# Optional Nozzles

<table>
<thead>
<tr>
<th>Nozzle Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>NS141</td>
<td>NS142</td>
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## RGA

<table>
<thead>
<tr>
<th>Nozzle Code</th>
<th>Description</th>
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<tr>
<td>NS151</td>
<td>NS152</td>
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## RGA

<table>
<thead>
<tr>
<th>Nozzle Code</th>
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<tr>
<td>NS161</td>
<td>NS162</td>
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## RGA

<table>
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<td>NS171</td>
<td>NS172</td>
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## RGA

<table>
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<tr>
<td>NS181</td>
<td>NS182</td>
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## RGA

<table>
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<th>Nozzle Code</th>
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<tbody>
<tr>
<td>NS191</td>
<td>NS192</td>
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## Nozzle Value Set

- Part No. NS140
- The standard nozzle (Part No. NS140) is not included in the set.

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**FR-810B**

### Specifications

- **Power consumption**
  - 700 W (100 V), 840 W (110 V), 920 W (120 V), 1,300 W (220 V), 1,900 W (230 V), 1,900 W (240 V)

- **Temperature range**
  - 400°C to 600°C

- **Station**
  - **Power consumption**: 30 W
  - **Airflow**: 1 to 9 L/min
  - **Dimensions**: 160 (W) x 145 (D) x 220 (H) mm
  - **Weight**: 3 kg

- **Handpiece**
  - **Power consumption**: 670 W (100 V), 810 W (110 V), 940 W (120 V), 1,070 W (220 V), 1,170 W (230 V), 1,270 W (240 V)
  - **Standard nozzle**: Ø4 mm (Part No. NS140)
  - **Total length**: 220 mm
  - **Weight**: 140 g

*Total length and weight exclude cord.*

*Airflow values shown above are as a reference, airflow range may vary depending on nozzle.

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**Desoldering / Rework**

**SMD Rework System**

**Hot Air**

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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 new functions make it possible to remove a component without damaging PCB.

Pickup indicator

By presetting pickup function, a component can be picked up automatically when solder is melted. At the same time, the indication turns on and the moment of picking up will be visible. Even a component and solder joints cannot 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 air for removing high heat capacity circuit boards that require high flow volume and high output, and sufficient hot air for appropriate flow volume and high output for high-density mounting substrates.

Efficiency improvement

The high volume airfow 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.

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 L/min.
  * Values depending on nozzle shape.

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 work.

Chain presets function for making a simple thermal profile

The chain presets function is to make a simple thermal profile by combining several preset cycles. (up to 5 steps)

This can improve work efficiency by 50% by standardizing work time, avoiding overheating. Improving repeatability of operation, and making difficult rework jobs easy.

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 new profile) and it has been idle for 10 minutes, the auto shut off 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.

Set-up example

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

Grip Fixture M

Recommended when it is required to mount several types of boards. Recommended heater is not required in case of use of a bottom heater other than the dedicated model F4H11.

Part No. C9008

Board Holder

Makes it easy to set and reheat a PCB and to make fine adjustments after setting.

Part No. C2107

Board Support Unit

Supports PCBs when underneath the nozzle to minimize the wadding.