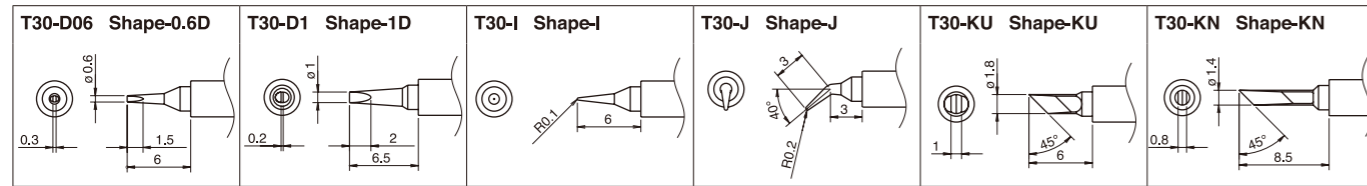


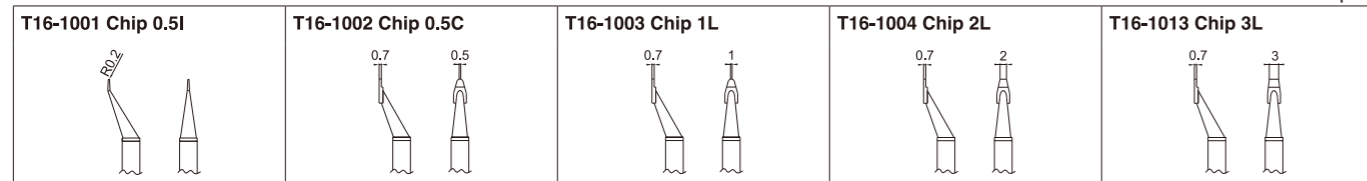
**T30 series For Model FM-2032**



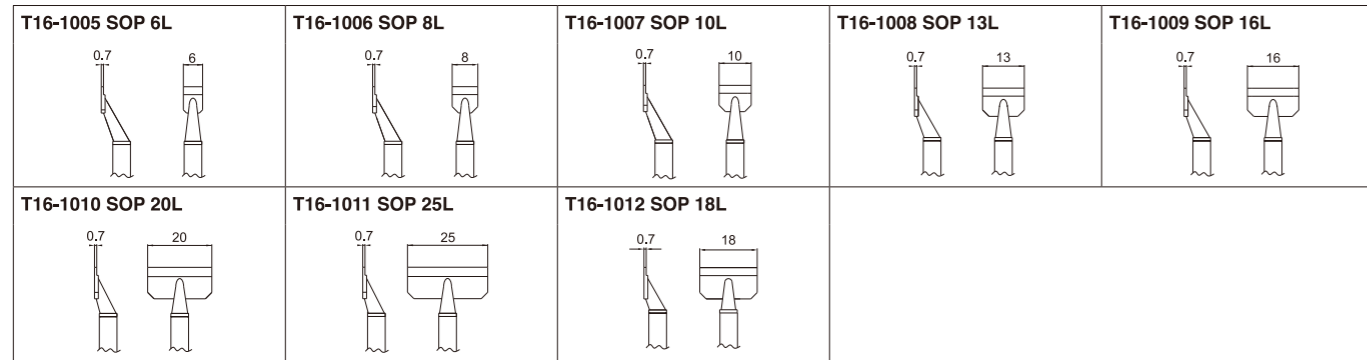
**T16 series For Model FM-2022**

**CHIP**

\*1 set: 2 pcs



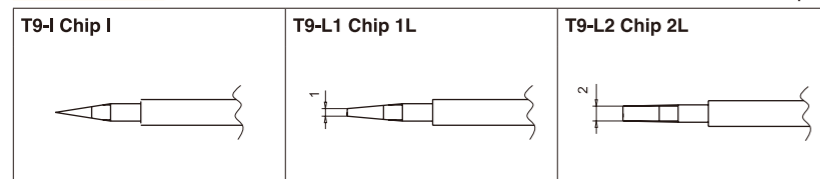
**SOP**



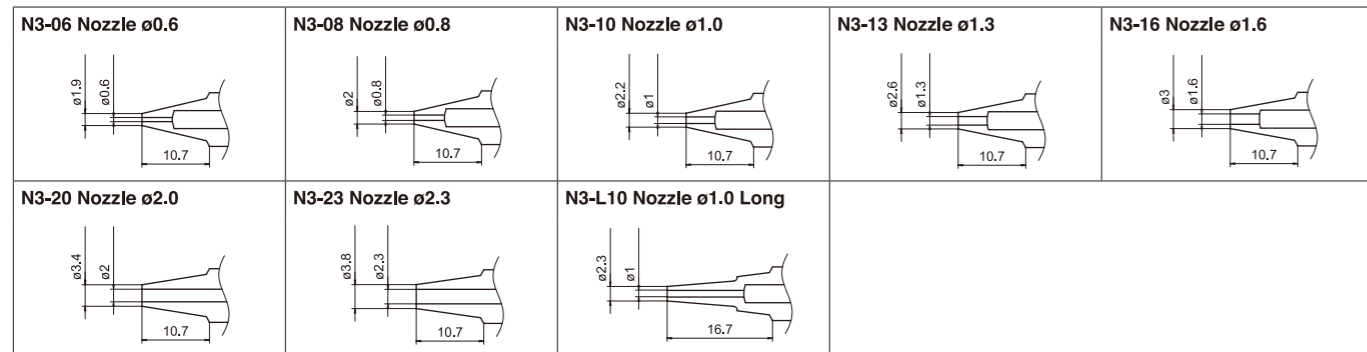
**T9 series For Model FM-2023**

**CHIP**

\*1 set: 2 pcs



**N3 series For Model FM-2024**



**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.



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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

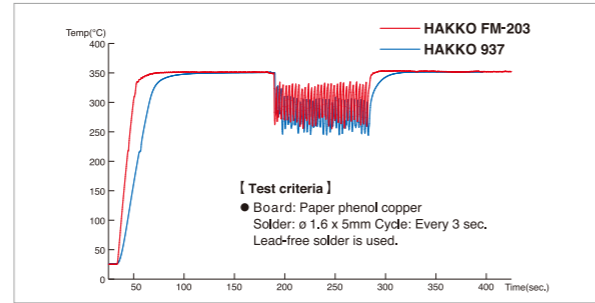
**Two connection ports**

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

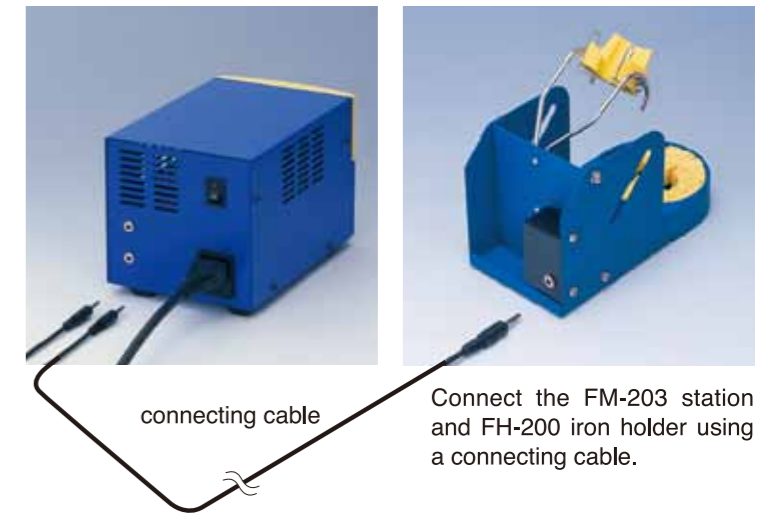


**Sleep function**

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



**N<sub>2</sub> system**



● Example setup

- FM-2026 N<sub>2</sub> soldering iron
- FX-780 N<sub>2</sub> generator
- FX-791 N<sub>2</sub> station (N<sub>2</sub> 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 N<sub>2</sub> generator and N<sub>2</sub> airflow meter must be connected before using the FM-2026.  
 For further details, refer to the N<sub>2</sub> 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.

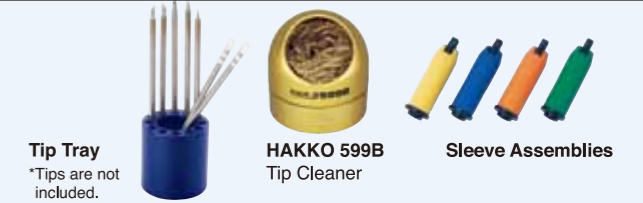


### Packing List

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 Micro Soldering Iron

\*Tip is an optional part.

\*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**

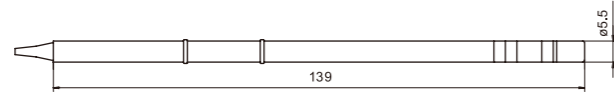
Power Consumption	70 W (24 V)
Temperature Range	350 to 450°C
Tip to Ground Potential	<2mV
Tip to Ground Resistance	<2Ω
Total Length (w/o cord)	180 mm with ø1.0 nozzle
Weight (w/o cord)	65 g with ø1.0 nozzle
Cord	1.2 m

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 <sup>2</sup> ) 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



	<b>T15-B Shape-B</b> 	<b>T15-B2 Shape-0.5B</b> 	<b>T15-B3 Shape-0.7B</b> 	<b>T15-B4 Shape-0.4B</b> 	<b>T15-BLL Shape-BL Long</b> 
<b>B</b>	<b>T15-BC1 Shape-1BC</b> <b>T15-BCF1*</b> 	<b>T15-BC2 Shape-2BC</b> <b>T15-BCF2*</b> 	<b>T15-BC3 Shape-3BC</b> <b>T15-BCF3*</b> 	<b>T15-BC12 Shape-1.2BC</b> 	<b>T15-BC15 Shape-1.5BC</b> 
<b>BC</b>	<b>T15-BC28 Shape-2.8BC</b> 	<b>T15-BCM2 Shape-2BC</b> <b>Bevel with indent</b> 	<b>T15-BCM3 Shape-3BC</b> <b>Bevel with indent</b> 	<b>T15-SBC04 Shape-0.4SBC</b> 	
<b>C</b>	<b>T15-C1 Shape-1C</b> 	<b>T15-CF2* Shape-2C</b> 	<b>T15-CF3* Shape-3C</b> 	<b>T15-C4 Shape-4C</b> <b>T15-CF4*</b> 	
<b>D</b>	<b>T15-D08 Shape-0.8D</b> 	<b>T15-D12 Shape-1.2D</b> 	<b>T15-D16 Shape-1.6D</b> 	<b>T15-D2 Shape-2D</b> 	<b>T15-D24 Shape-2.4D</b> 
	<b>T15-D32 Shape-3.2D</b> 	<b>T15-D4 Shape-4D</b> 	<b>T15-D52 Shape-5.2D</b> 	<b>T15-DL32 Shape-3.2DL</b> 	<b>T15-DL4 Shape-4DL</b> 
	<b>T15-DL52 Shape-5.2DL</b> 	<b>T15-XD15 Shape-1.5XD</b> 			
<b>I</b>	<b>T15-I Shape-I</b> 	<b>T15-IL Shape-IL</b> 	<b>T15-ILS Shape-ILS</b> 		
<b>J</b>	<b>T15-J02 Shape-0.2J</b> 	<b>T15-JD14 Shape-1.4JD</b> 	<b>T15-JD08 Shape-0.8JD</b> 	<b>T15-JD16 Shape-1.6JD</b> 	<b>T15-JL02 Shape-0.2JL</b> 
	<b>T15-JS02 Shape-0.2JS</b> 				

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

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

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

\*\* The iron tips marked with double asterisk (\*\*) have a temperature accuracy of 25°C. Others have a temperature accuracy of 15°C.