Wire)
- Color Bands: 2 pcs Part No. B5125 ● Power Cord Part No. B2387 ● Instruction Manual

Tip included T18-B T18 Series Tip >P.32

2 Ports/5 Types of Applications are supported.

*Only one FX-8805 L-type soldering iron is included at the time of purchase.



Soldering Iron
M Type
FX-8801

N-type Soldering Iron
FX-8802

Soldering gun with
manual solder feed
FX-8803

Hot Tweezers
FX-8804

Soldering Iron
L Type
FX-8805

FX-780 / FX-781

Compact Nitrogen Generator



- **Highest concentration of nitrogen gas: 99.9%**
- **No power supply required - generates N₂ gas using only compressed air.**
- **The large-capacity FX-781 model can support 2 soldering irons per 1 unit simultaneously.**

Specifications

Model No.	FX780-01	FX781-81
Supply air pressure	0.3 to 0.7 MPa	
Generated N ₂ purity	99.9% (Max.)	
Generated N ₂ flow rate	1.5 L/min. (At compressed air input of 0.5 MPa, 25°C; generated N ₂ gas concentration: 98%)	2.4 L/min. (At compressed air input of 0.5 MPa, 25°C; generated N ₂ gas concentration: 98%)
Dimensions	73(W) × 282(H) × 71(L) mm	73(W) × 407(H) × 71(L) mm
Weight	1.5 kg	2 kg

*External dimensions exclude sockets and valves. *Weight excludes the station fixing bracket.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

FX-791

N₂ Gas Flow Meter for Soldering Irons



- **Precision Flow Rate Design Specification - Adjustable from 0.25 L/min.**

Specifications

Pressure of discharged gas	0.2 MPa (2 kgf/cm ²)
Gas flow	0.25 to 2.5 L/min.
Dimensions	70(W) × 21(H) × 134(D) mm
Weight	0.6 kg

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

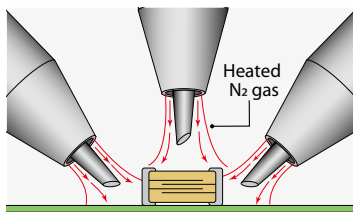
Nichrome Heater Type

Iron Holder/ Soldering-Related

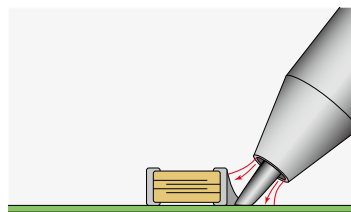
Topics

Effect of N₂ System (N₂ Soldering Iron)

When the N₂ system is used, nitrogen gas (N₂) is heated inside the soldering iron and blown out from the tip of the N₂ soldering iron. The hot N₂ gas enables preheating of "components" and "lands", and improves solderability by displacing oxygen during soldering.














Preheating with hot N₂ gas before soldering



Soldering with oxygen displaced

Soldering Iron Application List




		 Soldering Iron					
Model No.		FN-1101	FX-9701	FX-1001	FX-8801	FX-8805	FX-8806
Part No.		FN1101-81 Handpiece only	FX9701-81 Handpiece only	FX1001-81 Handpiece only	FX8801-01 Handpiece only	FX8805-01 Handpiece only	FX8806-81 Handpiece only
Part No.		—	FX9701-811 Conversion kit	—	—	—	FX8806-811 Conversion kit
Appearance							
Tip		Tip not included T36 Series >P.35	Tip not included T39 Series >P.37	Tip not included T31 Series >P.34	Tip included T18 Series >P.32	Tip included T19 Series >P.33	Tip included T32 Series >P.34
Tip shape		18 tip shapes	67 tip shapes	15 tip shapes	34 tip shapes	10 tip shapes	24 tip shapes
Specifications	Temperature range	50 – 450°C	50 – 450°C	350/400/450°C	50 – 480°C	50 – 480°C	50 – 480°C
	Power consumption	95 W	95 W	—	65 W	65 W	95 W
	Total length	180 mm	206 mm	190 mm	217 mm	222 mm	207 mm
	Weight	32 g	31 g	31 g	46 g	52 g	40 g
Compatible Stations		FN-1010 >P.24	FX-971 >P.25 FX-972 >P.25 FX-973 >P.55	FX-100 >P.26	FX-888DX >P.28 FX-889 >P.28 FR-701 >P.56 FR-702 >P.56	FX-888DX >P.28 FX-889 >P.28 FR-701 >P.56 FR-702 >P.56	FX-888DX >P.28

		 N₂ Soldering Iron					
Model No.		FN-1102	FX-9702	—	FX-8802	—	—
Part No.		FN1102-81	FX9702-81 Handpiece only	—	FX8802-01 Handpiece only	—	—
Part No.		—	FX9702-811 Conversion kit	—	—	—	—
Appearance				—		—	—
Tip		Tip not included T36 Series >P.35	Tip not included T39 Series >P.37	—	Tip included T18 Series >P.32	—	—
Tip shape		18 tip shapes	50 tip shapes	—	16 tip shapes	—	—
Specifications	Temperature range	50 – 450°C	50 – 450°C	—	50 – 450°C	—	—
	Power consumption	95 W	95 W	—	65 W	—	—
	Total length	180 mm	227 mm	—	237 mm	—	—
	Weight	40 g	49 g	—	50 g	—	—
Compatible Stations		FN-1010 >P.24	FX-971 >P.25 FX-972 >P.25 FX-973 >P.55	—	FX-888DX >P.28 FX-889 >P.28 FR-701 >P.56 FR-702 >P.56	—	—

*Total length and weight include the tip and nozzle, but exclude the cord and hose.
*Set temperature must not exceed 400°C.






Heavy-Duty Soldering Iron

FX-9707	FX-8004	FX-8301
FX9707-81 Handpiece only	FX8004-81 Handpiece only	FX8301-01 Handpiece only
FX9707-811 Conversion kit	—	—
		
Tip not included T53 Series >P.39	Tip not included T37 Series >P.36 T33 Series >P.36	Tip not included T20 Series >P.33
14 tip shapes	T37 Series 13 tip shapes T33 Series 21 tip shapes	23 tip shapes
50 – 500°C	50 – 500°C	200 – 500°C
200 W	390 W	150 W
222 mm	244 mm	175 mm
41 g	54 g	31 g
FX-972 >P.25 FX-973 >P.55	FX-805 >P.27	FX-838 >P.27





Heavy-Duty N₂ Soldering Iron

FX-9708	FX-8005	FX-8302
FX9708-81 Handpiece only	FX8005-81 Handpiece only	FX8302-01 Handpiece only
FX9708-811 Conversion kit	FX8005-82 Conversion kit	—
		
Tip not included T53 Series >P.39	Tip not included T37 Series >P.36 T33 Series >P.36	Tip not included T20 Series >P.33
14 tip shapes	T37 Series 13 tip shapes T33 Series 21 tip shapes	23 tip shapes
50 – 500°C	50 – 500°C	200 – 500°C
200 W	390 W	150 W
231 mm	255 mm	195 mm
54 g	66 g	39 g
FX-972 >P.25 FX-973 >P.55	FX-805 >P.27	FX-838 >P.27




Micro Soldering Iron

FX-9703	FX-1002
FX9703-81 Handpiece only	FX1002-81 Handpiece only
FX9703-811 Conversion kit	FX1002-82 Conversion kit
	
Tip not included T50 Series >P.39	Tip not included T35 Series >P.35
8 tip shapes	5 tip shapes
50 – 450°C	350/400°C
70 W	—
174 mm	166 mm
15 g	21 g
FX-971 >P.25 FX-972 >P.25 FX-973 >P.55	FX-100 >P.26



Micro N₂ Soldering iron

FX-9704	—
FX9704-81 Handpiece only	—
FX9704-811 Conversion kit	—
	—
Tip not included T50 Series >P.39	—
8 tip shapes	—
50 – 450°C	—
70 W	—
196 mm	—
35 g	—
FX-971 >P.25 FX-972 >P.25 FX-973 >P.55	—



Solder Feed

FX-8803
FX8803-01 Handpiece only
—

Tip included T18 Series >P.32
23 tip shapes
50 – 480°C
65 W
180 mm
207 g
FX-888DX >P.28 FX-889 >P.28 FR-701 >P.56 FR-702 >P.56

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

T18 Series Tip

Applicable Handpiece



FX-8801
>P.30



FX-8802
>P.30

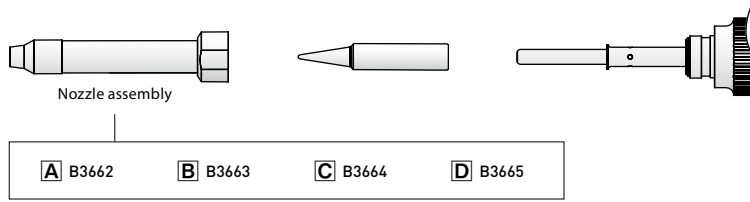
FX-8802 is compatible only with tips marked as **N₂**. Use a nozzle assembly that matches the tip.



FX-8803
>P.31

FX-8803 is compatible only with tips marked as **Solder Feed**.

Unit: mm



<p>B</p>				<p>C</p> <p>Tips marked with * are solder-plated only on the cut end.</p>
<p>T18-S4</p> <p>Solder Feed</p>	<p>T18-SB</p> <p>Solder Feed</p>	<p>T18-B</p> <p>N₂</p>	<p>T18-BL</p> <p>A</p>	<p>T18-C05</p> <p>N₂</p>
<p>T18-C08</p> <p>Solder Feed</p>	<p>T18-C1</p> <p>Solder Feed N₂ C</p>	<p>T18-S6</p> <p>Solder Feed</p>	<p>T18-S7</p> <p>Solder Feed N₂ A</p>	<p>T18-C2</p> <p>Solder Feed N₂ A</p>
<p>T18-C3</p> <p>Solder Feed N₂ B</p>	<p>T18-C4</p> <p>Solder Feed</p>	<p>T18-C5</p> <p>Solder Feed</p>	<p>T18-CF1*</p> <p>N₂ C</p>	<p>T18-CF15*</p> <p>Solder Feed N₂ C</p>
<p>T18-CF2*</p> <p>Solder Feed N₂ A</p>	<p>T18-CSF25*</p> <p>Solder Feed</p>	<p>T18-CF3*</p> <p>Solder Feed N₂ B</p>	<p>T18-CF4*</p> <p>Solder Feed</p>	<p>T18-D08</p> <p>Solder Feed N₂ A</p>
<p>T18-D12</p> <p>Solder Feed N₂ A</p>	<p>T18-S9</p> <p>Solder Feed</p>	<p>T18-D16</p> <p>Solder Feed N₂ B</p>	<p>T18-D24</p> <p>Solder Feed N₂ B</p>	<p>T18-D32</p> <p>Solder Feed</p>
<p>T18-S3</p> <p>Solder Feed</p>	<p>T18-DL12</p> <p>Solder Feed</p>	<p>T18-DL2</p> <p>Solder Feed</p>	<p>T18-DL32</p> <p>Solder Feed</p>	<p>T18-I</p> <p>Solder Feed N₂ C</p>
<p>T18-IS</p>	<p>J</p> <p>T18-BR02</p> <p>A</p>	<p>K</p> <p>T18-K</p> <p>Solder Feed N₂ D</p>	<p>T18-K35</p> <p>Solder Feed N₂ B</p>	

T19 Series Tip

Applicable Handpiece



FX-8805

>P.30

Unit: mm

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

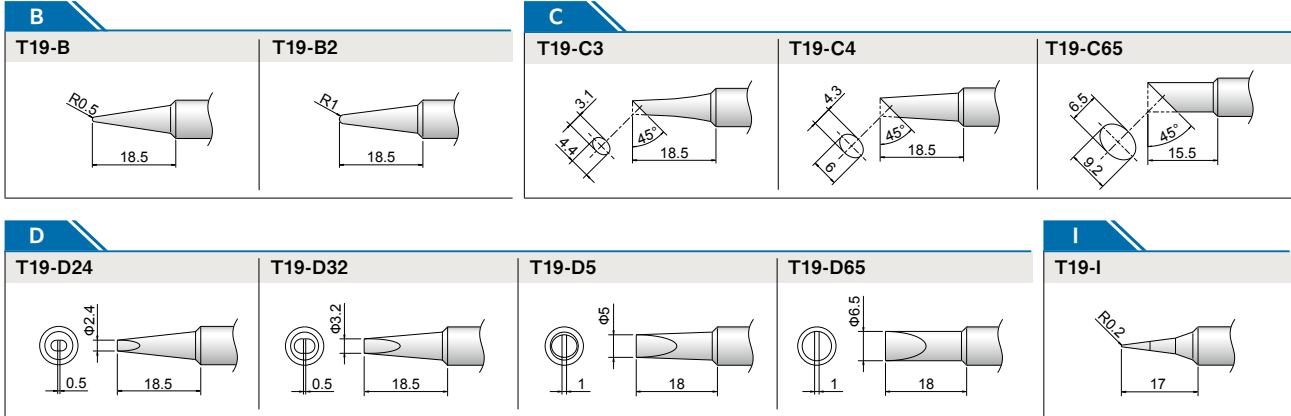
Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related



T20 Series Tip

Applicable Handpiece



FX-8301

>P.31

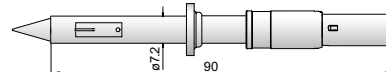
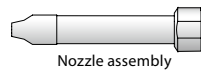


FX-8302

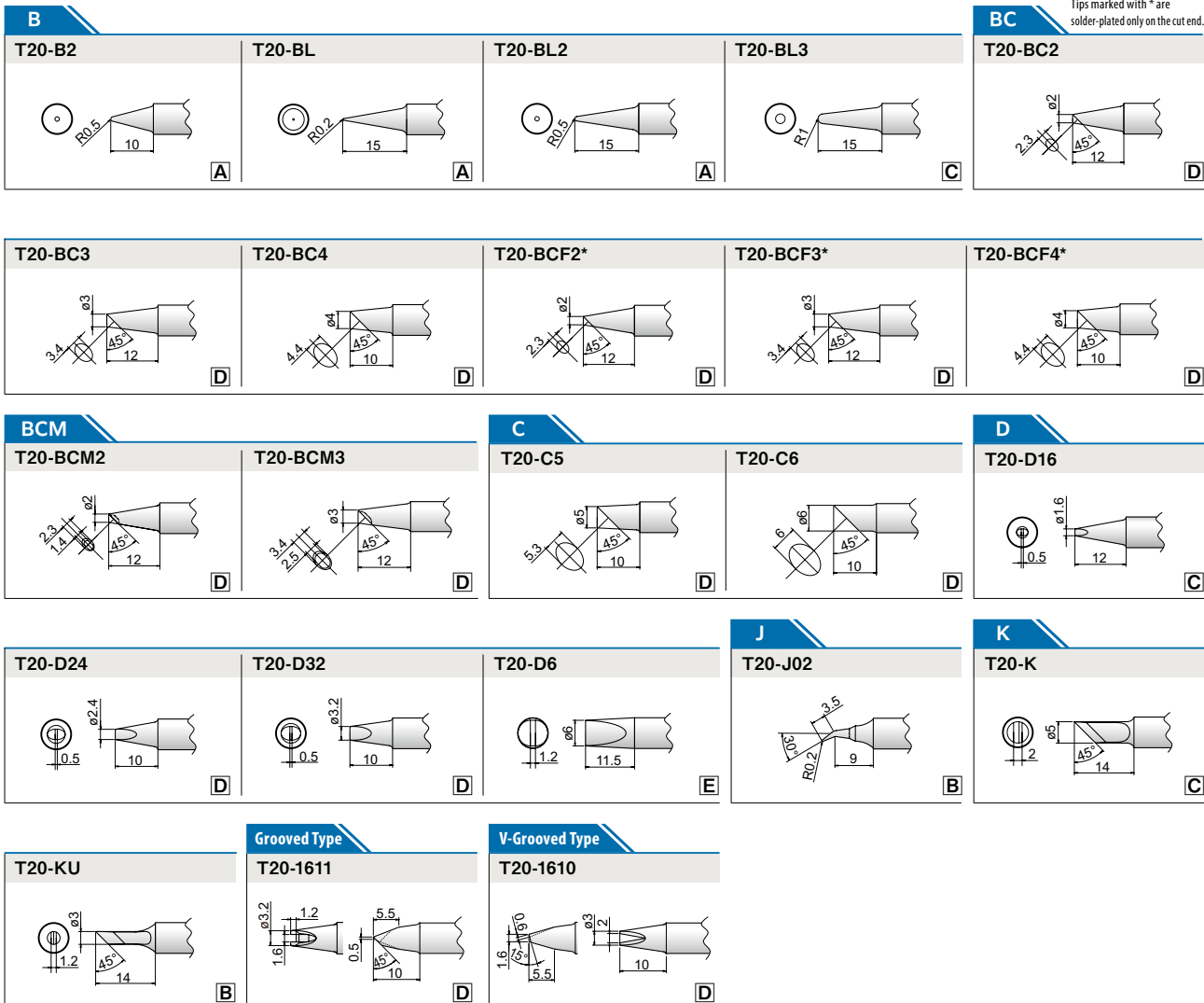
>P.31

Use the FX-8302 with a nozzle assembly compatible with the selected tip.

Unit: mm



A B3121 **B** B3122 **C** B3123 **D** B3124 **E** B3561



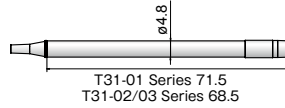
T31 Series Tip

Applicable Handpiece



Unit: mm

T31-01 Series 450°C
T31-02 Series 400°C
T31-03 Series 350°C



B T31-01BL T31-02BL T31-03BL 		T31-01SBL T31-02SBL T31-03SBL 		BC T31-01BC1 T31-02BC1 T31-03BC1 		T31-01BC28 T31-02BC28 T31-03BC28 		D T31B-01D08 T31B-02D08 T31B-03D08 	
T31-01WD08 T31-02WD08 T31-03WD08 		T31-01D16 T31-02D16 T31-03D16 		T31B-01D24 T31B-02D24 T31B-03D24 		T31B-01D52 T31B-02D52 T31B-03D52 		I T31-01I T31-02I T31-03I 	
T31-01IL T31-02IL T31-03IL 		J T31-01J02 T31-02J02 T31-03J02 		T31-01JL02 T31-02JL02 T31-03JL02 		T31-01JS02 T31-02JS02 T31-03JS02 		K T31-01KU T31-02KU T31-03KU 	

T32 Series Tip

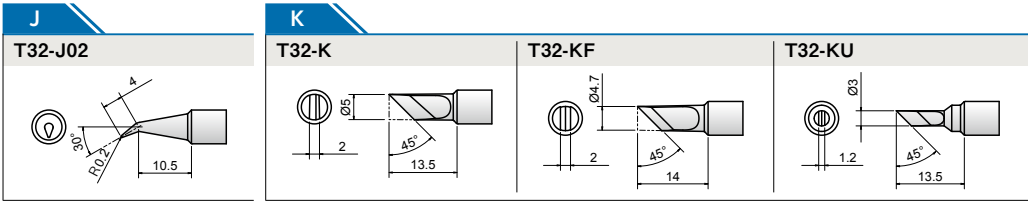
Applicable Handpiece



Unit: mm

Tips marked with * are solder-plated only on the cut end.

B T32-B 		BC T32-BC1 		T32-BC2 		T32-BC3 		T32-BC4 	
T32-BCF1* 		T32-BCF2* 		T32-BCF3* 		T32-BCF4* 		T32-BCT3 	
BCM T32-BCMT3 		C T32-C1 		D T32-D08 		T32-D12 		T32-D16 	
T32-D24 		T32-D32 		T32-D52 		I T32-I 		T32-ILS 	



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

T35 Series Tip

Applicable Handpiece

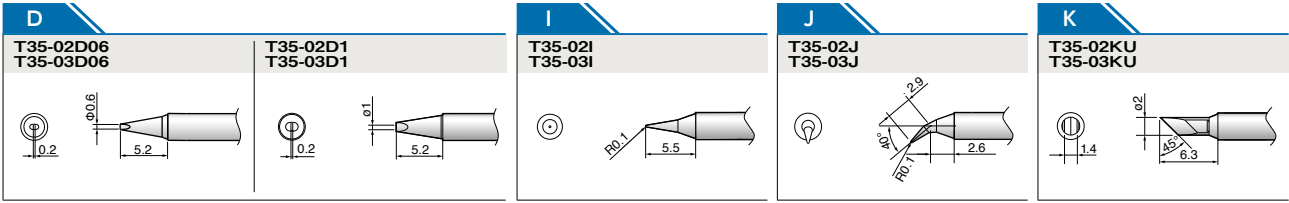
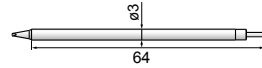


FX-1002

> P.31

Unit: mm

T35-02 Series 400°C
T35-03 Series 350°C



T36 Series Tip

Applicable Handpiece



FN-1101

> P.30

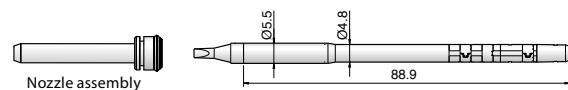


FN-1102

> P.30

Use the FN-1102 with a nozzle assembly compatible with the selected tip.

Unit: mm



- | | | | | |
|----------------|----------------|----------------|----------------|----------------|
| A B5233 | B B5234 | C B5235 | D B5236 | E B5237 |
|----------------|----------------|----------------|----------------|----------------|

IoT Capable Type

Station Type

N₂ System

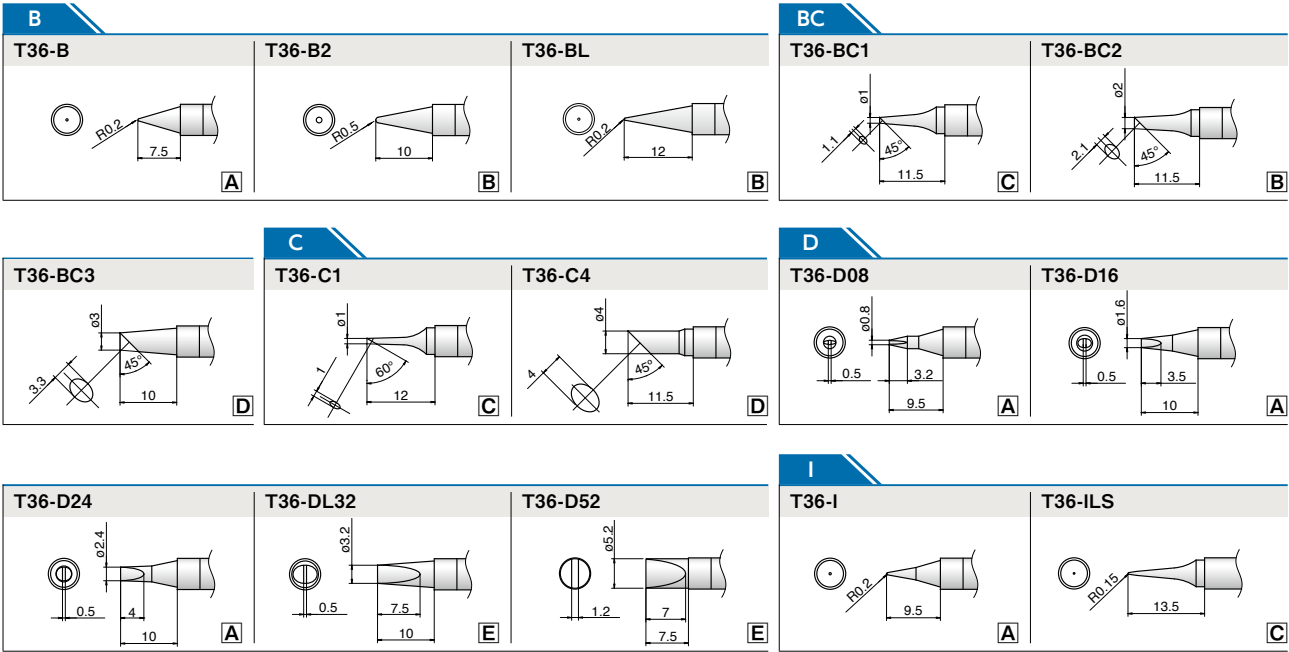
Solder Feed Unit

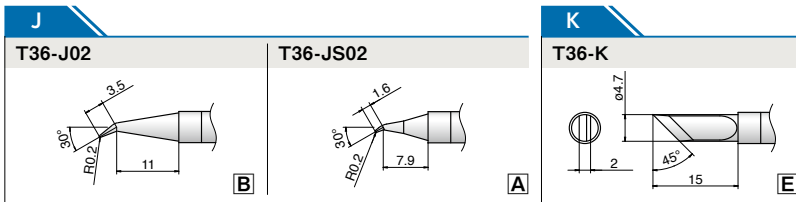
Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related





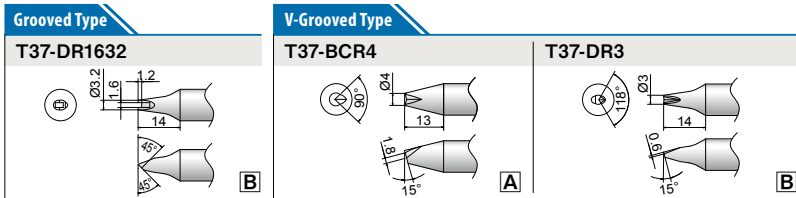
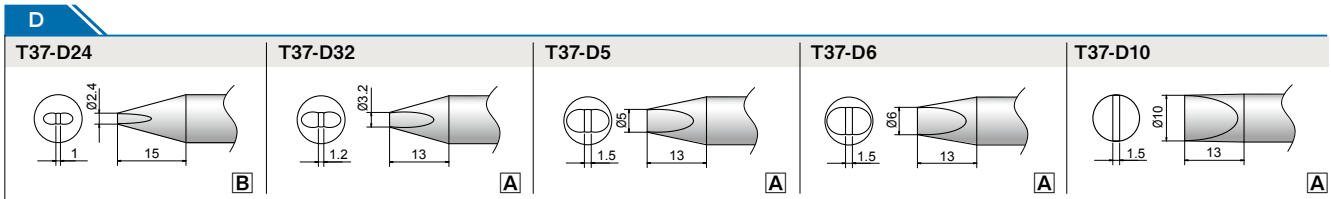
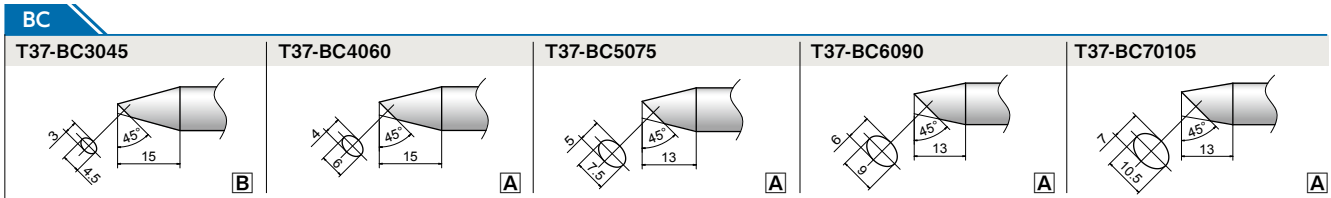
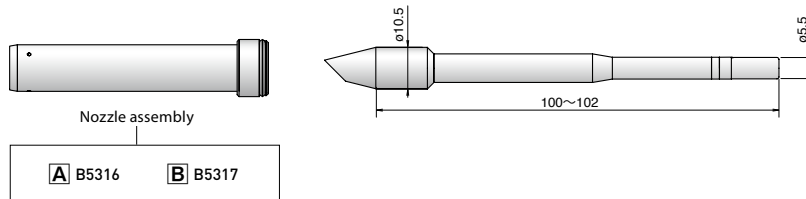
T37 Series Tip

Applicable Handpiece



Use the FX-8005 with a nozzle assembly compatible with the selected tip.

Unit: mm



T33 Series (300 W) can also be used with the FX-8004 and FX-8005.

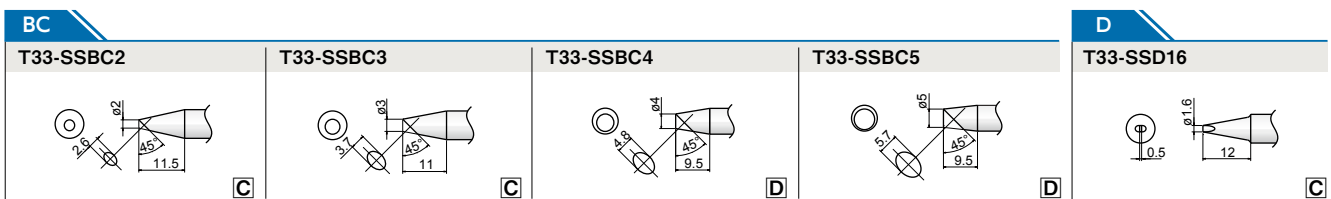
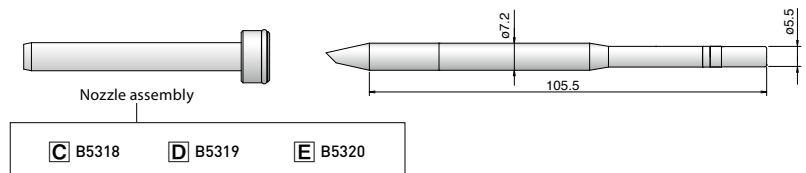
T33 Series: Slim Type Tip

Applicable Handpiece



Use the FX-8005 with a nozzle assembly compatible with the selected tip.

Unit: mm



T33-SSD24 D	T33-SSD32 E	T33-SSD6 E	Grooved Type T33-SS1611 C	V-Grooved Type T33-SS1610 C
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Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

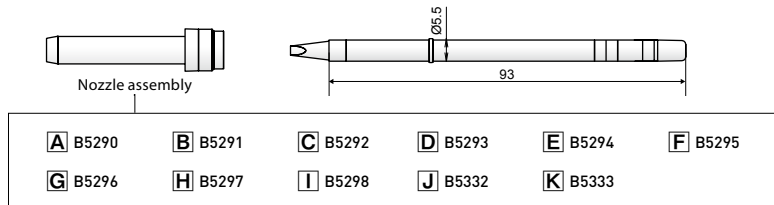
T39 Series Tip

Applicable Handpiece

FX-9701 N₂ **FX-9702**
>P.30 >P.30

FX-9702 is compatible only with tips marked as N₂. Use a nozzle assembly that matches the tip.

Unit: mm



B T39-B02 N ₂ F	T39-B05 N ₂ G	T39-B07 N ₂ C	T39-BL02 N ₂ K	T39-BLL02 N ₂ L
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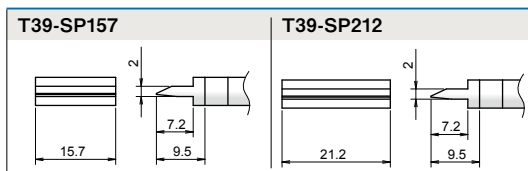
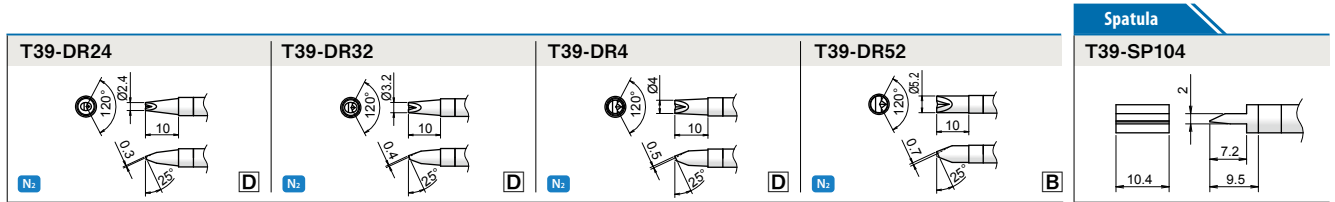
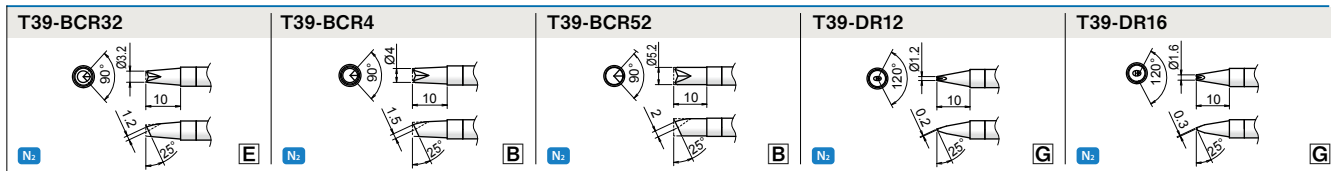
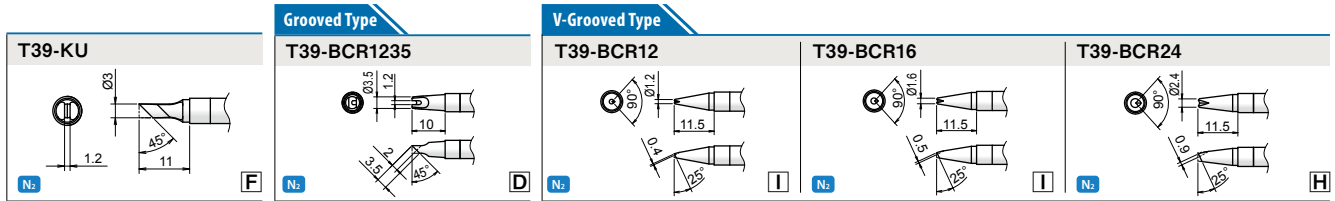
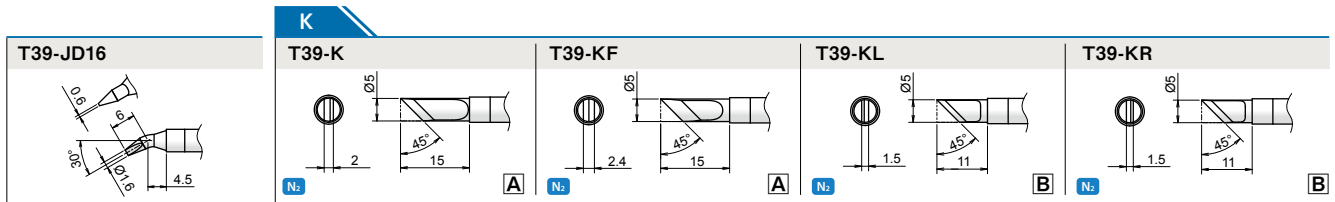
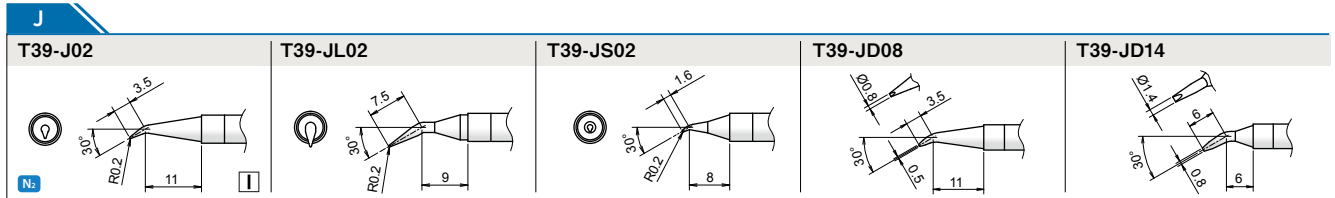
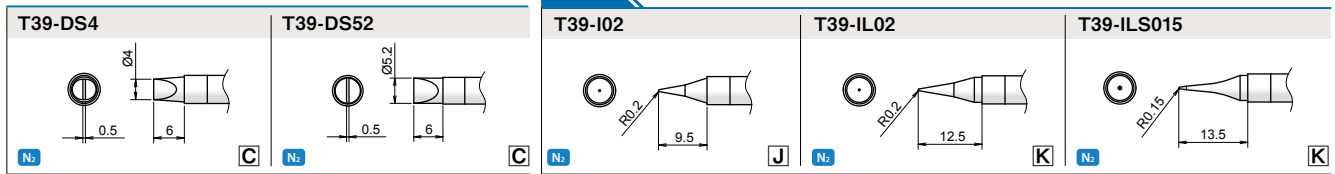
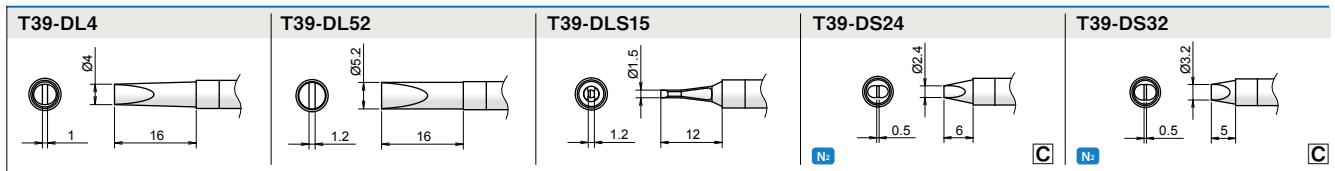
BC Tips marked with * are solder-plated only on the cut end. T39-BS02 N ₂ I	T39-BS03 N ₂ I	T39-BC1020 N ₂ I	T39-BC1530 N ₂ I	T39-BC2040 N ₂ I
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T39-BC2535 N ₂ H	T39-BC3065 N ₂ H	T39-BC3545 N ₂ E	T39-BCF1020* N ₂ I	T39-BCF2535* N ₂ H
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BCM T39-BCF3545* N ₂ E	T39-BCM2535 N ₂ H	T39-BCM3545 N ₂ E	C Tips marked with * are solder-plated only on the cut end. T39-C1020 N ₂ J	T39-C1025 N ₂ J
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D T39-C4055 N ₂ E	T39-CF4055* N ₂ E	T39-D08 N ₂ G	T39-D12 N ₂ G	T39-D16 N ₂ G
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T39-D24 N ₂ D	T39-D32 N ₂ D	T39-D4 N ₂ B	T39-D52 N ₂ B	T39-DL32 N ₂ B
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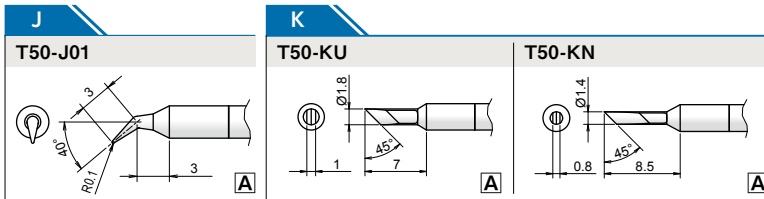
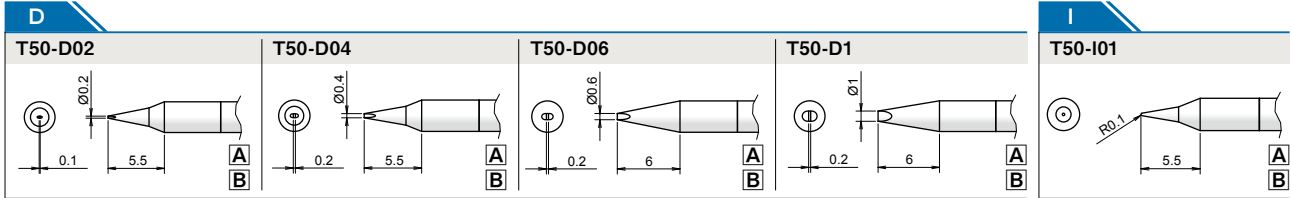
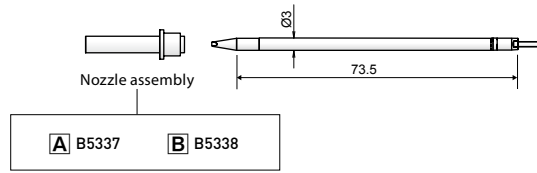
T50 Series Tip

Applicable Handpiece



Use the FX-9704 with a nozzle assembly compatible with the selected tip.

Unit: mm



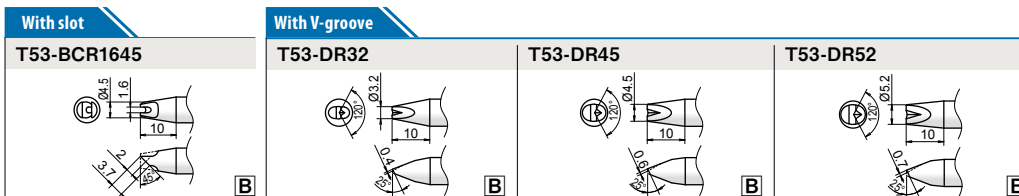
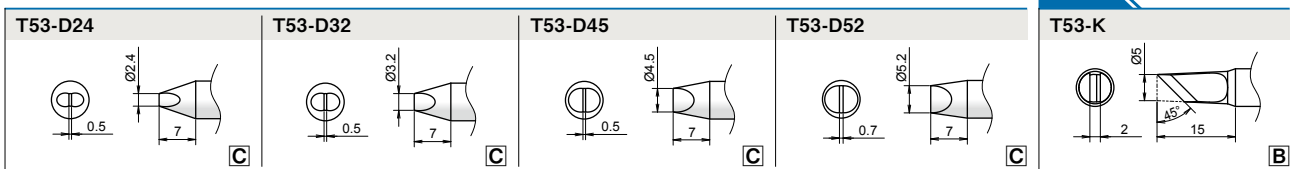
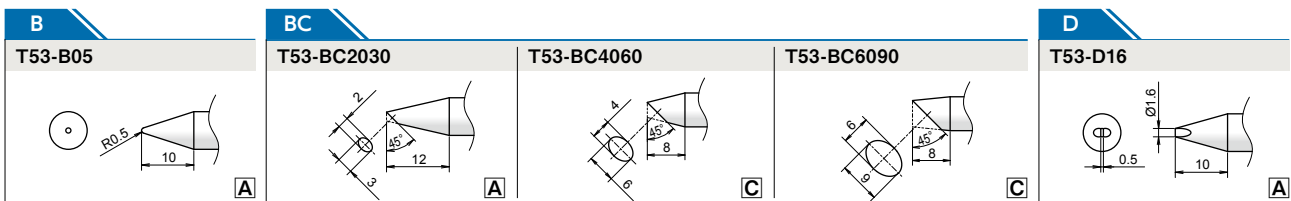
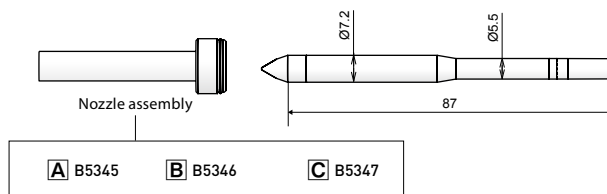
T53 Series Tip

Applicable Handpiece



Use the FX-9708 with a nozzle assembly compatible with the selected tip.

Unit: mm



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

375

Reduced Solder/Flux Splashing Solder Feeder with V-Grooving Feature for Solder Wire



RoHS for LEAD FREE



Packing List

●Unit ●AC Adaptor ●Instruction Manual

Specifications

Rating	DC 24V 75 mA				
Solder Feed Speed	27 mm/sec.				
Applicable solder diameters	Φ0.3 mm	Φ0.5 mm	Φ0.6 mm	Φ0.8 mm	Φ1 mm
Dimensions	78(W) × 98(H) × 56(D) mm				
Weight	0.59 kg				

AC Adaptor

Rating	DC 24 V
--------	---------

373

Automatic Solder Feeder



ESD SAFE RoHS for LEAD FREE



Packing List

●Unit ●Instruction Manual *Solder, soldering iron, and parts mounted on the soldering iron are not included.

Specifications

Power consumption	6W
Solder Feed Time	0 – 7 seconds
Solder Feed Speed	4.5 – 26 mm/sec.
Solder Feed Amount	0 – 182 mm
Solder back feed Amount	0 – 5 mm (Fixed Speed)
Mode	Auto/Manual
Applicable solder diameters	Φ0.6 / Φ0.65 / Φ0.8 / Φ1 / Φ1.2 / Φ1.6 mm
Spool-Type Solder Wire	Compatible with spool-type solder wire up to 1 kg
Dimensions	107(W) × 110(H) × 215(D) mm
Weight	1.5 kg

*The solder feed time applies to Auto Mode operation.

*Not compatible with lead-free solder wire of ø1.6 mm. *The weight includes the cord.

611

Solder reel stand



ESD SAFE RoHS



611-1



611-2

611-1

611-2 Two-Tier Type

*Solder not included.

Smooth Reeling-out of Solder Wire Improves Work Efficiency

FT-720

Instant Tip Cleaning Brush-Type Automatic Tip Cleaner



Specifications

Rating	DC 24V 140 mA
Brush Rotation Speed	1670 rpm
Dimensions	67(W) × 63(H) × 94(D) mm
Weight	200 g

AC Adaptor

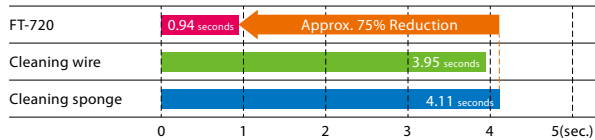
Rating	DC 24V
--------	--------

*For compatible soldering irons, refer to our website.

Improved Soldering Efficiency with Reduced Cleaning Time

An infrared sensor detects the insertion of the tip, automatically activating the rotating brush. This enables instant tip cleaning and improves soldering efficiency.

Comparison of cleaning times



*The above values are measured results and not guaranteed values.

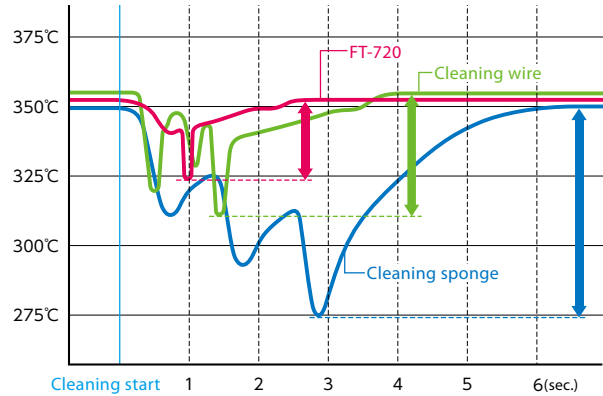
Packing List

- Unit (with Fluoroplastic Brush and Adjuster) ● AC Adaptor ● Instruction Manual

Reduced Tip Temperature Drop for Improved Efficiency

Since the FT-720 does not use water like a sponge, it minimizes tip temperature drops during cleaning, allowing for work to resume immediately afterward.

Comparison of temperature drops



*The above values are measured results and not guaranteed values.

FT-710

Solder Splash Prevention During Cleaning Brush-Type Automatic Tip Cleaner



Specifications

Rating	DC 24V 130 mA
Receptacle included	Receptacle A Receptacle B
Brush Rotation Speed	2500 rpm
Dimensions	71(W) × 77(H) × 107(D) mm
Weight	450 g

AC Adaptor

Rating	DC 24V
--------	--------

*For compatible soldering irons with Receptacle A and Receptacle B, refer to our website.

Packing List

- Unit (with Resin Brush) ● Gauge ● AC Adaptor ● Receptacle A and B ● Lock Nut ● Instruction Manual

Solder Splash Prevention and 2-Second Tip Cleaning

Inserting the soldering tip into the opening and pushing it downward activates the rotating brush to clean the tip. Since the tip is cleaned inside the tip cleaner, solder splash during cleaning is prevented.



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

FT-700

Ideal Maintenance Kit for Restoring Oxidized Tips



RoHS for LEAD FREE



Packing List

- Unit (with Rotating Brush and Power Cord)
- Chemical Paste
- Straight Brush
- Instruction Manual

Safe Restoration of Oxidized Tips Without Damage

Using a rotating brush and ammonium phosphate-free chemical paste, carbides and oxides are removed without damaging the tip, restoring its wettability.



Before Cleaning

Blackened Tip from oxidation.

After Cleaning

Removal of tip oxides restores wettability.

Specifications

Power consumption	3 W (100 V), 4.5 W (110 to 120 V, 220 to 240 V)
Dimensions	70(W) × 54(H) × 101(D) mm
Weight	0.65 kg

Chemical Paste

Net Volume	10 g
Composition	Flux, Tin: 50 wt% each

*The weight excludes the cord.

*Do not use the chemical paste for any purpose other than tip restoration.

FS-100

Tip Retinning Paste - Free from Ammonium Phosphate



RoHS for LEAD FREE



Removes Oxides from Soldering Tips

This ammonium phosphate-free chemical paste removes oxides and recoats the tip to restore its performance, without causing damage. Even more effective when used in combination with the FT-700.

*Be sure to remove any residual FS-100 from the tip before soldering.

Specifications

Net Volume	10 g
Composition	Flux, Tin: 50 wt% each

*The flux components of the chemical paste consist of "cycloaliphatic amine hydrobromide, aliphatic amine hydrobromide, petroleum jelly, and wax".

*After use, be sure to remove any residual FS-100 from the tip before soldering.

*Do not use for purposes other than tip retinning.

599B

Wire-Type Tip Cleaner



RoHS for LEAD FREE



Reduces Oxidation of Tips

Leaving a small amount of solder on the tip reduces oxidation after cleaning.

FX-600D

Digital Temperature Display Ceramic Heater Soldering Iron with Temperature Control



Specifications

Power consumption	47 W (100 V), 56 W (110 V), 67 W (120 V), 42 W (220 V), 46 W (230 V), 50 W (240 V)
Temperature range	200–540°C
Temperature stability	±1°C (no load)
Standard Tip	B (Part No. T18-B)
Total length	233 mm
Weight	65 g

*Total length and weight exclude the cord and cap.

Packing List

●Unit ●Cap ●Instruction Manual

Replacement Tip T18 Series Tip >P.32 T19 Series Tip >P.33

Comfort-Grip Design



Improved Visibility and Operability

Equipped with an LCD that clearly displays the temperature at a glance. Temperature setting is easy with the control wheel.



Compatible with a wide variety of tips (44 shapes in total from T18 and T19 series)

*To use T19 series tips, the enclosure pipe and nut must be replaced.

FX-600 / FX-601



FX-600

FX-601

Specifications

Model No.	FX-600	FX-601
Power consumption	50 W (100 V), 59 W (110 V), 74 W (120 V), 43 W (220 V), 47 W (230 V), 51 W (240 V)	47 W (100 V), 56 W (110 V), 67 W (120 V), 42 W (220 V), 46 W (230 V), 50 W (240 V)
Temperature range	200–500°C	240–540°C
Temperature stability	±1°C (no load)	±1°C (no load)
Standard Tip	B (Part No. T18-B)	2B (Part No. T19-B2)
Total length	233 mm	237 mm
Weight	61 g	68 g

*Total length and weight exclude the cord and cap.

Temperature Control Ceramic Heater Soldering Iron



FX-600



FX-601

FX-600

Packing List ●Unit ●Lock Key ●Bead Band ●Instruction Manual

Replacement Tip T18 Series Tip >P.32

FX-601

Packing List ●Unit ●Lock Key ●Bead Band ●Instruction Manual

Replacement Tip T19 Series Tip >P.33

Easy Temperature Setting with Dial Control

Temperature can be controlled independently of the dial scale.

LED Indicator Shows Temperature Status

Lighting	Temperature rising
Flashing	Reaches Set Temperature
Off	Temperature Dropping



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

Iron Holder/Soldering-Related

PRESTO

Ceramic Heater Soldering Iron with Quick Heating Switch



RoHS



980/984



981/985

980/984 Straight Type

981/985 Gun Type

Specifications

Model No.	980	981	984	985
Power consumption	20/130 W (switch on)			
Supplied Tip	BI (Part No. 980-T-BI)			
Total length	205 mm	160 mm	205 mm	160 mm
Weight	48 g	92 g	56 g	100 g

*Total length and weight exclude the cord and cap.

Replacement Tip Unit: mm

When capped(984/985)

980-T-B	980-T-BI	980-T-BC	980-T-D



FX-901

Battery-Powered Cordless Soldering Iron



RoHS



Packing List

●Unit (with Tip T11-B and Protective Cap) *Batteries are not included.

Specifications

Power Supply	4 x AA Batteries (not included)
Power consumption	Alkaline Batteries: 6 V (6 W) Nickel-Metal Hydride Batteries (2150 mAh): 4.8 V (5 W)
Battery Life	Alkaline Batteries: Approx. 60 minutes Nickel-Metal Hydride Batteries (2150 mAh): Approx. 120 minutes
Supplied Tip	B (Part No. T11-B)
Total length	212 mm
Weight	76 g

*Do not use manganese batteries, as they will not provide sufficient performance.

*Battery type affects both performance and energization time.

*Total length excludes the cap.

*Weight excludes batteries.

Replacement Tip Unit: mm

T11-B	T11-D4

RED

Nichrome Heater Soldering Iron (20 W/30 W/40 W/60 W)



RoHS



500
20 W
(With BB3)

501
30W
(With BB4)

502
40W
(With BB4)

503
60W
(With BB6)

Specifications

Model No.	500	501	502	503
Compatible Power Consumption	20 W	30 W	40 W	60 W
Supplied Tip	Φ3×65 mm (Part No. BB3)	Φ4×70 mm (Part No. BB4)	Φ4×70 mm (Part No. BB4)	Φ6×85 mm (Part No. BB6)
Total length	199 mm	207 mm		248 mm
Weight	60 g	65 g		95 g

*Total length and weight exclude the cord.

Replacement Tip

Part No.	BB3	BB4	BB6
Dimensions (mm)	Φ3×65	Φ4×70	Φ6×85
Compatible Part No.	500	501/502	503

MATCHLESS

Nichrome Heater Soldering Iron (150W/200W/300W)



RoHS



551
150W

557
200W

563
300W

Specifications

Part No.	551	557	563
Compatible Power Consumption	150 W	200 W	300 W
Supplied Tip	Φ12.7 mm (Part No. CA12.7)	Φ16 mm (Part No. CA16)	Φ19 mm (Part No. CA19)
Total length	359 mm	375 mm	425 mm
Weight	410 g	560 g	820 g

*Total length and weight exclude the cord.

Replacement Tip

Model No.	CA12.7	CA16	CA19
Dimensions (mm)	Φ12.7	Φ16	Φ19
Compatible Part No.	551P	557P	563P

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

IRON HOLDER



RoHS

For Ceramic Heater Soldering Irons

Compatible Soldering Irons

• FX-600D • FX-600 • FX-601 • PRESTO



FH-305
Foldable Iron Holder

● Weight 245 g

Compatible with Wire-Type Cleaner (not included)



633

633-01

● Weight 380 g



FH-300

● Weight 502 g

Compatible with Wire-Type Cleaner (not included, P.42)



633-02

● Weight 340 g

IoT Capable Type

Station Type

N₂ System

Solder Feed Unit

Tip Cleaner & Maintenance Kit

Ceramic Heater Type

Nichrome Heater Type

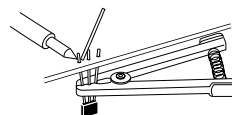
Iron Holder/Soldering-Related

HEATSINK

Heat Dissipation Clip for Protecting Heat-Sensitive Components

RoHS

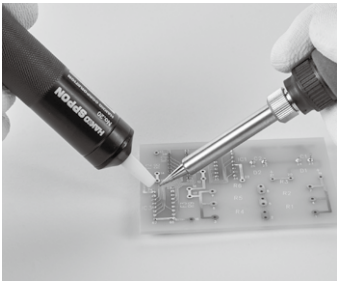
610



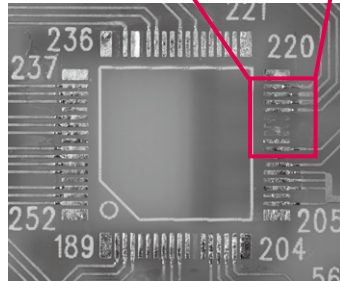
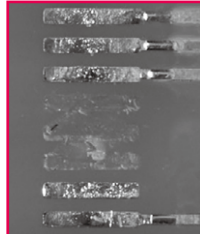
Use to hold heat-sensitive components such as illuminated switches and LEDs during soldering.

HAKKO Solutions for Common Challenges in Rework

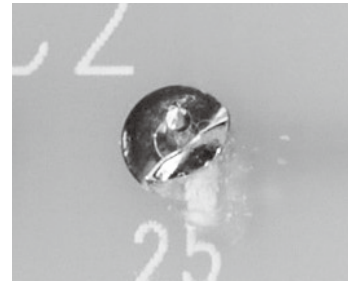
Precise timing required for desoldering of through-hole components.



Risk of land (pad) lifting during cleaning, after using desoldering wire.



Potential damage to lands (pads) when using desoldering wire.

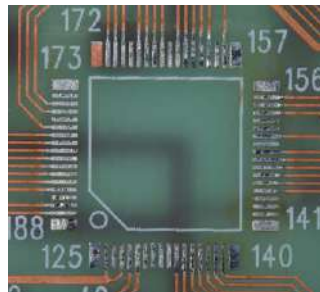
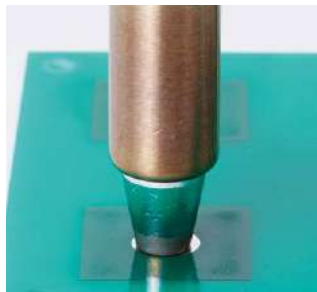


Here's the **Solution!**

Desoldering Tool

Heating and Suction!

Simultaneous heating and solder suction enable smooth desoldering and cleaning while protecting lands (pads) from damage.

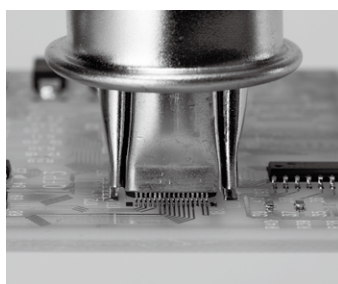


FR-410
P.54



FR-400
P.54

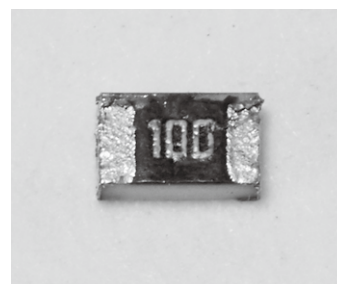
Thermal impact on adjacent components during surface-mounted components removal.



Risk of lands (pads) damage when using a soldering iron for desoldering.



Difficulty in removing surface-mounted components without damage.

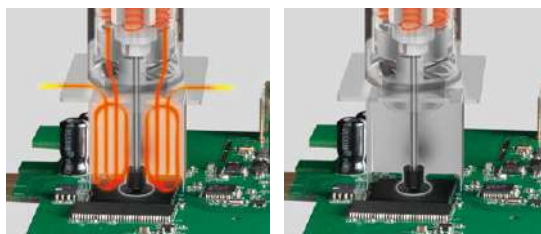


Here's the Solution!

Hot Air Station

Non-contact heating enables vacuum pickup of target components!

Nozzles tailored to component size minimize thermal impact on adjacent parts. Vacuum pickup function prevents pad (land) lifting. Optimized temperature profiles help reduce the risk of component damage.



FR-810B
P.60



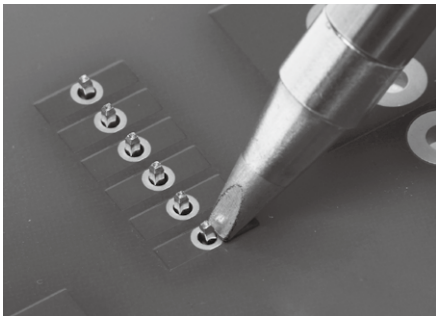
FR-811
P.60

Ideal for:

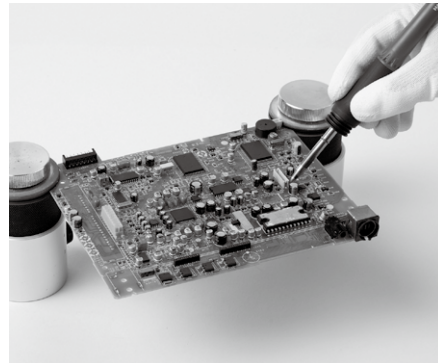
- Surface-Mounted Devices (SMDs)

HAKKO Solutions for Common Challenges in Rework

Reworking and post-installation on ground solid pattern(GND) areas can be time-consuming.



Multilayer PWBs absorb heat, slowing down soldering operations.



Here's the **Solution!**

Preheater

Streamline your Workflow with Preheating!

Equipped with a carbon heater system!

Choose from two control modes:

- Power Mode – adjusts heater output by percentage
- T/C Mode – maintains the set temperature at the measurement point

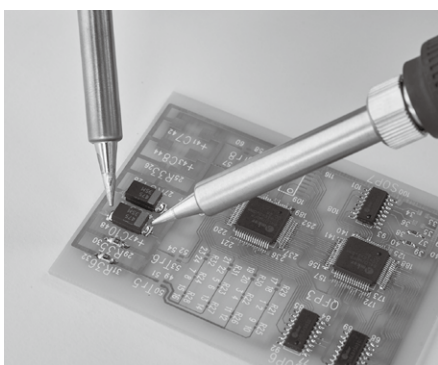


FR-870B

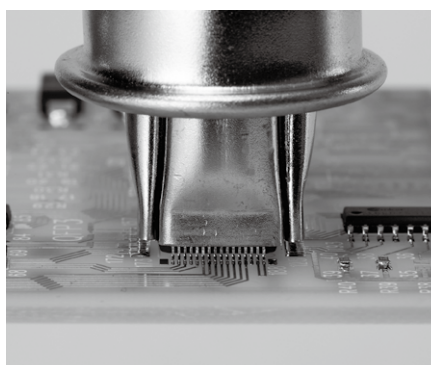


FR-872

Removing components with two soldering irons is inefficient.



Using hot air may cause thermal impact to adjacent components.



Here's the Solution!

Hot Tweezers Pinch and Remove Components!

The tips directly heat only the soldered area of the target component, enabling one-handed removal just like tweezers. Micro Hot Tweezers allow precise handling and targeting of small components such as chips.



Hot Tweezers
FX-9705
P.57



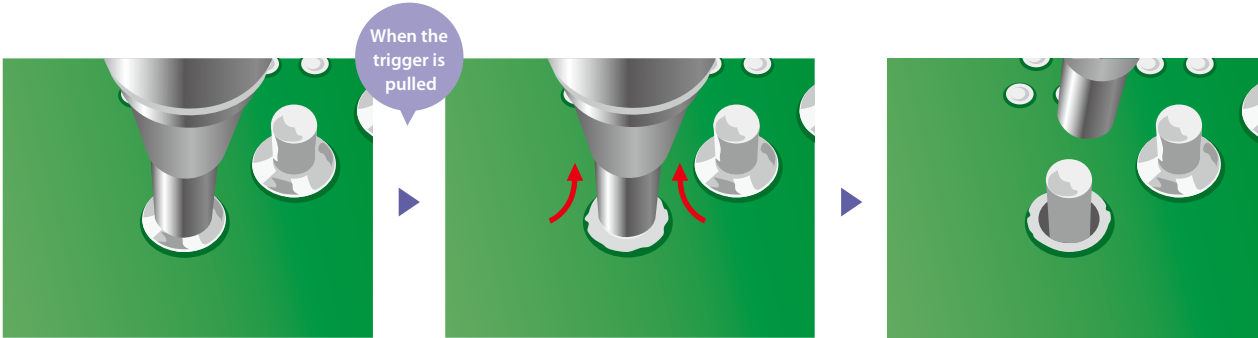
Micro Hot Tweezers
FX-9706
P.57

Useful and Practical Features for Desoldering Tool

Zero Residue with Powerful Suction



Valve Function



The nozzle precisely heats the target area, quickly melting the solder.

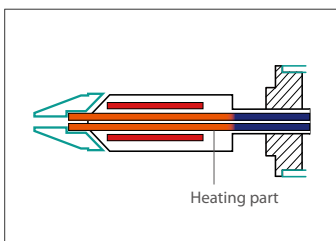
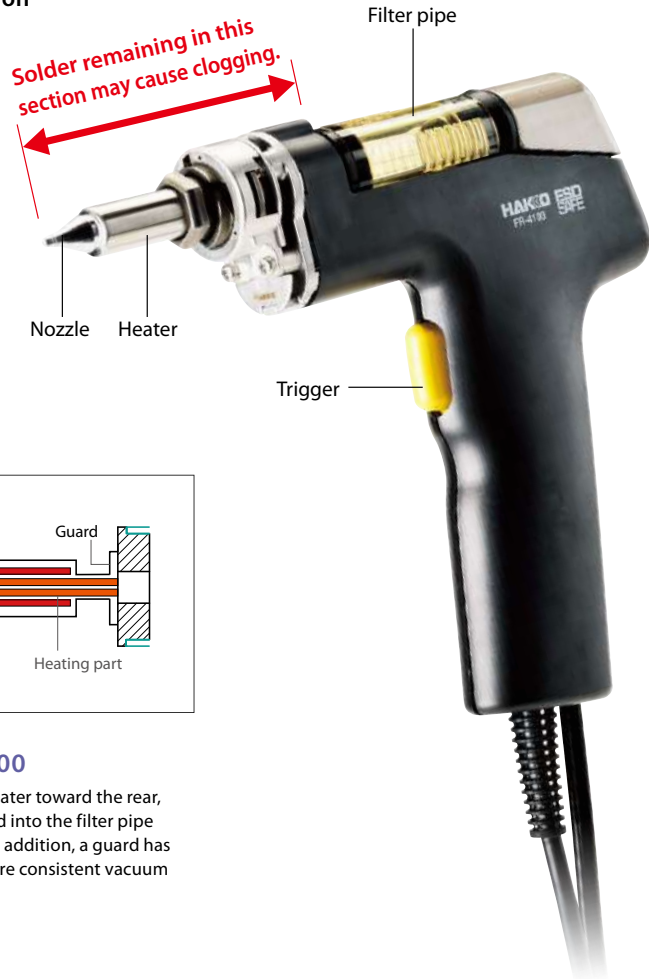
The valve opens after 0.2 seconds. The desoldering tool suctions solder with high pressure.

Leaves no residue.

Solder Clog Prevention

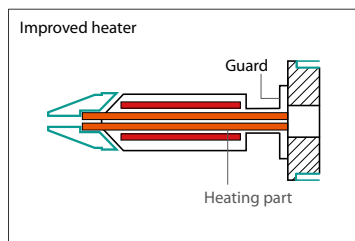
Improved Heater Design and Anti-Clogging Function

In conventional desoldering tool, solder clogging often occurs when the suctioned solder cools and solidifies before reaching the filter pipe, resulting in diminished suction performance. The redesigned heater structure combined with an Anti-Clogging Function (ACF), ensuring that solder remains molten until it reaches the filter pipe. This significantly mitigates the risk of clogging and maintains consistent operational efficiency.



Conventional models

Low temperatures behind the heating section cause solder to solidify.



FR-410 / FR-400

By extending the heater toward the rear, solder can be sucked into the filter pipe while still molten. In addition, a guard has been added to ensure consistent vacuum performance.

Automatic Power Management



Auto Sleep



Auto Shut-Off

When not in use, the desoldering tool automatically lowers its temperature or turns off power. This helps reduce nozzle oxidation and wear, extending nozzle life and preventing accidental power-on.

Quick Nozzle Changing



Nozzle Replacement with Nozzle Quick Changer

Selecting the appropriate nozzle for each workpiece is essential for maintaining high-quality results and operational efficiency during rework processes.

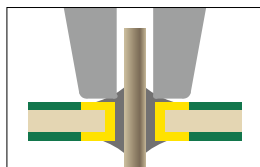
By pre-setting nozzles of various shapes and sizes in the Nozzle Quick Changer, users can perform quick, safe, and tool-free nozzle replacement.



Info

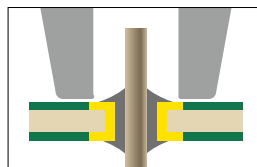
Enhance work efficiency with proper nozzle selection.

Properly sized nozzle



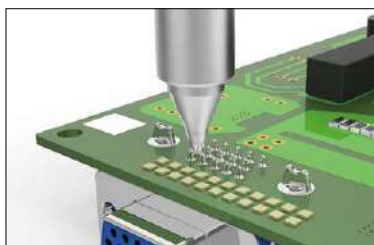
Ensures optimal heat transfer to the solder and workpiece, enabling smooth and reliable operation.

Oversized nozzle



May lead to inadequate heat transfer, potentially causing damage such as resist overheating or land (pad) separation.

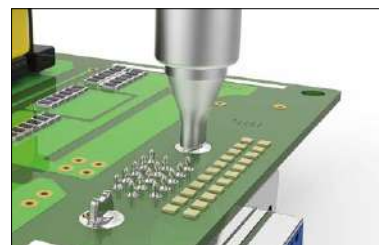
A comprehensive lineup of nozzles tailored to various applications:



SS Type – For ultra-small land (pad) diameters




























































Long Type – For narrow working spaces



Oval Type – For flat terminal components

Desoldering Tool Selection Guide

		Built-in Vacuum Pump		Handy	
		FR-410	FR-400	FR-301	
Model No.					
Page		P.54	P.54	P.55	
Features		 OFF  SLEEP    PRESET Up to 3  	 OFF  SLEEP    PRESET Up to 3  	 OFF  SLEEP    PRESET  	
Temperature range		330–450°C	350–500°C	350–500°C	
Number of ports		1	1	—	
Power consumption		190 W	320 W	100 V 98 W (50/60 Hz), 110 V 122 W (50/60 Hz) 120 V 140 W (60 Hz), 220 V 100 W (50/60 Hz) 230 V 110 W (50/60 Hz), 240 V 120 W (50/60 Hz)	
Nozzle/Heater		N61 Series - Separate Type	N60 Series - Separate Type	N61 Series - Separate Type	
Nozzle	For flat terminals	●	●	●	
	For narrow spaces	●	—	●	
	For micro land diameters	●	—	●	
Compatible Handpiece	Soldering Iron N ₂ Soldering Iron	 	 	 	
	Micro Soldering Iron N ₂ Micro Soldering Iron	 	 	 	
	Heavy-Duty Soldering Iron N ₂ Heavy-Duty Soldering Iron	 	 	 	
	Solder Feed Compatible				
	Tweezers				
	Micro Tweezers				
	Hot Air				
	Desoldering tool	 Std.	 Std.	 Std.	
Specifications (Desoldering Tool)	Station	Output	AC 24 V	AC 29 V	—
		Vacuum Generation Method	Double-Cylinder Diaphragm Pump	Double-Cylinder Diaphragm Pump	Diaphragm Pump
		Ultimate Vacuum Pressure	80 kPa (600 mmHg)	80 kPa (600mmHg)	81 kPa (610mmHg)
		Suction Flow Rate	15 L/min.	15 L/min.	11 L/min.
		Supply air pressure	—	—	—
		Compressed Air Consumption	—	—	—
		Dimensions	165(W) × 137(H) × 244(D) mm	166(W) × 137(H) × 264(D) mm	—
	Handpiece	Weight	4.8 kg	5.7 kg	—
		Power consumption	140 W	300 W	—
		Heater	Composite heater	Composite heater	Composite heater
		Total length	168 mm	183 mm	215(W) × 226(H) mm
		Weight	190 g	270 g	520 g
		Nozzle included	N61-05	N60-02	N61-08

*Total length and weight include the nozzle but exclude the cord and hose.

Rework Station

FX-973	FR-701	FR-702
		
P.55	P.56	P.56
		
50–450°C	50–480°C	50–480°C
3	2	4
400 W	260 W	1030 W (100 V), 1170 W (110 V), 1430 W (220 V), 1530 W (230 V), 1630 W (240 V)
N61 Series - Separate Type	N61 Series - Separate Type	N61 Series - Separate Type
●	●	●
●	●	●
●	●	●
		
		
		
		
		
		
		
		
AC 24 V	AC 24 V	AC 24 V
Double-Cylinder Diaphragm Pump	Double-Cylinder Diaphragm Pump	Double-Cylinder Diaphragm Pump
80 kPa (600 mmHg)	80 kPa (600mmHg)	80 kPa (600mmHg)
15 L/min.	15 L/min.	15 L/min.
—	—	—
—	—	—
158(W) × 135(H) × 254(D) mm	190(W) × 140(H) × 220(D) mm	370(W) × 150(H) × 220(D) mm
5.3 kg	6.2 kg	9 kg
140 W	140 W	140 W
Composite heater	Composite heater	Composite heater
168 mm	168 mm	168 mm
190 g	190 g	190 g
N61-05	N61-05	N61-05

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

FR-410

140 W High-Power Desoldering Tool



140 W High-Power

The upgraded 140 W heater enables stress-free desoldering of multilayer PWBs and reduces work time.

Packing List

- Station ● Handpiece (FR-4103) ● Iron Holder (with Cleaning Wire) ● Power Cord ● Tool Box

Tool Box Contents

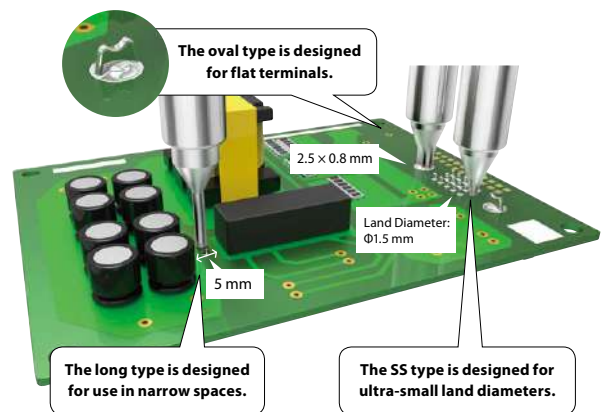
- Cleaning Pin for Nozzle Φ 1 mm ● Cleaning Pin for heater
- Cleaning Drill for Nozzle Φ 1 mm ● Nozzle Wrench ● Filter: 2 pcs
- Ceramic Paper Filter L: 4 pcs

- Instruction Manual

Nozzle included N61-05 N61 Series Nozzle List >P.65

Effective Desoldering on Micro Lands (Pads) and in Tight Spaces

Lineup of nozzles for micro lands (pads) and tight spaces. Enables desoldering tasks that were previously difficult.



FR-400

300 W Ultra High-Power Desoldering Tool

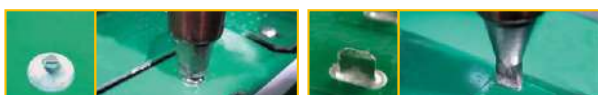


GOOD DESIGN



Nozzle Lineup for Large Components applications

A lineup of nozzles is available for components with large lead diameters of 2 mm or more, such as power modules, as well as for flat terminals.



Example Use of Nozzle Part No. N60-06

Example Use of Nozzle Part No. N60-09

Packing List

- Station ● Handpiece (FR-4003) ● Iron Holder (with Cleaning Wire) ● Power Cord ● Tool Box

Tool Box Contents

- Cleaning Pin for Nozzle Φ 1 mm ● Cleaning Pin for heater
- Cleaning Drill for Nozzle Φ 1 mm ● Nozzle Wrench ● Filter: 2 pcs
- Ceramic Paper Filter for tips: 4 pcs

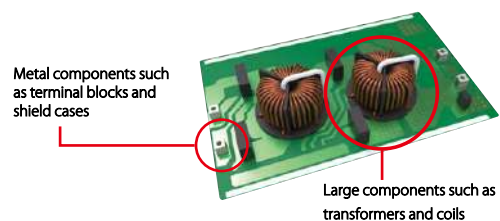
- Instruction Manual

Nozzle included N60-02 N60 Series Nozzle List >P.65

Incredible High-Power

The FR-400, equipped with an ultra-high-power 300 W heater, enables desoldering on heavy-duty and high heat dissipation PWBs – which until now desoldering tools alone were unable to melt solder.

It is effective for removing components from high-current PWBs, such as automotive inverter PWBs and PWBs for solar power conditioners.



FR-301

Portable Desoldering Tool for On-Site Repairs



Simple Iron Holder and Carrying Case Included



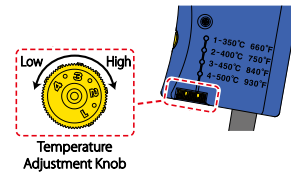
Packing List

- Unit (with Power Cord) ● Pre-Filter ● Ceramic Paper Filter L: 2 pcs
- Nozzle Wrench ● Simple Iron Holder ● Cleaning Pin for heating core
- Cleaning Pin for Nozzle Φ 1 mm ● Carrying Case ● Instruction Manual

Nozzle included N61-08 N61 Series Nozzle List >P.65

Easy Temperature Setting with Dial Control

Equipped with high-precision temperature control and a grip-mounted dial for easy temperature setting.



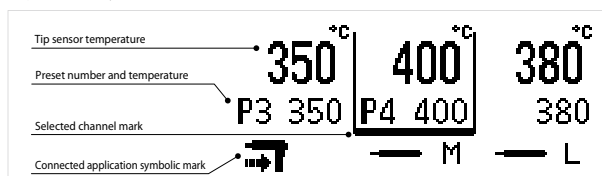
FX-973

3-port Rework Station



High Visible Display

It shows information such as set temperature, tip's sensor temperature, and preset setting, clearly and widely. The viewing angle is wide, and the high-brightness display provides high visibility.



Packing List

- Station ● Handpiece (FX-9701)
- Iron holder (FH-215, with cleaning sponge and wire)
- Handpiece (FR-4103) ● Iron holder (FH-410, with cleaning wire)
- Color band [green, qty 2] ● Color band [orange, qty 2] ● USB cable ● Power cord

Tool Box Contents

- Cleaning pin for 1.0 mm dia. ● Cleaning pin for heating element
- Cleaning drill for 1.0 mm dia. ● Nozzle wrench ● Filter [qty2]
- Ceramic paper filter [qty 4]

Instruction Manual

Tip not included T39 Series Tip >P.37

Nozzle included N61-05 N61 Series Nozzle List >P.65

9 different handpieces can be used



Priority Channel

A built-in sensor detects the handpiece in use and automatically switches channels. The unused handpiece stands by at the set temperature. And the operation delay does not occur after channel switching achieving maximum power with minimum size of station.



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

FR-701

2-Port Rework Station



OFF
Desoldering Tool
 SLEEP
Desoldering Tool

 P1 P2 P3
PRESET
 QUICK
 N2

 ESD SAFE
 RoHS
 for LEAD FREE

Std. FX-8801 >P.30
 Opt. FX-8805 >P.30
 Opt. FX-8802 >P.30
 Opt. FX-8803 >P.31
 Opt. 373 >P.40
 Std. FR-4103 >P.57
 Opt. FX-8804 >P.57



Packing List

- Station
- Handpiece (FX-8801)
- Handpiece (FR-4103)
- Iron Holder (FH-800, with Cleaning Sponge and Cleaning Wire) Blue & Yellow
- Iron Holder (FH-410, with Cleaning Wire)
- Power Cord
- Tool Box
- Instruction Manual

Tool Box Contents

- Cleaning Pin for Nozzle Φ 1 mm
- Cleaning Pin for heater
- Cleaning Drill for Nozzle Φ 1 mm
- Nozzle Wrench
- Filter: 2 pcs
- Ceramic Paper Filter L: 4 pcs

Tip included T18-B

T18 Series Tip List >P.32

Nozzle included N61-05

N61 Series Nozzle List >P.65

FR-702

4-Port Rework Station



OFF
Desoldering Tool / Hot Air
 SLEEP
Desoldering Tool / Hot Air

 P1 P2 P3
PRESET
 QUICK
 N2

 ESD SAFE
 RoHS
 for LEAD FREE

Simplified
 Std. FX-8801 >P.30
 Opt. FX-8805 >P.30
 Opt. FX-8802 >P.30
 Opt. FX-8803 >P.31
 Opt. 373 >P.40
 Std. FR-4103 >P.57
 Opt. FX-8804 >P.57
 Std. >P.57



Packing List

- Station (with Hot Air Handpiece)
- Handpiece (FX-8801, only one iron included)
- Handpiece (FR-4103)
- Iron Holder (FH-800, with Cleaning Sponge and Cleaning Wire) Blue & Yellow
- Iron Holder (FH-410, with Cleaning Wire)
- Iron Holder
- Color Band: 2 pcs
- Heat Resistant Pad
- Φ 3 mm Pad: 2 pcs
- Φ 5 mm Pad: 2 pcs
- Φ 7.6 mm Pad: 2 pcs
- Vacuum Pipe Adjustment Knob
- Power Cord
- Tool Box
- Instruction Manual

Tool Box Contents

- Cleaning Pin for Nozzle Φ 1 mm
- Cleaning Pin for heater
- Cleaning Drill for Nozzle Φ 1 mm
- Nozzle Wrench
- Filter: 2 pcs
- Ceramic Paper Filter L: 4 pcs

Nozzle included N51-02

N51-02 Hot-Air Nozzle List >P.63

Tip included T18-B

T18 Series Tip List >P.32

Nozzle included N61-05


N61 Series Nozzle List >P.65

Tweezers Application List

Model No.	
Appearance	
Tip	
Supported Component Sizes	
Tip shape	
Specifications	Temperature Range
	Power Consumption
	Total length
	Weight
	Standard Tip
Compatible Stations	



Hot Tweezers

FX-9705	FX-8804
	
Tip not included T51 Series > P.67	Tip included FX-8804 Tip List > P.62
From Chip Components to SOP Width 16 mm	From Chip Components to SOP Width 25 mm
14 tip shapes	15 tip shapes
50–450°C	200–400°C
190 W	65 W
146 mm	186 mm
55 g	93 g
—	A1378 (2L Type)
FX-972 > P.25 FX-973 > P.55	FX-888DX > P.28 FX-889 > P.28 FR-701 > P.56 FR-702 > P.56

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station



Hot Air

Desoldering Wire

Model No.	
Appearance	
Tip	
Supported Component Sizes	
Tip shape	
Specifications	Temperature Range
	Power Consumption
	Total length
	Weight
Compatible Stations	











































Micro Hot Tweezers



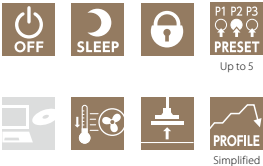

















FX-9706	FX-1003
	
Tip not included T52 Series > P.67	Tip not included T38 Series > P.66
Chip Components up to 2 mm wide	Chip Components up to 2 mm wide
7 tip shapes	7 tip shapes
50–450°C	350°C/400°C
140 W	—
130 mm	130 mm
33 g	32 g
FX-972 > P.25 FX-973 > P.55	FX-100 > P.26

*Total length and weight include the tip but exclude the cord.

Hot Air Selection Guide

		FR-810B	FR-811	
Model No.				
Page		P.60	P.60	
Features		    Up to 5     Simplified	    Up to 5    	
Pickup Indicator		●	●	
Linkage with Preheater/Bottom Heater		—	● (Dedicated Bottom Heater)	
Timer Function		●	●	
T/C Connector		—	●	
USB Port for External Device		—	●	
Temperature Setting Range		50–600°C	50–600°C	
Number of Ports		1	1	
Power Consumption		700 W (100 V), 840 W (110 V), 820 W (120 V), 1100 W (220 V), 1200 W (230 V), 1300 W (240 V)	700 W (100 V), 840 W (110 V), 820 W (120 V), 1100 W (220 V), 1200 W (230 V), 1300 W (240 V)	
Airflow		1–9 (5–115 L/min.)	001–100% (5–115 L/min.)	
Compatible Handpieces	Soldering Iron N ₂ Soldering Iron	 	 	
	Micro Soldering Iron N ₂ Micro Soldering Iron	 	 	
	Heavy-Duty Soldering Iron N ₂ Heavy-Duty Soldering Iron	 	 	
	Solder Feed Compatible			
	Tweezers			
	Micro Tweezers			
	Hot Air	 Std.	 Std.	
	Desoldering tool			
Specifications (Hot Air)	Station	Power Consumption	30 W	30 W
		Dimensions	160(W) × 145(H) × 220(D) mm	160(W) × 145(H) × 220(D) mm
		Weight	1.5 kg	1.5 kg
	Handpiece	Power Consumption	670 W	670 W
		Total length	250 mm	250 mm
		Weight	180 g	180 g
Nozzle included		N51-02	Nozzle not included	

*Total length and weight include the nozzle but exclude the cord and hose.

FR-702	FR-850
	
(Applicable to Hot Air Function only)	
P.56	P.60
	
●	—
—	—
●	●
—	—
—	—
50–600°C *When Using Hot Air	50–600°C
4	1
1530 W	112 W
1–9 (5–115 L/min.)	1.5–5 L/min.
	
	
	
	
	
	
	
	
30 W	7 W
370(W) × 150(H) × 220(D) mm	98(W) × 140(H) × 165(D) mm
9 kg	1.8 kg
670 W	105 W
250 mm	227 mm
180 g	70 g
N51-02	Nozzle not included

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

FR-810B

High-Power, High-Airflow Hot Air Rework Station



Packing List

- Station (with Handpiece) ● Nozzle ● Handpiece Holder ● Power Cord
- Vacuum pipe control Knob with screw ● $\Phi 3$ mm Pad: 2 pcs ● $\Phi 5$ mm Pad: 2 pcs
- $\Phi 7.6$ mm Pad: 2 pcs ● Heat Resistant Pad ● Instruction Manual

Nozzle included N51-02 Hot-Air Nozzle List >P.63

High Power and High Airflow Improve Rework Efficiency and Safety

High power and high airflow enable rapid heating, improving work efficiency. In addition, reduced thermal impact on components and PWBs enhances safety.

FR-811

Hot Air Rework Station with High Power, High Airflow, and 6-Zone Temperature Profile Capability



Packing List

- Station (with Handpiece) ● USB Cable: 1 m ● Grip Stand Assembly
- Thermocouple: 0.2 mm K-Type ● Power Cord ● Vacuum Pipe Adjustment Knob
- $\Phi 3$ mm Pad: 2 pcs ● $\Phi 5$ mm Pad: 2 pcs ● $\Phi 7.6$ mm Pad: 2 pcs ● Heat Resistant Pad
- Instruction Manual

Nozzle not included Hot-Air Nozzle List >P.63

High Power and High Airflow Improve Rework Efficiency and Safety

Advanced Profile Capability

Detailed 6-zone settings allow for precise control of the temperature ramp-up.

Various operating parameters can be configured by connecting the station to a PC

FR-850

Micro Hot Air with a wide temperature range and fine airflow control



Packing List

- Station, Handpiece (FR-8501) ● Iron holder (FH-225) ● USB cable ● Power cord
- Instruction manual

Nozzle not included NA01 Series Nozzle List >P.62

Highly Effective for Fine Components on High Thermal Mass PWBs such as Multilayer Boards



Six Nozzle Types for a Wide Range of Applications

Hot Air ON/OFF at Your Finger tips

Useful and Practical Features for Hot Air

Safe and Precise Rework for Components and PWBs

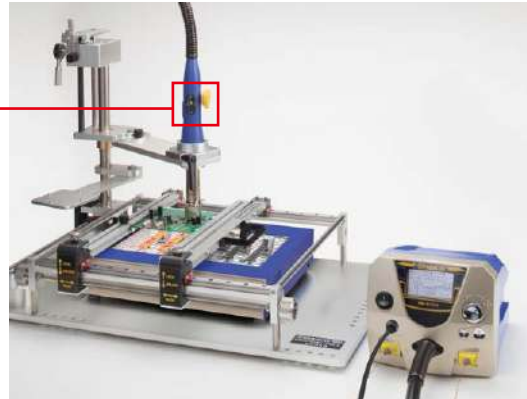


Vacuum Pickup

The nozzle and vacuum pipe are positioned over the target component. Upon solder melting, the component is automatically lifted via suction. An indicator allows visual confirmation of process completion, ensuring safe and reliable component removal.



Indicator



Advanced Heating Control for Optimal Rework

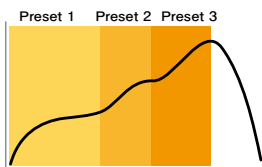


Temperature Profile Creation

Two profile modes are available:

Simplified Profile

Configure up to 5 steps for temperature and time using preset timer functions.

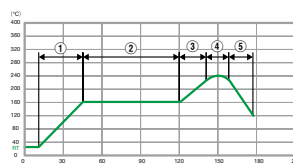


	Temperature(°C)	Time (sec)	Airflow
Preset 1	250	100	6
Preset 2	300	40	6
Preset 3	350	50	6
Preset 4	100	000	6
Preset 5	100	000	6

*Presets 4 and 5 are skipped because the time is set to '000'.

Advanced Profile

Supports up to 6 steps including temperature, airflow, time, and ramp-up rate. Heating zones are individually adjustable, including a bottom heater zone, enabling precise thermal control tailored to each application.



① Temperature Ramp-Up ② Preheating
③ Temperature Ramp-Up ④ Main Heating
⑤ Cooling

Zone	Type	Temp	Time	Air	Flow	Value
E1 ZONE1	CA	120	10	10	10	0:00:00-000
E2 ZONE2	CA	200	10	10	10	0:00:00-000
E3 ZONE3	CA	250	10	10	10	0:00:00-000
E4 ZONE4	CA	350	10	10	10	0:00:00-000
E5 ZONE5	CA	450	10	10	10	0:00:00-000
E6 ZONE6	CA	450	10	10	10	0:00:00-000

This functionality ensures safe, high-quality rework by delivering optimal heating conditions for various components and PWBs.

Automatic Cooling Function



Automatic Cooling

After high-temperature operations, the system initiates a controlled cool-down period. This process helps reduce thermal stress on the heater.

FX-8804 Tip

Applicable Handpiece



FX-8804

> P.57

Unit: mm

For Tip

A1577 	A1379 	A1378 	A1388 	A1389
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For SOP

A1576 	A1390 	A1391 	A1380 	A1381
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A1382 	A1392 	A1383 	A1384 	A1385
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NA01 Series Nozzle

Applicable Handpiece



FR-850

> P.60

Unit: mm

NA01-C10 	NA01-C20 	NA01-C30 	NA01-CB10 	NA01-CB20
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NA01-CB30

Hot-Air Nozzle

Applicable Products



FR-810B

FR-811

FR-702

> P.60

> P.60

> P.56

Unit: mm

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

N51 Series

For Single

Nozzles marked with an asterisk cannot be used with the vacuum function.

N51-01 ※ 	N51-02 	N51-03 	N51-04 	N51-05 ※
---------------------	-------------------	-------------------	-------------------	---------------------

For BGA

N51-10 	N51-11 	N51-12 	N51-13 	N51-14
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N51-15 	N51-16 	N51-17 	N51-18 	N51-19
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N51-20 	N51-21 	N51-22 	N51-23 	N51-24
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N51-25 	N51-26
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Value Nozzle Set

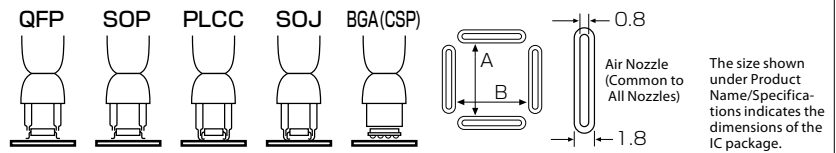


Set of 4 single nozzles, excluding N51-02

Part No. **N51-50**

Conventional Nozzle

A conventional nozzle can be mounted by aligning its screw-fastening section with the raised portion of the heater pipe.



For QFP

A1125B 	A1262B 	A1126B 	A1128B 	A1127B
-------------------	-------------------	-------------------	-------------------	-------------------

A1261B 	A1129B 	A1263B 	A1265B 	A1203B
-------------------	-------------------	-------------------	-------------------	-------------------

A1264B 	A1215B 	A1180B 	A1181B 	A1182B
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For SOP/TSOL Nozzles marked with an asterisk cannot be used with the vacuum function.

A1131 * 	A1132 * 	A1133 * 	A1134 * 	A1258B
--------------------	--------------------	--------------------	--------------------	-------------------

A1260B 	A1257B 	A1259B 	A1185B 	A1186B
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For PLCC

A1187B 	A1188B 	A1140B 	A1141B 	A1139B
-------------------	-------------------	-------------------	-------------------	-------------------

A1135B 	A1136B 	A1137B 	A1138B 	A1189B
-------------------	-------------------	-------------------	-------------------	-------------------

For SOJ Nozzles marked with an asterisk cannot be used with the vacuum function.

A1214B 	A1183 * 	A1184B
-------------------	--------------------	-------------------

For BGA

A1470 	A1471
------------------	------------------

A1472 	A1473 	A1474 	A1475 	A1476
------------------	------------------	------------------	------------------	------------------

For Single Nozzles marked with an asterisk cannot be used with the vacuum function.

A1477 	A1478 	A1124B * Inner Diameter $\varnothing 2.5$	A1130 * Inner Diameter $\varnothing 4.4$	A1142B *
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For SIP Nozzles marked with an asterisk cannot be used with the vacuum function.

A1190 * Inner Diameter $\varnothing 2.5$	A1325 * Nozzle width adjustable in 5-10 mm increments Simple slide mechanism: loosen the screw, set to the desired position, and tighten again. Front View of Nozzle Inner Diameter $\varnothing 1.5$	A1191 * 	A1192 *
--	--	--------------------	--------------------

Custom Nozzle Orders

When ordering custom nozzles, provide a manufacturer-issued IC dimensional drawing (or a copy), or send the actual IC.

N60 Series Nozzle

Applicable Products



FR-400

>P.54

Unit: mm

<p>N60-01</p>	<p>N60-02</p>	<p>N60-03</p>	<p>N60-04</p>	<p>N60-05</p>
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<p>N60-06</p>	<p>N60-07</p>	<p>N60-08</p>	<p>N60-09</p>
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Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

N61 Series Nozzle

Applicable Products



FR-410

FR-301

FX-973

FR-701

FR-702

>P.54

>P.55

>P.55

>P.56

>P.56

Unit: mm

<p>SS Type</p>			<p>S Type</p>	
<p>N61-01</p>	<p>N61-02</p>	<p>N61-03</p>	<p>N61-04</p>	<p>N61-05</p>

<p>Standard Type</p>				
<p>N61-06</p>	<p>N61-07</p>	<p>N61-08</p>	<p>N61-09</p>	<p>N61-10</p>

<p>Long Type</p>				<p>Oval Type</p>
<p>N61-11</p>	<p>N61-12</p>	<p>N61-13</p>	<p>N61-14</p>	<p>N61-15</p>

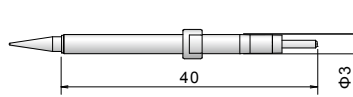
<p>N61-16</p>



T38 Series Tip

Unit: mm

T38-02 Series 400°C
T38-03 Series 350°C



For Tip

<p>T38-02I T38-03I</p>	<p>T38-02IS T38-03IS</p>	<p>T38-02J T38-03J</p>	<p>T38-02JS T38-03JS</p>	<p>T38-02K T38-03K</p>
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<p>T38-02L1 T38-03L1</p>	<p>T38-02L2 T38-03L2</p>
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T51 Series Tip

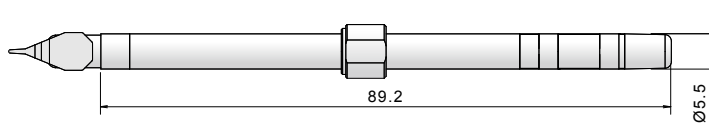
Applicable Handpiece



FX-9705

> P.57

Unit: mm



For Tip

T51-C05 	T51-I05 	T51-L1 	T51-L2 	T51-L3
--------------------	--------------------	-------------------	-------------------	-------------------

For SOP

T51-LA3 	T51-L6 	T51-L8 	T51-L10 	T51-L13
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T51-L16 	T51-LA6 	T51-LA8 	T51-LA10
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T52 Series Tip

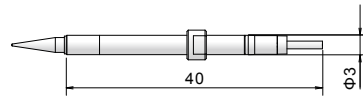
Applicable Handpiece



FX-9706

> P.57

Unit: mm



For Tip

T52-I005 	T52-I015 	T52-L1 	T52-L2 	T52-J005
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T52-J015 	T52-K
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Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Desoldering tool

Rework Station

Hot Air

Desoldering Wire

WICK

Desoldering Wire for Easy Solder Removal



RoHS

FR-551

Halogen-Free Flux Used

Characteristics of Flux

Flux Type	No Clean Type
Flux Classification (IPC J-STD-004C)	ROLO
Halide Content [mass%](JIS Z 3197)	0.00%
Copper Corrosion Test (JIS Z 3197)	PASS
Corrosion Test with Copper Mirror (IPC-TM-650)	No breakthrough
Insulation Resistance Test (JIS Z 3197)	1×10 ⁸ Ω or more
Voltage Withstand Humidity Test (JIS Z 3197)	No Ion Migration

Part No.	Width (mm)					Length (m)		Case ESD SAFE Specifications
	1.5	2.0	2.5	3.0	3.5	1.5	25	
FR551-1515-E	●					●		●
FR551-2015-E		●				●		●
FR551-2515-E			●			●		●
FR551-3015-E				●		●		●
FR551-5015-E					●	●		●
FR551-20250-E		●					●	—
FR551-25250-E			●				●	—
FR551-30250-E				●			●	—



SPPON / DS01

Simple Desoldering Tool



RoHS



18
12cm³(12cc)

18G
12 cm³ (12 cc)
with guard

20
20cm³(20cc)

20G
20cm³(20cc)
with guard

DS01P
28cm³(28cc)




■ Sucks Up Melted Solder

■ Adopted a Cleaning Shaft to Prevent Nozzle Clogging

Prevents solder clogging for smooth operation.



Preheater Selection Guide

	Hot Air FR-830	Infrared FR-870B	Infrared FR-872
Model No.			
Page	P.69	P.70	P.70
Power Consumption	210 W (100 V) 240 W (110 V) 470 W (120 V) 230 W (220 V) 250 W (230 V) 270 W (240 V)	500 W (100 V) 610 W (110 V) 730 W (120 V) 1130 W (220 V) 1240 W (230 V)	1050 W (100 V) 1250 W (110 V) 1440 W (120 V) 1150 W (220 V) 1250 W (230 V)
Temperature Setting Range	150 – 300°C	50 – 200°C	50 – 200°C
Output Setting Range	—	0 – 100%	0 – 100%
Airflow	0.15 m ³ /min.	—	—
Effective Heating Area	—	190(W) × 80(D) mm	224(W) × 266(D) mm
Heater Area Switching	—	2 Zones	4 Zones
Features	T/C Connector	●	●
	Heating Profile Creation	—	● (3 steps)
	Linkage with Hot Air	—	● Can Be Linked with FM-2029 (FM-206)
Specifications	Dimensions	140(W) × 75(H) × 185(D) mm	360(W) × 97(H) × 535(D) mm
	Weight	0.75 kg	3.2 kg

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

FR-830

Hot Air Preheater Optimal for Localized Heating



ESD SAFE RoHS for LEAD FREE

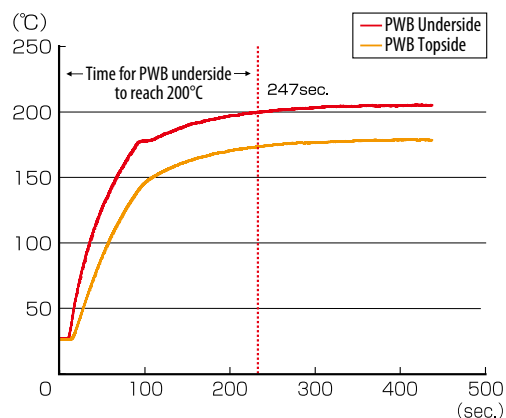


Packing List

● Unit ● Power Cord ● Instruction Manual

Optimal for Preheating Multilayer PWBs

This heater effectively preheats PWBs in a short time.



[Measurement Conditions]

- Hot air: 300°C
- Distance from nozzle to PWB: 10 mm
- Temperature measured with sensors mounted on both the PWB topside and underside

FR-870B / FR-872

Infrared Preheater



FR-870B

FR-872

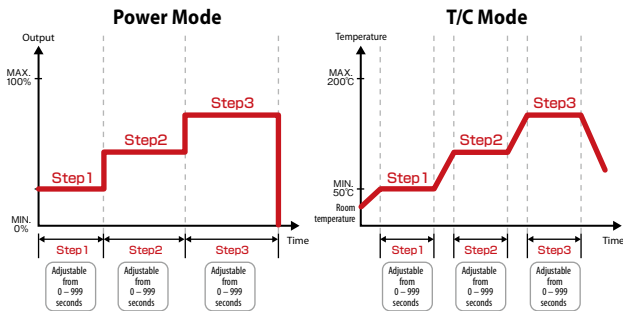


FR-870B

FR-872

Equipped with Auto Mode, allowing for creation of three-step heating profiles.

Three-step heating profiles can be created in both Power Mode and T/C mode. Each mode supports up to 10 profile settings, enabling customization according to the task or workpiece.



Packing List

- Unit ● Thermocouple: Type K ● Heater(Spare) ● Power cord
- Instruction Manual

Rapid Heating with Infrared Carbon Heater

The infrared carbon heater enables fast and uniform heating across the entire PWB. The heating area can be divided to match the PWB zone or work area. (FR-870B: 2-zone selectable/FR-872: 4-zone selectable)

Includes a convenient PWB holder for secure positioning

In T/C mode, temperature control is based on the measured workpiece temperature

In T/C mode, the included thermocouple is attached to the workpiece, and heating is controlled so that the temperature at the measurement point reaches the set temperature.



The sensor (thermocouple tip) is attached to the PWB.



The temperature is regulated to match the preset value at the sensor location.

Useful and Practical Features for Soldering Pots

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Different Pots for Different Applications

HAKKO's solder pots can be easily replaced by simply loosening the screws on the unit. Flexible use is possible by using different solder compositions or pot sizes depending on the task. When using lead-free solder, use a specially coated solder pot with enhanced durability.

How to Replace the Pot



Loosen the 2 screws on both sides using the included hexagon wrench, then remove the pot.

Pot Size

For FX-305

50 × 50 Square Pot
Options



75 × 75 Square Pot
Included as Standard with the FX-305



100 × 100 Square Pot
Options



Unit: mm



The 50 × 50 square pot is best-suited if your work mainly involves small components, as it heats up to solder-melting temperature quickly.



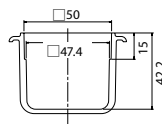
Supports a variety of workpieces by using the highly versatile 75 × 75 square pot as standard



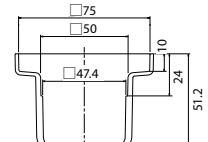
New 100 mm Square Pot Now Available - Compatible with Large Components

For FX-301B/FX-300

50 × 50 Square Pot
Included as Standard



75 × 75 Square Pot
Options



Unit: mm

For Easier and More Accurate Daily Inspections

Automatic Temperature Correction








When temperature measurement results are transmitted via infrared from the thermometer (FG-100B/FG-101B), temperature correction is performed automatically.

Zero Human Error Management



The pot temperature is automatically calibrated to record the results of temperature measurement/calibration/correction on a PC.

Soldering Pot Selection Guide

		Soldering Pot		
		FX-305	FX-301B	FX-300
Model No.				
	Page	P.73	P.73	P.73
	Included Pot	75 x 75 Square Specially Coated Solder Pot	50 x 50 Square Specially Coated Solder Pot	50 x 50 Square Stainless-Steel Pot
	Compatible Pots	50 x 50 Square Specially Coated Solder Pot 100 x 100 Square Specially Coated Solder Pot	75 x 75 Square Specially Coated Solder Pot 50 x 50 Square Stainless-Steel Pot 75 x 75 Square Stainless-Steel Pot	75 x 75 Square Stainless-Steel Pot 50 x 50 Square Specially Coated Solder Pot 75 x 75 Square Specially Coated Solder Pot
	Features			
Setting the Solder Composition		5 types (Sn-Pb / Sn-Cu / Sn-Ag-Cu / Sn / Sn-Bi)	4 types (Sn-Pb / Sn-Cu / Sn-Ag-Cu / Sn)	—
Specifications	Power Consumption	550 W (100 V), 680 W (110 V), 575 W (120 V), 580 W (220 V), 640 W (230 V), 700 W (240 V)	200 W (100 V), 260 W (110 V), 290 W (120 V), 240 W (220 V), 260 W (230 V), 280 W (240 V)	195 W (100 V), 220 W (110 V), 200 W (120 V), 190 W (220 V), 205 W (230 V), 215 W (240 V)
	Temperature Setting Range	50 x 50 Square: 50–530°C 75 x 75 Square: 50–500°C 100 x 100 Square: 50–450°C	50 x 50 Square: 200–450°C 75 x 75 Square: 200–380°C	50 x 50 Square: 200–450°C 75 x 75 Square: 200–380°C
	Molten Solder Capacity	50 x 50 Square: 0.85 kg 75 x 75 Square: 1.9 kg 100 x 100 Square: 2.75 kg	50 x 50 Square: 0.85 kg 75 x 75 Square: 1.2 kg	50 x 50 Square: 0.85kg 75 x 75 Square: 1.2kg
	Dimensions	Unit Only: 162 (W) x 100 (H) x 239 (L) mm With Solder Pot Cover Attached: 162 (W) x 123 (H) x 239 (D) mm	143 (W) x 100 (H) x 220 (D) mm	143 (W) x 100 (H) x 220 (D) mm
	Weight	2.5 kg	1.7 kg	1.7 kg

FX-305

Max. Temperature 530°C High-Power Soldering Pot



Standard with 75 × 75 square specially coated solder pot

The standard pot can be replaced with an optional 50 × 50 or 100 × 100 square pots, depending on the application.



Up to 5 solder compositions can be set as parameters

Setting the solder composition enables quick solder melting.

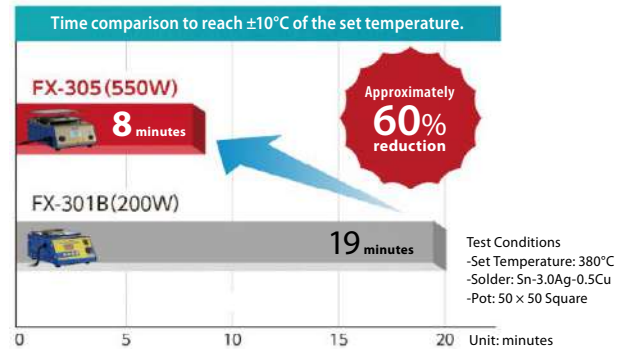
Packing List

- Unit ● 75 × 75 Square Specially Coated Solder Pot ● Solder Waste Collector
- Solder Pot Cover ● Spatula ● Hexagon Wrench (2 mm across flats) ● USB Cable
- Power Cord ● Instruction Manual

*Solder sold separately.

550 W high-power heater enables quick startup and high temperature up to 530°C.

Compared to the previous FX-301B model (200 W), the time required to melt solder in the pot is reduced by approximately 60%. This reduction prevents temperature drops in the pot during continuous operation.



FX-301B

Digital Display Soldering Pot



Packing List

- Unit (with Power Cord) ● 50 × 50 Square Specially Coated Solder ● Spatula
- Hexagon Wrench (2.5 mm across flats) ● Solder Waste Collector
- Instruction Manual

*Solder sold separately.

Standard with 50 × 50 square specially coated solder pot

The standard pot can be replaced with an optional 75 × 75 square pot, depending on the application.

Up to 4 solder compositions can be set as parameters

FX-300

Analog Type Soldering Pot



Packing List

- Unit (with Power Cord) ● 50 × 50 Square Stainless-Steel Pot ● Spatula
- Hexagon Wrench (2.5 mm across flats) ● Solder Waste Collector
- Instruction Manual

*Solder sold separately.

Standard with 50 × 50 square stainless-steel pot

The standard pot can be replaced with an optional 75 × 75 square stainless-steel pot or durable specially coated solder pot, depending on the application.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

FG-100B

Thermometer with Infrared Communication



Measurement with High-Precision, Long-Life Ultra-Fine Sensor

The ultra-fine sensor with excellent temperature responsiveness enables quick and highly precise measurement of tip temperature.



AS5000

Packing List

- Unit (with Trial Battery)
- Sensor (with certificate of conformance)
- Instruction Manual

Fixed display of measurement result

AUTO HOLD Function

When the tip temperature stabilizes, the measurement automatically stops and the result is held on the display. This function minimizes measurement variation caused by individual operators.

MAX HOLD Function

The maximum tip temperature measured is displayed. Used for Quality Control of Components and PWBs.

Infrared communication eliminates operator errors in temperature control.

Measurement results can be transmitted via infrared to soldering stations or soldering pots equipped with an infrared receiving function.

FG-101B

Soldering Iron Tester with Infrared Communication



Tip temperature, tip-to-ground potential difference, and tip-to-ground resistance can be measured.

A single button allows for switching between measurement modes, enabling simple and reliable measurements.



Packing List

- Unit (with Conductive Plate)
- Fuse
- Power Cord
- Conductive Wire
- Ground Clip
- Sensor (with certificate of conformance)
- Instruction Manual

Measurement with High-Precision, Long-Life Ultra-Fine Sensor

Fixed display of measurement result

AUTO HOLD Function

When the tip temperature stabilizes, the measurement automatically stops and the result is held on the display. This function minimizes measurement variation caused by individual operators.

MAX HOLD Function *Use only for temperature measurement

The maximum tip temperature measured is displayed. Used for Quality Control of Components and PWBs.

FG-102

Thermometer capable of storing measurement results in the unit



- Measurement with High-Precision, Long-Life Ultra-Fine Sensor
- Measurement Completion Notification and Pass/Fail Judgment

Measurement completion is indicated on the display. If an acceptable temperature range is registered in advance, the measured temperature will be automatically judged with a Pass/Fail judgment.

Packing List

- Unit (with Trial Battery)
- Barcode Reader
- Barcode Label (30 each for Soldering Iron ID and operator ID)
- USB Cable
- Sensor (with certificate of conformance)
- Instruction Manual

Capable of storing up to 300 measurement results in the unit

The unit can store up to 300 data entries. Stored data can be transferred to a PC via USB connection. Operator and equipment (soldering iron) information required for recorded data can be registered by scanning pre-registered IDs with a barcode reader. This streamlines the process and eliminates recording errors.



Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Thermometer Selection Guide

		FG-100B	FG-101B	FG-102
Model No.				
Features				
Measurement	Tip Temperature	●	●	●
	Tip-to-Ground Potential Difference	—	●	—
	Tip-to-Ground Potential Resistance	—	●	—
Power Supply		006P 9V battery (alkaline cell recommended)	AC 100V 50/60 Hz AC 100–240V (depending on local voltage standards)	AA battery (LR6 1.5V, alkaline cell recommended)
Power Consumption		—	3.2W (100V), 3.6W (100-110V), 3.2W (120V), 3.6W (220-240V)	—
Temperature Resolution		1°C	1°C	1°C
Temperature Measurement Range		0–700°C	0–700°C	0–700°C
Temperature accuracy Tolerance		±3°C (300–600°C), ±5°C (other than above)	±3°C (300–600°C), ±5°C (other than above)	±3°C (300–600°C), ±5°C (other than above)
Temperature Sensor		K (CA) Type Thermocouple	K (CA) Type Thermocouple	K (CA) Type Thermocouple
Operating Environment		Ambient Temperature/Humidity Range: 0-40°C, max. 80% RH (no condensation)		
Environmental Conditions		Applicable Pollution Degree: 2 (according to IEC/UL 61010-1)		
Dimensions		75(W) × 44(H) × 140(D) mm	211(W) × 53(H) × 126(D) mm	193(W) × 90(H) × 219(D) mm
Weight		125 g	0.95kg	0.93 kg

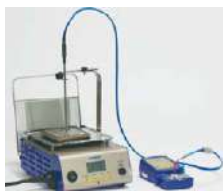
*The temperature sensor can only be used up to 500°C. Use a temperature probe when measuring temperatures above 500°C.

*The external dimensions exclude projections and the barcode reader. *The weight excludes batteries and the barcode reader.

Temperature probe (optional)

Enables temperature measurement of solder pots, hot air, and tips for Auto-Soldering where temperature cannot be measured directly.

For Solder Pot



Part No. **A1310**

For Hot Air





Part No. **C1541**

For Auto-Soldering



Part No. **CX1002**



	Air-Purifying Type	
	FA-430	FA-431
Model No.		
Page	P.77	P.77
Power Consumption	120 W	
Noise Level*1	50 dB(A) (MEDIUM mode)	
Suction Capacity*2	HIGH Mode	
	MEDIUM Mode	
	LOW Mode	
Filtering Efficiency*3	HIGH Mode	97% (≥0.3 μm)
	MEDIUM Mode	
	LOW Mode	
Static Pressure	1500 Pa	
Dimensions	330(W) × 366 (H) × 343(D) mm	
Weight*4	7.5 kg	7.2 kg
Duct	Sold separately	Sold separately

*1 Noise level is measured at 1 meter from the front of the unit in an anechoic room. *2 When using 2 ducts.
 *3 Initial value filtering efficiency (zero) by counting method for airborne dust on a single-layer filter. *4 The weight excludes the cord.

Duct for FA-430/FA-431

In addition to self-supporting nozzle-type ducts, a benchtop hood can also be connected.

Nozzle Type

For side suction.



Duct Set with Rectangular Nozzle

Part No. **C1571**

Duct length: Ø55mm×1.2m(ESD SAFE)

For top suction.



Duct Set with Round Nozzle

Part No. **C1572**

Duct length: Ø55mm×1.2m(ESD SAFE)

Benchtop Hood

Blocks the effects of air conditioning and other external airflow. For preventing fumes from escaping upward.




Benchtop Hood

Part No. **B2418**

*The following parts are also required when using a benchtop hood.

Part No.	Product Name
B2410	Duct (Ø75 mm × 2 m, non-self-supporting)
B2416	Duct Band (set of 2)
B3621	Adapter (for 3-inch connection)

	Desktop Type	
	FA-400	
Model No.		
Page	P.77	
Power Consumption	50 Hz: 15 W (100 V), 18 W (110 V), 19 W (220 V), 22 W (230 V), 24 W (240 V) 60 Hz: 13 W (100 V), 15 W (110 V), 19 W (120 V), 16 W (220 V), 18 W (230 V), 19 W (240 V)	
Noise Level*5	50 Hz: 48 dB 60 Hz: 51 dB	
Suction Capacity*6	Vertical 1 m ³ /min. (50 Hz) / 1.1 m ³ /min. (60 Hz) Horizontal 0.4 m ³ /min. (50 Hz) / 0.5 m ³ /min. (60 Hz)	
Air velocity	Vertical 1 m/sec. (50 Hz) / 1.1 m/sec. (60 Hz) Horizontal 2.6 m/sec. (50Hz) / 2.9 m/sec. (60Hz)	
Static Pressure	—	
Filter Size	130(W) × 130(H) × 10(D) mm	
Dimensions*7	166(W) × 212(H) × 113(D) mm	
Weight	0.91 kg	

*5 Noise level is measured at 1 meter from the front of the unit. *6 Suction capacity is measured when a filter installed.

*7 Dimensions exclude the cord.

FA-430

With HEPA Filter, Air-Purifying Fume Extractor



ESD SAFE RoHS



Packing List

● Main Unit ● Main Filter ● Pre-Filter: 10 pcs ● Cap ● Power Cord ● Instruction Manual

Duct set sold separately > P.76

99.97%* filtering efficiency with HEPA filter

Employing a HEPA filter used in cleanrooms, FA-430 achieves a high filtering efficiency of 99.97%.

*Initial value filtering efficiency by counting method for airborne dust on a single-layer filter.

Filter Replacement Notification Function

The main filter of the FA-430 provides high filtering efficiency, but its performance declines after it reaches a certain level of particle accumulation. The filter indicator (LED lamp) alerts the user when the filter needs to be replaced.

Powerful Suction and Quiet Design

A high-performance fan with 1,500 Pa of static pressure provides powerful suction that is less affected by the surrounding environment. Airflow is adjustable to 3 levels to suit your work environment.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

FA-431

Air-Purifying Fume Extractor



ESD SAFE RoHS



Packing List

● Main Unit ● Main Filter L ● Pre-Filter L: 10 pcs ● Cap ● Power Cord ● Remote Control ● Instruction Manual

Duct set sold separately > P.76

Cost-effective filter reduces running costs.

Cost-effective, long-life filters are used for both the pre-filter and main filter. This fume extractor lasts approximately 4 times longer than the FA-430 with a high-performance HEPA filter.

*Filter lifespan may vary depending on the working environment and various conditions.

Using a sub-filter extends the lifespan by approximately 10 times.

Also optimal for use as a fume extractor for Auto-soldering system.

By using an optional sub-filter to remove large particles that would quickly clog the pre-filter and main filter, these filters lifespans can be extended by approximately 10 times compared to the FA-430.

Equipped with a remote control for easy power ON/OFF

Even when the unit is placed under a workbench, you can turn it on and off using the remote control without having to bend down.

Air-Purifying Type

Desktop Type

FA-400

Desktop Type Fume Extractor



ESD SAFE RoHS



Packing List

● Unit (with Power Cord) ● Filter: 1 pc ● Instruction Manual

Can be used in both the vertical and horizontal positions

Vertical



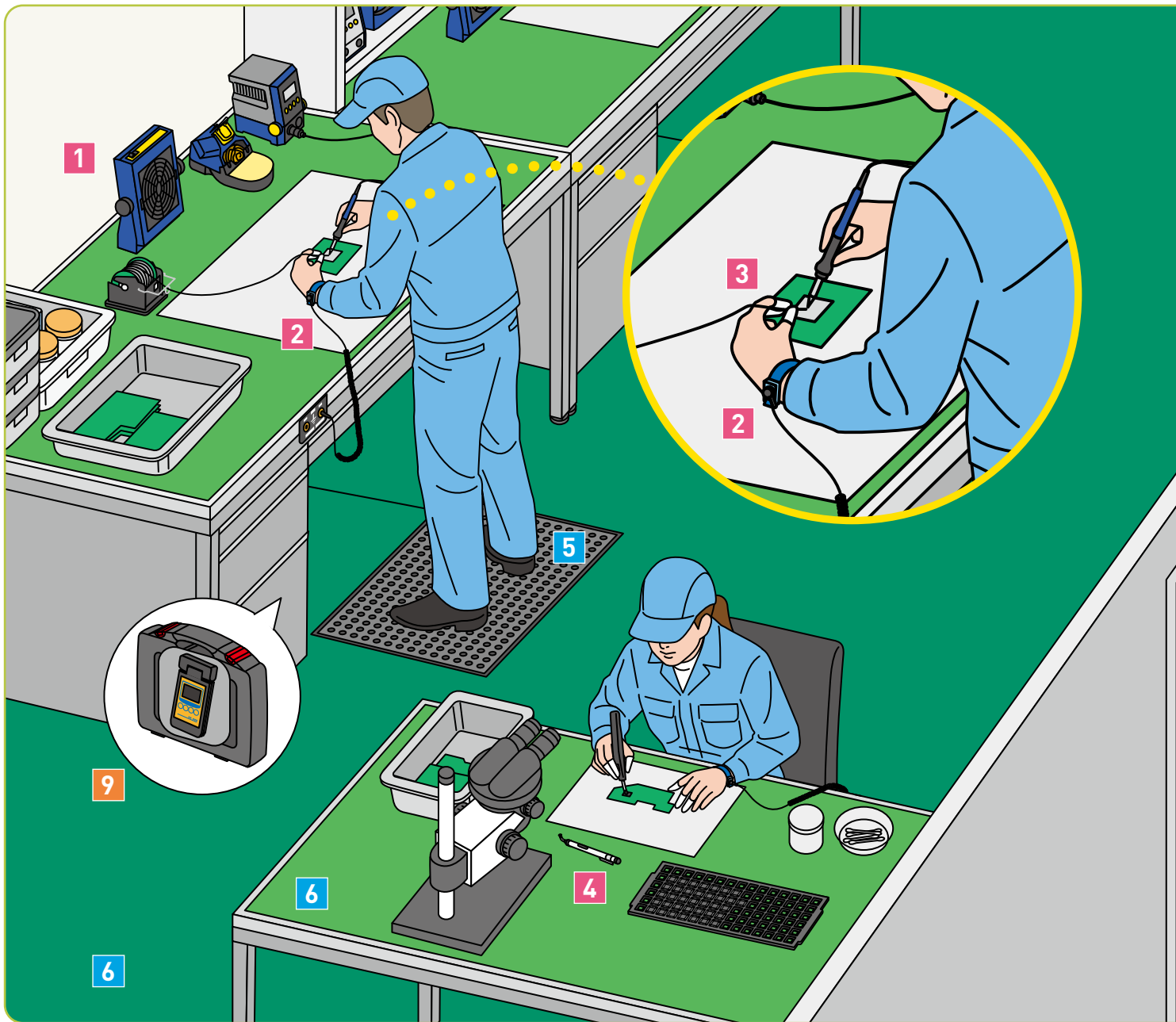
Capable of capturing a wide range of fumes.

Horizontal




Higher air velocity ensures powerful fume extraction at the soldering point.

Protect Your Electronics with ESD-Safe Solutions




ESD Protection For Operator

1 P.81
Static Eliminator
 FE-510




2 P.81
Anti-Static Wrist Strap



442B

3 P.83
Anti-Static Finger Stalls
 566



Satic-Dissipative Finger Stalls
 568



Finger Stalls for General Work
 567



4 P.82
Outlet-powered Pick-Up Tool
 392



Battery-Powered Vacuum Pick-Up Tool
 394



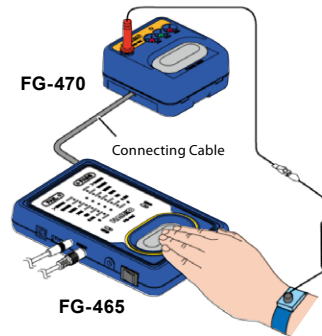
Portable Vacuum Pick-Up Tool
 393





Combo Tester

Connecting the Footwear Tester FG-465 and the Wrist Strap Tester FG-470 enables simultaneous testing of wrist straps and footwear as a combo tester.



Software

- **ID Management**
Input from a reader is also supported
- **Measurement Support**
The next operation is displayed on the screen.



- **Measurement Data Storage**
When the FG-470 is connected, the judgment results of FG-470 can also be stored

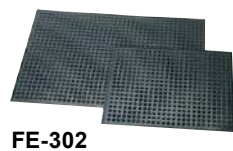


	A	B	C	D	E	F	G
1	Date:	Time	ID	Name	Comprehe	Left foot (Left foot
2		2020/7/1	8:47	400 Smith	PASS	10M-100N	PASS
3		2020/7/1	8:47	100 Jonson	PASS	10M-100N	PASS
4		2020/7/1	8:47	192 Williams	PASS	10M-100N	PASS
5		2020/7/1	8:48	202			

ESD Protection For Workplace

5 P.83

Anti-Static Mat
(for Standing Work)



FE-302

6 P.83

Anti-Static Mat
(for Floor/Table)

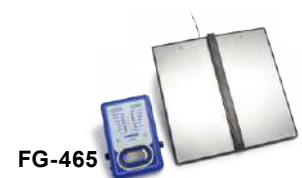


499

For Measuring Electrostatic Resistance and Managing Test Data

7 P.80

Footwear Tester



FG-465

8 P.80

Wrist Strap Tester



FG-470

9 P.80

Static Level Meter



FG-450

FG-465

Footwear Tester



RoHS



Packing List

- Unit ● Test Plate ● Mounting Base ● Knob: 2 pcs ● AC Adaptor ● USB Cable
- Wood Screw: 2 pcs ● Pan Head Screw: 2 pcs ● Instruction Manual

Instant Judgment of Antistatic and Conductive Footwear Based on Standards

Automatically Stores Measurement Data on a PC

Measurement data is automatically saved in CSV format by measurement date.
*FG-465 dedicated software is required.

FG-470

Wrist Strap Tester



RoHS



Packing List

- Unit (with Trial Battery) ● Ground Wire: 1 m ● Mounting Holder
- Wood Screw: 4 pcs ● Banana Plug ● Instruction Manual

Instant Judgment with just a Press of the Pad

- An improved, easy-to-press pad enables more reliable Pass/Fail judgment.
 - Banana jacks are positioned on the front panel for easy plug insertion and removal.
 - A highly visible LED lamp and an audible buzzer notify judgment results.
- *The buzzer sounds only for "PASS".

Can be used as a Combo Tester

Connecting to the FG-465 enables simultaneous testing of wrist straps and footwear, with FG-470 measurement results also saved as data.

FG-450

Static Level Meter



RoHS



Packing List

- Unit (with Carrying Case and Trial Battery) ● Strap
- Ion Balance Plate Part No. B3585 ● Ground Wire

Measurement of Charged Object Potential (e.g., Resin) and Ion Balance of Electrostatic Eliminators

In addition to measuring electrostatic potential, the ion balance plate included as standard allows for checking electrostatic eliminators.

FE-510

Static Eliminator



RoHS



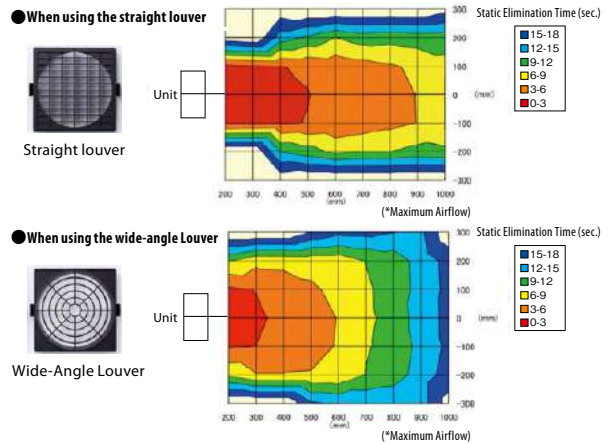
Packing List

- Unit (with Wide-Angle Louver, Filter, and Stand) ● Straight Louver
- Cleaning Brush ● AC Adaptor ● Lead wires for output signal connection (set of 3)
- Instruction Manual

Selectable Static Eliminator Area to Best Suit the Work Environment

For fast static neutralization of distant objects, use the straight louver; for wide-area static neutralization, use the wide-angle louver.

FE-510 Static Eliminator Area / Typical Static Elimination Characteristics (±1000 V → ±10 V)



442B

Anti-Static Wrist Strap



RoHS



Blue

Light Green

Gray

442B-01/442B-02

442B-04/442B-05

442B-06/442B-07

442B-01 Blue Ground Wire (1.5m)

442B-04 Light Green Ground Wire (1.5m)

442B-06 Gray Ground Wire (1.5m)

442B-02 Blue Ground Wire (2.5m)

442B-05 Light Green Ground Wire (2.5m)

442B-07 Gray Ground Wire (2.5m)

Packing List

- Wristband
- Ground Wire (with Banana Plug and Alligator Clip): 1.5 m or 2.5 m
- Code Helper

Comfortable Fit with Adjustable Band Length

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Footwear Tester/ Wrist Strap Tester

Wrist Strap

Vacuum Pick-Up Tool

Anti-Static Mat/ Finger Stalls

392

Outlet-powered Suction Pick-Up Tool



ESD SAFE RoHS



Packing List

- Unit (with Pen, Hose, and Power Cord)
- Bent Nozzle: $\Phi 0.4$ mm
- Bent Nozzle: $\Phi 1.1$ mm
- Pad: $\Phi 3$ mm
- Pad: $\Phi 7$ mm
- Instruction Manual

Excellent Operability with Strong Suction and Lightweight Grip

Components are picked up with just a light touch by simply covering the hole on the pen. Pickup operations are supported by the powerful suction unique to the station type.

Capable of Picking Up 0603-Size Components

*Optional bent nozzle $\Phi 0.26$ mm (Part No. A1198) is required.

394

Battery-Powered Vacuum Pick-Up Tool



RoHS



Packing List

- Unit (with 2 AAA Trial Batteries)
- Bent Nozzle: $\Phi 1.1$ mm
- Pad: $\Phi 5$ mm
- Pad: $\Phi 10$ mm
- Instruction Manual

Battery-powered with strong pickup capability, easy to carry

Simply pressing the button lightly with the pad in close contact with the component surface picks it up. This enables comfortable operation even during extended periods of work.

Capable of Picking Up 0603-Size Components

*Optional bent nozzle $\Phi 0.26$ mm is required.

393

Portable Vacuum Pick-Up Tool



RoHS



Packing List

- Unit
- Bent Nozzle: $\Phi 1.1$ mm
- Pad: $\Phi 3$ mm
- Pad: $\Phi 7$ mm
- Pad: $\Phi 10$ mm

The Unit with Built-In Storage for Nozzles and Pads makes it Easy to Carry

Nozzles and pads can be stored by removing the cap on the rear.

Pickup Performance

Unit: gf

Nozzle	Pad	392	394	393
Bent Nozzle: $\Phi 0.4$	—	0.6	0.6	Not usable
Bent Nozzle $\Phi 1.1$ or Straight Nozzle $\Phi 1.1$	$\Phi 3$ mm	20	6	3
	$\Phi 5$ mm	40	60	10
	$\Phi 7$ mm	80	120	18
	$\Phi 10$ mm	120	230	40

FE-302

Anti-Static Mat For Standing Work



RoHS

FE302-81



FE302-82

FE302-81 600(L)×915(W)×11(T)mm

FE302-82 465(L)×600(W)×11(T)mm

Anti-Static Mat for Standing Work – Effective in Reducing Fatigue

*Grounding wire not included.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

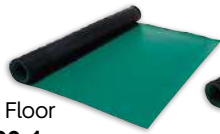
499

Anti-Static Mat For Floor/Table



RoHS

For Floor
499-1



For Table
499-5



499-1 For Floor

499-5 For Table

Packing List ●Unit ●Grounding Cord: 2 pcs Part No. B1750

Made of Nitrile Rubber (NBR) with Excellent Oil and Wear Resistance

Easily cut with a commercially available cutter or scissors.

Tool for Lead & Wire

Heating Gun

566

Anti-Static Finger Stalls (Powder-Free)



RoHS



566-1 Inner Diameter 13.5mm Pack of 1000

566-2 Inner Diameter 15mm Pack of 1000

566-3 Inner Diameter 16.5mm Pack of 1000

566-4 Inner Diameter 18mm Pack of 1000

566-5 Inner Diameter 21mm Pack of 1000

Footwear Tester/
Wrist Strap Tester

Wrist Strap

Vacuum
Pick-Up Tool

Anti-Static Mat/
Finger Stalls

568

Static-Dissipative Finger Stalls (Powder-Free)



RoHS



568-1 Inner Diameter 15.5mm Pack of 100

568-2 Inner Diameter 18mm Pack of 100

568-3 Inner Diameter 20mm Pack of 100

Powder-Free, Recommended for Use Even in Cleanroom Environments

567

Finger Stalls for General Work

RoHS



567-1 Inner Diameter 15.5mm Pack of 100

567-2 Inner Diameter 18mm Pack of 100

567-3 Inner Diameter 20mm Pack of 100

For Fingertip Protection During Work

Soft, snug fit on fingertips for excellent workability

Specifications

Footwear Tester

Model No.		FG-465
Rating		DC 24 V 50 mA
Measurement Voltage		DC 20 V
Measurement Range	Upper Evaluation Limit	1000 MΩ (1×10 ⁹ Ω)
		100 MΩ (1×10 ⁸ Ω)
		10 MΩ (1×10 ⁷ Ω)
	Lower Evaluation Limit	1 MΩ (1×10 ⁶ Ω)
		0.1 MΩ (1×10 ⁵ Ω)
Conductivity Evaluation	R < 0.1 MΩ (1×10 ⁵ Ω)	
Accuracy	R < 0.1 MΩ	±5%
	0.1 MΩ ≤ R ≤ 100 MΩ	±10%
	100 MΩ < R	±8%
Operating Environment		Ambient Temperature/Humidity Range: 0-40°C, max. 80% RH (no condensation)
Environmental Condition		Applicable Pollution Degree: 2 (according to IEC/UL 61010-1)
Dimensions		120(W) × 30(H) × 185(D) mm
Weight		0.55 kg (with mounting base attached)

Test Plate

Cord Length	1.6 m
Dimensions	310(W) × 18(H) × 310(D) mm
Weight	1.9 kg

AC Adaptor

Output Voltage	DC 24 V
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*The dimensions and weight of the test plate exclude the cable.

Wrist Strap Tester

Model No.		FG-470
Power Supply		006P 9 V battery (alkaline cell recommended)
Indication	LOW	R < 800kΩ
	PASS	800kΩ ≤ R ≤ 9MΩ
	HIGH	R > 9MΩ
Judgment Level Accuracy	800kΩ	+10% / -0%
	9MΩ	+0% / -10%
Battery Life		Approx. 50,000 times (using alkaline battery)
Ground Lead Length		1m
Operating Environment		Ambient Temperature/Humidity Range: 0-40°C, max. 80% RH (no condensation)
Dimensions		85(W) × 44(H) × 90(D) mm 92(W) × 48(H) × 97(D) mm (with mounting holder attached)
Weight		120 g 160 g (with mounting holder)

*The weight excludes batteries.

Static Level Meter

Model No.		FG-450
Power Supply		9V Alkaline Battery
Measurable Potential Range		Normal Mode: 0.00 to ±19.99 kV (resolution: 0.01 kV) Ion Balance Mode: 0.000 to ±1.999 kV (resolution: 0.001 kV)
Signal Detection Method		Oscillating Chopper Method
Display Update Frequency		0.5 seconds
Measurement Precision		±10% of reading ±2digit
Continuous Operating Time		Approx. 10 hours (using alkaline battery)
Measurement Distance		30 mm (Between Measured Object and Sensor)
Measurement Distance Adjustment		Red LED Light Spot System
Sensor Head Rotation Angle		180° (stops at every 45°)
Display		LCD Display with Built-in Backlight
Polarity Display		+Polarity/-Polarity Display
Mode		Ion Balance/Electrostatic Potential Measurement
Battery Check		Battery Level Indication on Display
Operating Environment		Operating Temperature/Humidity Range: 0-40°C, 20-70% RH (no condensation)
External Dimensions		68(W) × 138(H) × 22(D) mm
Weight		Approx. 160 g

*The weight includes batteries.

Electrostatic Eliminator

Model No.	FE-510
Rating	DC 24 V 10 VA
Discharge Method	High-Frequency Corona Discharge
High-Voltage Output Voltage	AC 2000V
Ion Balance	Within ± 10 V
Discharge Time	Straight Louver: approx. 1.5 seconds Wide-Angle Louver: approx. 2.5 seconds
High-Voltage Abnormal Output (ALARM)	MOS FET Relay Volt-Free Contact Output Maximum Current: 100 mA Applied Voltage: DC 30 V or less
Cleaning Check Output (C.C.)	MOS FET Relay Volt-Free Contact Output Maximum Current: 100 mA Applied Voltage: DC 30 V or less
Airflow	1.5–3 m ³ /min.
Air Blowout Angle	Adjustable 360° vertically (in 10° increments)
Ozone Generation Amount	0.04 ppm or less
Operating Environment	Operating Temperature: 0–40°C Operating Humidity: 15–65% RH (no condensation)
Discharge Needle Material	Tungsten
External Dimensions	150 (W) × 182 (H) × 50 (D) mm (without projections)
Weight	Approx. 0.79 kg

AC Adaptor

Rating	DC 24V 1A
External Dimensions	34(W) × 72(H) × 51(D) mm
Weight	Approx. 100 g

*The weight includes the stand.

*Ion balance and discharge time are representative values measured at 300 mm from the center of the air outlet under maximum airflow (as shipped).

*The ozone generation amount is a measured value taken at the center, 150 mm in front of the air outlet.

Anti-Static Wrist Strap

Model No.	442B					
Part No.	442B-01	442B-02	442B-04	442B-05	442B-06	442B-07
Color	Blue		Light Green		Gray	
Ground Lead	1.5 m	2.5 m	1.5 m	2.5 m	1.5 m	2.5 m

Vacuum Pick-Up Tool

Model No.	392	394	393
Power Supply	—	Two AAA batteries	—
Power Consumption	5W	—	—
Battery Life	—	Approx. 30,000 times (using alkaline battery)	—
Maximum Attainable Pressure	37.3 kPa (280 mmHg)	—	—
Suction Capacity	—	120 g (with $\Phi 10$ mm pad)	—
Pad	Conductive Silicone Rubber	Conductive Silicone Rubber	Conductive Silicone Rubber
Dimensions	Station: 132 (W) × 83 (H) × 170 (D) mm Pen: $\Phi 10$ × 123 (L) mm Hose: 1.1 m	130(W) × 29(H) × 22(D) mm	$\Phi 13$ × 132 mm
Weight	Station: 1.65 kg Pen: 25 g	43 g	19 g

*The weight excludes batteries, cord, nozzles, and pads.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Footwear Tester/ Wrist Strap Tester

Wrist Strap

Vacuum Pick-Up Tool

Anti-Static Mat/ Finger Stalls

Anti-Static Mat

Part No.	FE302-81	FE302-82
Electrical Resistance	1 × 10 ⁷ Ω or Less (Technical recommendations of research institute of industrial safety, Electrode: Φ60 × 10 kg DC 100 V)	
Material	Nitrile Rubber (NBR)	
Hardness	60 ±5 (JIS K 6253, Durometer Type A)	
Tensile Strength	8.8 MPa or more (JIS K 6251)	
Dimensions	600(L) × 915(W) × 11(T) mm	465(L) × 600(W) × 11(T) mm

Part No.	499-1	499-5
Color	Green	Light Green
Applications	For Floor	For Table
Electrical Resistance	1 × 10 ⁸ Ω or Less (Technical recommendations of research institute of industrial safety, Electrode: Φ60 × 10 kg DC 100 V)	1 × 10 ⁷ Ω or Less (Technical recommendations of research institute of industrial safety, Electrode: Φ60 × 10 kg DC 100 V)
Material	Nitrile Rubber (NBR)	
Hardness	85 ±5 (JIS K 6253, Durometer Type A)	67 ±5 (JIS K 6253, Durometer Type A)
Abrasion Resistance	1cm ³ or less(Tabern Abrasion Test)	
Tensile Strength	8.8 MPa or more (JIS K 6251)	6–12 MPa(JIS K 6251)
Residual Indentation	0.7 mm or less (JIS A 5705)	1 mm or less (JIS A 5705)
Dimensions	10(L) m × 1(W) m × 2(T) mm	

Anti-Static Finger Stalls

Part No.	566-1	566-2	566-3	566-4	566-5
Inner Diameter	13.5 mm	15 mm	16.5 mm	18 mm	21 mm
Wall Thickness	0.16 mm				
Surface Resistance	1 × 10 ⁹ – 1 × 10 ¹¹ Ω cm				
Quantity per Package	Pack of 1000				

Static-Dissipative Finger Stalls

Part No.	568-1	568-2	568-3
Inner Diameter	15.5 mm	18 mm	20 mm
Wall Thickness	0.4 mm	0.41 mm	0.42 mm
Surface Resistance	1 × 10 ⁵ – 1 × 10 ⁷ Ω cm		
Quantity per Package	Pack of 100		

Finger Stalls for General Work

Part No.	567-1	567-2	567-3
Inner Diameter	15.5 mm	18 mm	20 mm
Wall Thickness	0.36 mm	0.37 mm	0.4 mm
Quantity per Package	Pack of 100		

FT-802

Precise Insulation Removal with a Thermal Wire Stripper



ESD SAFE RoHS



Specifications

Power Consumption	76 W
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Station

Output	AC 20 V
Dimensions	76(W) × 159(H) × 161(D) mm
Weight	1.6 kg

Handpiece

Power Consumption	72 W (20 V)
Cord Length	1.6 m
Total length	153 mm
Weight	47 g

*The total length and weight of the handpiece exclude the cord and blade.

G4 Series Blade List

Unit: mm

Part No.	Product Name	Appearance
G4-1601	Blade Straight	
G4-1602	Blade 18-28AWG	
G4-1603	Blade 26-38AWG	

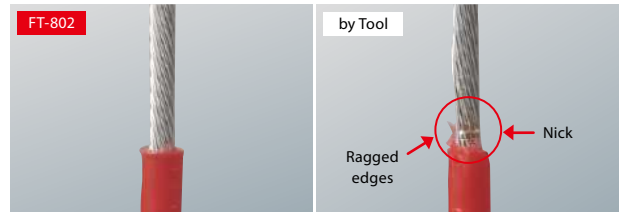
Packing List

- Station (with Wire Material indicator seal)
- Handpiece (with Lead Adjuster)
- Power Cord
- Hex Socket Set Screw: 2 pcs
- Hexagon Wrench
- Instruction Manual

Blades not included G4 Series Blade List

High-Quality and Precision Insulation Removal

The FT-802 precisely strips lead wire insulation without damaging the core wire, meeting the high-quality product needs of the cutting-edge aerospace and medical industries.



Blades can be replaced independently.

Extra-thick cables can be handled with the knife-type blade.

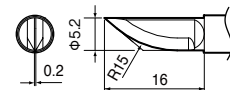
Knife-Type Wire Stripper FT-8003



Specifications

Power Consumption	46 W (2.4V)
Total length	155 mm
Weight	27 g

*Total length and weight exclude the cord and blade.



FT8003-81 Conversion kit

FT8003-82 Handpiece only

FT-630

Quick WICK (Desoldering Wire) Cutter without Tools



ESD SAFE RoHS



Packing List

- Unit
- AC Adaptor
- Instruction Manual

Specifications

Rating	DC 24 V 170 mA
Compatible WICK Widths	0.7 – 3.8mm
Cut Length	2.5 – 30mm
Dimensions	100(W) × 61(H) × 92(D) mm
Weight	280 g

AC Adaptor

Rating	DC 24 V
--------	---------

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Thermal Wire Stripper

Hand Tools

Lead Forming Tool

Cutting Pliers / Pliers

For Working and Processing
Annealed Copper Wire



For Electronic
Components



For General
Work

RoHS

For Electronic Components

Unique heat treatment delivers both sharp cutting performance and high durability.



FT-600
Micro Cutting Pliers



FT-601
Cutting Pliers



FT-620
Long Needle
Nose Pliers



FT-621
Pliers

For General Work

Optimal for wire working, processing tasks, and hobby use.



106-01
Cutting tool for
flush cut with
safety clip



106-02
Cutting tool for
flush cut with
angled blade



106-03
Cutting tool for
flush cut with
small blade



106-04
Cutting tool for
front, flush cut



106-05
Cutting tool for
flush cut



106-06
Short Nose Pliers



106-07
Long Nose Pliers

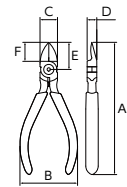


106-08
Bent Nose Pliers

For Electronic Components

	Part No.	Cutting Capacity (Annealed Copper Wire)	External Dimensions: mm					
			A	B	C	D	E	F
Micro Cutting Pliers	FT600-81	Φ1.2 mm (MAX.)	117	50	11	6	21	13.4
Cutting Pliers	FT601-81	Φ1.5 mm (MAX.)	117	51	15.5	8.5	24	16.8
Long Needle Nose Pliers	FT620-81	—	148	50	11	6	60	52.4
Pliers	FT621-81	—	124	50	11	6	36	28.4

*Do not cut steel wires. Otherwise, the blades may chip.

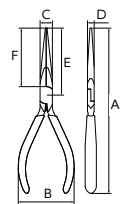


Cutting Pliers

For General Work

	Part No.	Cutting Capacity (Annealed Copper Wire)	External Dimensions: mm					
			A	B	C	D	E	F
Cutting tool for flush cut with safety clip	106-01	Φ1.3 mm (MAX.)	132	54±2	13.5	5	20	—
Cutting tool for flush cut with angled blade	106-02	Φ1.3 mm (MAX.)	129	54±2	13.5	5	16	—
Cutting tool for flush cut with small blade	106-03	Φ0.8 mm (MAX.)	130	54±2	9.5	4	18	—
Cutting tool for front, flush cut	106-04	Φ1 mm (MAX.)	138	54±2	14	6	27	—
Cutting tool for flush cut	106-05	Φ1.3 mm (MAX.)	132	54±2	13.5	5	20	—
Short Nose Pliers	106-06	—	140	54±2	13	6	29	—
Long Nose Pliers	106-07	—	154	54±2	13	6	40	—
Bent Nose Pliers	106-08	—	146	54±2	13	4	35	—

*Do not cut hard wires. Otherwise, the blades may chip.



Pliers

153 / 154

Manual Lead Former for Axial Component Lead Processing



RoHS



153-1

154-1

Specifications

Part No.	153-1	154-1
Forming Size	5.6 mm Pitch	5 mm Pitch
Processed Lead Wire Diameter	Φ0.8 mm (MAX.)	Φ0.5 mm (MAX.)
Processed Lead Wire	Annealed Copper Wire Only	
Usable Taping Width (Outer)	85 mm (MAX.)	
Usable Taping Pitch	5 mm	
External Dimensions	125(W) × 130(H) × 110(D) mm	
Weight	2 kg	

*Not suitable for lead frame (rectangular lead wire) components.
*The weight includes the handle and clamps.

Packing List

- Unit ● Parts Tray ● Hexagon Wrenches (2 mm/2.5 mm/3 mm/4 mm)
- Clamp ● Handle ● Instruction Manual

Processing Range

Part No.	153-1	154-1
Cutting and Forming		
Forming		
Cutting		

*Only annealed copper wire can be processed.
Not suitable for lead frame (rectangular lead wire) components.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

Thermal Wire Stripper

Hand Tools

Lead Forming Tool

155

Manual Lead Cutter for Radial Component Lead Processing



RoHS



Specifications

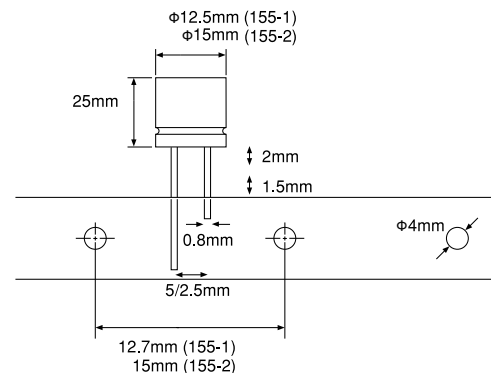
Part No.	155-1	155-2
Processed Lead Wire Diameter	Φ0.8 mm (MAX.)	
Processed Lead Wire	Annealed Copper Wire Only	
Maximum Component Size	Φ12.5 × 25 mm	Φ15 × 25 mm
Feed Hole Pitch	12.7 mm	15 mm
Lead Pitch	5 mm, 2.5 mm	5 mm
Processing Size	At least 1.5 mm from the tape edge and at least 2 mm from the component edge	
External Dimensions	110(W) × 140(H) × 125(D) mm	
Weight	1.7 kg	

*Shipped with the pitch set to 5 mm.
*Not suitable for lead frame (rectangular lead wire) components.
*The weight includes the handle and clamps.

Packing List

- Unit ● Parts Tray ● Hexagon Wrenches (2 mm/2.5 mm/3 mm/4 mm)
- Clamp ● Handle ● Instruction Manual

Processing Range



*Only annealed copper wire can be processed.

152B

Motor Drive for Automating Manual Lead Formers/Lead Cutters



RoHS



Specifications

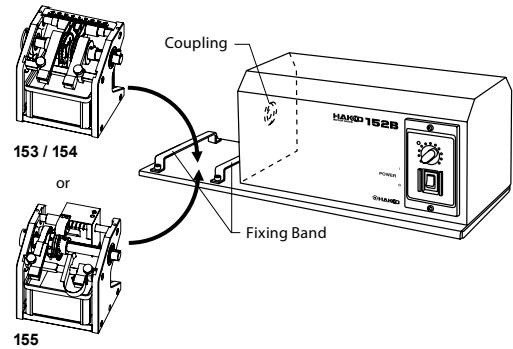
Power Consumption	30 W
Plug Shape	Flat Plug
Maximum Processing Capacity (for use only with Models 153/154)	30,000 pcs/h (50 Hz) 36,000 pcs/h (60 Hz)
Maximum Processing Capacity (with Model 155)	15,000 pcs/h (50 Hz) 18,000 pcs/h (60 Hz)
External Dimensions	430(W) x 140(H) x 150(D) mm
Weight	5.6kg

*The weight excludes the cord.

Packing List

- Unit (with Coupling, Fixing Band, and Power Cord)
- Instruction Manual

Compatible with Models 153/154/155 – Enhanced Efficiency through Automation



DIPLINER

For IC Pin Alignment



RoHS



Specifications

Part No.	FT100	FT150	FT200	FT300
IC Width	7.5 mm	10 mm	15 mm	19 mm
Number of IC Pins	8, 14, 16 18, 20	22	24, 28, 40, 42	64

FT100

FT150

FT200

FT300

Packing List

- Unit ● Instruction Manual

Corrects Variations in Pin Spread of ICs/LSIs

SOLEIDO

Soldering Aids

RoHS



600-01 Set of 3

For Component Removal and Coating Stripping

① Needle

Used for removing ICs. For lifting the leads and removing the IC while melting the solder with a soldering iron.

② Hook

For removing electronic components mounted on a PCB while melting the solder with a soldering iron.

③ Remover

For gripping the leads and removing resistors, capacitors, and ICs while melting the solder with a soldering iron.

④ Fork

For bending the leads of electronic components such as resistors in the direction of the PCB pattern.


⑤ Scraper

For stripping lead wire coatings, removing PCB masking, and removing rust.

⑥ Brush

For removing solder residue, PCB masking ink, and rust.

Heating Gun Guide

Variable Temperature and Airflow Type (Stepless Control)		
FV-310		
Model No.		
	RoHS	
Maximum Temperature	530°C (Continuously Variable 50 – 530°C)	
Air Velocity	360 – 600 m/min.	
Airflow	0.15 – 0.25 m ³ /min.	
Power Consumption	1000 W	
External Dimensions	240(W) × 190(H) × 70(D) mm	
Weight	0.6 kg	
Types of Optional Nozzles	7	
Sales of Replacement Parts	○	
Work Applications	Processing heat-shrink tubing	◎
	Drying paint and putty materials	◎
	Bumper repair	○
	Welding long floor sheets	◎
	Applying adhesive decorative sheets	◎
	Welding Bonding PVC sheets	◎
	Shrink packaging	◎
	Curving plastic materials	◎
	Peeling stickers	◎

*The maximum temperature is measured at 10 mm from the nozzle. The same applies at both LOW and HIGH airflow settings.
*The external dimensions and weight exclude the cord.

Optional Nozzles for FV-310

Wide Heating

Nozzle Spatula Type 62mm
N70-02



Overall Heating

Nozzle Hook Type 20mm
N70-03



Nozzle Hook Type 40mm
N70-04



Local Heating

Nozzle Holder
N70-05



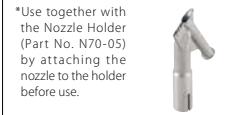
Nozzle Single 12mm
N70-06



*Use together with the Nozzle Holder (Part No. N70-05) by attaching the nozzle to the holder before use.

Floor Welding

Nozzle V Type for 4 mm Welding Rods
N70-07



*Use together with the Nozzle Holder (Part No. N70-05) by attaching the nozzle to the holder before use.

Sheet Welding

Nozzle Spatula Type 20mm
N70-01



*Use together with the Nozzle Holder (Part No. N70-05) by attaching the nozzle to the holder before use.

*The N70-07 cannot be used with the FV-300.

Auto-Soldering System

Soldering Iron

Desoldering & Rework

Preheater

Soldering Pot

Thermometer & Soldering Tester

Fume Extractor

Static Control

Tool for Lead & Wire

Heating Gun

FV-310

Heating Gun Variable Temperature and Airflow Type



RoHS



Packing List

● Unit ● Carrying Case ● Instruction Manual

■ Easy Heater Replacement

■ Comes with an easy to carry Carrying Case




Improved Work Efficiency with Stepless Control of Temperature and Airflow

The hot air temperature and airflow can be continuously adjusted steplessly using the control knobs on the top of the unit, allowing for precise settings according to the work requirements.



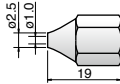
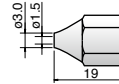
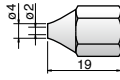
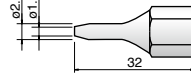
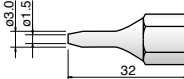
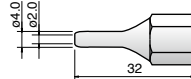
Temperature Control Knob Airflow Control Knob

Melter Guide





MELTER 804		
Model No.		
Applicable Adhesives	EVA- and Polyamide-Based Stick Form	
Specifications	Temperature range	100–200°C
	Power Consumption	100 W
	External Dimensions	207(L) × 173(H) × 45(D) mm
	Weight	350g
	Included Nozzle	Φ2mm (A1083)
	Nozzle Shape	6 types

*The weight excludes the cord.

Optional Nozzles for MELTER 804

A1088 	A1086 
A1083 	A1089 
A1087 	A1084 

Adhesive

		EVA-Based	Polyamide-Based
Applications		<ul style="list-style-type: none"> ● Paper processing such as corrugated cardboard ● Bonding of wood ● Temporary fixing of plastics and metals 	<ul style="list-style-type: none"> ● Bonding of fabrics and cushioning materials ● Resealing
		  	<ul style="list-style-type: none"> ● Reinforcing soldering ● Insulation processing ● Fixing capacitors, resistors, and similar components ● Securing jumper wires ● Insulation potting on terminals ● Fixing terminals of winding coils ● Fixing ferrite cores and variable coils 
	Adhesive Bondable Materials ¹⁾	Paper	◎
	Wood	◎	◎
	Metal	○	○
	Plastic	○	○
	Leather	◎	◎
	Electronic components	×	◎
Applicable Products		MELTER 804	MELTER 804
	Shape	Stick Φ11.5 × 220 mm	Stick Φ11.5 × 220 mm
	Part No.	812 Pack of 14 811 1 kg Pack	810 1 kg Pack
Specifications	Viscosity	5800 mPa·s	2300m Pa·s
	Open Time ²⁾	40 sec.	10 sec.
	Heat Resistance Temperature	55°C	100°C

*1 The symbols ◎ and ○ indicate the degree of adhesive strength. *2 The time from adhesive application to the point of hardening.

MELTER 804

Hot Melt Glue Gun with Temperature Control



RoHS



Packing List

- Unit ● Adapter Plug ● Nozzle Replacement Wrench (Spanner 13, 14)
- Instruction Manual

Nozzle included A1083 804-Use Nozzle List Nozzle List >P.92

*Adhesive is not included.

■ **Easy Dispensing with Light Force – Reduced Fatigue Even During Continuous Operation**

■ **Also Suitable for Securing Electronic Components When Using Polyamide-Based Adhesives**



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