

Supporting lead-free soldering

# N<sub>2</sub> system

For lead-free soldering

N<sub>2</sub> gas and preheating effect improves the solderability greatly!



# The lineup for the N<sub>2</sub> system has greatly improved design and cost performance

## Features of the HAKKO N<sub>2</sub> system

### Preheating effect

The preheating effect is achieved by passing Nitrogen gas along the heating element in the hand piece. Soldering can be done on multilayer PWB and high density PWB sensitive to heat without raising the temperature of the tip excessively, even when the melting point of lead-free solder is high.

### Improvement of wettability and spreadability

By using the HAKKO N<sub>2</sub> system, the wetting and spreading are excellent for eutectic solder, lead-free solder and high-temperature solder, comparing with our conventional soldering iron.

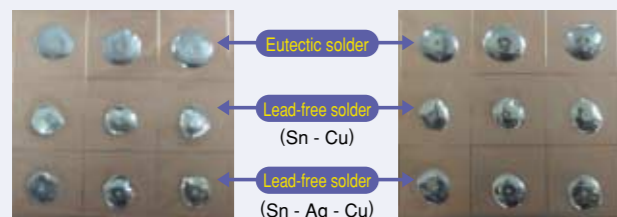
### Preventing oxidation

Oxidization of solder and soldering tip can be prevented by using Nitrogen gas, which passes along the nozzle assembly uniformly.

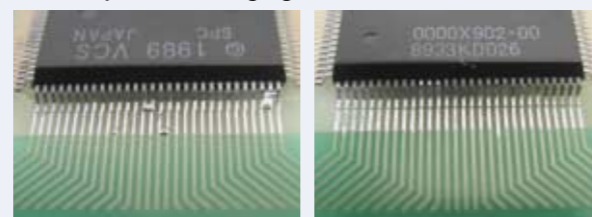
### Space saving

In case of setting with HAKKO FX-951, the dimensions are 163(W) x 280(H) x 110(D)mm  
In case of setting with HAKKO FM-203, the dimensions are 201(W) x 280(H) x 190(D)mm

### Comparison of wettability and spreadability



■ Less bridge is generated even for components susceptible to bridging.



### HAKKO N<sub>2</sub> system (setting example)

The following models can be set with N<sub>2</sub> system : -  
HAKKO FX-950, HAKKO FX-951, HAKKO FX-952, HAKKO FM-203, HAKKO FM-204, HAKKO 938

※If using the N<sub>2</sub> system combing with the HAKKO FX-952 or HAKKO FM-203, two units for each HAKKO FM-206, HAKKO FX-780 and HAKKO FX-791 are necessary.

#### ● Setting example with FX-951

※HAKKO FX-951  
HAKKO FM-206  
HAKKO FX-780  
HAKKO FX-791



#### ● Setting example with MODEL FM-203

※HAKKO FM-203, HAKKO FM-206,  
HAKKO FX-780, HAKKO FX-791



## HAKKO FM-2026 ESD SAFE N<sub>2</sub> soldering iron

### ■ N<sub>2</sub> soldering iron with high-output 70W

Nitrogen gas passes between the tip and nozzle ass'y uniformly and the soldering tip is entirely covered with Nitrogen gas, which intercepts oxygen to prevent the soldering tip and solder from being oxidized and increases the preheating effect. It allows more stable and uniform soldering.



## HAKKO FX-780 N<sub>2</sub> gas generator

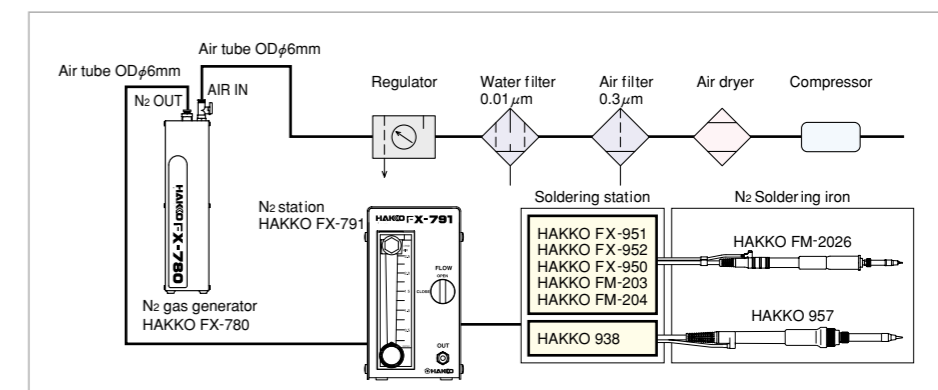
### ■ Compact high-performance N<sub>2</sub> generator

HAKKO FX-780 generate Nitrogen gas at a maximum concentration of 99.9%. It is very compact and can be installed in a minimal space. Moreover, it can be placed perpendicularly or horizontally.

#### ■ Performance table

Input compression air pressure (MPa)	N <sub>2</sub> concentration (%)							
	99.9	99.5	99.0	98.0	97.0	96.0	95.0	90.0
0.3	0.15	0.37	0.48	0.66	0.88	1.1	1.3	2.6
0.4	0.24	0.57	0.77	1.1	1.4	1.7	2.0	4.4
0.5	0.35	0.75	1.1	1.5	1.9	2.2	2.9	5.9
0.6	0.48	0.97	1.3	1.8	2.4	3.1	3.5	7.5
0.7	0.55	1.2	1.6	2.2	3.1	3.7	4.2	9.2

#### ■ Connection method



## HAKKO FX-791 N<sub>2</sub> station

### ■ Compact N<sub>2</sub> flow meter

This meter is very compact and can be installed in a minimal space next to the soldering station. The flow meter has a range between 0.25 - 2.5L/min, allowing easy control.

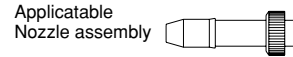
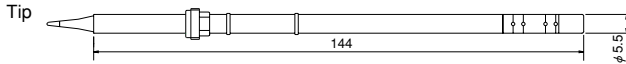
(Recommended flow rate is 0.5L/min. to 1.5L/min. Adjust the flow rate depending on the tip shape.)



# FM-2026 Replacement Tip and Nozzle Assemblies

※Be sure to install the nozzle assembly in the soldering iron to be used.

Unit : mm



SHAPE	Tip	Part No.	Nozzle assembly	SHAPE	Tip	Part No.	Nozzle assembly
SHAPE B	T17-B2 SHAPE-0.5B	B2708	Nozzle assembly C	SHAPE D	T17-D08 SHAPE-0.8D	B2709	Nozzle assembly D
	T17-BC1 SHAPE-1BC T17-BCF1 *	B2899	Nozzle assembly F		T17-D16 SHAPE-1.6D	B2708	Nozzle assembly C
	T17-BC2 SHAPE-2BC T17-BCF2 *	B2706	Nozzle assembly A		T17-D24 SHAPE-2.4D	B2708	Nozzle assembly C
SHAPE BC	T17-BC3 SHAPE-3BC T17-BCF3 *	B2900	Nozzle assembly G	SHAPE J	T17-J02 SHAPE-0.2J	B2707	Nozzle assembly B
	T17-KF SHAPE-KF	B2923	Nozzle assembly J		T17-KU SHAPE-KU	B2901	Nozzle assembly H
				SPECIAL APPLICATIONS TYPE	T17-BCM2 SHAPE-2BC Bevel with indent **	B2706	Nozzle assembly A
					T17-BCM3 SHAPE-3BC Bevel with indent **	B2900	Nozzle assembly G

\*Tinned on the soldering surface only. \*\*The part numbers T17-BCM2 and T17-BCM3 are not available for sale or use in the U.S.A.

## HAKKO FM-2026

### Specifications

Part No.	FM2026-06 (Conversion kit)
Power consumption	24V (70W)
Tip to ground resistance	<2Ω
Tip to ground potential	<2mV
Length (w/o cord)	205mm with tip T17-D24
Weight (w/o cord)	45g w/nozzle assembly C and T17-D24
Cord	1.2m



### Packing List

- ①Connecting cable ..... 1
- ②HAKKO 599B tip cleaner..... 1
- ③HAKKO FH-200 iron holder..... 1  
(②+③: No.FH200-01)
- ④HAKKO FM-2026 N<sub>2</sub> soldering iron... 1
- ⑤Heat resistant pad..... 1

※This unit does not include a soldering tip or nozzle ass'y. When purchasing this unit, please buy your desired soldering tip and nozzle assembly together.

### Replacement and optional parts

Part No.	Part name
B2974	Sleeve cover
B2765C	Sleeve assembly, yellow
B2768C	Sleeve assembly, orange
B2769C	Sleeve assembly, blue

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OVERSEAS AFFILIATES

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

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

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

## HAKKO FX-780

### Specifications

Part No.	FX780-01
Air supply pressure	0.3 - 0.7MPa
Concentration of generated N <sub>2</sub>	99.9% (Max.)
Amount of generated N <sub>2</sub>	1.5L/min. (When compressed air of 0.5MPa is supplied at 25°C, the concentration of generated nitrogen is 98%)
External dimensions (w/o sockets and valve)	73 (W) x 282 (H) x 71 (L) mm
Weight (w/o racks)	1.5kg

### Packing List

- HAKKO FX-780 N<sub>2</sub> generator..... 1
- Racks for station..... 2

## HAKKO FX-791

### Specifications

Part No.	FX791-01
Outer dimensions	70 (W) x 121 (H) x 134 (D) mm
Weight	600g
Pressure gauge for discharged gas	0.2MPa (2.0kgf/cm <sup>2</sup> )
Gas flow	0.25 - 25L/min

### Packing List

- HAKKO FX-791 N<sub>2</sub> station..... 1

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Please access to the following for the other Sales affiliates.  
<http://www.hakko.com>

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