

HAKKO FM-203

SOLDERING STATION

ESD SAFE

For lead-free soldering



New more-advanced multifunctional station.
Equipped with 2 connection ports to enable a single station to simultaneously play 2 roles.



A single station plays multiple roles: Soldering, desoldering and SMD rework. This new station with 2 connection ports allows users to use it more comfortably.



HAKKO FM-203 ESD SAFE
SOLDERING STATION

Station + One Soldering Iron

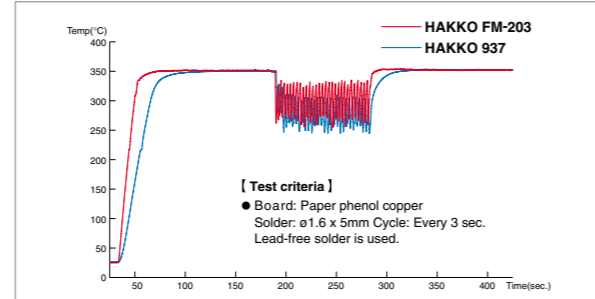
Two connection ports

Two soldering irons can be connected at the same time, which allows users to select and use the appropriate one without having to connect them alternatively.

Powerful thermal recovery

The composite tip provides powerful thermal recovery and stable temperature accuracy.

● Thermal Recovery Graph



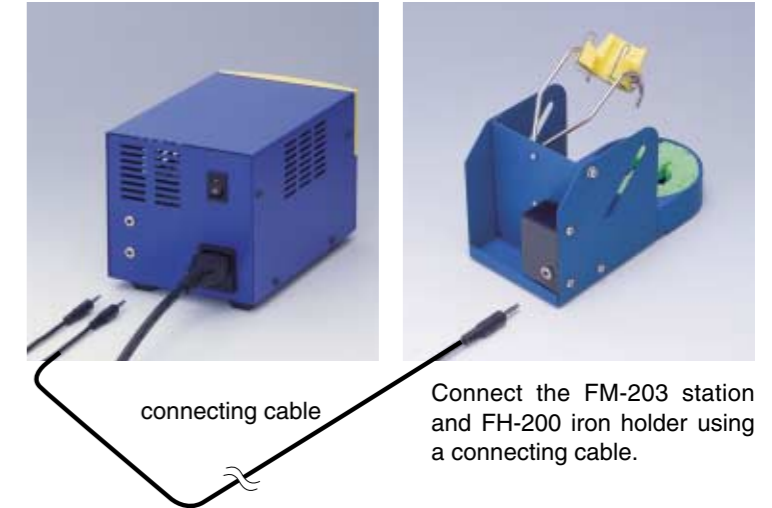
No offset required

Sleep function

After the iron is inserted into the iron holder, the sleep function activates for a user-settable time (0 to 29 min.) and the tip temperature will decrease to approximately 200°C.

Auto power shut-off function

When 30 minutes have elapsed after inserting the iron into the iron holder, the auto power shut-off function activates and stops to apply power to the heating element.



*It is necessary to change unit settings before using sleep and auto power shut-off functions.

Soldering

HAKKO FM-2027 ESD SAFE
SOLDERING IRON

Soldering Iron



- Lightweight grip provides fatigueless work even for extended jobs.
- Four colored sleeves are provided. Using color-coding for tip shape enables convenient work.
- The lock-type sleeve enables it to be firmly secured.



N₂ system

● Example setup

- FM-2026 N₂ soldering iron
- FX-780 N₂ generator
- FX-791 N₂ station (N₂ air-flow meter)



*For further details, refer to the N₂ system brochure.

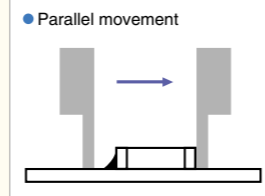
SMD rework

HAKKO MODEL FM-2022 ESD SAFE
PARALLEL REMOVER

Parallel Remover



- Unique parallel movement of tips allows easy grip and release and applies heat optimally.



HAKKO MODEL FM-2023 ESD SAFE
MINI PARALLEL REMOVER

Mini Parallel Remover



- Direct heating reduces damage to neighboring sensitive components compared to hot air systems.

FM-2022:
-Can be used for chips and flat packages up to 25mm in size.

FM-2023:
-Standard or reverse tweezers action can be selected with a switch lever.
-Equipped with a small ergonomic grip.

Desoldering

HAKKO MODEL FM-2024 ESD SAFE
DESOLDERING TOOL

Desoldering Tool



- Greatly improved workability
Small ergonomic-style grip and light weight provides fatigueless work.
- New design prevents clogging
New design with reduced distance between the nozzle and end and filter pipe prevents clogging by sucked-up solder.

- Easy maintenance
Uses disposable paper filter pipes. Allows paper and solder to be disposed of separately. Quick nozzle replacement. Nozzle can be replaced safely with the provided nozzle remover.

- Safe design
Equipped with a nozzle lock function. Inserting a nozzle into the grip automatically locks it in place and prevents the nozzle cartridge from being pulled out suddenly.

- Selectable grip
Detachable handle allows two-way use: gun type or straight type.



DCB (Desoldering Control Box)

*Before using the FM-2024 unit, connect it to the desoldering control box and compressor.

Combination examples of handpieces which can be connected.

Since all handpieces cannot be connected to each connector port, refer to the following table.



Handpiece	Channel D connector	Channel S connector
FM-2027	○	○
FM-2022 *1	○	×
FM-2023 *1	○	×
FM-2024 *2	○	○
FM-2026 *3	○	○

*1 If the FM-2022 or the FM-2023 handpiece is connected to the channel D connector the other handpiece connected to the channel S connector can be used with it at the same time. If either handpiece is used, the non-used handpiece will be automatically subject to sleep mode.

*2 If two FM-2024 handpieces are connected to both channel connectors connect each of them to the desolder control box.

*3 The N₂ generator and N₂ airflow meter must be connected before using the FM-2026. For further details, refer to the N₂ system brochure.

List of Specifications and Example Setups



● HAKKO FM-203

Power Consumption	140W
Temperature Range	200 to 450°C
Temperature Accuracy	±5°C at idle temperature

● Station

Output	24V
Dimensions	120(W) x 120(H) x 190(D)mm
Weight	2.7kg

● HAKKO FM-2027 Soldering Iron

Power Consumption	70W (24V)
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV
Total Length (w/o cord)	188mm with 2.4D tip
Weight (w/o cord)	30g with 2.4D tip
Cord	1.2m

*The temperature was measured using the HAKKO FG-101 thermometer.

HAKKO FM-203 ESD SAFE
SOLDERING STATION

Station + One Soldering Iron

*Tip is an optional part.



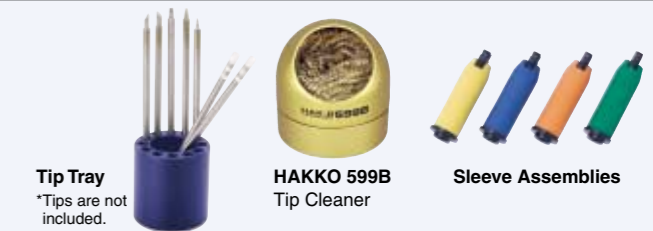
■ Packing List

- ① Tip tray.....1
- ② Iron holder (No.FH200-02).....1
- ③ HAKKO FM-203 station.....1
- ④ HAKKO FM-2027 soldering iron.....1
- ⑤ Control card.....1
- ⑥ Heat resistant pad.....1
- ⑦ Power cord (not shown in the photo).....1
- ⑧ Connecting cable (not shown in the photo).....1

*Tip is an optional part.

■ Replacement and Optional Parts

Part No.	Name/Description	Applicable
B3216	Sleeve assembly, yellow	FM-2027
B3218	Sleeve assembly, blue	FM-2027
B3217	Sleeve assembly, orange	FM-2027
B3219	Sleeve assembly, green	FM-2027
599B-02	Tip cleaner	FH-200
B3253	Connecting cable	FM-203, FH-200
A1514	Ceramic paper filter/10pcs	FM-2024
A1512	Front holder	FM-2024
A1511	Filter pipe assembly	FM-2024
B2756	Tip tray	FM-2027



Tip Tray
*Tips are not included.

HAKKO 599B
Tip Cleaner

Sleeve Assemblies

Soldering

HAKKO FM-2027 ESD SAFE
SOLDERING IRON

Soldering Iron

*Tip is an optional part.



● Specifications

Power Consumption	70W (24V)
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV
Total Length (w/o cord)	188mm with 2.4D tip
Weight (w/o cord)	30g with 2.4D tip
Cord	1.2m

No.FM2027-03 Conversion kit



- Packing List
- ① Connecting cable.....1
 - ② HAKKO FH-200 iron holder.....1
 - ③ HAKKO 599B tip cleaner.....1
 - (②+③: No.FH200-02)
 - ④ HAKKO FM-2027 soldering iron.....1
 - ⑤ Heat resistant pad.....1

*Tip is an optional part.

SMD rework

HAKKO MODEL FM-2022 ESD SAFE
PARALLEL REMOVER

Parallel Remover

*Tip is an optional part.



● Specifications

Power Consumption	140W (24V)
Temperature Range	200-400°C
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV
Total Length (w/o cord)	148mm with SOP 25L tip
Weight (w/o cord)	64g with SOP 25L tip
Cord	1.2m

No.FM2022-05 Conversion kit



- Packing List
- ① Connecting cable.....1
 - ② HAKKO FH-200 iron holder.....1
 - ③ Cleaning sponge.....1
 - (②+③: No.FH200-03)
 - ④ Model FM-2022 parallel remover.....1
 - ⑤ Heat resistant pad.....1

*Tip is an optional part.

HAKKO MODEL FM-2023 ESD SAFE
MINI PARALLEL REMOVER

Mini Parallel Remover

*Tips(shape-I) are originally attached.



● Specifications

Power Consumption	140W (24V)
Temperature Range	200-400°C
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV
Total Length (w/o cord)	117mm with I tip
Weight (w/o cord)	37g with I tip
Cord	1.2m
Standard Tip	T9-1 (Shape-I)

No.FM2023-06 Conversion kit



- Packing List
- ① Connecting cable.....1
 - ② HAKKO FH-200 iron holder.....1
 - ③ Cleaning sponge.....1
 - (②+③: No.FH200-04)
 - ④ Model FM-2023 mini parallel remover.....1
 - ⑤ Tips (No.T9-1/2pcs of set).....1
 - ⑥ Heat resistant pad.....1
 - ⑦ Component bed.....1

Desoldering

HAKKO MODEL FM-2024 ESD SAFE
DESOLDERING TOOL

Desoldering Tool

*Nozzle is an optional part.



● MODEL FM-2024 Desoldering Tool

Power Consumption	70W (24V)
Temperature Range	350-450°C
Tip to Ground Potential	< 2mV
Tip to Ground Resistance	< 2Ω
Total Length (w/o cord)	180mm with ø1.0 nozzle
Weight (w/o cord)	65g with ø1.0 nozzle
Cord	1.2m

● Desolder Control Box

Power Consumption	12W
Output	24V
Vacuum Generator	Ejector type
Vacuum Pressure(max.)	93kPa (700mmHg)
Suction Flow	28L/min.
Tip to Ground Potential	< 2mV
Applied Air Pressure	490kPa (5.0kgf/cm ²) when in use (trigger or button is pressed)
Compressed Air Consumption	1.62 c.f.m. (46L/min.)
Dimension	119(W) x 45(H) x 172(D)mm
Weight (w/o cord & hose)	1.2kg



- Packing List
- ① HAKKO FH-200 iron holder.....1
 - ② HAKKO 599B tip cleaner.....1
 - (①+②: No.FH200-05)
 - ③ Cleaning drill.....1
 - ④ Ceramic paper filter.....10
 - ⑤ Desolder control box (DCB).....1
 - ⑥ Connecting cable.....1
 - ⑦ Filter pipe assembly.....1
 - ⑧ Model FM-2024 desoldering tool.....1
 - ⑨ Handle (for gun configuration).....1
 - ⑩ Nozzle remover.....1

*Nozzle is an optional part.

No.FM2024-34 Conversion kit (UK)

No.FM2024-35 Conversion kit (France)

No.FM2024-33 Conversion kit (Other EU Countries)

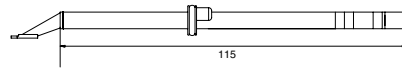
SHAPE B	T15-B Shape-B	T15-B2 Shape-0.5B	T15-B3 Shape-0.7B	T15-B4 Shape-0.4B	T15-BLL Shape-BL LONG
SHAPE BC	T15-BC1 Shape-1BC T15-BCF1*	T15-BC2 Shape-2BC T15-BCF2*	T15-BC3 Shape-3BC T15-BCF3*	T15-BC12 Shape-1.2BC	T15-BC15 Shape-1.5BC
SHAPE C	T15-C1 Shape-1C	T15-CF2* Shape-2C	T15-CF3* Shape-3C	T15-C4 Shape-4C T15-CF4*	
SHAPE D	T15-D08 Shape-0.8D	T15-D12 Shape-1.2D	T15-D16 Shape-1.6D	T15-D2 Shape-2D	T15-D24 Shape-2.4D
SHAPE D	T15-D32 Shape-3.2D	T15-D4 Shape-4D	T15-D52 Shape-5.2D	T15-DL4 Shape-4D LONG	T15-DL52 Shape-5.2D LONG
	T15-X15 Shape-1.5XD				
SHAPE I	T15-I Shape-I	T15-IL Shape-IL	T15-ILS Shape-ILS		
SHAPE J	T15-JO2 Shape-0.2J	T15-JD14 Shape-1.4JD	T15-JD16 Shape-0.6JD	T15-JL02 Shape-0.2JL	T15-JS02 Shape-0.2JS

SHAPE K	T15-K Shape-K	T15-KF Shape-KF	T15-KL Shape-KL	T15-KU Shape-KU	
SHAPE R	T15-R20 Shape-2.0R	T15-R23 Shape-2.3R	T15-R27 Shape-2.7R	T15-R34 Shape-3.4R	T15-R48 Shape-4.8R
SHAPE SB	T15-SB02 Shape-0.2SB	T15-SB03 Shape-0.3SB	T15-SB05 Shape-0.5SB	T15-SB08 Shape-0.8SB	T15-SBC04 Shape-0.4SBC
	T15-SBS04 Shape-0.4BS	T15-SBS07 Shape-0.7BS			
TUNNEL	T15-1001** Tunnel 5.1 x 4.6	T15-1002** Tunnel 5.1 x 10.4	T15-1003** Tunnel 9.5 x 18.3	T15-1004** Tunnel 9.5 x 15.8	T15-1005** Tunnel 9.5 x 13.2
	T15-1006** Tunnel 6.9 x 11.4	T15-1007** Tunnel 7.9 x 18.8	T15-1008** Tunnel 19.5 x 10.2	T15-1009** Tunnel 13.4 x 20.5	T15-1010** Tunnel 19.5 x 12
QUAD	T15-1201** Quad 13.6 x 8.5	T15-1202** Quad 10.3 x 10.3	T15-1203** Quad 12.8 x 12.8	T15-1204** Quad 17.9 x 17.9	T15-1205** Quad 23.4 x 17.3
	T15-1206** Quad 22.5 x 16.5	T15-1207** Quad 15.5 x 15.5	T15-1208** Quad 15.8 x 15.8	T15-1209** Quad 8.4 x 8.4	T15-1210** Quad 15.4 x 12.8
SPATULA	T15-1401** Spatula 10.4	T15-1402** Spatula 15.7	T15-1403** Spatula 21.2	T15-1406** Spatula 40	
SPECIAL APPLICATIONS TYPE	T15-BCM2*** Shape-2BC Bevel with indent	T15-BCM3*** Shape-3BC Bevel with indent	T15-1603** Shape-LONG REACH CHISEL	T15-1605** Shape-LONG REACH CHISEL	

* Tinned on the soldering surface only.
** The iron tips marked with double asterisks (**) have a temperature accuracy of $\pm 25^{\circ}\text{C}$. Others have a temperature accuracy of $\pm 15^{\circ}\text{C}$.
*** The part numbers T15-BCM2 and T15-BCM3 are not available for sale or use in the U.S.A.

T16 series For Model FM-202

*1set: 2pcs

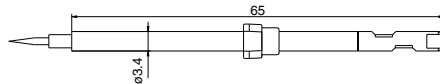


Unit : mm

P-I-C	T16-1001 CHIP 0.5I	T16-1002 CHIP 0.5C	T16-1003 CHIP 1L	T16-1004 CHIP 2L	T16-1013 CHIP 3L
S-O-P	T16-1005 SOP 6L	T16-1006 SOP 8L	T16-1007 SOP 10L	T16-1008 SOP 13L	
	T16-1009 SOP 16L	T16-1010 SOP 20L	T16-1011 SOP 25L	T16-1012 SOP 18L	

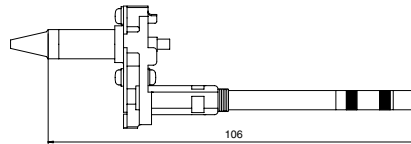
T9 series For Model FM-203

*1set: 2pcs



P-I-C	T9-I CHIP I	T9-L1 CHIP 1L	T9-L2 CHIP 2L

N3 series For Model FM-204



N3-06 Nozzle 0.6mm	N3-08 Nozzle 0.8mm	N3-10 Nozzle 1.0mm	N3-13 Nozzle 1.3mm
N3-16 Nozzle 1.6mm	N3-20 Nozzle 2.0mm	N3-23 Nozzle 2.3mm	N3-L10 Long Nozzle 1.0mm

Specifications and design are subject to change without notice.
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