

Optional Nozzles

Single	N51-01	N51-02	N51-03	N51-04	N51-05
BGA	N51-10 for 4 x 4	N51-11 for 6 x 6	N51-12 for 8 x 8	N51-13 for 10 x 10	N51-14 for 12 x 12
BGA	N51-15 for 14 x 14	N51-16 for 15 x 15	N51-17 for 17 x 17	N51-18 for 18 x 18	N51-19 for 20 x 20
BGA	N51-20 for 22 x 22	N51-21 for 24 x 24	N51-22 for 27 x 27	N51-23 for 29 x 29	N51-24 for 35 x 35
BGA	N51-25 for 38 x 38	N51-26 for 40 x 40	Part No. N51-50 Nozzle Value Set The standard nozzle (Part No. N51-02) is not included in the set.		

FR-810B

Packing List



Station with handpiece, Nozzle (Ø4 mm), Handpiece holder, Vacuum pipe control knob L (with screw), Pads (qty 2 each of Ø3 mm, Ø5 mm, Ø7.6 mm), Heat resistant pad, Power cord, Temperature distribution chart, Instruction manual

Specifications

Power consumption	700 W (100 V), 840 W (110 V), 820 W (120 V), 1100 W (220 V), 1200 W (230 V), 1300 W (240 V)
Temperatur range	50 to 600°C
Station	
Power consumption	30 W
Air flow	1 to 9 (5 to 115 L/min.)
Dimensions	160 (W) x 145 (H) x 220 (D) mm
Weight	1.5 kg
Handpiece	
Power consumption	670 W (100 V), 810 W (110 V), 790 W (120 V), 1070 W (220 V), 1170 W (230 V), 1270 W (240 V)
Standard nozzle	Ø4 mm (Part No. N51-02)
Total length	250 mm
Weight	180 g

* Total length and weight exclude cord.
* Airflow values shown above are only as reference. Airflow range may vary depending on nozzles.

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Desoldering / Rework

SMD Rework System
Hot Air

HAKKO FR-810B ESD SAFE
SMD REWORK STATION

High power and large air volume
Further evolution of SMD rework station

The vacuum pick-up function with an indicator ensures safety for the components and PWB's.



Improvements of FR-810B

On top of the features of FR-810, high power and large air volume, the new functions of vacuum pickup and pickup indicator have been given to FR-810B. The 2 new functions make it possible to remove a component without damaging PWB.

Pickup indicator

By pre-setting pickup function, a component can be picked up automatically when solder is melted. At the same time, the indication comes up and the moment of picking up will be visible. Even a component and solder joints can not be seen as covered by a nozzle, easy and safe picking up is possible.



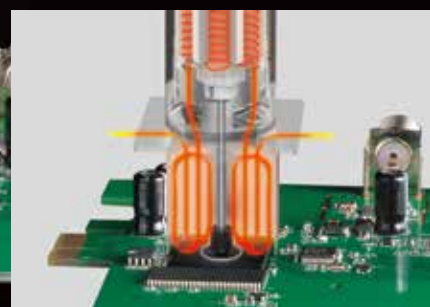
Vacuum pickup function

The vacuum pickup function is to pick up a component with a suction pad and vacuum. It will pick a component only after the hot air melts solder joints. This can avoid an error to peel off the land by removing a component with excessive force.



New type of nozzles for improving temperature characteristics

The new nozzles improve work efficiency with uniform heating by hot air convection inside the nozzle which is created due to vents on the nozzle top. (Only with BGA nozzles)



One-touch nozzle replacement

Nozzles can be quickly changed for many different types of components. In addition, conventional nozzles are compatible. Heaters can also be easily and securely replaced.



High power and large volume hot air for quick removal of components

A tool that can provide powerful hot airflow for repairing high heat capacity circuit boards that require high blow volume and high output, and sufficient hot airflow for appropriate blow volume and high output for high-density mounting substrates.

Hottest and most powerful in our hot air series

Temperature range: **50 to 600 °C**

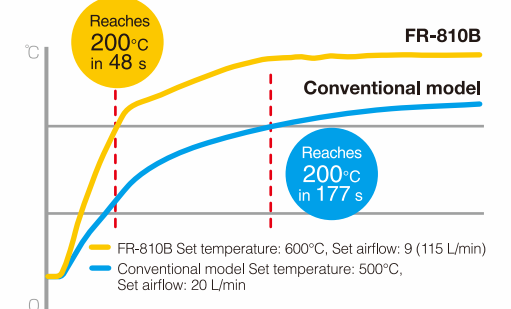
Turbo fan for large volume air flow

Air flow **5 times 5 L/min. to 115^{*1} L/min.**

*1 Varies depending on nozzle shape.

Efficiency improvement

The high volume airflow and high output of FR-810B make it possible to perform the same work in only one-third of the time required when using a conventional model. This reduces the thermal impact on boards and components.



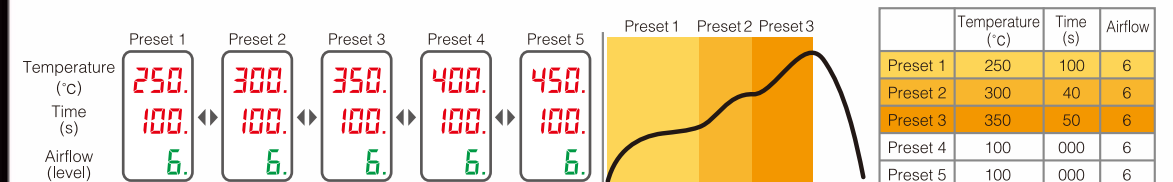
* Examination of time taken for connector sections soldered onto a ceramic board to be heated to 200°C with maximum temperature and airflow settings selected. Single nozzles with an approximately 4mm diameter were used.

Timer function

Timer function is to control the time of operation. This can help to prevent parts from overheating and can improve the overall quality of rework.

Chain presets function for making a simple thermal profile

The chain presets function is to make a simple thermal profile by combining several preset conditions. (Up to 5 steps) This can improve work efficiency a lot by standardizing work time, avoiding overheating, improving repeatability of operation, and making difficult rework jobs easy.



*Presets 4 and 5 have been set to '000', so they are skipped.

Auto sleep and auto shutoff features

To ensure safety and conserve power, when the handpiece is placed in the handpiece holder, the auto sleep function will be activated and it will start cooling automatically. If the handpiece has not been removed from the handpiece holder (e.g. Using it in a rework fixture) and it has been idle for 30 minutes, auto shutoff function will be activated. It will be automatically powered off. Access to settings can be restricted by the password function.

With the use of Grip fixture, Board holder and Bottom heater, work conditions can be controlled even more strictly.

A low cost rework system can be assembled with a bottom heater, a grip fixture, and a board holder.



Grip Fixture M
Recommended if a bottom heater is not required or in case of use of a bottom heater other than the dedicated model for FR-811.
Part No. C5028



Board Holder
Makes it easy to set and remove a PWB and to make fine adjustments after setting.
Part No. C5027



Board Clip
Accepts even irregular-shaped PWB.
Part No. B5098



Board Support Unit
Supports PWB from underneath to minimize its warping.
Part No. B5136



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