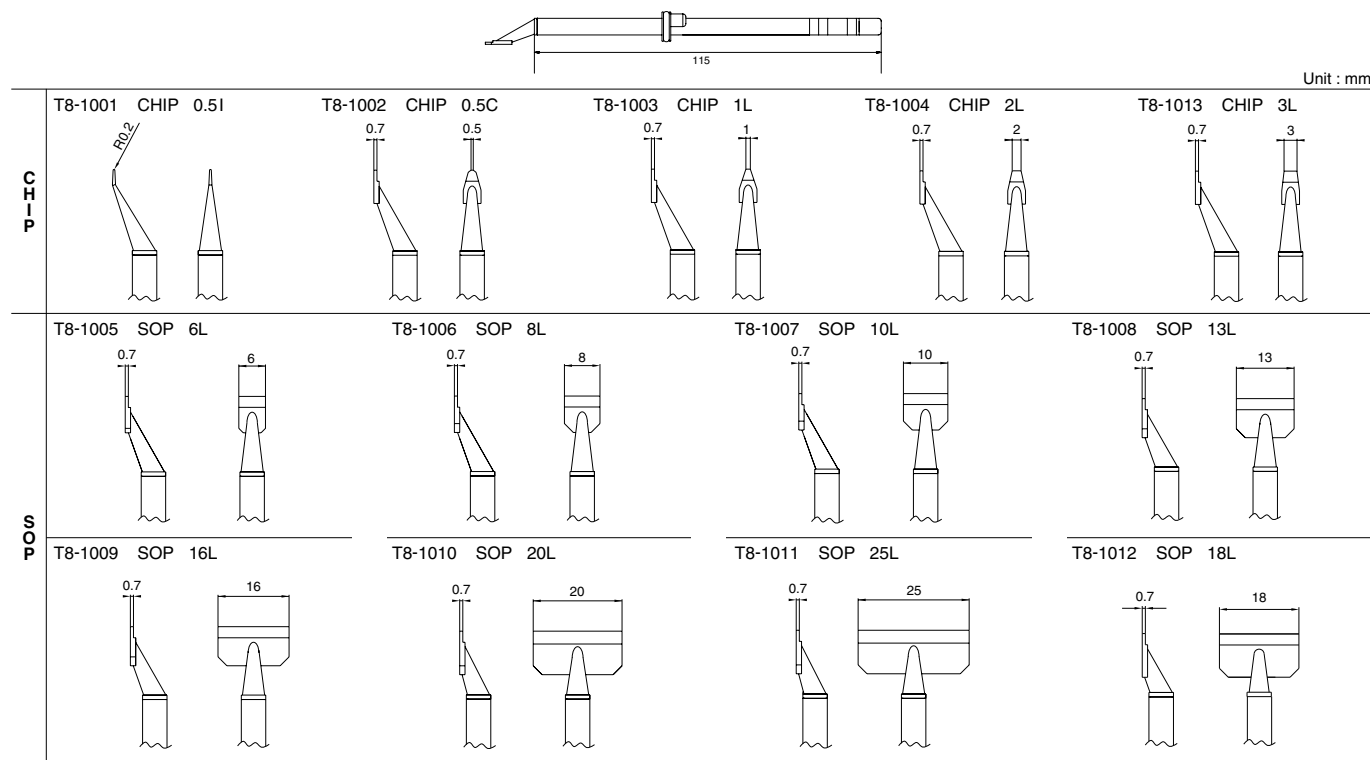


Replacement Tips and Nozzles

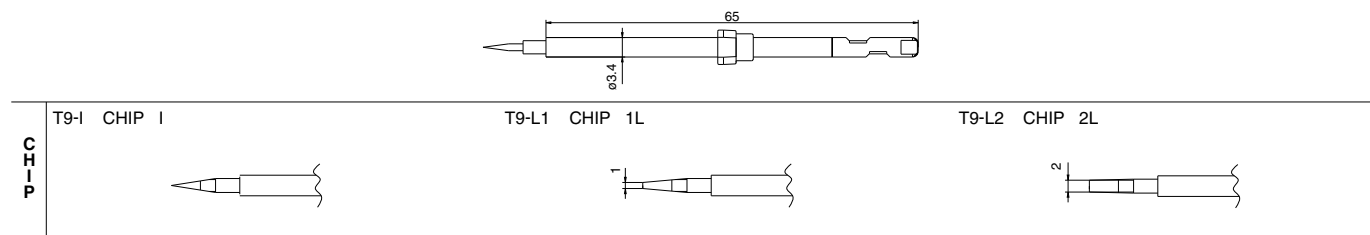
T8 series For Model FM-2022

*1set: 2pcs

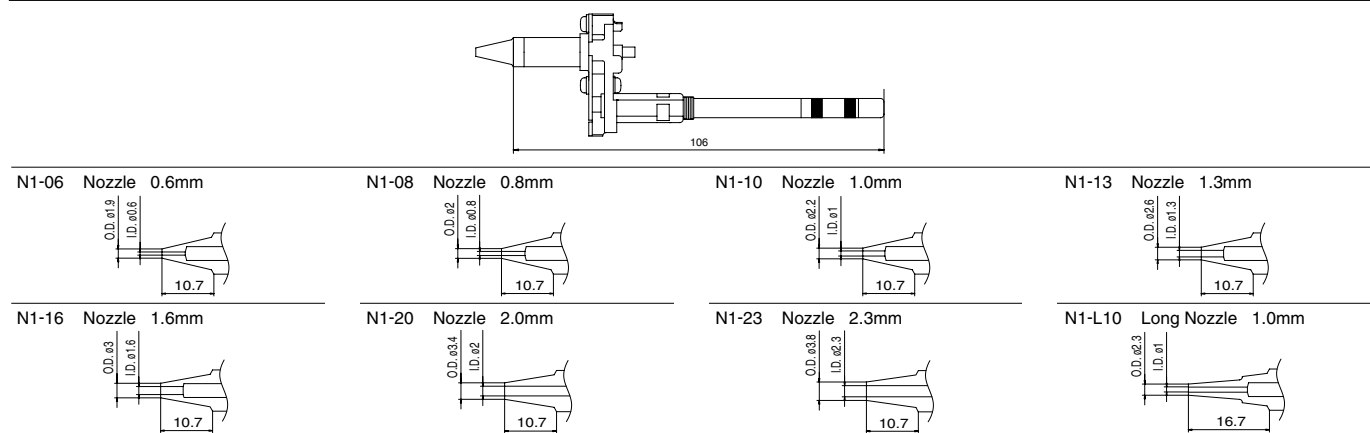


T9 series For Model FM-2023

*1set: 2pcs



N1 series For Model FM-2024



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CA00288BbBa001 Nov. 2007

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HAKKO FM-203 **ESD SAFE**
SOLDERING STATION

For lead-free soldering



•Soldering Iron FM-2027



•Parallel Remover Model FM-2022

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



•Mini Parallel Remover Model FM-2023



•Desoldering Tool Model FM-2024



•HAKKO FM-203: Station + Soldering Iron

HAKKO

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

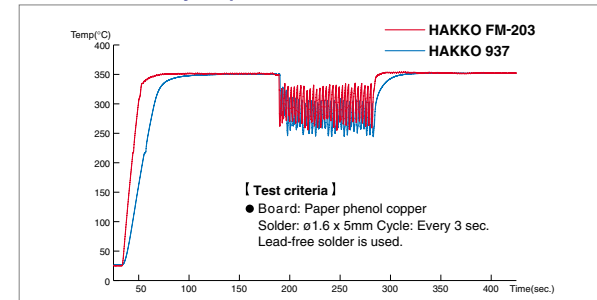
Two connection ports

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

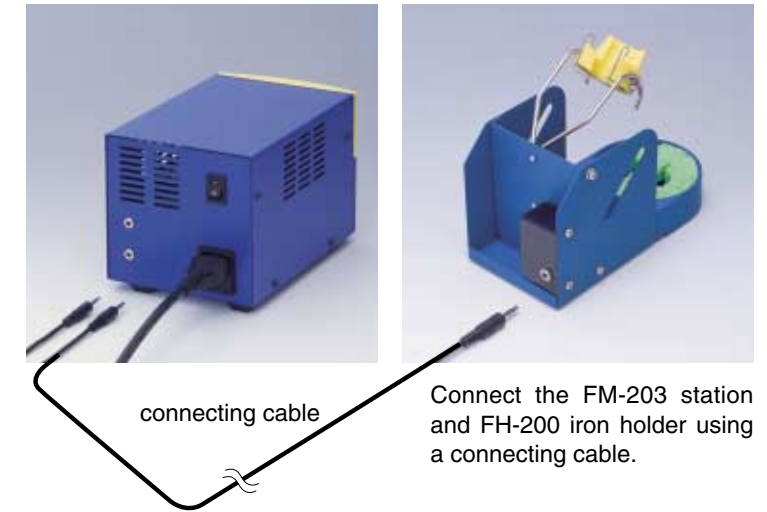


Sleep function

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.

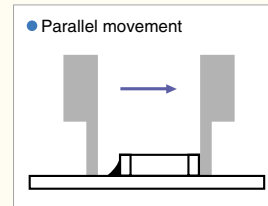


SMD rework

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.
 Fur further details, refer to the N₂ system brochure.



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

*Fur 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.



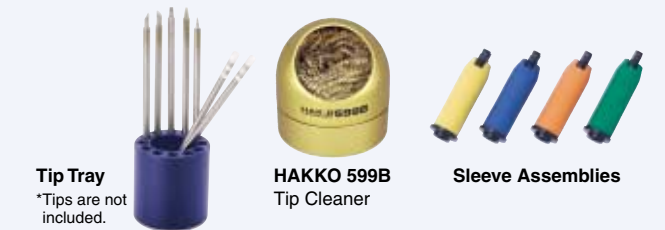
■ **Packing List**

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



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)	1
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.FM2022-04 Conversion kit



■ **Packing List**

① Connecting cable	1
② HAKKO FH-200 iron holder	1
③ Cleaning sponge	1
(②+③: No.FH200-03)	1
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.FM2023-04 Conversion kit



■ **Packing List**

① Connecting cable	1
② HAKKO FH-200 iron holder	1
③ Cleaning sponge	1
(②+③: No.FH200-04)	1
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

For smooth setup, we recommend to order "Conversion kit" as shown by the photo. The part number of "Conversion kit" varies from the input voltage. Please contact with the nearest representative for the further information.



■ **Packing List**

① HAKKO FH-200 iron holder	1
② HAKKO 599B tip cleaner	1
(①+②: No.FH200-05)	1
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.

Replacement Tips

T12 series For HAKKO FM-2027

Unit : mm

SHAPE B	T12-B Shape-B	T12-B2 Shape-0.5B	T12-B3 Shape-0.7B	T12-B4 Shape-0.4B
	T12-BL Shape-BL			
SHAPE BC	T12-BC1 Shape-1BC T12-BCF1*	T12-BC2 Shape-2BC T12-BCF2*	T12-BC3 Shape-3BC T12-BCF3*	
	T12-C1 Shape-1C	T12-C4 Shape-4C T12-CF4*		
SHAPE 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		
	T12-I Shape-I	T12-IL Shape-IL	T12-ILS Shape-ILS	
SHAPE J	T12-J02 Shape-0.2J	T12-JL02 Shape-0.2JL	T12-JS02 Shape-0.2JS	
	T12-K Shape-K	T12-KF Shape-KF	T12-KL Shape-KL	T12-KR Shape-KR
SHAPE K	T12-KU Shape-KU			

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		
	T12-1401 Spatula 10.4	T12-1402 Spatula 15.7	T12-1403 Spatula 21.2	T12-1404 Spatula 25
SPATULA	T12-1405 Spatula 32	T12-1406 Spatula 40		

SPECIAL APPLICATIONS 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)
T12-BCM2 Shape-2BC Bevel with indent**	T12-BCM3 Shape-3BC Bevel with indent**		

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
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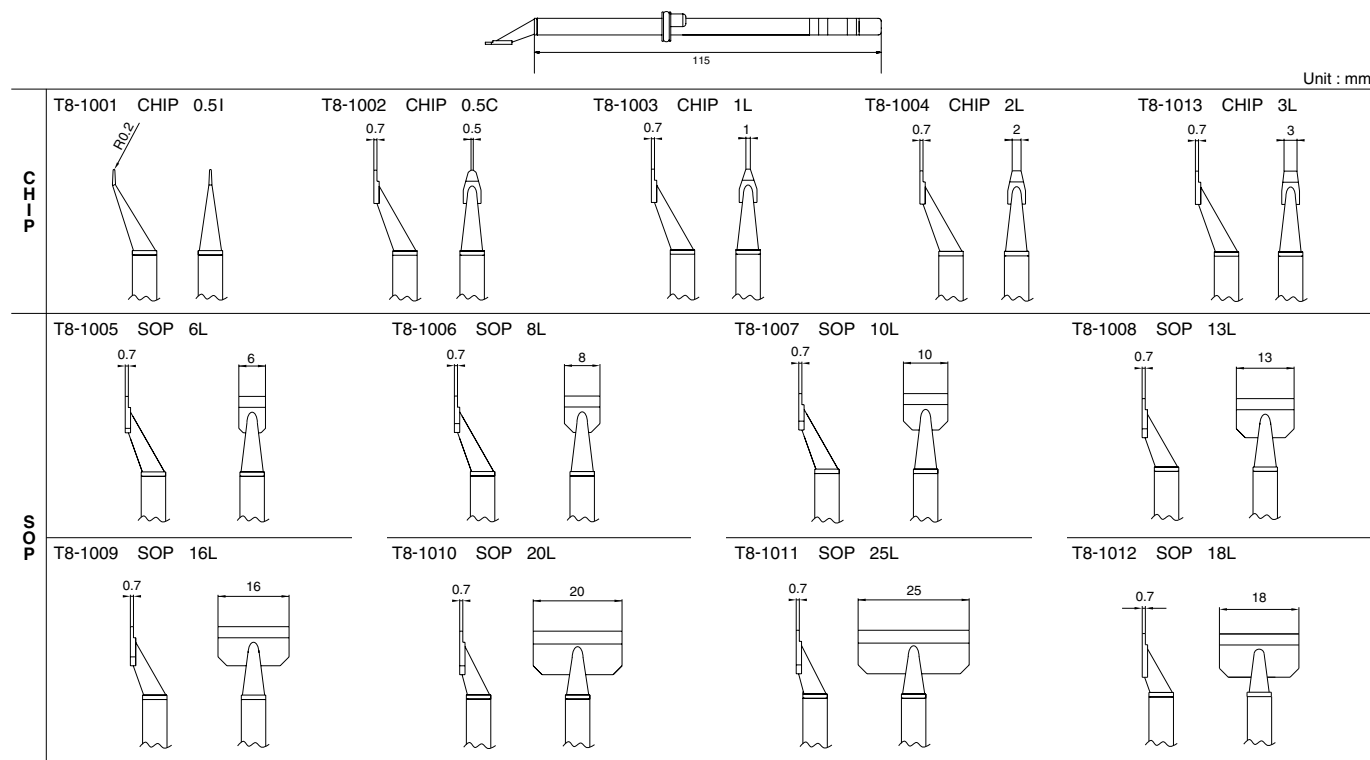
* Tinned on the soldering surface only.

**The part numbers T12-BCM2 and T12-BCM3 are not available for sale or use in the U.S.A.

Replacement Tips and Nozzles

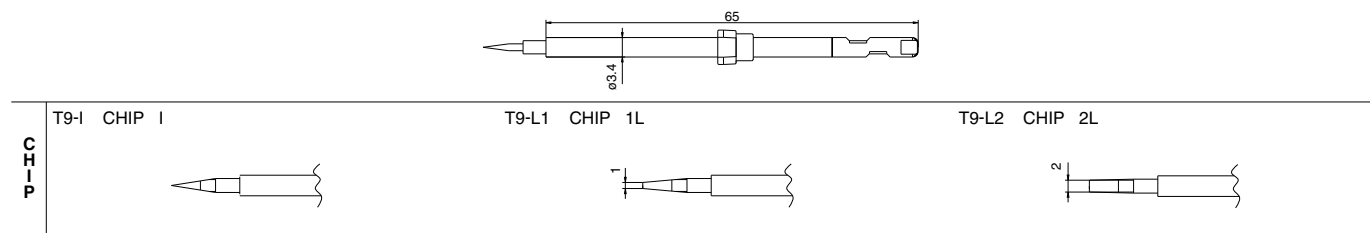
T8 series For Model FM-2022

*1set: 2pcs

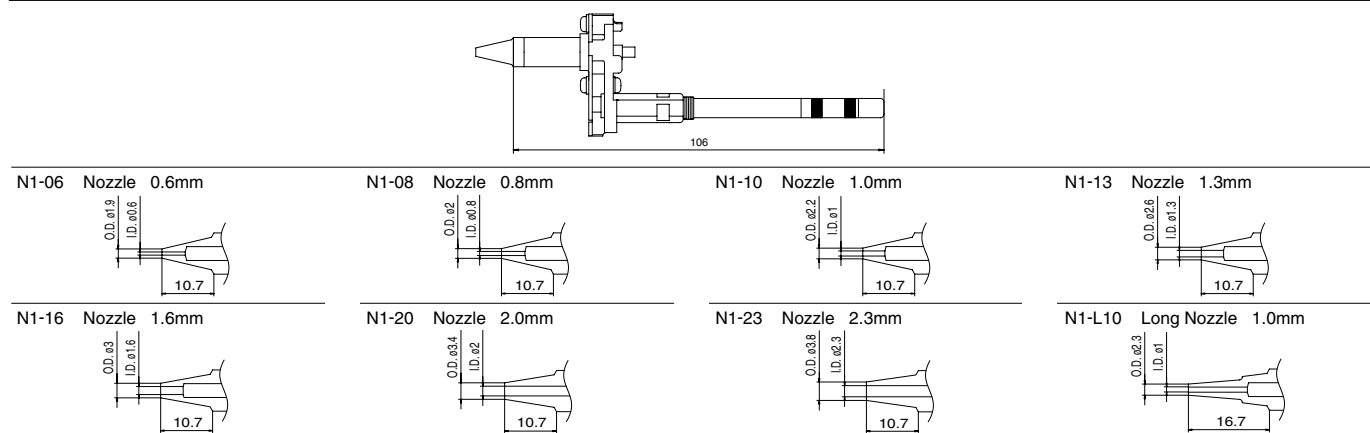


T9 series For Model FM-2023

*1set: 2pcs



N1 series For Model FM-2024



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SOLDERING STATION

For lead-free soldering



New more-advanced multifunctional station.
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