



American Hakko Products, Inc.

# PRODUCT BULLETIN

**Bulletin No:** PB375

**Issue Date:** 4-19-2016

**Available:** 5-2-2016

**Product Description:**


HAKKO FR-410 Desoldering Station with N61 Series Nozzles

**Part No:**

FR410-02 (with FR-4101 Gun-Type Handpiece)  
 FR410-03 (with FR-4102 Pencil-Type Handpiece)  
 N61-01 through N61-17



**Specification:**

<b>Model</b>	FR-410	
<b>Part No.</b>	FR410-02	FR410-03
<b>Input Voltage</b>	120 VAC 50/60 Hz	
<b>Power Consumption</b>	190W	
<b>Temperature Range</b>	330°C – 450°C (620°F – 850°F)	
<b>Temperature Stability</b>	±5°C (±9°F) at idle	
<b>ESD Safe</b>	Yes	
<b>Safety Approval</b>		

**Contents:**

Part No.	Description
--	FR-410 Desoldering Station
<b>FR4101-81</b> or <b>FR4102-81</b>	FR-4101 Gun-Type Handpiece or FR-4102 Pencil-Type Handpiece
<b>FH410-81</b> or <b>FH410-02</b>	Holder for FR-4101 or Holder for FR-4102
<b>C5030</b>	Maintenance Kit Includes: <ul style="list-style-type: none"> <li>• B1087 – 1.0mm Cleaning Pin</li> <li>• B1215 – Heater Cleaning Pin</li> <li>• B1303 – 1.0mm Cleaning Drill</li> <li>• B5106 – Nozzle Wrench</li> <li>• A5020 – Station Filter (x2)</li> <li>• A1033 – Handpiece Filter (x4)</li> </ul>
<b>B2419</b>	Power Cord
--	Instruction Manual

Specifications continued on Page 2

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**Specifications (continued):**

**Station**

<b>Output Voltage</b>	24 V	
<b>Vacuum Generator</b>	Pump – Double Cylinder	
<b>Vacuum Pressure</b>	80 kPa / 600 mm Hg (24 in. Hg)	
<b>Suction Flow</b>	15 L/min	
<b>Temperature Control</b>	Microprocessor control using closed-loop sensor	
<b>Temperature Presets</b>	3 – User Programmable	
<b>Sleep Enabled</b>	Yes	
<b>Auto Power Off Safety</b>	Yes	
<b>Low Temp Alarm</b>	Yes	
<b>Process Control Lockout</b>	Yes - Password	
<b>Dimension (W x H x D)</b>	<b>Station</b>	165 x 137 x 244 mm (6.5 x 5.4 x 9.6 in.)
	<b>Shipping</b>	394 x 229 x 312 mm (15.5 x 9.0 x 12.25 in.)
<b>Weight</b>	<b>Station</b>	4.8 kg (10.6 lb.)
	<b>Shipping</b>	7.4 kg (16.2 lb.)

**Handpieces**

<b>Model</b>	FR-4101	FR-4102
<b>Part No.</b>	FR4101-81	FR4102-81
<b>Power Consumption</b>	140W	
<b>Nozzle-to-Ground Resistance</b>	< 2 ohms	
<b>Nozzle-to-Ground Potential</b>	< 2 mV	
<b>Heater</b>	HAKKO Composite Ceramic™	
<b>Nozzles</b>	N61 Series	
<b>Standard Nozzle (Included)</b>	N61-05 (1.0 mm (0.04 in.))	
<b>Cord Length</b>	1.2 m (4 ft.)	
<b>Total Length (w/o Cord)<sup>1</sup></b>	168 mm (6.6 in.)	206 mm (8.1 in.)
<b>Weight (w/o Cord)<sup>1</sup></b>	170 g (0.38 lb.)	160 g (0.35 lb.)

<sup>1</sup> – As measured with N61-05 nozzle installed



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**Specifications (continued):**

**N61 Series Nozzles**

<p>N61-01</p> <p>Units: mm(in.)</p>	<p>N61-02</p> <p>Units: mm(in.)</p>	<p>N61-03</p> <p>Units: mm(in.)</p>
<p>N61-04</p> <p>Units: mm(in.)</p>	<p>N61-05</p> <p>Units: mm(in.)</p>	<p>N61-06</p> <p>Units: mm(in.)</p>
<p>N61-07</p> <p>Units: mm(in.)</p>	<p>N61-08</p> <p>Units: mm(in.)</p>	<p>N61-09</p> <p>Units: mm(in.)</p>
<p>N61-10</p> <p>Units: mm(in.)</p>	<p>N61-11</p> <p>Units: mm(in.)</p>	<p>N61-12</p> <p>Units: mm(in.)</p>
<p>N61-13</p> <p>Units: mm(in.)</p>	<p>N61-14</p> <p>Units: mm(in.)</p>	<p>N61-15</p> <p>Units: mm(in.)</p>
<p>N61-16</p> <p>Units: mm(in.)</p>	<p>N61-17</p> <p>Units: mm(in.)</p>	



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***Comments:***

As the design of PCBs evolve, the need for higher power desoldering tools with a wide arrange of nozzle configurations grows. The HAKKO FR-410 Desoldering Station is designed to fit that need and bridge the gap in power between the 70W HAKKO FM-204 Desoldering Station, and the 300W HAKKO FR-400 Ultra Heavy Duty Desoldering Station.

The HAKKO FR-410 provides 140W of power and has the widest selection of nozzle configurations that can meet almost every need. The station also includes the same popular features from the HAKKO FR-400 which include an anti-clogging feature which helps ensure instantaneous application of peak vacuum pressure to the solder joint, a delay timer to prevent premature release of the vacuum system before solder has cleared the heater and is captured in the solder collection chamber, a large, easy to read display that includes a vacuum level indicator to let you know if there are restrictions building that will need to be cleaned out, 3 user programmable presets, and process control password lockout to prevent any unauthorized changes to the systems operation or setup.

The HAKKO FR-410 is available in two different versions... one for those that prefer a gun-type handpiece using the HAKKO FR-4101, and one for those that prefer a pencil-type handpiece using the HAKKO FR-4102, both of which are lightweight and ergonomic. Both handpieces feature an easy access solder collection chamber that is simple to clean, an easy to change heater cartridge that uses HAKKO Composite Ceramic™ technology, and an independent nozzle which provides a low cost of operation. Each station also includes a basic maintenance kit with cleaning tools and replacement filters.

For more information, please visit us at [www.HakkoUSA.com](http://www.HakkoUSA.com)