



## PRODUCT BULLETIN

Bulletin No: PB260

Issue Date: November 5, 2007

Product:

FM-203 Dual Port Soldering Station

**Part No:** FM203-01 FM203-DP

#### Comments:

The Hakko FM-203 is a Dual Port high performance soldering station. Even when soldering lead-free solders the high performance allows lower



operating temperatures. The soldering station can operate any of the following hand pieces, FM-2027 Soldering Iron, FM-2022 Parallel Remover (SMD tweezer), FM-2023 Mini Parallel Remover (SMD mini tweezer), FM-2024 Desoldering Module, and/or FM-2026 Nitrogen Soldering Iron. The soldering iron and desolder tool can be used in either or both ports and the tweezers are limited to one port with a soldering or desoldering iron in the other port.

The station features a programmable sleep mode of 0-29 minutes or auto-power shut off at 30 minutes. Sleep mode, auto power shut off and tip temperature can be programmed separately for each port. The sleep mode reduces the tip temperature to approximately 200°C (400°F) after the programmed time (0-29 minutes). The lower tip temperature will reduce oxidation of the tip and improve the tip performance. When in sleep mode the tip will quickly return to temperature after the iron is removed from the holder.

When utilizing the FM-2027 Soldering Iron the station uses the T15 series composite tip. The composite tip is a soldering tip in which a heating element and sensor are integrated with ceramic. Despite its highly compact design, the tip offers superior thermal response and greatly improved thermal recovery. T15 series tips are available in a wide variety of tip shapes and can also be used with the Hakko FM-203, FP-102 and FM-202 soldering stations. Any tip can be operated at temperatures 200 - 450°C (400 - 840°F). The station includes a card lock system to lock the preset soldering temperature. With the card removed operators can not adjust the working temperature.

The FM-2022 uses T16 tips, The FM-2023 uses T9 tips, The FM-2024 uses N3 nozzles and The FM-2026 uses T17 tips.

From

For pricing information, please contact your local American Hakko representative or our customer service department at (661) 294-0090.

American Hakko Products, Inc. 28920 N. Avenue Williams. Valencia, CA 91355 Tel: (661) 294-0090 Fax: (661) 294-0096 www.hakkousa.com AHP14 Rey 2000-01

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33 Springdale Ave. Canton, MA 02021



# Specifications:

| modification is                             |               |  |
|---|---------------|--|
| FM-203 Soldering Station                    |               |  |
| Power Consumption 140W 120V                 |               |  |
| Temperature Range 200 - 450°C (400 - 840°F) |               |  |
| Temperature Stability ±5°C (±9°F)           |               |  |
| Temperature Accuracy                        | ±15°C (±27°F) |  |

| Soldering Iron (No.FM-2027)                              |                 |  |
|--|-----------------|--|
| Power Consumption  | 70W (24V)       |  |
| Tip to Ground Resistance                                 | < 2Ω            |  |
| Tip to Ground Potential                                  | < 2mV           |  |
| Cord Length  | 1.2m (47 in.)   |  |
| Total Length (w/o Cord) with 2.4D soldering tip attached | 188mm (7.4 in.) |  |
| Weight (w/o Cord)<br>with 2.4D soldering tip attached    | 30g (1.0 oz.)   |  |

| Station           |  |
|-------------------|--|
| Output            | 24V  |
| Dimensions        | 120(W) x 120(H) x 190(D)mm (4.7 x 4.7 x 7.5 in.) |
| Weight (w/o cord) | 2.7kg (5.9 lb.)                                  |

#### Contents:

| <u>s.</u> |   |          |          |
|-----------|---|----------|----------|
| Part No.  | Name                                    | FM203-01 | FM203-DP |
| N/A       | FM-203 soldering station                | 1        | 1        |
| FM2027-02 | Connector                               | 1        | 2        |
| B2387     | Power cord                              | 1        | 1        |
| B2972     | Control card                            | 1        | 1        |
| B3219     | Sleeve assembly, Green, anti-bacterial  | 1        | 1        |
| B3216     | Sleeve assembly, Yellow, anti-bacterial | 0        | 1        |
| B2300     | Heat-resistant pad                      | 1        | 2        |
| FH200-01  | Iron Holder, Sleep, w/ 599B             | 1        | 2        |
| B3253     | Connecting cable                        | 1        | 2        |
| B2756     | Tip tray                                | 1        | 1        |
| N/A       | Instruction manual                      | 1        | 1        |

The FM2023-DP includes two FM-2027 connectors and sleep holders. Tips not included.

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Accessories/Replacement Parts:

| Part No.  | Name  | Specification  |
|-----------|---|--|
| FM2027-01 | HAKKO FM-2027 w/ Yellow<br>Sleeve Assembly        | Does not include tip or holder   |
| B3216     | Sleeve Assembly Yellow (Lock-type, Antibacterial) |  |
| B3217     | Sleeve Assembly Orange (Lock-type, Antibacterial) |  |
| B3218     | Sleeve Assembly Blue (Lock-type, Antibacterial)   |  |
| B3219     | Sleeve Assembly Green (Lock-type, Antibacterial)  |  |
| A1536     | Cleaning sponge                                   | Green  |
| FM2022-05 | Conversion kit                                    | FM-2022 Parallel Remover with sleep holder and cable. Tips not included.     |
| FM2023-05 | Conversion kit                                    | FM-2023 Mini Parallel Remover with sleep holder and cable. Tips included.    |
| FM2024-21 | Conversion kit/120 V                              | FM-2024 Desoldering Module with sleep holder and cable. Nozzle not included. |
| FM2026-06 | Conversion kit                                    | FM-2026 Nitrogen Iron with sleep holder and cable. Tips not included.        |
| FM2027-03 | Conversion kit                                    | FM-2027 Soldering Iron with sleep holder and cable. Tips not included.       |

## Tips and Nozzles:

See PB258 for T15 tip list for HAKKO FM-2027

## Tips for HAKKO FM-2022

| Part No. | Part Name       | Specifications |
|----------|-----------------|----------------|
| T16-1001 | Tip / CHIP 0.5I |                |
| T16-1002 | Tip / CHIP 0.5C |                |
| T16-1003 | Tip / CHIP 1L   |                |
| T16-1004 | Tip / CHIP 2L   |                |
| T16-1005 | Tip / SOP 6L    |                |
| T16-1006 | Tip / SOP 8L    |                |
| T16-1007 | Tip / SOP 10L   |                |
| T16-1008 | Tip / SOP 13L   |                |
| T16-1009 | Tip / SOP 16L   |                |
| T16-1010 | Tip / SOP 20L   |                |
| T16-1011 | Tip / SOP 25L   |                |
| T16-1012 | Tip / SOP 18L   |                |
| T16-1013 | Tip / CHIP 3L   |                |

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## Tips for HAKKO FM-2023

| Part No. | Part Name     | Specifications |
|----------|---------------|----------------|
| T9-I     | Tip / CHIP I  |                |
| T9-L1    | Tip / CHIP 1L |                |
| T9-L2    | Tip / CHIP 2L |                |

#### Nozzles for HAKKO FM-2024

| Part No. | Part Name                      | Specifications |
|----------|--------------------------------|----------------|
| N3-06    | Nozzle / 0.6mm (0.02 in.)      |                |
| N3-08    | Nozzle / 0.8mm (0.03 in.)      |                |
| N3-10    | Nozzle / 1.0mm (0.04 in.)      |                |
| N3-13    | Nozzle / 1.3mm (0.05 in.)      |                |
| N3-16    | Nozzle / 1.6mm (0.06 in.)      |                |
| N3-20    | Nozzle / 2.0mm (0.08 in.)      |                |
| N3-23    | Nozzle / 2.3mm (0.10 in.)      |                |
| N3-L10   | Long Nozzle / 1.0mm (0.04 in.) |                |

## Tips for HAKKO FM-2026

| Part No. | Part Name                  | Specifications                       |
|----------|----------------------------|--------------------------------------|
| T17-B2   | SHAPE-0.5B Conical         |                                      |
| T17-BC1  | SHAPE-1BC Bevel            |                                      |
| T17-BC2  | SHAPE-2BC Bevel            |                                      |
| T17-BC3  | SHAPE-3BC Bevel            |                                      |
| T17-BCF1 | SHAPE-1BC Bevel            | Tinned on the soldering surface only |
| T17-BCF2 | SHAPE-2BC Bevel            | Tinned on the soldering surface only |
| T17-BCF3 | SHAPE-3BC Bevel            | Tinned on the soldering surface only |
| T17-BL   | SHAPE-B Long Shape Conical |                                      |
| T17-D08  | SHAPE-0.8D Chisel          |                                      |
| T17-D16  | SHAPE-1.6D Chisel          |                                      |
| T17-D24  | SHAPE-2.4D Chisel          |                                      |
| T17-J02  | SHAPE-0.2J Bent            |                                      |
| T17-KF   | SHAPE-KF Knife             |                                      |
| T17-KR   | SHAPE-KR Knife             |                                      |
| T17-KU   | SHAPE-KU Knife             |                                      |

#### Available:

November 6, 2007

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