

Supporting lead-free soldering

N₂ system

For lead-free soldering

N₂ gas and preheating effect improves the solderability greatly!

HAKKO FX-780 · FX-781

■ Performance table of FX-780

Input compression air pressure (MPa)		N ₂ concentration (%)							
		99.9	99.5	99.0	98.0	97.0	96.0	95.0	90.0
0.3	Output amount (L/min. at 25°C)	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

■ Performance table of FX-781

Input compression air pressure (MPa)		N ₂ concentration (%)							
		99.9	99.5	99.0	98.0	97.0	96.0	95.0	90.0
0.3	Output amount (L/min. at 25°C)	0.28	0.55	0.84	1.1	1.4	1.7	2.1	4.8
0.4		0.49	0.9	1.3	1.8	2.3	2.8	3.4	7.8
0.5		0.7	1.2	1.8	2.4	3.2	4.0	4.8	10.9
0.6		0.92	1.7	2.3	3.2	4.2	4.9	6.1	13.8
0.7		1.1	2.1	2.8	4.0	5.1	6.3	7.6	17.1

■ Specifications

Part No.	FX780-01	FX781-01
Air supply pressure	0.3 to 0.7 MPa	
Concentration of generated N ₂	99.9% (Max.)	
Amount of generated N ₂	1.5 L/min. (When compressed air of 0.5 MPa is supplied at 25°C, the concentration of generated nitrogen is 98%)	2.4 L/min. (When compressed air of 0.5 MPa 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	73 (W) x 407 (H) x 71 (L) mm
Weight (w/o racks)	1.5 kg	2 kg

■ Packing List for FX-780

HAKKO FX-780 N₂ generator1
Racks for station2

■ Packing List for FX-781

HAKKO FX-780 N₂ generator1
Racks for station4
Fitting1

HAKKO FX-791

■ Specifications

Part No.	FX791-01
Outer dimensions	70(W) x 121(H) x 134(D) mm
Weight	600 g
Pressure gauge for discharged gas	0.2 MPa (2.0 kgf/cm ²)
Gas flow	0.25 to 2.5 L/min.

■ Packing List

HAKKO FX-791 N₂ station1

HAKKO
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OVERSEAS AFFILIATES

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HAKKO

The lineup for the N₂ system has greatly improved design and cost performance

Features of the HAKKO N₂ 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 N₂ 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 282(H) x 131(D)mm
In case of setting with HAKKO FM-203, the dimensions are 193(W) x 282(H) x 190(D)mm



HAKKO FX-780 · FX-781 N₂ generator

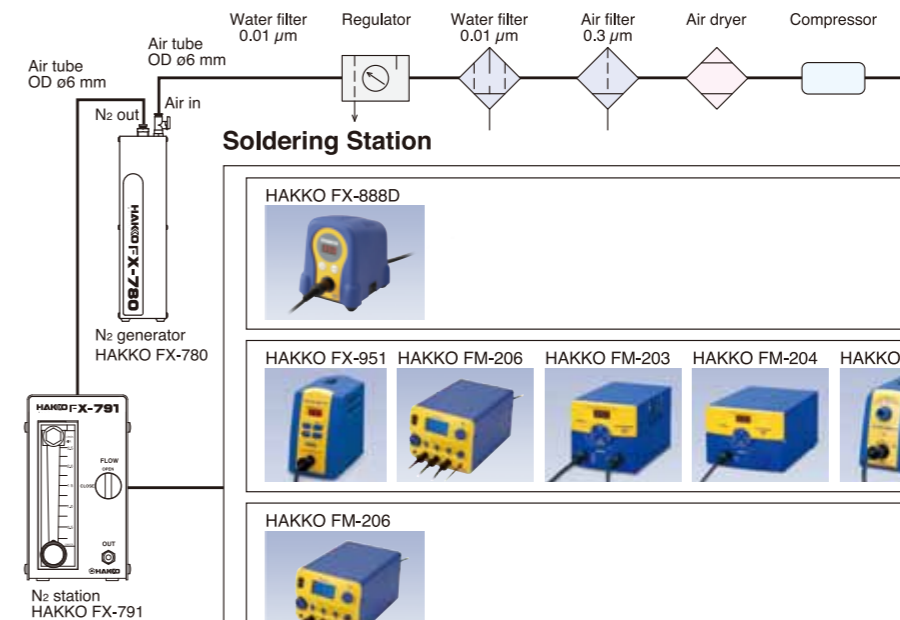
Compact high-performance N₂ generator

- Highest concentration of nitrogen gas: 99.9%
- Non-electrical compressed air delivers N₂ gas
- HAKKO FX-781 large-capacity type accepts 2 soldering irons and capable of creating high concentration and large flow of N₂ gas.



Connection method

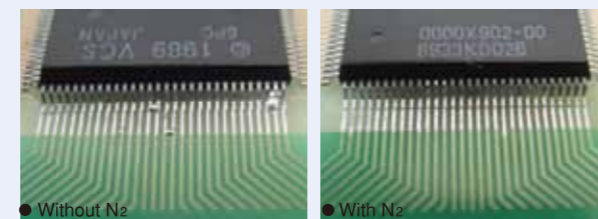
* For further details, refer to HAKKO web site.



Comparison of wettability and spreadability



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



HAKKO FX-791 N₂ station

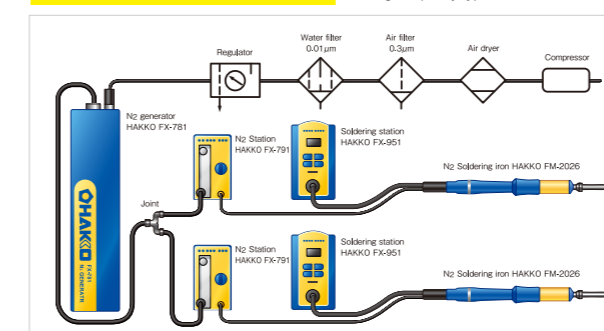
Compact N₂ flow meter

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 to 2.5 L/min, allowing easy control. (Recommended flow rate is 0.5 L/min. to 1.5 L/min. Adjust the flow rate depending on the tip shape.)



For two soldering irons

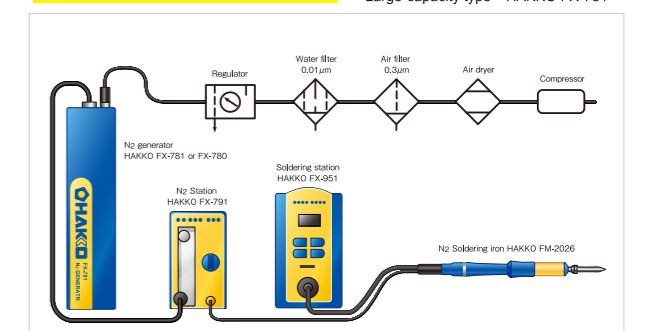
Large-capacity type : HAKKO FX-781



* It is capable to supply high concentration Nitrogen of 97% at the output rate approx. 1 L/min. (at air supply pressure of 0.5 MPa)

For one soldering iron

Small-capacity type : HAKKO FX-780
Large-capacity type : HAKKO FX-781



* It is capable to supply high concentration Nitrogen of 99.9% at the output rate approx. 1 L/min. (at air supply pressure of 0.7 MPa)