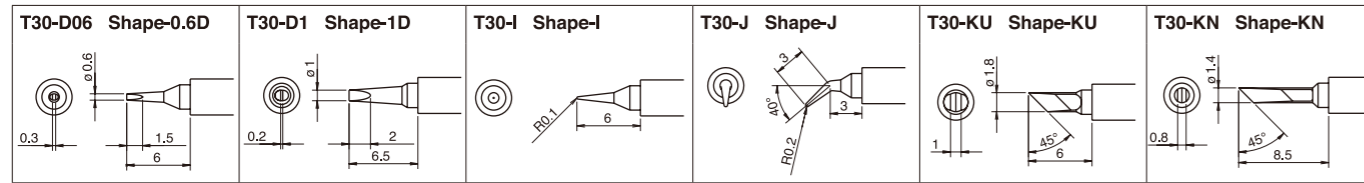


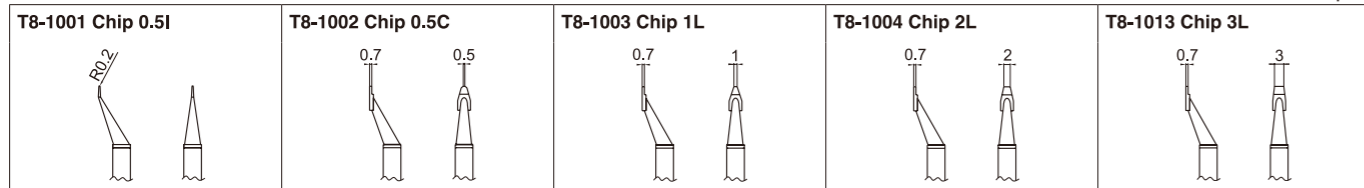
T30 series For Model FM-2032



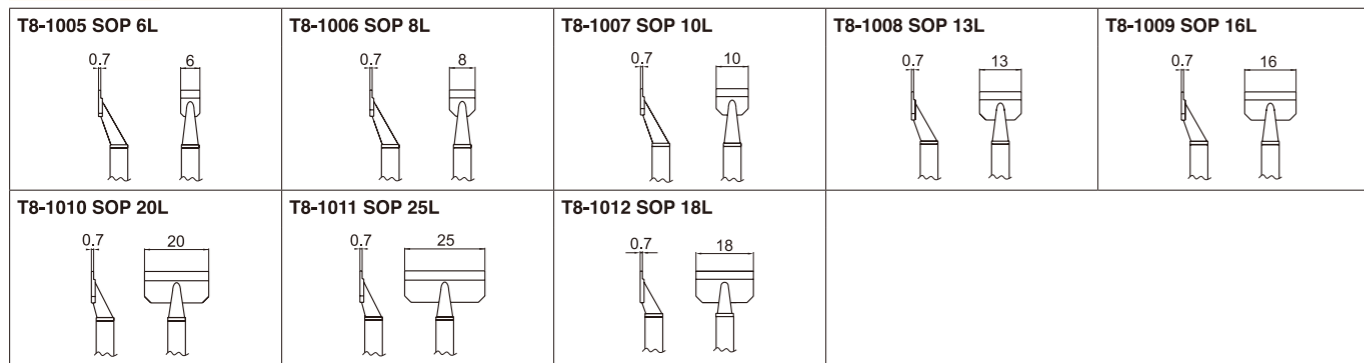
T8 series For Model FM-2022

CHIP

*1 set: 2 pcs



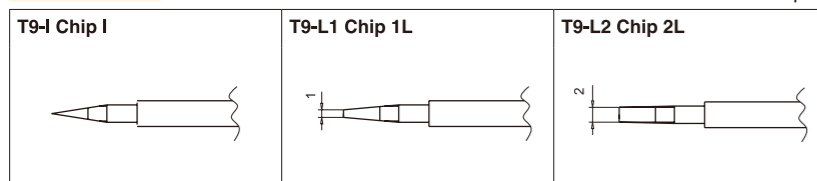
SOP



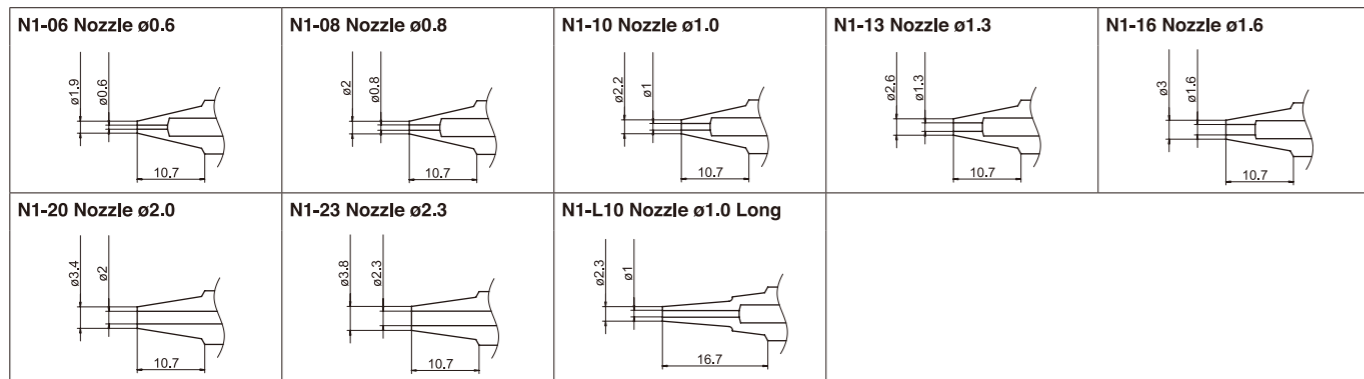
T9 series For Model FM-2023

CHIP

*1 set: 2 pcs



N1 series For Model FM-2024



HAKKO
HAKKO CORPORATION
OVERSEAS AFFILIATES

HEAD OFFICE
4-5, SHIOKUSA 2-CHOME, NANIWA-KU, OSAKA, 556-0024 JAPAN
TEL:+81-6-6561-3225 FAX:+81-6-6561-8466
http://www.hakko.com E-mail:sales@hakko.com

U.S.A.
AMERICAN HAKKO PRODUCTS, INC.
28920 AVENUE WILLIAMS VALENCIA, CA 91355, U.S.A.
TEL: (661) 294-0090 FAX: (661) 294-0096
Toll Free (800)88-HAKKO
http://www.hakkousa.com

HONG KONG
HAKKO DEVELOPMENT CO., LTD.
ROOM 1504, EASTERN HARBOUR CENTRE,
28 HOI CHAK STREET, QUARRY BAY, HONG KONG.
TEL: 2811-5588 FAX: 2590-0217
http://www.hakko.com.hk
E-mail:info@hakko.com.hk

SINGAPORE
HAKKO PRODUCTS PTE LTD
1, GENTING LINK #02-04
PERFECT ONE, SINGAPORE 349518
TEL: 6748-2277 FAX: 6744-0033
http://www.hakko.com.sg
E-mail:sales@hakko.com.sg

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Please access to the following for the other sales affiliates and distributors.
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HAKKO FM-203 **ESD SAFE**
SOLDERING STATION

2-Port High Performance Rework Station



Highly-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 station with 2 connection ports allows users to use it more comfortably.



HAKKO FM-203 ESD SAFE
SOLDERING STATION

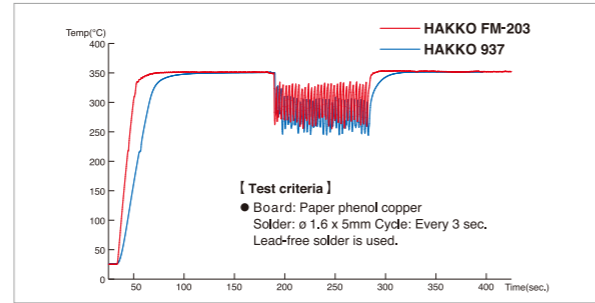
Two connection ports

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

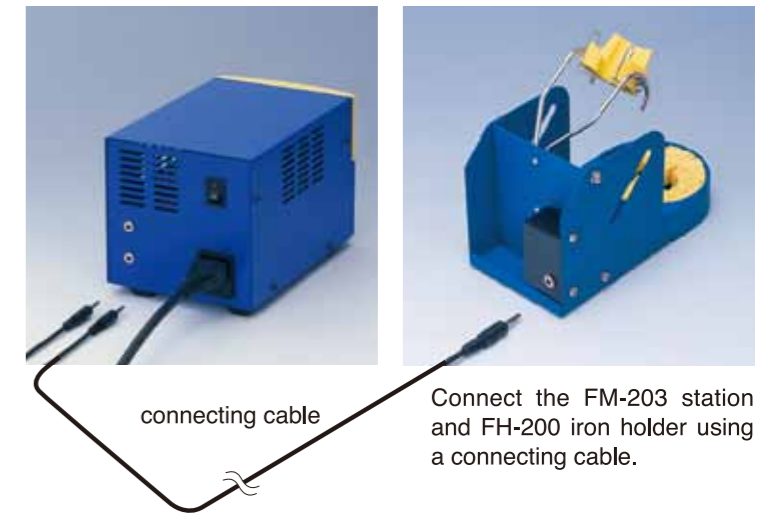


Sleep function

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 supply power to the heating element.



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

Soldering

HAKKO MODEL FM-2027 ESD SAFE

Soldering Iron

- Lightweight grip provides fatigueless work even for extended jobs.



HAKKO MODEL FM-2032 ESD SAFE

Micro Soldering Iron

- Ideal for micro-soldering applications under a microscope



N₂ system



Example setup

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

*For further details, refer to HAKKO web site.

Desoldering

HAKKO MODEL FM-2024 ESD SAFE

Desoldering Tool



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.

Example setup



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	○	○
FM-2032	○	○

*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.

SMD rework

HAKKO MODEL FM-2022 ESD SAFE

Parallel Remover

- Unique parallel movement of tips allows easy grip and release and applies heat optimally.
- Can be used for chips and flat packages up to 25mm in size.



HAKKO MODEL FM-2023 ESD SAFE

Mini Parallel Remover

- Direct heating reduces damage to neighboring sensitive components compared to hot air systems.
- Standard or reverse tweezers action can be selected with a switch lever.



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	< 2
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

*Tip is an optional part.

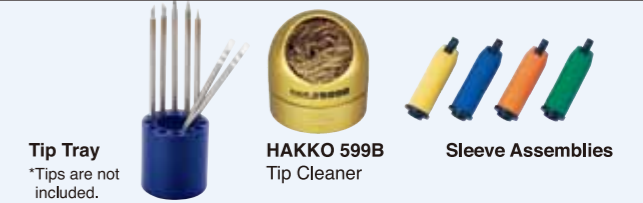


Packing List

Station, Handpiece (FM-2027), Sleeve assembly, Connecting cable, Power cord, Control card, Iron holder, Tip tray, Heat resistant pad, Instruction manual

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

*For N2 system details, refer to HAKKO web site.

HAKKO FM-2027 ESD SAFE **HAKKO FM-2032** ESD SAFE

Soldering Iron

*Tip is an optional part.



Micro Soldering Iron

*Tip is an optional part.



Specifications

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

Specifications

Power Consumption	48 W (24 V)
Tip to Ground Resistance	<2Ω
Tip to Ground Potential	<2mV
Total Length (w/o cord)	170 mm with 1D tip
Weight (w/o cord)	14 g with 1D tip
Cord	1.3 m

No.FM2027-03 Conversion kit



No.FM2032-52 Conversion kit



SMD rework

HAKKO MODEL FM-2022 ESD SAFE

Parallel Remover

*Tip is an optional part.



Specifications

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

No.FM2022-05 Conversion kit



HAKKO MODEL FM-2023 ESD SAFE

Mini Parallel Remover

*Tips(shape-I) are originally attached.



Specifications

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

No.FM2023-06 Conversion kit



Desoldering

HAKKO MODEL FM-2024 ESD SAFE

Desoldering Tool

*Nozzle is an optional part.



MODEL FM-2024 Desoldering Tool

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

- No.FM2024-34 Conversion kit (UK)
- No.FM2024-35 Conversion kit (France)
- No.FM2024-33 Conversion kit (Other EU Countries)



Desolder Control Box

Power Consumption	12 W
Output	24 V
Vacuum Generator	Ejector type
Vacuum Pressure(max.)	93 kPa (700 mmHg)
Suction Flow	20 L/min.
Tip to Ground Potential	<2mV
Applied Air Pressure	490 kPa (5.0 kgf/cm ²) when in use (trigger or button is pressed)
Compressed Air Consumption	1.62 c.f.m. (46 L/min.)
Dimension	119(W) x 45(H) x 172(D)mm
Weight (w/o cord & hose)	1.2 kg

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

* These tips are tinned on the soldering surface only.

Concave type	
T12-1610	T12-1612

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

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

* These tips are tinned on the soldering surface only.

Heavy duty type					
T12-WB2 Shape-0.5WB	T12-WD08 Shape-0.8WD	T12-WD12 Shape-1.2WD	T12-WD16 Shape-1.6WD	T12-WD52 Shape-5.2WD	T12-WI Shape-WI