

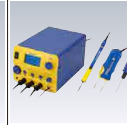







# HAKKO Soldering Iron Lineup

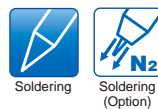
		FN-1010	FX-100	FX-951	FX-950	FM-203	FM-206	FX-801	FX-838	
										
Types		IoT Capable	IH	High Performance				Heavy Duty		
Specifications	Power consumption	100 W	25 W (85 W)	75 W	75 W	140 W	410 W (max.)	300 W	158 W	
	Power consumption of Handpiece	95 W	—	70 W	70 W	70 W × 2 port	70 W × 3 port	260 W	150 W	
	Temperature Range	50 to 450°C	350°C/400°C/450°C	200 to 450°C	200 to 450°C	200 to 500°C	200 to 500°C	50 to 500°C	200 to 500°C	
	Soldering Tip	T36 series	T31 series	T12 series	T12 series	T12 series	T12 series	T33 series (Regular / Slim)	T20 series	
Applicable Standard	Lead Free Suggestible	●	●	●	●	●	●	●	●	
	ESD Safe	●	●	●	●	●	●	●	●	
	RoHS Suggestible	●	●	●	●	●	●	●	●	
Accessories	Micro Soldering Iron connectable		●	●		●	●			
	N <sub>2</sub> Micro Soldering Iron connectable			●		●	●			
	N <sub>2</sub> Soldering Iron connectable	●		●	●	●	●		●	
	N <sub>2</sub> Heavy Duty Soldering Iron connectable						●	●	●	
	Self Feeder connectable	●	●	●	●	●	●	●	●	
	SMD Hot Tweezers connectable					●	●			
	Desoldering Iron connectable					●	●			
	Hot Air Handpiece connectable						●			
Function	Auto Shutoff Function: When a set time passed, the function stops to supply power to the heating element.									
		●	●	●		●	●	●	●	
	Auto Sleep Function: When a set time passed, the tip temperature decreases to a set lower temperature.									
		●	●	●	● Option	●	●	●	●	
	Lock Function: Lockable by password, control card or lock key.									
		Password	Password	Control card	Lock key	Control card	Password	Password	Control card	
	Lower Temperature Error Alert: When the temperature drops below a set limit, an error is displayed and the buzzer sounds.									
		●		●		●		●	●	
	Offset Temperature Function: Temperature offsettable by analog, digital or adjustment mode.									
		Digital		Digital	Manual	Digital	Digital	Digital	Digital	
	Preset Temperature Function: The function allows to input several frequently-used temperatures and recall with one push of a button.									
	●						●	●	●	



## FN-1010 ESD SAFE

IoT Capable Soldering Station **Digital**

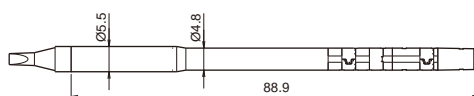
Tip not included



- Enables human error-free temperature control and traceability of manual soldering process

### Optional Tips for FN-1101

Unit: mm



<b>T36-B Shape-0.2B</b> 	<b>T36-B2 Shape-0.5B</b> 	<b>T36-BL Shape-BL</b> 	<b>T36-BC1 Shape-1BC</b> 	<b>T36-BC2 Shape-2BC</b> 	<b>T36-BC3 Shape-3BC</b> 
<b>T36-C1 Shape-1C</b> 	<b>T36-C4 Shape-4C</b> 	<b>T36-D08 Shape-0.8D</b> 	<b>T36-D16 Shape-1.6D</b> 	<b>T36-D24 Shape-2.4D</b> 	<b>T36-DL32 Shape-3.2DL</b> 
<b>T36-D52 Shape-5.2D</b> 	<b>T36-I Shape-I</b> 	<b>T36-ILS Shape-ILS</b> 	<b>T36-J02 Shape-0.2J</b> 	<b>T36-JS02 Shape-0.2JS</b> 	<b>T36-K Shape-K</b> 

## Features

“Process control” and “Traceability” can be established through daily manual soldering operation.



### Information to be collected by T36 series tip

The following information can be collected by memory chip in T36 series tip and saved in a computer through a soldering station.

- Tip shape
- Serial number
- Number of loads
- Total time of power supplied
- Load Sensitivity
- Type of solder alloy (Lead-Free / Lead)
- Count alarm



Optimization of soldering conditions is now possible based on a variety of information in daily soldering process collected by FN-1010.

### Connectable with N<sub>2</sub> soldering iron

To improve solder wettability and spreadability

## FN-1102 5P

### N<sub>2</sub> Soldering Iron

Tip not included

Please see the optional tips on P.48.



For further details, see the N<sub>2</sub> system (P.46 & P.47).

## Packing List

FN-1010	Station, Handpiece (FN-1101), Tip cleaner (FT-401, with cleaning wire), Power cord, Iron holder, Instruction manual
FN-1102	Handpiece, Instruction manual

## Specifications

Model No.	FN-1010
Power consumption	100 W
Temperature range	50 to 450°C
Temperature stability	±3°C at idle temperature

### Station

Output voltage	AC 21 V
Dimensions	104 (W) × 138 (H) × 152 (D) mm
Weight	1.9 kg

### Soldering Iron

Power consumption	95 W (21 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	180 mm (with 2.4D tip)
Weight*	32 g (with 2.4D tip)

\* Without cord

Model No.	FN-1102
Power consumption	95 W (21 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	180 mm (with 2.4D tip)
Weight*	50 g (with 2.4D tip and nozzle assembly A)

\* Without cord and tube



## More Features

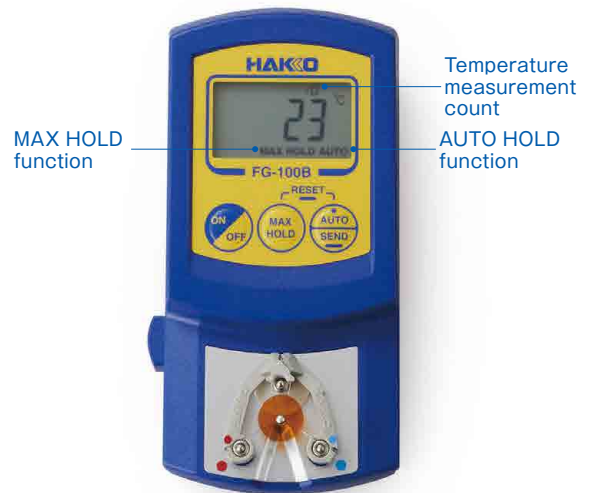
Automatic calibration/off-set can be completed once measurement result is sent through infrared.



Human error-free “tip temperature calibration” and “off-set” can be established through daily manual soldering process. Results of measurement/calibration/off-set can be recorded automatically.

Eliminate human error in manual recording of measurement result by using FG-100B

Human errors in manual recording process and time for recording can be eliminated by sending measurement result from FG-100B to FN-1010.



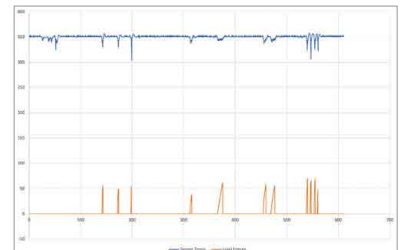
For further information of FG-100B, see P. 65.

## Visualize energy supplied during soldering

It is now possible to visualize invisible energy supplied from T36 series tip during soldering. And that makes it possible to control factors of soldering, which were impossible before.

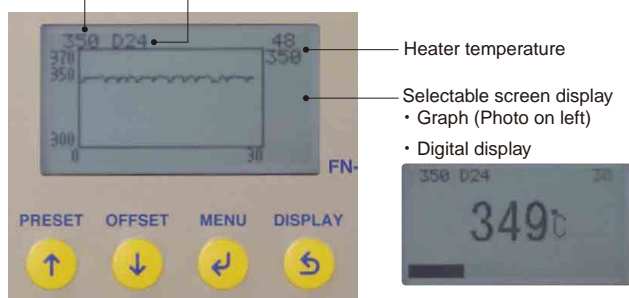


Start Time	Time	Sensor Temp	Load Energy
	141.05	350	0
	141.225	349	2
	141.4	346	5
	141.575	344	9
	141.75	340	15
	141.925	340	23
	142.1	339	33
	142.275	337	42
	142.45	334	47
	142.625	331	48
	142.8	330	47
	142.975	339	53
	143.15	344	55
	143.325	343	54
	143.5	343	0



## Real-time work status on the LCD screen

Set temperature Tip shape



## Notification of alarm with sound and vibration

Alarm can be notified with vibration in a noisy environment.

## Free fall detection function

Built-in motion sensor detects free fall and cuts the power. It can prevent burning floor, a fire and other accident with the heat.



## Improved button operation

Quick access to “Preset temperatures” and “Off-set mode” with one push.

It takes few button operation to access to most frequently used functions.

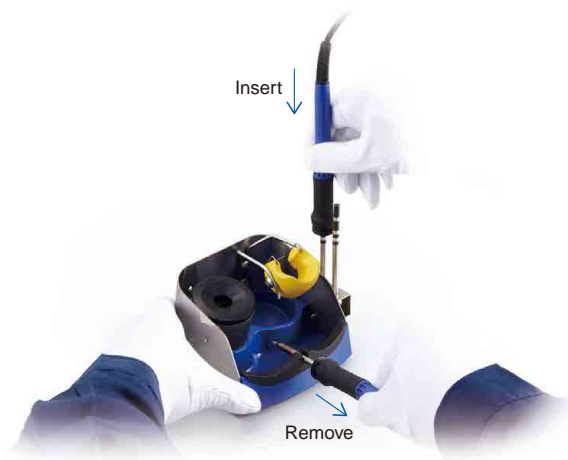
### Tip cleaner with solder ball preventive design

Solder ball during tip cleaning can be reduced by 99% with devised cleaner designs such as smaller aperture, and set angle as well as position.

\* In-house comparison







### Tip replacement without heat resistant pad



### Option for IoT communication

Please choose the options according to the numbers of units and the connection port of PC and server.

Type	Specifications and Part No.		Connectable numbers	Compatibility with PC	Sequence control	Example of connection
Interface Card for FN-1010		USB type with cable No. B5210	One unit per one PC	○	×	
		RS232C type with cable No. B5211	One unit per one PC	△*	○	
		LAN type No. B5212	Multiple units per one PC	○	×	

\* RS232C cannot be connected with some PCs. Please check.

## FX-100 ESD SAFE



### IH Soldering Station Digital

Tip not included



- Provides the heat to the tip effectively by an 'Induction heater'
- Unique "Power assist" feature that assists the thermal recovery performance of the soldering iron tip
- No calibration is required.
- Wide variety of tips available
- Meets or exceeds IPC J-STD-001 and ANSI ESD S20.20.

### Optional Tips for FX-1001

Unit: mm

<b>T31-XX BC1</b> "01" for 450°C (A: 71.5) "02" for 400°C (A: 68.5) "03" for 350°C (A: 68.5)				
<b>T31-01BC1 Shape-1BC</b> T31-02BC1 T31-03BC1 	<b>T31-01BC28 Shape-2.8BC</b> T31-02BC28 T31-03BC28 	<b>T31-01BL Shape-BL</b> T31-02BL T31-03BL 	<b>T31-01D08 Shape-0.8D</b> T31-02D08 T31-03D08 	<b>T31-01D16 Shape-1.6D</b> T31-02D16 T31-03D16 
<b>T31-01D24 Shape-2.4D</b> T31-02D24 T31-03D24 	<b>T31-01D52 Shape-5.2D</b> T31-02D52 T31-03D52 	<b>T31-01I Shape-I</b> T31-02I T31-03I 	<b>T31-01IL Shape-IL</b> T31-02IL T31-03IL 	<b>T31-01J02 Shape-0.2RSB</b> T31-02J02 T31-03J02 
<b>T31-01JL02 Shape-0.2RLB</b> T31-02JL02 T31-03JL02 	<b>T31-01JS02 Shape-0.2RSSB</b> T31-02JS02 T31-03JS02 	<b>T31-01KU Shape-KU</b> T31-02KU T31-03KU 	<b>T31-01SBL Shape-SBL</b> T31-02SBL T31-03SBL 	<b>T31-01WD08 Shape-0.8WD</b> T31-02WD08 T31-03WD08 

### Optional Tips for FX-1002

Unit: mm

<b>T35-XX D06</b> "02" for 400°C (A: 64) "03" for 350°C (A: 64)				
<b>T35-02D06 Shape-0.6D</b> T35-03D06 	<b>T35-02D1 Shape-1D</b> T35-03D1 	<b>T35-02I Shape-I</b> T35-03I 	<b>T35-02J Shape-J</b> T35-03J 	<b>T35-02KU Shape-KU</b> T35-03KU 

## Features

### IH (induction heater) for excellent thermal efficiency. Ideal for the most challenging soldering jobs.

FX-100 features IH (induction heater) that continuously powers the soldering iron and maintains the set temperature by automatically detecting even minute drops in temperature, plus HAKKO's proprietary "Power Assist" function.

FX-100 achieves powerful thermal recovery even with fine-shaped tips.

It provides excellent thermal responsiveness that conventional IH and sensor feedback systems cannot offer.



### Boost function

To increase tip temperature by 5 to 10°C (depends on tip shape) for better working efficiency.

### Connectable with micro soldering iron

For micro soldering applications under a microscope

## FX-1002 50W

### Micro Soldering Iron

Tip not included



## Packing List

<b>FX-100</b>	Station, Handpiece (FX-1001), Heat resistant pad, Power cord, Sleeve (green), Sleeve (gray), Cleaning wire, Iron holder, Instruction manual
<b>FX-1002 (Conversion kit)</b>	Handpiece, Sleeve (green), Heat resistant pad, Iron holder, Instruction manual

### Interactive method by LCD display with 3 buttons

#### PROFILE

```
PROFILE 1
S:HAKKO-1
U:ID-123
S:0.6 LEAD FREE
```

Station ID, user name and solder type can be registered.

#### TIP LOAD

```
TIP LOADS
APPROX.
000025 points
<RESET> <OK>
```

The soldering count is displayed.

#### TIP TIME

```
TIP TIME
0023 hours
<RESET> <OK>
```

The cumulative running time on the iron tip is displayed.

#### TIP TYPE and NORMAL MODE/BOOST MODE

```
<01>
N
■■■■■■
```

Visible tip type (01/02/03) and normal mode (N)/boost mode (B) on display

## Specifications

Model No.	FX-100
Power consumption	28 W (85 W)
Temperature range	T31-01 Series: 450°C, T31-02 Series: 400°C T31-03 Series: 350°C
Temperature stability	±1.1°C

### Station

Output power	50 W
Output frequency	13.56 MHz
Dimensions	127 (W) × 150 (H) × 167 (D) mm
Weight	3 kg

### Soldering Iron

Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	IH (Induction heating)
Cord length	1.3 m
Total length*	190 mm with T31-02D24 or T31-03D24 tip 193 mm with T31-01D24 tip
Weight*	31 g (with T31-02D24 tip)

\* Without cord

Model No.	FX-1002
Temperature range	T35-02 Series: 400°C, T35-03 Series: 350°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	IH (Induction heating)
Cord length	1.3 m
Total length*	166 mm (with T35-02D1 tip)
Weight*	21 g (with T35-02D1 tip)

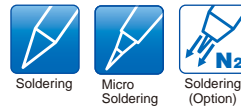
\* Without cord

## FX-951 ESD SAFE

High Performance Soldering Station

Digital

Tip not included



- Compact high-power thermally-controlled soldering iron
- Informs you of errors by a warning buzzer or display

## FX-950 ESD SAFE

High Performance Soldering Station

Analog

Tip not included

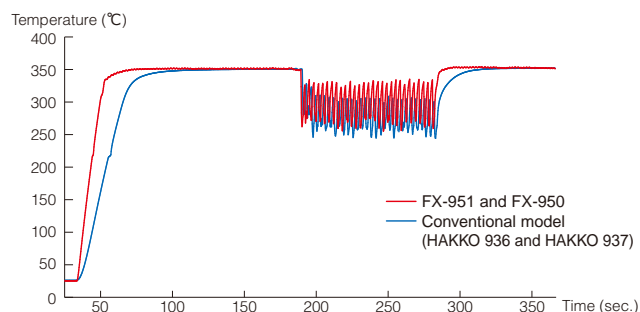


- Analog type high-power thermally-controlled soldering iron
- "Lock key" can lock the temperature setting.
- Informs you of various errors by a lamp



## Features

### Thermal recovery graph (comparison of HAKKO products)



### Test criteria

Measurement method	A thermocouple is mounted on the tip and the tip temperature is measured when soldering $\phi 1.6$ mm $\times$ 5 mm solder to paper phenol copper board once every 3 seconds.
Board	Paper phenol copper board.
Temperature setting	350°C
Solder	Lead-free solder (Sn/Ag/Cu), diameter: 1.6 mm $\times$ 5 mm

### Connectable with micro soldering iron

For micro soldering applications under a microscope

## FM-2032 55W

### Micro Soldering Iron

Tip not included

Please see the optional tips on P.51.



N<sub>2</sub> Soldering is available with optional parts (P.47 & P.51).

### Connectable with N<sub>2</sub> soldering iron

To improve solder wettability and spreadability

## FM-2026 55W

### N<sub>2</sub> Soldering Iron

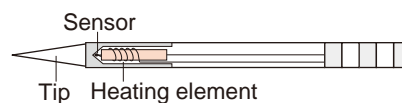
Tip not included

Please see the optional tips on P.51.



For further details, see the N<sub>2</sub> system (P.46 & P.47).

### Composite tip



The composite tip with an integrated heating element and sensor offers superior thermal responsivity and thermal recovery.

## Specifications

Model No.	FX-951	FX-950
Power consumption	75 W	
Temperature range	200 to 450°C	
Temperature stability	±5°C at idle temperature	

### Station

Output voltage	AC 24 V
Dimensions	FX-951: 80 (W) $\times$ 130 (H) $\times$ 131 (D) mm FX-950: 80 (W) $\times$ 118 (H) $\times$ 138 (D) mm
Weight	1.2 kg

### Soldering Iron

Power consumption	70 W (24 V)
Tip to ground resistance	<2 $\Omega$
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	188 mm (with 2.4D tip)
Weight*	30 g (with 2.4D tip)

\* Without cord

Model No.	FM-2032	FM-2026
Power consumption	48 W (24 V)	70 W (24 V)
Temperature range	200 to 450°C	
Tip to ground resistance	<2 $\Omega$	
Tip to ground potential	<2 mV	
Heating element	Composite heater	
Cord length	1.3 m	1.2 m
Total length	170 mm* (with 1D tip)	205 mm** (with 2.4D tip)
Weight	14 g* (with 1D tip)	45 g** (with 2.4D tip and nozzle assembly C)

\* Without cord \*\* Without cord and tube \*\*\* Use FM-2026 below 400°C.

## Packing List

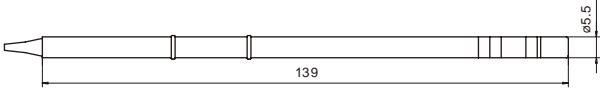

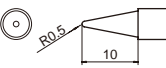
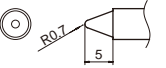
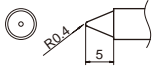
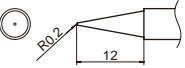
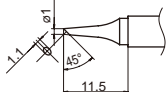
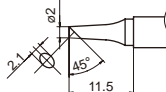
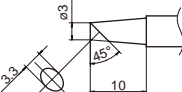
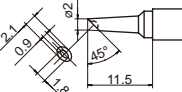
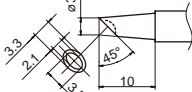
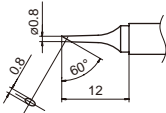
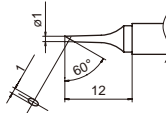
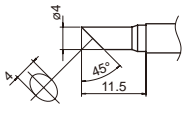
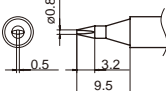

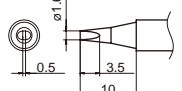
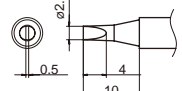
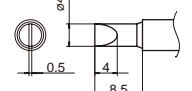
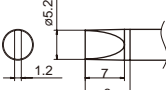
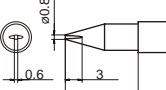
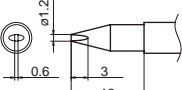
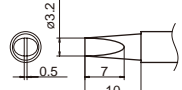
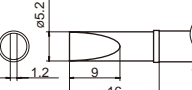

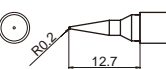
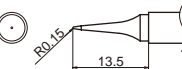
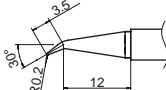
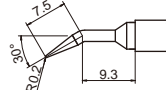
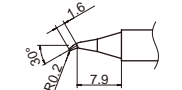
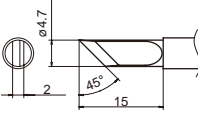
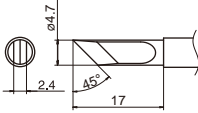
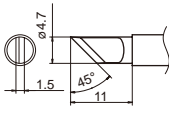
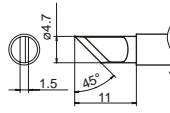
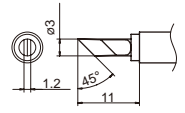
FX-951	Station, Handpiece (FM-2028), Control card, Power cord, Connecting cable, Heat resistant pad, Iron holder, Instruction manual
FX-950	Station, Handpiece (FM-2028), Lock key, Heat resistant pad, Iron holder, Instruction manual
FM-2032 (Conversion kit)	Handpiece, Heat resistant pad, Iron holder, Connecting cable, Instruction manual
FM-2026 (Conversion kit)	Handpiece, Sleeve cover, Sleeve assembly (yellow), Heat resistant pad, Iron holder, Connecting cable, Instruction manual

# Station Type and Accessories

## Optional Tips for FM-2028

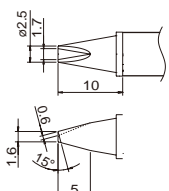
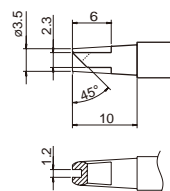
Unit: mm

### Standard type

					
<b>B</b>	<b>T12-B Shape-B</b> 	<b>T12-B2 Shape-0.5B</b> 	<b>T12-B3 Shape-0.7B</b> 	<b>T12-B4 Shape-0.4B</b> 	<b>T12-BL Shape-BL</b> 
<b>BC</b>	<b>T12-BC1 Shape-1BC</b> <b>T12-BCF1*</b> 	<b>T12-BC2 Shape-2BC</b> <b>T12-BCF2*</b> 	<b>T12-BC3 Shape-3BC</b> <b>T12-BCF3*</b> 	<b>T12-BCM2 Shape-2BC</b> <b>with indent</b> 	<b>T12-BCM3 Shape-3BC</b> <b>with indent</b> 
<b>C</b>	<b>T12-C08 Shape-0.8C</b> 	<b>T12-C1 Shape-1C</b> 	<b>T12-C4 Shape-4C</b> <b>T12-CF4*</b> 		
<b>D</b>	<b>T12-D08 Shape-0.8D</b> 	<b>T12-D12 Shape-1.2D</b> 	<b>T12-D16 Shape-1.6D</b> 	<b>T12-D24 Shape-2.4D</b> 	<b>T12-D4 Shape-4D</b> 
	<b>T12-D52 Shape-5.2D</b> 	<b>T12-DL08 Shape-0.8DL</b> 	<b>T12-DL12 Shape-1.2DL</b> 	<b>T12-DL32 Shape-3.2DL</b> 	<b>T12-DL52 Shape-5.2DL</b> 
<b>I</b>	<b>T12-I Shape-I</b> 	<b>T12-IL Shape-IL</b> 	<b>T12-ILS Shape-ILS</b> 		
<b>J</b>	<b>T12-J02 Shape-0.2J</b> 	<b>T12-JL02 Shape-0.2JL</b> 	<b>T12-JS02 Shape-0.2JS</b> 		
<b>K</b>	<b>T12-K Shape-K</b> 	<b>T12-KF Shape-KF</b> 	<b>T12-KL Shape-KL</b> 	<b>T12-KR Shape-KR</b> 	<b>T12-KU Shape-KU</b> 

\* These tips are tinned on the soldering surface only.

### Concave type

<b>T12-1610</b> 	<b>T12-1612</b> 
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## SMD type

Quad	<b>T12-1201 Quad 13.6 x 8.5</b> 	<b>T12-1202 Quad 10.3 x 10.3</b> 	<b>T12-1203 Quad 12.8 x 12.8</b> 	<b>T12-1204 Quad 17.9 x 17.9</b> 	<b>T12-1205 Quad 23.4 x 17.3</b> 
	<b>T12-1206 Quad 22.5 x 16.5</b> 	<b>T12-1207 Quad 15.5 x 15.5</b> 	<b>T12-1208 Quad 15.8 x 15.8</b> 	<b>T12-1209 Quad 8.4 x 8.4</b> 	
Tunnel	<b>T12-1001 Tunnel 5.1 x 4.6</b> 	<b>T12-1002 Tunnel 5.1 x 10.4</b> 	<b>T12-1003 Tunnel 9.5 x 18.3</b> 	<b>T12-1004 Tunnel 9.5 x 15.8</b> 	<b>T12-1005 Tunnel 9.5 x 13.2</b> 
	<b>T12-1006 Tunnel 6.9 x 11.4</b> 	<b>T12-1007 Tunnel 7.9 x 18.8</b> 	<b>T12-1008 Tunnel 19.5 x 10.2</b> 	<b>T12-1009 Tunnel 13.4 x 20.5</b> 	<b>T12-1010 Tunnel 19.5 x 12</b> 
Spatula	<b>T12-1401 Spatula 10.4</b> 	<b>T12-1402 Spatula 15.7</b> 	<b>T12-1403 Spatula 21.2</b> 	<b>T12-1404 Spatula 25</b> 	<b>T12-1405 Spatula 32</b> 
	<b>T12-1406 Spatula 40</b> 				

## Long life type

<b>T12-BZ Shape-B (Z)</b> 	<b>T12-B2Z Shape-0.5B (Z)</b> 	<b>T12-BC1Z Shape-1BC (Z)</b> <b>T12-BCF1Z*</b> 	<b>T12-BC2Z Shape-2BC (Z)</b> <b>T12-BCF2Z*</b> 	<b>T12-BC3Z Shape-3BC (Z)</b> <b>T12-BCF3Z*</b> 
<b>T12-C4Z Shape-4C (Z)</b> <b>T12-CF4Z*</b> 	<b>T12-D12Z Shape-1.2D (Z)</b> 	<b>T12-D16Z Shape-1.6D (Z)</b> 	<b>T12-D24Z Shape-2.4D (Z)</b> 	<b>T12-D4Z Shape-4D (Z)</b> 
<b>T12-KFZ Shape-KF (Z)</b> 	<b>T12-KRZ Shape-KR (Z)</b> 			

\* These tips are tinned on the soldering surface only.

## Heavy duty type

<b>T12-WB2 Shape-0.5WB</b> 	<b>T12-WD08 Shape-0.8WD</b> 	<b>T12-WD12 Shape-1.2WD</b> 	<b>T12-WD16 Shape-1.6WD</b> 	<b>T12-WD52 Shape-5.2WD</b> 	<b>T12-WI Shape-WI</b> 



## FM-203 ESD SAFE

### 2-Port High Performance Rework Station

Digital

Tip not included



- 2 handpieces can be connected at the same time.

## FM-206 ESD SAFE

### 3-Port High Performance Rework Station

Digital

Tip not included

Nozzle not included



- 3-port rework station that enables soldering, desoldering, and SMD rework all with a single unit
- Graphic LCD enables easy viewing and operation.

### Handpiece Combination Examples

#### FM-203



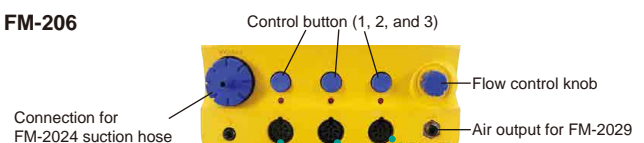
Handpiece	Channel D connector	Channel S connector
FM-2027	○	○
FM-2022 <sup>*1</sup>	○	×
FM-2023 <sup>*1</sup>	○	×
FM-2024 <sup>*2</sup>	○	○
FM-2026 <sup>*3</sup>	○	○
FM-2030 <sup>*1</sup>	○	×
FM-2031 <sup>*1 &amp; *3</sup>	○	×
FM-2032	○	○

<sup>\*1</sup> When FM-2022, FM-2023, FM-2030 or FM-2031 is connected to the channel D connector, both channel connectors can't be used at the same time.

<sup>\*2</sup> When two FM-2024s are connected to the channel connectors, each FM-2024 must be connected to the desolder control box.

<sup>\*3</sup> For FM-2031 and FM-2026, each handpiece needs an N<sub>2</sub> generator (FX-780), flowmeter (FX-791), compressor, regulator, etc. For further details, see N<sub>2</sub> system (P.46 & P.47).

#### FM-206



Handpiece	Receptacle 1	Receptacle 2	Receptacle 3
FM-2027	○	○	○
FM-2024	○ <sup>*1</sup>	○	○ <sup>*1</sup>
FM-2029	×	×	○
FM-2022	×	○	×
FM-2023	×	○	×
FM-2026	○	○	○
FM-2030	×	○	○
FM-2031	×	○ <sup>*2</sup>	○ <sup>*2</sup>
FM-2032	○	○	○

<sup>\*1</sup> FM-2024 can be connected to receptacle 2 and 3. However, only one FM-2024 can be used with the station.

<sup>\*2</sup> For FM-2031 and FM-2026, each handpiece needs an N<sub>2</sub> generator (FX-780), flowmeter (FX-791), compressor, regulator, etc. For further details, see N<sub>2</sub> system (P.46 & P.47).

**NOTE:** FM-2024 and FM-2029 can't be used at the same time.

## Accessories

FM-2027 ESD

## Soldering Iron

Tip not included

FM-2026 ESDN<sub>2</sub> Soldering Iron

Tip not included

FM-2029 ESD

## Hot-Air Pencil

Nozzle not included

FM-2030 ESD

## Heavy Duty Soldering Iron

Tip not included

FM-2031 ESDN<sub>2</sub> Heavy Duty Soldering Iron

Tip not included

FM-2032 ESD

## Micro Soldering Iron

Tip not included



N<sub>2</sub> Soldering is available with optional parts (P.47 & P.51).

FM-2022 ESD

## SMD Hot Tweezers

Tip not included

FM-2023 ESD

## Mini SMD Hot Tweezers

Tip included

FM-2024 ESD

## Desoldering Tool

Nozzle not included



# Station Type and Accessories

## Specifications

Model No.	FM-203
Power consumption	140 W
Temperature range	FM-2026/2027: 200 to 450°C FM-2022/2023: 200 to 400°C FM-2024: 350 to 450°C FM-2030/2031: 200 to 500°C FM-2032: 200 to 450°C
Temperature stability	±5°C at idle temperature

### Station

Output voltage	AC 24 V
Dimensions	120 (W) × 120 (H) × 190 (D) mm
Weight	2.7 kg

### Soldering Iron (FM-2027)

Power consumption	70 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	188 mm (with 2.4D tip)
Weight*	30 g (with 2.4D tip)

\* Without cord

Model No.	FM-206
Power consumption	410 W (450 W, max.)
Temperature range	FM-2026/2027: 200 to 450°C FM-2022/2023: 200 to 400°C FM-2024: 350 to 450°C FM-2029: 100 to 550°C FM-2030/FM-2031: 200 to 500°C FM-2032: 200 to 450°C
Temperature stability	±5°C at idle temperature

### Station

Output voltage	AC 24 V
Vacuum generator	Vacuum pump, cylinder type
Vacuum pressure	80 kPa (600 mmHg, max.)
Suction flow	14 L/min.
Air flow	6 L/min. (max.)
Dimensions	162 (W) × 136 (H) × 245 (D) mm
Weight*	6.2 kg

### Soldering Iron (FM-2027)

Power consumption	70 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	188 mm (with 2.4D tip)
Weight*	30 g (with 2.4D tip)

### Desoldering Tool (FM-2024)

Power consumption	70 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	180 mm (with ø1 mm nozzle)
Weight**	65 g (with ø1 mm nozzle)

### Hot Air Handpiece (FM-2029)

Power consumption	140 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length***	232 mm (with ø4 mm nozzle)
Weight***	50 g (with ø4 mm nozzle)

\* Without cord    \*\* Without cord and hose    \*\*\* Without cord and tube

Model No.	FM-2022
Power consumption	140 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	148 mm (with SOP 25L tip)
Weight*	64 g (with SOP 25L tip)

\* Without cord

Model No.	FM-2023
Power consumption	140 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Standard tip	Shape-I: 2 pcs/set (No. T9-I)
Cord length	1.2 m
Total length*	117 mm (with I tip)
Weight*	37 g (with I tip)

\* Without cord

Model No.	FM-2024
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### Desoldering Tool

Power consumption	70 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length**	180 mm (with ø1 mm nozzle)
Weight**	65 g (with ø1 mm nozzle)

### Desolder Control Box

Power consumption	12 W (24 V)
Vacuum generator	Ejector type
Vacuum pressure	93 kPa (700 mmHg, max.)
Suction flow	20 L/min.
Nozzle to ground potential	<2 mV
Applied air pressure	490 kPa (5 kgf/cm <sup>2</sup> ) While in use (trigger or button is pressed)
Compressed air consumption	46 L/min.
Outer dimensions	119 (W) × 45 (H) × 172 (D) mm
Weight*	1.2 kg

\* Without cord    \*\* Without cord and hose

Model No.	FM-2026
Power consumption	70 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length**	205 mm (with 2.4D tip)
Weight**	45 g (with 2.4D tip and nozzle assembly C)

\* Use this N<sub>2</sub> soldering iron below 400°C.

\*\* Without cord and tube

Model No.	FM-2027
Power consumption	70 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	188 mm (with 2.4D tip)
Weight*	30 g (with 2.4D tip)

\* Without cord

## Specifications

Model No.	FM-2030
Power consumption	140 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.3 m
Total length*	224 mm (with 2.4D tip)
Weight*	41 g (with 2.4D tip)

\* Without cord

Model No.	FM-2032
Power consumption	48 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.3 m
Total length*	170 mm (with 1D tip)
Weight*	14 g (with 1D tip)

\* Without cord

Model No.	FM-2031
Power consumption	140 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	231 mm (with 2.4D tip)
Weight*	47 g (with 2.4D tip and nozzle assembly E)

\* Without cord and tube

## Packing List

<b>FM-203</b>	Station, Handpiece (FM-2027), Sleeve assembly, Connecting cable, Power cord, Control card, Iron holder, Tip tray, Heat resistant pad, Instruction manual
<b>FM-206</b>	Station, Power cord, Tip tray, Desoldering tool (FM-2024), Handle (for gun configuration for FM-2024), Iron holder (for FM-2024), Ceramic paper filter (10 pcs; for FM-2024), Nozzle remover (for FM-2024), Cleaning drill for heating element (for FM-2024), Connecting cable (for FM-2024), Handpiece (FM-2027), Iron holder (for FM-2027), Heat resistant pad (for FM-2027), Connecting cable (for FM-2027), Hot air handpiece (FM-2029), Iron holder (for FM-2029), Heat resistant pad (for FM-2029), Connecting cable (for FM-2029), Instruction manual
<b>FM-2022 (Conversion kit)</b>	Parallel remover, Heat resistant pad, Iron holder, Connecting cable, Instruction manual
<b>FM-2023 (Conversion kit)</b>	Mini parallel remover, Soldering tip (T9-I), Heat resistant pad, Iron holder, Component bed, Connecting cable, Instruction manual

<b>FM-2024 (Conversion kit, with DCB)</b>	Desoldering tool, Handle (for gun configuration), Desoldering control box, Filter pipe assembly, Iron holder, Cleaning drill for heating element, Nozzle remover, Ceramic paper filter (10 pcs), Connecting cable, Instruction manual
<b>FM-2026 (Conversion kit)</b>	Handpiece, Sleeve cover, Sleeve assembly (yellow), Heat resistant pad, Iron holder, Connecting cable, Instruction manual
<b>FM-2027 (Conversion kit)</b>	Handpiece, Sleeve assembly (yellow), Heat resistant pad, Iron holder, Connecting cable
<b>FM-2029 (Conversion kit)</b>	Handpiece (hot air), Handpiece holder, Heat resistant pad, Connecting cable, Instruction manual
<b>FM-2030 (Conversion kit)</b>	Handpiece (soldering), Heat resistant pad, Iron holder, Connecting cable, Instruction manual
<b>FM-2031 (Conversion kit)</b>	Handpiece (soldering), Heat resistance pad, Iron holder, Connecting cable, Instruction manual
<b>FM-2032 (Conversion kit)</b>	Handpiece, Heat resistant pad, Iron holder, Connecting cable, Instruction manual

## FM-2029 Features

Securely and easily remove 10 × 10 (mm) chips.



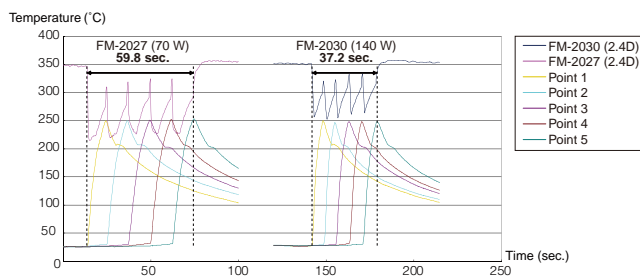
## FM-2032 Size

Unit: mm



## FM-2030 Features

Graph of a comparison of the performance of FM-2027 (70 W) and FM-2030 (140 W)



### Test criteria

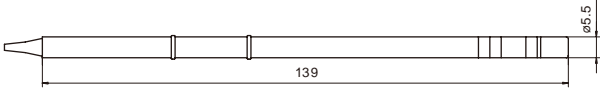

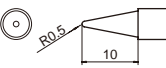
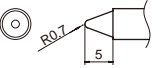
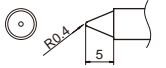
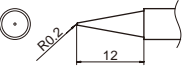
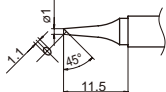
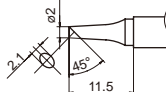
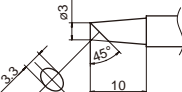
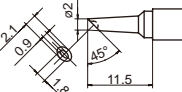
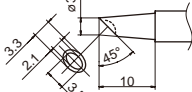
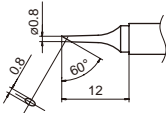
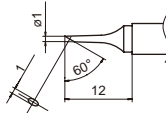
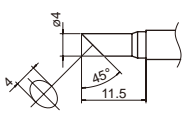
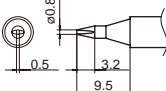

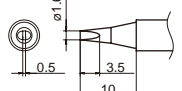
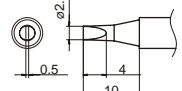
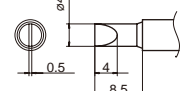
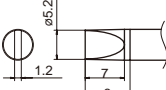
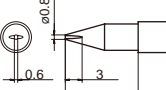
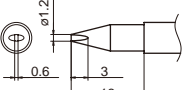
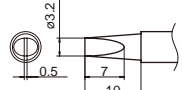
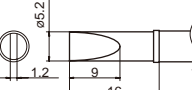

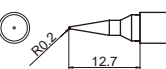
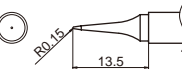
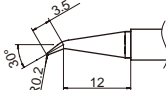
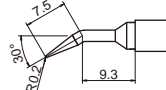
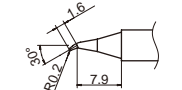
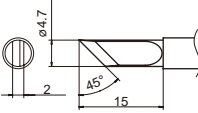
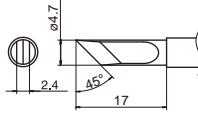
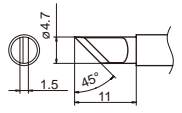
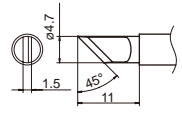
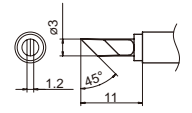
Test method	Solder at 5 points and measure the time until the temperature of the workpiece reaches 250°C.
Board	Bakelite board
Component used	Screw
Tip shape	Shape-2.4D
Temperature setting	350°C
Solder	Lead-free solder (Sn/Ag/Cu), diameter: 1 mm

# Station Type and Accessories

## Optional Tips for FM-2027

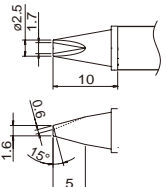
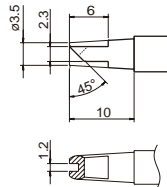
Unit: mm

### Standard type

					
<b>B</b>	<b>T12-B Shape-B</b> 	<b>T12-B2 Shape-0.5B</b> 	<b>T12-B3 Shape-0.7B</b> 	<b>T12-B4 Shape-0.4B</b> 	<b>T12-BL Shape-BL</b> 
<b>BC</b>	<b>T12-BC1 Shape-1BC T12-BCF1*</b> 	<b>T12-BC2 Shape-2BC T12-BCF2*</b> 	<b>T12-BC3 Shape-3BC T12-BCF3*</b> 	<b>T12-BCM2 Shape-2BC with indent</b> 	<b>T12-BCM3 Shape-3BC with indent</b> 
<b>C</b>	<b>T12-C08 Shape-0.8C</b> 	<b>T12-C1 Shape-1C</b> 	<b>T12-C4 Shape-4C T12-CF4*</b> 		
<b>D</b>	<b>T12-D08 Shape-0.8D</b> 	<b>T12-D12 Shape-1.2D</b> 	<b>T12-D16 Shape-1.6D</b> 	<b>T12-D24 Shape-2.4D</b> 	<b>T12-D4 Shape-4D</b> 
	<b>T12-D52 Shape-5.2D</b> 	<b>T12-DL08 Shape-0.8DL</b> 	<b>T12-DL12 Shape-1.2DL</b> 	<b>T12-DL32 Shape-3.2DL</b> 	<b>T12-DL52 Shape-5.2DL</b> 
<b>I</b>	<b>T12-I Shape-I</b> 	<b>T12-IL Shape-IL</b> 	<b>T12-ILS Shape-ILS</b> 		
<b>J</b>	<b>T12-J02 Shape-0.2J</b> 	<b>T12-JL02 Shape-0.2JL</b> 	<b>T12-JS02 Shape-0.2JS</b> 		
<b>K</b>	<b>T12-K Shape-K</b> 	<b>T12-KF Shape-KF</b> 	<b>T12-KL Shape-KL</b> 	<b>T12-KR Shape-KR</b> 	<b>T12-KU Shape-KU</b> 

\* These tips are tinned on the soldering surface only.

### Concave type

<b>T12-1610</b> 	<b>T12-1612</b> 
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## SMD type

Quad	<b>T12-1201 Quad 13.6 x 8.5</b> 	<b>T12-1202 Quad 10.3 x 10.3</b> 	<b>T12-1203 Quad 12.8 x 12.8</b> 	<b>T12-1204 Quad 17.9 x 17.9</b> 	<b>T12-1205 Quad 23.4 x 17.3</b> 
	<b>T12-1206 Quad 22.5 x 16.5</b> 	<b>T12-1207 Quad 15.5 x 15.5</b> 	<b>T12-1208 Quad 15.8 x 15.8</b> 	<b>T12-1209 Quad 8.4 x 8.4</b> 	
Tunnel	<b>T12-1001 Tunnel 5.1 x 4.6</b> 	<b>T12-1002 Tunnel 5.1 x 10.4</b> 	<b>T12-1003 Tunnel 9.5 x 18.3</b> 	<b>T12-1004 Tunnel 9.5 x 15.8</b> 	<b>T12-1005 Tunnel 9.5 x 13.2</b> 
	<b>T12-1006 Tunnel 6.9 x 11.4</b> 	<b>T12-1007 Tunnel 7.9 x 18.8</b> 	<b>T12-1008 Tunnel 19.5 x 10.2</b> 	<b>T12-1009 Tunnel 13.4 x 20.5</b> 	<b>T12-1010 Tunnel 19.5 x 12</b> 
Spatula	<b>T12-1401 Spatula 10.4</b> 	<b>T12-1402 Spatula 15.7</b> 	<b>T12-1403 Spatula 21.2</b> 	<b>T12-1404 Spatula 25</b> 	<b>T12-1405 Spatula 32</b> 
	<b>T12-1406 Spatula 40</b> 				

## Long life type

<b>T12-BZ Shape-B (Z)</b> 	<b>T12-B2Z Shape-0.5B (Z)</b> 	<b>T12-BC1Z Shape-1BC (Z)</b> <b>T12-BCF1Z*</b> 	<b>T12-BC2Z Shape-2BC (Z)</b> <b>T12-BCF2Z*</b> 	<b>T12-BC3Z Shape-3BC (Z)</b> <b>T12-BCF3Z*</b> 
<b>T12-C4Z Shape-4C (Z)</b> <b>T12-CF4Z*</b> 	<b>T12-D12Z Shape-1.2D (Z)</b> 	<b>T12-D16Z Shape-1.6D (Z)</b> 	<b>T12-D24Z Shape-2.4D (Z)</b> 	<b>T12-D4Z Shape-4D (Z)</b> 
<b>T12-KFZ Shape-KF (Z)</b> 	<b>T12-KRZ Shape-KR (Z)</b> 			

\* These tips are tinned on the soldering surface only.

## Heavy duty type

<b>T12-WB2 Shape-0.5WB</b> 	<b>T12-WD08 Shape-0.8WD</b> 	<b>T12-WD12 Shape-1.2WD</b> 	<b>T12-WD16 Shape-1.6WD</b> 	<b>T12-WD52 Shape-5.2WD</b> 	<b>T12-WI Shape-WI</b> 



# Station Type and Accessories

## Optional Tips for FM-2032

Unit: mm

<b>T30-D06 Shape-0.6D</b> 	<b>T30-D1 Shape-1D</b> 	<b>T30-I Shape-I</b> 	<b>T30-J Shape-J</b> 	<b>T30-KU Shape-KU</b> 	<b>T30-KN Shape-KN</b> 
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## Optional Tips for FM-2022

Unit: mm

### CHIP

\*1 set: 2 pcs

<b>T8-1001 Chip 0.5I</b> 	<b>T8-1002 Chip 0.5C</b> 	<b>T8-1003 Chip 1L</b> 	<b>T8-1004 Chip 2L</b> 	<b>T8-1013 Chip 3L</b> 
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### SOP

<b>T8-1005 SOP 6L</b> 	<b>T8-1006 SOP 8L</b> 	<b>T8-1007 SOP 10L</b> 	<b>T8-1008 SOP 13L</b> 	<b>T8-1009 SOP 16L</b> 
<b>T8-1010 SOP 20L</b> 	<b>T8-1011 SOP 25L</b> 	<b>T8-1012 SOP 18L</b> 		

## Replacement Tips for FM-2023

Unit: mm

### CHIP

\*1 set: 2 pcs

<b>T9-I Chip I</b> 	<b>T9-L1 Chip 1L</b> 	<b>T9-L2 Chip 2L</b> 
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## Optional Tips for FM-2030

Unit: mm

<b>T22-BL Shape-BL</b> 	<b>T22-BL2 Shape-2BL</b> 	<b>T22-BC2 Shape-2BC</b> 	<b>T22-C3 Shape-3C</b> 	<b>T22-C5 Shape-5C</b> 	<b>T22-C6 Shape-6C</b> 
<b>T22-D08 Shape-0.8D</b> 	<b>T22-D12 Shape-1.2D</b> 	<b>T22-D16 Shape-1.6D</b> 	<b>T22-D24 Shape-2.4D</b> 	<b>T22-D32 Shape-3.2D</b> 	<b>T22-D45 Shape-4.5D</b> 
<b>T22-D52 Shape-5.2D</b> 	<b>T22-J02 Shape-0.2J</b> 	<b>T22-JD08 Shape-0.8JD</b> 	<b>T22-K Shape-K</b> 		

**Optional Nozzles for FM-2024**

Unit: mm

<b>N1-06 Nozzle <math>\varnothing 0.6</math></b> 	<b>N1-08 Nozzle <math>\varnothing 0.8</math></b> 	<b>N1-10 Nozzle <math>\varnothing 1</math></b> 	<b>N1-13 Nozzle <math>\varnothing 1.3</math></b> 	<b>N1-16 Nozzle <math>\varnothing 1.6</math></b> 
<b>N1-20 Nozzle <math>\varnothing 2</math></b> 	<b>N1-23 Nozzle <math>\varnothing 2.3</math></b> 	<b>N1-L10 Nozzle <math>\varnothing 1</math> long</b> 		

**Optional Nozzles for FM-2029**

Unit: mm

		$\varnothing A$	$\varnothing B$
<b>N4-01 Nozzle <math>\varnothing 2</math></b>		2	2.5
<b>N4-02 Nozzle <math>\varnothing 4</math></b>		4	5
<b>N4-03 Nozzle <math>\varnothing 6</math></b>		6	7
<b>N4-04 Nozzle <math>\varnothing 8</math></b>		8	9

**Optional Tips for the FM-2026**

Please see the optional tips on P.51.

**Optional Tips for the FM-2031**

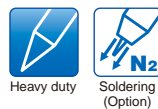
Please see the optional tips on P.50.



## FX-801 ESD SAFE

Heavy Duty Soldering Station **Digital**

Tip not included

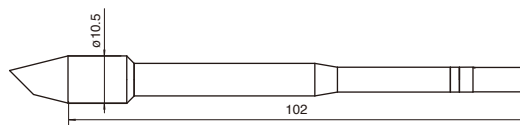


- Super power 300 W
- Best suited for soldering P.W.B. with high heat capacity and high heat dissipation property

### Optional Tips for FX-8002

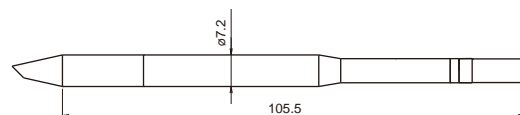
Unit: mm

#### Regular type



<b>T33-BC2 Shape-2BC</b>	<b>T33-BC3 Shape-3BC</b>	<b>T33-BC4 Shape-4BC</b>	<b>T33-BC5 Shape-5BC</b>	<b>T33-BC6 Shape-6BC</b>	<b>T33-D24 Shape-2.4D</b>
<b>T33-D32 Shape-3.2D</b>	<b>T33-D5 Shape-5D</b>	<b>T33-D6 Shape-6D</b>	<b>T33-1610</b>	<b>T33-1611</b>	

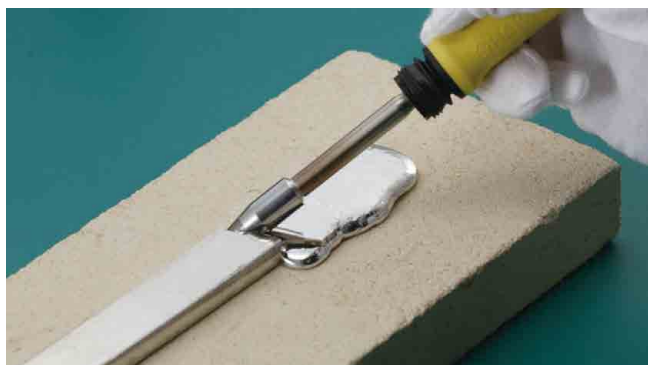
#### Slim type



<b>T33-SSBC2 Shape-2SSBC</b>	<b>T33-SSBC3 Shape-3SSBC</b>	<b>T33-SSBC4 Shape-4SSBC</b>	<b>T33-SSBC5 Shape-5SSBC</b>	<b>T33-SSD16 Shape-1.6SSD</b>	<b>T33-SSD24 Shape-2.4SSD</b>
<b>T33-SSD32 Shape-3.2SSD</b>	<b>T33-SSD6 Shape-6SSD</b>	<b>T33-SS1610</b>	<b>T33-SS1611</b>		

## Features

### Make the impossible possible with Super Power of 300 W Heater



Check out the powerful performance of FX-801 easily melting a bar solder.



For further details,  
please scan here.

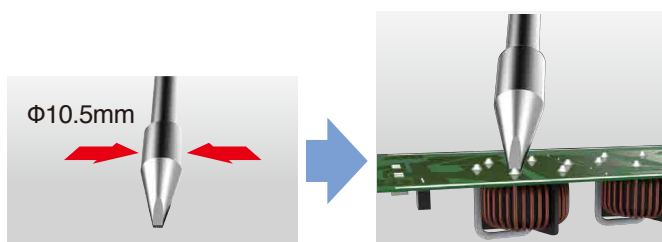
### Compact and lightweight (50 g) for heavy duty 300 W iron

The same weight as the iron part of FX-838, 150 W soldering station, for operator's comfort and better workability.

### A wide variety of tip shapes

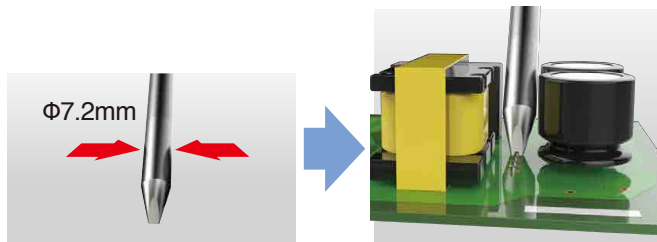
#### • Regular type

Best suited for components with high thermal mass such as transformers and coils.



#### • Slim type

Slimmed-down tips for narrow spaces without losing of enough power.



### Connectable with N<sub>2</sub> soldering iron

To improve solder wettability and spreadability

## FX-8003 ESD

### N<sub>2</sub> Soldering Iron

Tip not included

Please see the optional tips on P.49.



For further details, see the N<sub>2</sub> system (P.46 & P.47).

## Packing List

<b>FX-801</b>	Station, Handpiece (FX-8002), Heat resistant pad, Power cord, Connecting cable, Iron holder (with cleaning wire), Instruction manual
<b>FX-8003</b>	Handpiece, Instruction manual

## Specifications

Model No.	FX-801
Power consumption	300 W
Temperature range	50 to 500°C
Temperature stability	±5°C at idle temperature

### Station

Output voltage	AC 29 V
Dimensions	145 (W) × 107 (H) × 211 (D) mm
Weight	3.9 kg

### Soldering Iron

Power consumption	260 W (29 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	228 mm (with 4BC tip)
Weight*	50 g (with 4BC tip)

\* Without cord

Model No.	FX-8003
Power consumption	260 W (29 V)
Temperature range	50 to 500°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length*	253 mm (with 4BC tip)
Weight*	65 g (with 4BC tip and nozzle assembly A)

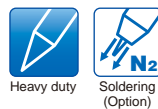
\* Without cord

## FX-838 ESD SAFE

Heavy Duty Soldering Iron

Digital

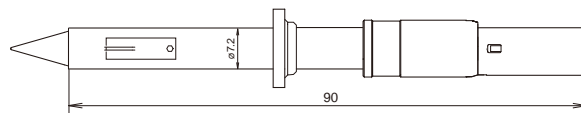
Tip not included



- High powered 150 W soldering iron
- Best suited for soldering of power-supply boards, heat sinks, and shield cases
- Applicable also to the soldering of multilayer boards with micro components

### Optional Tips for FX-8301

Unit: mm

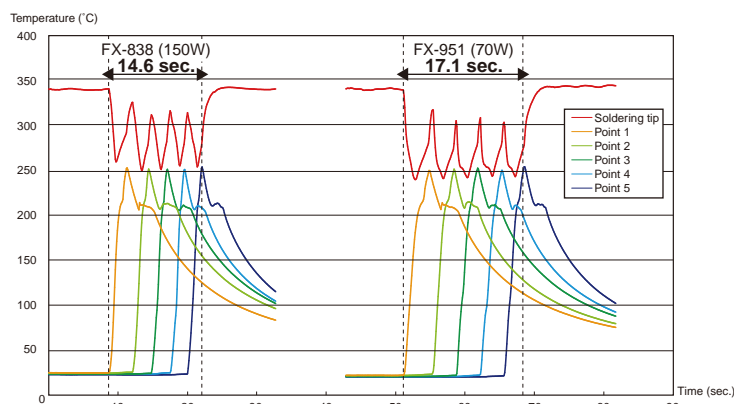


<b>T20-B2 Shape-0.5B</b> 	<b>T20-BC2 Shape-2BC T20-BCF2*</b> 	<b>T20-BC3 Shape-3BC T20-BCF3*</b> 	<b>T20-BC4 Shape-4BC T20-BCF4*</b> 	<b>T20-BCM2 Shape-2BC with indent</b> 
<b>T20-BCM3 Shape-3BC with indent</b> 	<b>T20-BL Shape-BL</b> 	<b>T20-BL2 Shape-2BL</b> 	<b>T20-BL3 Shape-3BL</b> 	<b>T20-C5 Shape-5C</b> 
<b>T20-C6 Shape-6C</b> 	<b>T20-D16 Shape-1.6D</b> 	<b>T20-D24 Shape-2.4D</b> 	<b>T20-D32 Shape-3.2D</b> 	<b>T20-D6 Shape-6D</b> 
<b>T20-J02 Shape-0.2J</b> 	<b>T20-K Shape-K</b> 	<b>T20-KU Shape-KU</b> 	<b>T20-1610</b> 	<b>T20-1611</b> 

\* These tips are tinned on the soldering surface only.

## Features

### Graph of a comparison of the performance of FX-838 and a conventional station



#### Test criteria

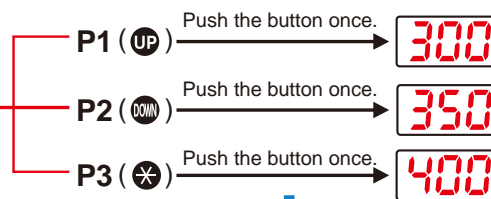
Measurement method	Thermocouples are mounted on the tip and the soldered portion on the board, and the time until the soldered portion reaches 250°C is measured for 5 points.
Board	Bakelite board
Component used	Terminal
Tip shape	Shape-1.6D
Temperature setting	340°C
Solder	Lead-free solder (Sn/Ag/Cu), diameter: 0.5 mm

### Temperature preset mode

The temperature preset mode allows you to input three frequently-used temperatures in advance and recall them with one push of a button.



#### Preset example



One push of a button can quickly recall each setting.

### Connectable with N<sub>2</sub> soldering iron

To improve solder wettability and spreadability

## FX-8302

### N<sub>2</sub> Soldering Iron

Tip not included

Please see the optional tips on P.50.



For further details, see the N<sub>2</sub> system (P.46 & P.47).

## Packing List

FX-838	Station, Handpiece (FX-8301), Control card, Power cord, Heat resistant pad, Connecting cable, Iron holder, Instruction manual
FX-8302	Handpiece, Instruction manual

## Specifications

Model No.	FX-838
Power consumption	158 W
Temperature range	200 to 500°C
Temperature stability	±5°C at idle temperature

### Station

Output voltage	AC 27 V
Dimensions	110 (W) × 110 (H) × 205 (D) mm
Weight	3.2 kg

### Soldering Iron

Power consumption	150 W (27 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Cord length	1.2 m
Total length*	175 mm (with 2.4D tip)
Weight*	31 g (with 2.4D tip)

\* Without cord

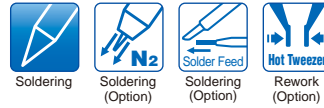
Model No.	FX-8302
Power consumption	150 W (27 V)
Temperature range	200 to 500°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Cord length	1.2 m
Total length*	195 mm (with 2.4D tip)
Weight*	41 g (with 2.4D tip and nozzle assembly D)

\* Without cord and tube

## FX-888D ESD SAFE

All-Round Soldering Station **Digital**

Tip included



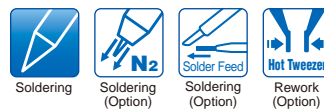
- Features Adjustment mode, Preset mode, and Password function
- Separable tip/heater design provides superior cost performance.
- L type (large type) soldering iron FX-8805 is added to the lineup.

## FX-889 ESD SAFE

2-Port All-Round Soldering Station **Digital**

Tip included

\* 1 piece of FX-8801 is included as standard.



- All the user-friendly functions are succeeded from FX-888D.
- Two applications can be active at the same time.
- Applicable to all the options, N<sub>2</sub> soldering iron, Soldering gun, SMD Hot Tweezers, and L type (large type) soldering iron.



## Common features

### Strict temperature management

#### ● Digital display

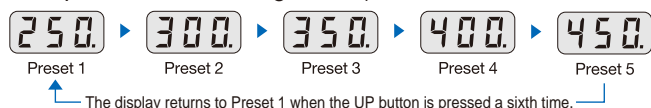
FX-888D's and FX-889's digital display makes it easy to check the set temperature at a glance.

#### ● Password function

Settings can be locked using a password to prevent them from being changed unexpectedly.

#### ● Preset mode

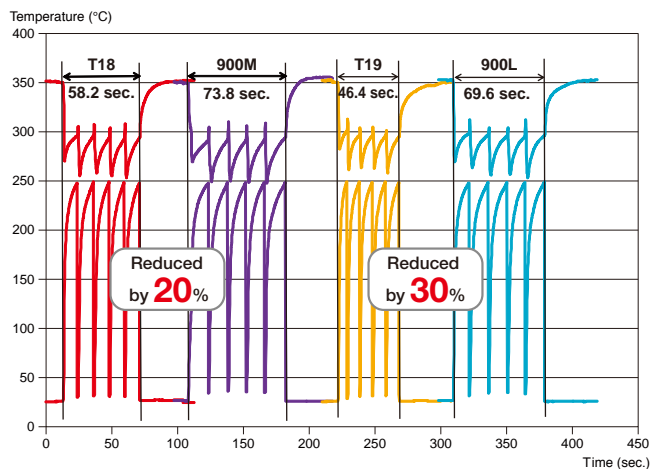
Simply select the desired temperature from a selection of preset temperatures registered in advance. (up to 5 preset temperatures can be registered.)



#### ● Adjustment mode

With adjustment mode, what used to be a troublesome procedure is now as simple as entering the measured tip temperature in FX-888D and FX-889.

#### ● FX-888D and FX-889 deliver excellent thermal recovery by using T18 and T19 series tips for their terrific heat conductivity.



### Test criteria

Measurement method	Thermocouples are mounted on the tip and the soldered portion on the board, and the time until the soldered portion reaches 250°C is measured for 5 points.
Board	Paper phenol copper board
Component used	Terminal
Tip shape	Shape-2.4D
Temperature setting	350°C
Solder	Lead-free solder (Sn/Ag/Cu), diameter: 0.5 mm



Measuring the tip temperature with a tip thermometer (FG-100B)

## Packing List

FX-888D	Station, Handpiece (FX-8801), Iron holder, Instruction manual
FX-889	Station, Handpiece (FX-8801), Power cord, Dual Iron Holder, Color band (qty 2), Instruction Manual

## Specifications

Model No.	FX-888D	FX-889
Power consumption	70 W	135 W
Temperature range	50 to 480°C	50 to 480°C
Temperature stability	±1°C at idle temperature (when set to 200 to 480°C)	

### Station

Output voltage	AC 26 V	AC 26 V
Dimensions	100 (W) × 120 (H) × 120 (D) mm	157 (W) × 121 (H) × 149 (D) mm
Weight	1.2 kg*	2.1 kg

### Soldering Iron

Power consumption	65 W (26 V)	65 W (26 V)
Tip to ground resistance	<2 Ω	<2 Ω
Tip to ground potential	<2 mV	<2 mV
Heating element	Ceramic heater	Ceramic heater
Standard tip	Shape-B (No.T18-B)	Shape-B (No.T18-B)
Cord length	1.2 m	1.2 m
Total length*	217 mm (with B tip)	217 mm (with B tip)
Weight*	46 g (with B tip)	46 g (with B tip)

\* Without cord

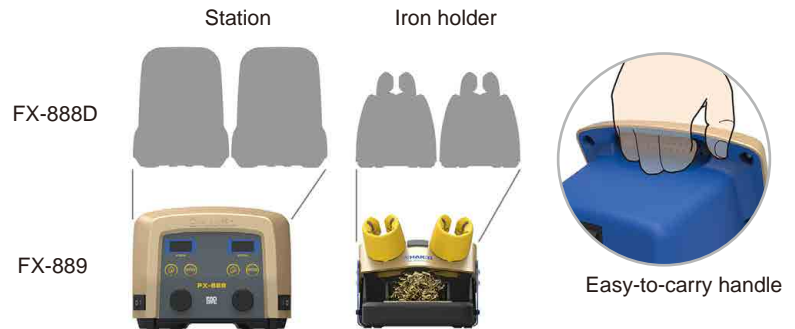
# Station Type and Accessories

## Features of FX-889

### User-Friendly Design

#### ● Space-saving design

The reduced foot print is smaller than 2 of FX-888D and its iron holder. Efficient setup is available even on smaller workbench.



#### ● Power-saving design

Independent switches cut the power for each iron when not in use. Power-saving design minimizes standby electricity.

#### ● Superior operability

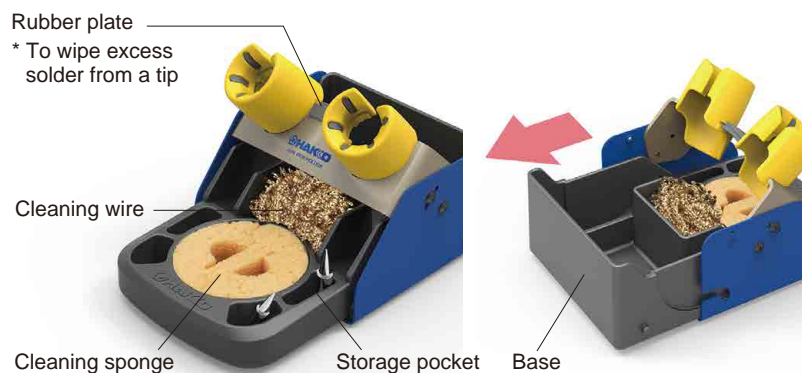
Four buttons were symmetrically placed at the both sides on the front panel. The two buttons on each side allow simple and intuitive operation.

A color band can be attached to the handle, and this makes it possible to see at a glance which side it is connected to. (2 pieces of color band are included as the standard accessories.)



#### ● Rich functions of iron holder

- Convenient pockets to stock soldering tips
- Three different ways for tip cleaning with provided cleaning tools
- Simple and easy cleaning of iron holder inside by removing holder base



**FX-8801** ESD SAFE**Soldering Iron M type**

Tip included

**FX-8802** ESD SAFE**N<sub>2</sub> Soldering Iron**

Tip included

**FX-8803** ESD SAFE**Soldering Gun**

Tip included

**FX-8804** ESD SAFE**SMD Hot Tweezers**

Tip included

**FX-8805** ESD SAFE**Soldering Iron L type**

Tip included

**Specifications**

Model No.	FX-8801
Power consumption	65 W (26 V)
Temperature range	50 to 480°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. T18-B)
Cord length	1.2 m
Total length*	217 mm (with B tip)
Weight*	46 g (with B tip)

\* Without cord

Model No.	FX-8802
Power consumption	65 W (26 V)
Temperature range	50 to 480°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. T18-B)
Cord length	1.2 m
Total length**	190 mm (with B tip)
Weight**	59 g (with B tip and nozzle assembly A)

\* Use this N<sub>2</sub> soldering iron below 450°C.

\*\* Without cord and tube

Model No.	FX-8803
Power consumption	65 W (26 V)
Temperature range	50 to 480°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-3C pre-tinned surface 45° (No. T18-CF3)
Standard guide nozzle	ø1 mm
Usable solder diameter	0.6, 0.8, 1, 1.2, 1.6 mm
Cord length	1.1 m
Dimensions	170 (W) × 180 (H) × 23 (D) mm
Weight*	207 g

\* Without cord

Model No.	FX-8804
Power consumption	65 W (26 V)
Temperature range	200 to 400°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-2L (No. A1378) 2 pcs/set
Cord length	1.2 m
Total length**	186 mm
Weight**	93 g

\* The recommended (process) temperature is from 200°C to 400°C while setting temperature range of FX-888D is from 50°C to 480°C.

\*\* Without cord

Model No.	FX-8805
Power consumption	65 W (26 V)
Temperature range	50 to 480°C
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. T19-B)
Cord length	1.2 m
Total length*	222 mm (with B tip)
Weight*	52 g (with B tip)

\* Without cord



# Station Type and Accessories

## Packing List

<b>FX-8801</b>	Handpiece, Instruction Manual
<b>FX-8802</b>	Handpiece, Shield plate, Instruction manual
<b>FX-8803</b>	Handpiece, Instruction manual
<b>FX-8804</b>	Handpiece, Caution label, Heat resistant pad, Instruction manual
<b>FX-8805</b>	Handpiece, Instruction Manual

NOTE: The soldering iron cannot be used as a standalone device.

## Option

### FX-8803

Part No.	Name	Specifications
C1437	Iron holder (with cleaning sponge)	—

### FX-8804

Part No.	Name	Specifications
FH800-04BY	Iron holder (with cleaning sponge)	Blue & yellow

### FX-8801 & FX-8805

Part No.	Name	Specifications
B5122	Tip enclosure	With nut, required when converting from FX-8801 to FX-8805
B3730	Nut and tip enclosure	Required when converting from FX-8805 to FX-8801

## Replacement Tips for FX-8801 and FX-8803

Unit: mm

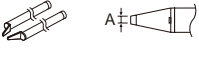

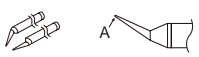
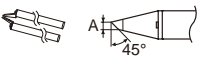
<p>Applicable for FX-8803</p> <p><b>T18-B Shape-B</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-SB Shape-SB</b></p>	<p><b>T18-BR02 Shape-0.2BR</b></p>	<p><b>T18-BL Shape-BL</b></p>	<p><b>T18-C05 Shape-0.5C</b></p>
<p>Applicable for FX-8803</p> <p><b>T18-C08 Shape-0.8C</b></p>	<p>Applicable for FX-8803 (Only C1)</p> <p><b>T18-C1 Shape-1C</b> <b>T18-CF1*</b></p>	<p><b>T18-CF15* Shape-1.5C</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-C2 Shape-2C</b> <b>T18-CF2*</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-CSF25* Shape-2.5CS</b></p>
<p>Applicable for FX-8803</p> <p><b>T18-C3 Shape-3C</b> <b>T18-CF3*</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-C4 Shape-4C</b> <b>T18-CF4*</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-C5 Shape-5C</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-K Shape-K</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-D08 Shape-0.8D</b></p>
<p>Applicable for FX-8803</p> <p><b>T18-D12 Shape-1.2D</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-D16 Shape-1.6D</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-D24 Shape-2.4D</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-D32 Shape-3.2D</b></p>	<p><b>T18-DL12 Shape-1.2DL</b></p>
<p><b>T18-DL2 Shape-2DL</b></p>	<p><b>T18-DL32 Shape-3.2DL</b></p>	<p><b>T18-S3 Shape-S3</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-S4 Shape-S4</b></p>	<p><b>T18-S6 Shape-S6</b></p>
<p>Applicable for FX-8803</p> <p><b>T18-S9 Shape-S9</b></p>	<p>Applicable for FX-8803</p> <p><b>T18-I Shape-I</b></p>	<p>* These tips are tinned on the soldering surface only.</p>		

## Replacement Tips and Nozzles for FX-8802

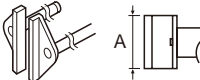
Please see the replacement tips on P.51.

## Replacement Tips for FX-8804

### For Chip Component

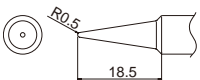
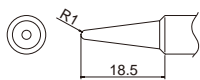

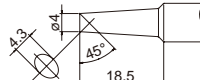
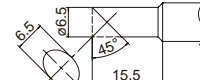
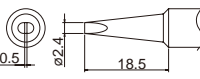

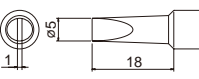
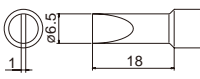
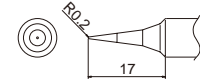
Part No.	Name	Size of A (B)	Tip Shape
A1577	Tip/CHIP 0.5L	0.5 mm	
A1379	Tip/CHIP 1L	1 mm	
A1378	Tip/CHIP 2L	2 mm	
A1388	Tip/CHIP 0.5C	1.5 (0.5) mm	
A1389	Tip/CHIP 0.5I	R0.25 mm	
A1576	Tip/CHIP 2.6C	2.6 mm	

### For SOP Component

Part No.	Name	Size of A	Tip Shape
A1390	Tip/SOP 4L	4 mm	
A1391	Tip/SOP 6L	6 mm	
A1380	Tip/SOP 8L	8 mm	
A1381	Tip/SOP 10L	10 mm	
A1382	Tip/SOP 13L	13 mm	
A1392	Tip/SOP 15L	15 mm	
A1383	Tip/SOP 18L	18 mm	
A1384	Tip/SOP 20L	20 mm	
A1385	Tip/SOP 25L	25 mm	

## Replacement Tips for FX-8805

Unit: mm

<b>T19-B Shape-B</b> 	<b>T19-B2 Shape-2B</b> 	<b>T19-C3 Shape-3C</b> 	<b>T19-C4 Shape-4C</b> 	<b>T19-C65 Shape-6.5C</b> 
<b>T19-D24 Shape-2.4D</b> 	<b>T19-D32 Shape-3.2D</b> 	<b>T19-D5 Shape-5D</b> 	<b>T19-D65 Shape-6.5D</b> 	<b>T19-I Shape-I</b> 



## FX-780 / FX-781

### N<sub>2</sub> Generator



- Highest concentration of nitrogen gas: 99.9%
- Compact design reduces footprint.
- Large-capacity type accepts 2 soldering irons (FX-781).

## FX-791

### N<sub>2</sub> Flowmeter



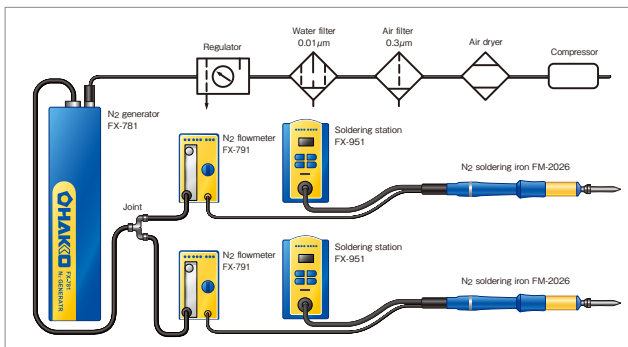
- Flowmeter for N<sub>2</sub> soldering iron with flow control valve and regulator

- The preheating effect is achieved by passing nitrogen gas along the heating element in the hand piece.
- Improvement of wettability and spreadability
- Preventing oxidation

### Connection Method

#### For two soldering irons

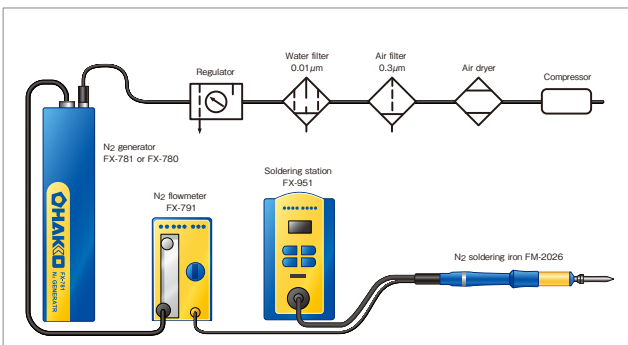
Large-capacity type : FX-781



\* It is capable to supply high concentration nitrogen of 97% at the output rate approx. 1L/min. (at air supply pressure of 0.5MPa)

#### For one soldering iron

Small-capacity type : FX-780  
Large-capacity type : FX-781



\* It is capable to supply high concentration nitrogen of 99.9% at the output rate approx. 1L/min. (at air supply pressure of 0.7MPa)

### Specifications

Model No.	FX-780	FX-781
Air supply pressure	0.3 to 0.7 MPa	
Concentration of generated N <sub>2</sub>	99.9% (max.)	
Amount of generated N <sub>2</sub>	1.5 L/min. (When compressed air of 0.5 MPa is supplied at 25°C, the concentration of the generated nitrogen is 98%.)	2.4 L/min. (When compressed air of 0.5 MPa is supplied at 25°C, the concentration of the generated nitrogen is 98%.)
Dimensions*	73 (W) × 282 (H) × 71 (L) mm	73 (W) × 407 (H) × 71 (L) mm
Weight**	1.5 kg	2 kg

\* Without sockets and valve

\*\* Without racks

Model No.	FX-791
Pressure of discharged gas	0.2 MPa (2 kgf/cm <sup>2</sup> )
Gas flow	0.25 to 2.5 L/min.
Dimensions	70 (W) × 121 (H) × 134 (D) mm
Weight	600 g

### Packing List

FX-780	Unit, Rack for unit (2 pcs), Instruction manual
FX-781	Unit, Racks for unit (4 pcs), Instruction manual
FX-791	Unit, Instruction manual

## Effects of N<sub>2</sub> system

N<sub>2</sub> gas is heated inside soldering iron and is discharged from the tip end. It prevents soldering joint from oxidation and gives preheating effect to workpiece. As a result, solderability increases.



### Preventing oxidation

Heated N<sub>2</sub> gas reduces the oxidation of tips (iron plating). As a result, the wettability of tips is improved.

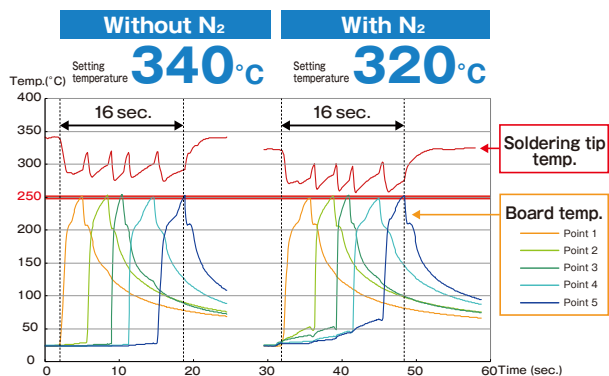


### Test criteria

After applying power for 3 hours with the temperature set at 400°C, feed solder and perform cleaning, and then compare the conditions.

### Preheating effect

Heated N<sub>2</sub> gas preheats the workpiece. As a result, even if the temperature setting is low, soldering can be finished in the same time as before.



### Test criteria

Board: Paper phenol copper board  
Component: Connector  
Solder: Lead-free solder (Sn-3Ag-0.5Cu)  $\phi$ 0.5mm  
Tip shape: T12-D24 and T13-D24  
Measurement method: Measure the time until the workpiece reached to 250°C at 5-points

- Compatible with no-clean soldering (low-activity flux)
- Solves the insufficient heat supply problems which may occur during soldering of multilayer boards
- Reduces cracking in multilayer ceramic capacitors by thermal stress
- Reduces soldering time
- Relieves loads applied to heat-sensitive parts
- Reduces tip oxidation

The use of N<sub>2</sub> gas improves workability, quality stability and reduces running cost.

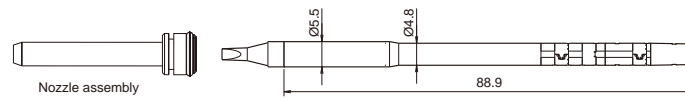
## Applicable Soldering Station

	N <sub>2</sub> Soldering Iron	Soldering Station
IoT Capable	FN-1102 <b>95 W</b>	FN-1010
Heavy Duty	FX-8003 <b>260 W</b>	FX-801
	FX-8302 <b>150 W</b>	FX-838
High Performance	FM-2031 <b>140 W</b>	FM-206 FM-203
	FM-2032 <b>48 W</b>	FX-951 FM-206 FM-203
	FM-2026 <b>70 W</b>	FX-951 FM-206 FM-203 FM-204 FX-950
	* Use FM-2026 below 400°C.	
All-Round	FX-8802 <b>65 W</b>	FX-888D FX-889
	* Use FX-8802 below 450°C.	

## Optional Tips and Nozzle Assemblies for FN-1102

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm



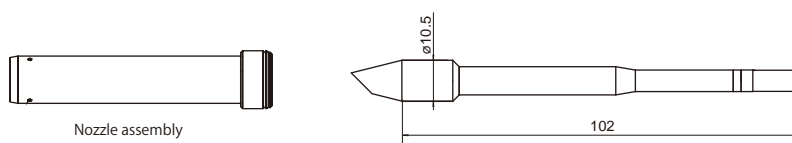
<b>T36-B Shape-0.2B</b> 	<b>T36-B2 Shape-0.5B</b> 	<b>T36-BL Shape-BL</b> 	<b>T36-BC1 Shape-1BC</b> 	<b>T36-BC2 Shape-2BC</b> 
B5233 Nozzle assembly A	B5234 Nozzle assembly B	B5234 Nozzle assembly B	B5235 Nozzle assembly C	B5234 Nozzle assembly B
<b>T36-BC3 Shape-3BC</b> 	<b>T36-C1 Shape-1C</b> 	<b>T36-C4 Shape-4C</b> 	<b>T36-D08 Shape-0.8D</b> 	<b>T36-D16 Shape-1.6D</b> 
B5236 Nozzle assembly D	B5235 Nozzle assembly C	B5236 Nozzle assembly D	B5233 Nozzle assembly A	B5233 Nozzle assembly A
<b>T36-D24 Shape-2.4D</b> 	<b>T36-DL32 Shape-3.2DL</b> 	<b>T36-D52 Shape-5.2D</b> 	<b>T36-I Shape-I</b> 	<b>T36-ILS Shape-ILS</b> 
B5233 Nozzle assembly A	B5237 Nozzle assembly E	B5237 Nozzle assembly E	B5233 Nozzle assembly A	B5235 Nozzle assembly C
<b>T36-J02 Shape-0.2J</b> 	<b>T36-JS02 Shape-0.2JS</b> 	<b>T36-K Shape-K</b> 		
B5234 Nozzle assembly B	B5233 Nozzle assembly A	B5237 Nozzle assembly E		

## Optional Tips and Nozzle Assemblies for FX-8003

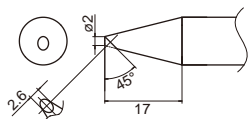
Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

## Regular type

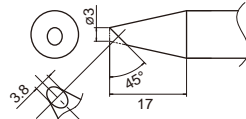


## T33-BC2 Shape-2BC



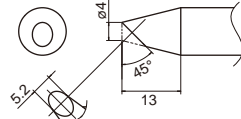
B5070 Nozzle assembly B

## T33-BC3 Shape-3BC



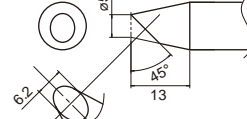
B5070 Nozzle assembly B

## T33-BC4 Shape-4BC



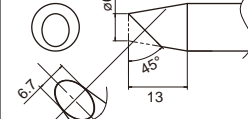
B5069 Nozzle assembly A

## T33-BC5 Shape-5BC



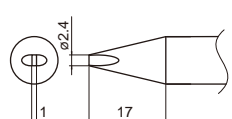
B5069 Nozzle assembly A

## T33-BC6 Shape-6BC



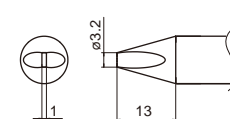
B5069 Nozzle assembly A

## T33-D24 Shape-2.4D



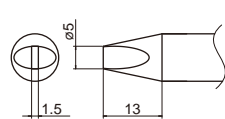
B5070 Nozzle assembly B

## T33-D32 Shape-3.2D



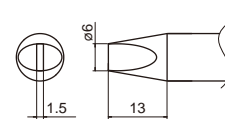
B5069 Nozzle assembly A

## T33-D5 Shape-5D



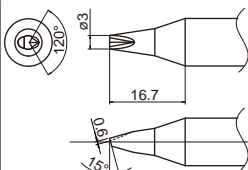
B5069 Nozzle assembly A

## T33-D6 Shape-6D



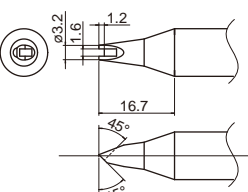
B5069 Nozzle assembly A

## T33-1610



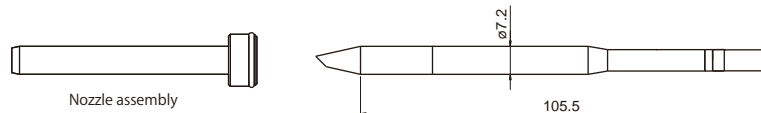
B5070 Nozzle assembly B

## T33-1611

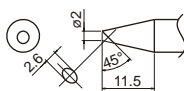


B5070 Nozzle assembly B

## Slim type

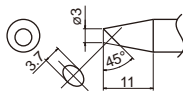


## T33-SSBC2 Shape-2SSBC



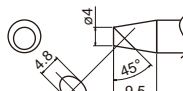
B5239 Nozzle assembly C

## T33-SSBC3 Shape-3SSBC



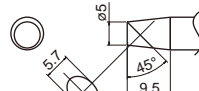
B5239 Nozzle assembly C

## T33-SSBC4 Shape-4SSBC



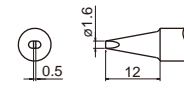
B5240 Nozzle assembly D

## T33-SSBC5 Shape-5SSBC



B5240 Nozzle assembly D

## T33-SSD16 Shape-1.6SSD



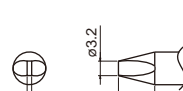
B5239 Nozzle assembly C

## T33-SSD24 Shape-2.4SSD



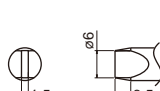
B5240 Nozzle assembly D

## T33-SSD32 Shape-3.2SSD



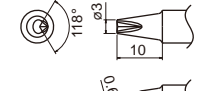
B5241 Nozzle assembly E

## T33-SSD6 Shape-6SSD



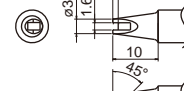
B5241 Nozzle assembly E

## T33-SS1610



B5239 Nozzle assembly C

## T33-SS1611

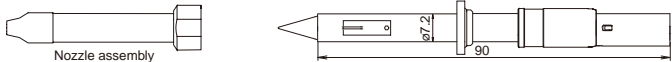
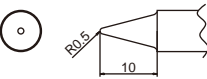
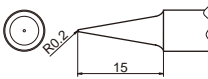
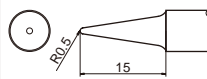

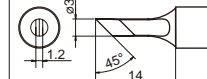
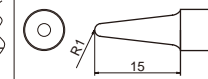
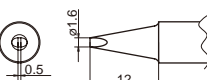
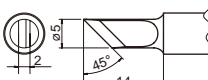






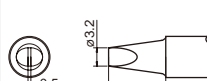


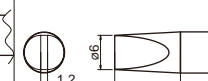
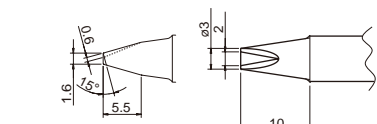
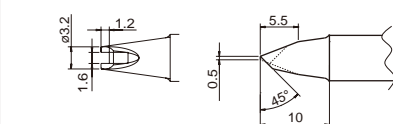


B5239 Nozzle assembly C

## Optional Tips and Nozzle Assemblies for FX-8302

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

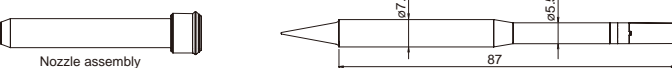

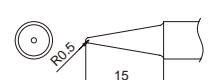
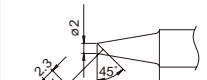



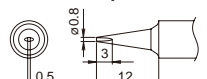
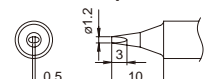
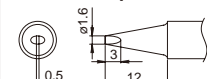
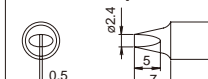
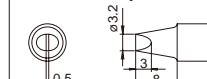
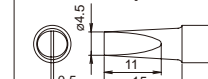
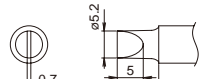
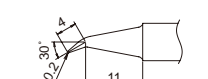

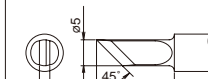
					
<b>T20-B2 Shape-0.5B</b>	<b>T20-BL Shape-BL</b>	<b>T20-BL2 Shape-2BL</b>	<b>T20-J02 Shape-0.2J (0.2RSB)</b>	<b>T20-KU Shape-KU</b>	<b>T20-BL3 Shape-3BL</b>
					
B3121 Nozzle assembly A	B3121 Nozzle assembly A	B3121 Nozzle assembly A	B3122 Nozzle assembly B	B3122 Nozzle assembly B	B3123 Nozzle assembly C
<b>T20-D16 Shape-1.6D</b>	<b>T20-K Shape-K</b>	<b>T20-BC2 Shape-2BC T20-BCF2*</b>	<b>T20-BC3 Shape-3BC T20-BCF3*</b>	<b>T20-BC4 Shape-4BC T20-BCF4*</b>	<b>T20-C5 Shape-5C</b>
					
B3123 Nozzle assembly C	B3123 Nozzle assembly C	B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3124 Nozzle assembly D
<b>T20-C6 Shape-6C</b>	<b>T20-D24 Shape-2.4D</b>	<b>T20-D32 Shape-3.2D</b>	<b>T20-BCM2 Shape-2BC with indent</b>	<b>T20-BCM3 Shape-3BC with indent</b>	<b>T20-D6 Shape-6D</b>
					
B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3124 Nozzle assembly D	B3561 Nozzle assembly E
<b>T20-1610</b>		<b>T20-1611</b>			
					
B3124 Nozzle assembly D		B3124 Nozzle assembly D			

\* These tips are tinned on the soldering surface only.

## Optional Tips and Nozzle Assemblies for FM-2031

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

					
<b>T22-BL Shape-BL</b>	<b>T22-BL2 Shape-2BL</b>	<b>T22-BC2 Shape-2BC</b>	<b>T22-C3 Shape-3C</b>	<b>T22-C5 Shape-5C</b>	<b>T22-C6 Shape-6C</b>
					
B3121 Nozzle assembly A	B3121 Nozzle assembly A	B3121 Nozzle assembly A	B3121 Nozzle assembly A	B3124 Nozzle assembly D	B3124 Nozzle assembly D
<b>T22-D08 Shape-0.8D</b>	<b>T22-D12 Shape-1.2D</b>	<b>T22-D16 Shape-1.6D</b>	<b>T22-D24 Shape-2.4D</b>	<b>T22-D32 Shape-3.2D</b>	<b>T22-D45 Shape-4.5D</b>
					
B3123 Nozzle assembly C	B3121 Nozzle assembly A	B3123 Nozzle assembly C	B3561 Nozzle assembly E	B3124 Nozzle assembly D	B3124 Nozzle assembly D
<b>T22-D52 Shape-5.2D</b>	<b>T22-J02 Shape-0.2J</b>	<b>T22-JD08 Shape-0.8JD</b>	<b>T22-K Shape-K</b>		
					
B3124 Nozzle assembly D	B3121 Nozzle assembly A	B3561 Nozzle assembly E	B3123 Nozzle assembly C		



## Optional Tips and Nozzle Assemblies for FM-2032

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

C5038 Nozzle assembly A C5039 Nozzle assembly B C5040 Nozzle assembly C C5041 Nozzle assembly D*					
<b>T30-D1 Shape-1D</b>	<b>T30-D06 Shape-0.6D</b>	<b>T30-I Shape-I</b>	<b>T30-J Shape-J</b>	<b>T30-KU Shape-KU</b>	<b>T30-KN Shape-KN</b>
C5038 Nozzle assembly A C5041 Nozzle assembly D*	C5038 Nozzle assembly A C5041 Nozzle assembly D*	C5038 Nozzle assembly A C5041 Nozzle assembly D*	C5040 Nozzle assembly C C5041 Nozzle assembly D*	C5038 Nozzle assembly A C5041 Nozzle assembly D*	C5039 Nozzle assembly B C5041 Nozzle assembly D*

\* Shorter nozzle design provides better visibility.  
For further information, visit our website.

## Optional Tips and Nozzle Assemblies for FM-2026

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

<b>T13-B2 Shape-0.5B</b>	<b>T13-BL Shape-BL</b>	<b>T13-BC1 Shape-1BC T13-BCF1*</b>	<b>T13-BC2 Shape-2BC T13-BCF2*</b>	<b>T13-BC3 Shape-3BC T13-BCF3*</b>	<b>T13-D08 Shape-0.8D</b>
B2708 Nozzle assembly C	B2898 Nozzle assembly E	B2899 Nozzle assembly F	B2706 Nozzle assembly A	B2900 Nozzle assembly G	B2709 Nozzle assembly D
<b>T13-D16 Shape-1.6D</b>	<b>T13-D24 Shape-2.4D</b>	<b>T13-J02 Shape-0.2J</b>	<b>T13-KF Shape-KF</b>	<b>T13-KR Shape-KR</b>	<b>T13-KU Shape-KU</b>
B2708 Nozzle assembly C	B2708 Nozzle assembly C	B2707 Nozzle assembly B	B2923 Nozzle assembly J	B2902 Nozzle assembly I	B2901 Nozzle assembly H
<b>T13-BCM2 Shape-2BC with indent</b>	<b>T13-BCM3 Shape-3BC with indent</b>				
B2706 Nozzle assembly A	B2900 Nozzle assembly G	* These tips are tinned on the soldering surface only.			

## Replacement Tips and Nozzle Assemblies for FX-8802

Tip and nozzle assembly are supplied separately. Please purchase a compatible nozzle assembly for your tip referring the chart below.

Unit: mm

<b>T18-B Shape-B</b>	<b>T18-C05 Shape-0.5C</b>	<b>T18-C1 Shape-1C T18-CF1*</b>	<b>T18-C2 Shape-2C T18-CF2*</b>	<b>T18-C3 Shape-3C T18-CF3*</b>	<b>T18-D08 Shape-0.8D</b>
B3662 Nozzle assembly A	B3664 Nozzle assembly C	B3664 Nozzle assembly C	B3662 Nozzle assembly A	B3663 Nozzle assembly B	B3662 Nozzle assembly A
<b>T18-D12 Shape-1.2D</b>	<b>T18-D16 Shape-1.6D</b>	<b>T18-D24 Shape-2.4D</b>	<b>T18-K Shape-K</b>	<b>T18-I Shape-I</b>	* These tips are tinned on the soldering surface only.
B3662 Nozzle assembly A	B3663 Nozzle assembly B	B3663 Nozzle assembly B	B3665 Nozzle assembly D	B3664 Nozzle assembly C	



## FX-600

### Temperature Adjustable Soldering Iron

Tip included



- Adjustable temperature range: 200 to 500°C

## FX-601

### Heavy Duty Temperature Adjustable Soldering Iron

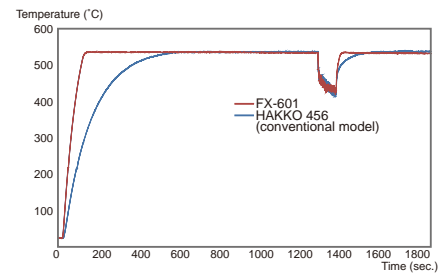
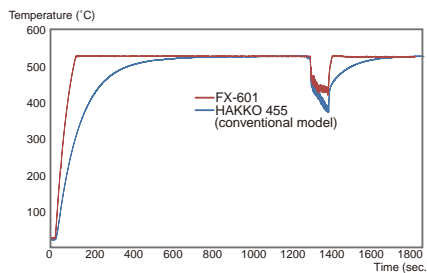
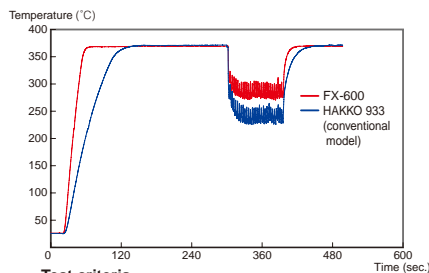
Tip included



- Maximum temperature: 540°C

### Features

#### Superior heat conductivity



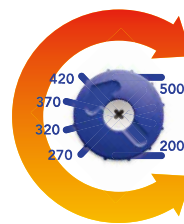
#### Test criteria

- Temperature of soldering iron with a diameter 1.6 x 5 mm piece of solder applied once every 3 seconds to paper phenol copper board.
- Lead-free solder is used.

#### Detach the control knob and lock the temperature setting.



#### Turn the CAL knob to attain a more accurate temperature.



\* Accurate temperature control can be performed even outside the scale.

### 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 to 500°C	240 to 540°C
Temperature stability	±1°C at idle temperature	±1°C at idle temperature
Tip to ground resistance	<2 Ω	<2 Ω
Tip to ground potential	<2 mV	<2 mV
Heating element	Ceramic heater	Ceramic heater
Standard tip	Shape-B (No. T18-B)	Shape-2B (No. T19-B2)
Total length*	233 mm (with B tip)	237 mm (with 2B tip)
Weight*	61 g (with B tip)	68 g (with 2B tip)

\* Without cord

**Packing List**

<b>FX-600</b>	Unit, Lock key, Instruction manual
<b>FX-601</b>	Unit, Lock key, Instruction manual



FX-600 with 605M

**Option**

Part No.	Name	Specifications
FH300-81	Iron holder	With cleaning sponge
633-01	Iron holder	With 599B
633-02	Iron holder	With cleaning sponge
605M	Iron cover	—
B3720	Tip enclosure	With nut, required when converting from FX-600 to FX-601
B3730	Nut and tip enclosure	Required when converting from FX-601 to FX-600

\* For information on the iron holders, see P.58.

**Replacement Tips for FX-600**

Unit: mm

<b>T18-B Shape-B</b> 	<b>T18-BL Shape-BL</b> 	<b>T18-C05 Shape-0.5C</b> 	<b>T18-C08 Shape-0.8C</b> 	<b>T18-C1 Shape-1C</b> <b>T18-CF1*</b> 
<b>T18-C2 Shape-2C</b> <b>T18-CF2*</b> 	<b>T18-C3 Shape-3C</b> <b>T18-CF3*</b> 	<b>T18-C4 Shape-4C</b> <b>T18-CF4*</b> 	<b>T18-C5 Shape-5C</b> 	<b>T18-CF15* Shape-1.5C</b> 
<b>T18-CSF25* Shape-2.5CS</b> 	<b>T18-D08 Shape-0.8D</b> 	<b>T18-D12 Shape-1.2D</b> 	<b>T18-D16 Shape-1.6D</b> 	<b>T18-D24 Shape-2.4D</b> 
<b>T18-D32 Shape-3.2D</b> 	<b>T18-DL12 Shape-1.2DL</b> 	<b>T18-DL2 Shape-2DL</b> 	<b>T18-DL32 Shape-3.2DL</b> 	<b>T18-I Shape-I</b> 
<b>T18-BR02 Shape-0.2BR</b> 	<b>T18-K Shape-K</b> 	<b>T18-S3 Shape-S3</b> 	<b>T18-S4 Shape-S4</b> 	<b>T18-S6 Shape-S6</b> 
<b>T18-S9 Shape-S9</b> 	<b>T18-SB Shape-SB</b> 			

\* These tips are tinned on the soldering surface only.

**Replacement Tips for FX-601**

Unit: mm

<b>T19-B Shape-B</b> 	<b>T19-B2 Shape-2B</b> 	<b>T19-C3 Shape-3C</b> 	<b>T19-C4 Shape-4C</b> 	<b>T19-C65 Shape-6.5C</b> 
<b>T19-D24 Shape-2.4D</b> 	<b>T19-D32 Shape-3.2D</b> 	<b>T19-D5 Shape-5D</b> 	<b>T19-D65 Shape-6.5D</b> 	<b>T19-I Shape-I</b> 

## DASH

### Ceramic Heater Soldering Iron

Tip included



- An entry model of ceramic heater soldering iron
- Ideal for electronic circuit assembly

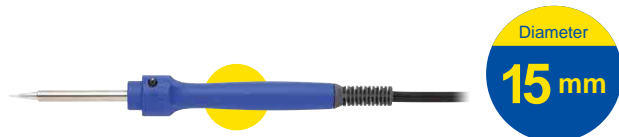


#### Packing List

FX-650	Unit
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#### Features

Slim handle improves your work efficiency!



Simple and easy tip replacement



Quick change just loosening a screw

#### Specifications

Model No.	FX-650
Power consumption	15 to 16 W
Heating element	Ceramic heater
Standard tip	Shape-B (No.T34-B)
Total length*	224 mm
Weight*	60 g (with B tip)

\* Without cord

#### Option

Part No.	Name	Specifications
FH300-81	Iron holder	With cleaning sponge
633-01	Iron holder	With 599B
633-02	Iron holder	With cleaning sponge
605M	Iron cover	—

\* For information on the iron holders, see P.58.



No.605M (with FX-650)

#### Replacement Tips for DASH

Unit: mm

<b>T34-B Shape-B</b> 	<b>T34-C08 Shape-0.8C</b> 	<b>T34-C2 Shape-2C</b> 	<b>T34-C3 Shape-3C</b> 	<b>T34-C4 Shape-4C</b> 
<b>T34-D32 Shape-3.2D</b> 	<b>T34-I Shape-I</b> 			

# PRESTO

## W-Switchable Ceramic Heater Soldering Iron

Tip included



- The boost switch can immediately raise the power from 20 W in normal operation mode to 130 W, which enables the soldering iron to be heated up at a high speed.
- PRESTO can be used for a wide range of applications.
- A safety cap is available for 984 and 985.

When capped



### Packing List

980, 981	Unit
984, 985	Unit, Safety cap

### Specifications

Model No.	980	981	984	985
Power consumption	20/130 W (while the switch is pushed)			
Heating element	Ceramic heater			
Standard tip	Shape-B (No. 980-T-B)			
Total length*	205 mm	160 mm	205 mm	160 mm
Weight*	48 g	92 g	56 g	100 g

\* Without cord and cap

### Option

Part No.	Name	Specifications
FH300-81	Iron holder	With cleaning sponge
633-01	Iron holder	With 599B
633-02	Iron holder	With cleaning sponge

\* For information on the iron holders, see P.58.

### Replacement Tips for PRESTO

Unit: mm

<b>980-T-B Shape-B</b> 	<b>980-T-BC Shape-BC</b> 	<b>980-T-BI Shape-BI</b> 	<b>980-T-D Shape-D</b> 
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## FX-901

### Battery-Powered Soldering Iron

Tip included



- Easy-to-carry soldering iron powered by AA alkaline batteries
- Cordless design makes this iron very handy and usable virtually anywhere.



### Easy Replacement

#### Easy tip replacement

Turn the nipple  
90° clockwise.



#### Easy battery replacement



### Packing List

FX-901	Unit, Cap
--------	-----------

\* Batteries not included

### Specifications

Model No.	FX-901
Power supply	AA x 4 pcs
Power consumption	Alkaline batteries: 6 W (6 V) Nickel hydrogen batteries (2150 mAh): 5 W (4.8 V)
Standard tip	Shape-B (No.T11-B)
Battery life*	Alkaline batteries: 60 minutes Nickel hydrogen batteries (2150 mAh): 120 minutes
Total length**	212 mm
Weight***	76 g

Measurement conditions

- When using new batteries, performance will vary depending on the batteries.
- The operating time was measured from the point that the soldering iron was turned on to the point at which the temperature dropped below 300°C, which is the minimum temperature at which soldering can be performed.

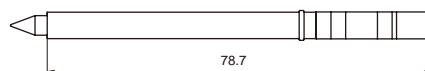
\* When using batteries other than those specified above, the performance and the operating time will vary.

\*\* Without cap

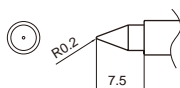
\*\*\* Without battery

### Replacement Tips for FX-901

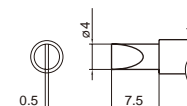
Unit: mm



T11-B Shape-B



T11-D4 Shape-4D



## RED

### Nichrome Heater Soldering Iron

Tip included



- Ideal for use in a variety of soldering works



#### Specifications

Model No.	500	501	502	503
Power consumption	20 W	30 W	40 W	60 W
Heating element	Nichrome heater			
Standard tip	ø3 x 65 mm (No.BB3)	ø4 x 70 mm (No.BB4)	ø6 x 85 mm (No.BB6)	
Total length*	199 mm	207 mm	248 mm	
Weight*	60 g	65 g	95 g	

\* Without cord

#### Option

Part No.	Name	Specifications
602	Iron holder	With cleaning sponge
603	Iron holder	With cleaning sponge

\* For information on the iron holders, see P.58.

## MG

### Solder Feed Soldering Gun

Tip included



- Solder feed mechanism built in the body allows users to make fine adjustments.



#### Specifications

Model No.	582	583	585	587	589	592
Power consumption	30 W	40 W	60 W	80 W	100 W	150 W
Heating element	Nichrome heater					
Standard tip	ø4 mm (No.582-T-4)	ø6 mm (No.585-T-6)	ø8 mm (No.587-T-8)	ø10 mm (No.592-T-10)		
Dimensions	197 x 149 mm	213 x 149 mm	227 x 149 mm	241 x 149 mm		
Weight*	266 g	290 g	318 g	322 g	380 g	

\* Without cord

#### Packing List

<b>582, 583, 585, 587, 589, 592</b>	Unit, 1.6 mm diameter Guide nozzle, Instruction manual
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\* 2.3 mm diameter guide nozzle is originally set into the unit.

#### Option

Part No.	Name	Specifications
582-N-0.8	Guide nozzle	0.8 mm
582-N-1.0	Guide nozzle	1 mm
582-N-1.2	Guide nozzle	1.2 mm
607	Iron holder	With cleaning sponge
582-022	Spool holder	—

\* For information on the iron holder, see P.58.



## IRON HOLDER

### Iron Holder



No. FH300-81\*



No. 633-01



No. 633-02



No. 607



No. 602



No. 603

\* HAKKO 599B can be also mounted.

### Wire-type tip cleaner



No. 599B



HAKKO 599B

Prevents soldering tip oxidation

### Applicable Soldering Irons

Part No.	FH300-81	633-01	633-02	607	602	603
Soldering irons	DASH PRESTO FX-600 FX-601	DASH PRESTO FX-600 FX-601	DASH PRESTO FX-600 FX-601	MG	RED	RED

## 611 ESD SAFE

### Reel Stand



No. 611-2



- Solder reel stand for coiled solder with a maximum load of 1 kg
- Smooth action when reeling out solder wire improves work efficiency
- A mounting screw for the grounding wire is attached on the baseplate.

### Specifications

Part No.	611-1	611-2
Shaft diameter	ø15 mm	
Usable solder	Roll solder 1 kg (max.) × 1	Roll solder 1 kg (max.) × 2
Dimensions	87 (W) × 78 (H) × 141 (D) mm	87 (W) × 200 (H) × 141 (D) mm
Weight	450 g	750 g

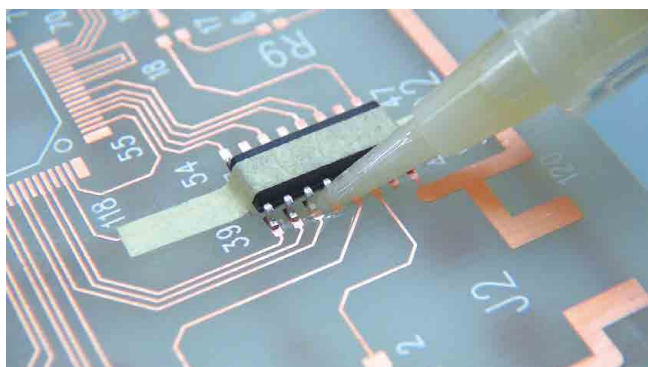
## FS-210

### Brush-tip Type Flux Pen



#### Features

Pen for pinpoint application of optimum amount of flux



Simply push the shaft for a generous coating of flux



- Pen tip does not split easily.
- You can fill your favorite flux into FS-210.
- Simply push the pen shaft when you need some extra flux.

#### Packing List

<b>FS210-82</b>	Flux container for 4 mL (5 pcs)
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\* No flux contained.

#### Replacement Parts

<b>A5009</b>	Brush-tip with a cap (5 pcs)
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