

**HAKKO** **FR-400** **ESD**  
DESOLDERING TOOL SAFE

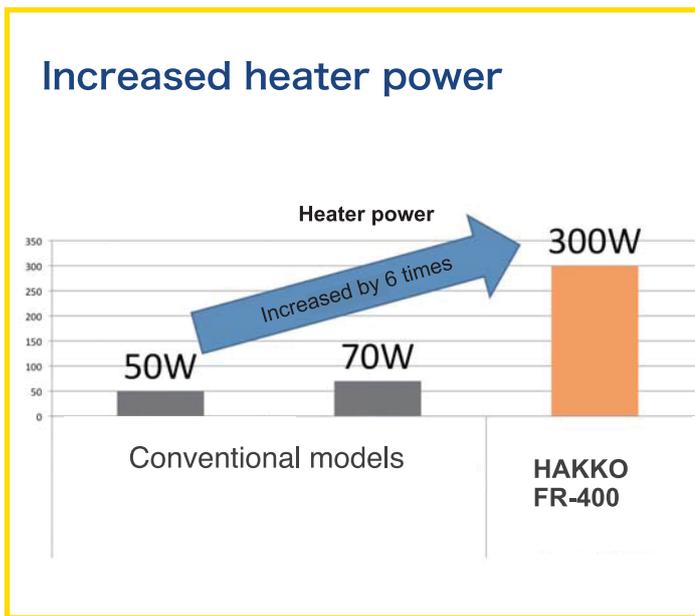
# 300W of Desoldering Power! A Revolution in High Mass Rework

Quickly and safely reflow and remove solder from the most demanding PCBs

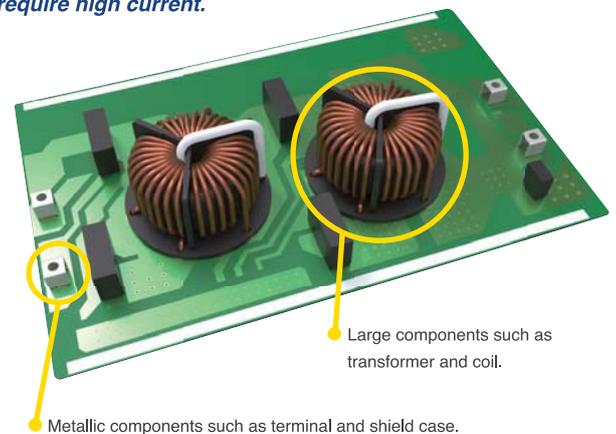


# 300W of desoldering power makes the impossible now possible!

It is becoming more and more difficult to desolder high current components from PCBs that are specially engineered for heat dissipation. In some cases, two different pieces of equipment are used to attempt rework of the component: A soldering station to help melt the solder on one side, and a desoldering station to melt and remove the solder from the other side. The new HAKKO FR-400 with 300W of power and an advanced vacuum system eliminate extra equipment needs while safely and effectively allowing reflow and removal of the most demanding components.

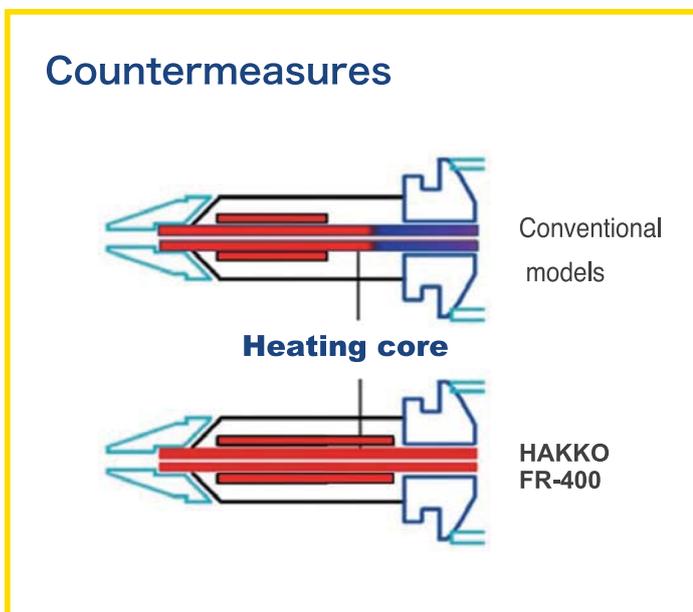


*FR-400 makes a big difference in rework process on inverter PWB for automotive device and power conditioner PWB for solar power generator that require high current.*



# Advanced vacuum system for near instant vacuum

Suction is delayed by 0.2 seconds after pulling the trigger, allowing for a buildup of vacuum which is then applied to the solder joint for an instant high pressure vacuum.



# Reduce Clogging

## Improved Heater Core

A longer heated segment of the heating core ensures solder is carried to the filter pipe while remaining molten, greatly reducing the likelihood of clogging.

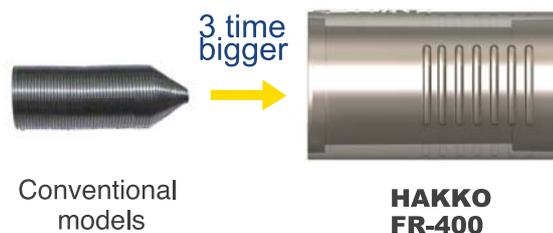
## Anti-Clogging Function (ACF)

This new feature prevents ensures proper application of suction to ensure the material in the heater core is carried all the way to the filter pipe.

## Easy maintenance

### New high capacity filter pipe

New filter pipe has 3x the capacity of other filter pipes which is needed for large solder joints. The filter pipe can be easily cleaned and re-used, reducing waste.



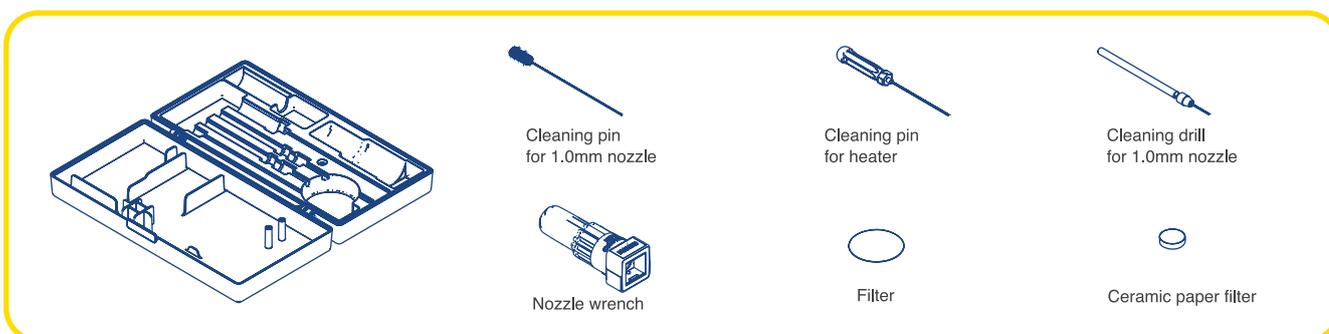
### Cartridge heating element

Easy to replace heating element simply by removing 3 screws.



### Included maintenance kit

A basic maintenance kit with a cleaning pin and drill for the standard nozzle, and cleaning pin for the heating core, as well as replacement filters and nozzle removal tool are all included in a convenient tool case.



### Larger and easy to see station filter

When desoldering, flux is also ingested into the system which can degrade performance if it enters the pump system. To prevent this, a filter is used at the station vacuum port. The new filter is larger to enhance the adsorption of the flux before it enters the pump system, and the transparent cover makes it easy to see when this filter should be changed.



## Large LCD display

Very easy to see temperature on the large LCD display



Vacuum indicator to check clogging



Suction with no clogging



Suction with clogging

## Larger selection of nozzles, even for odd shapes

N60 Series nozzles include standard sizes and larger sizes greater than 2.0mm diameter including flat tabs



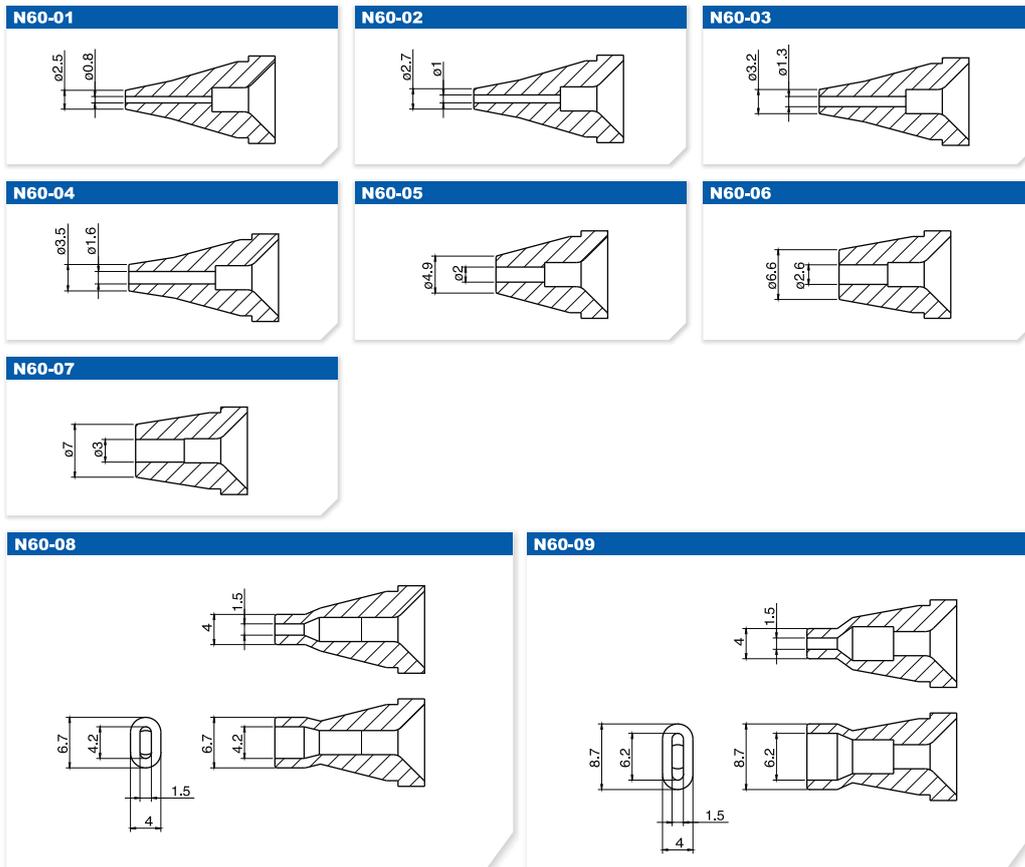
N60-06



N60-09

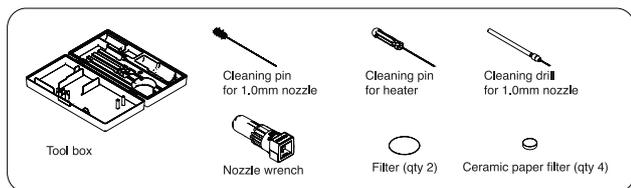
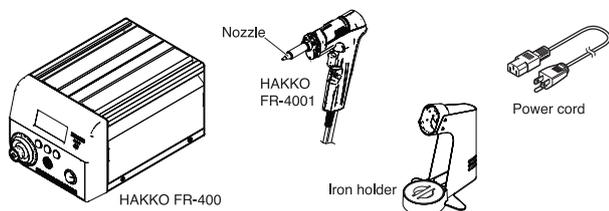
■ For FR-4001

## Replacement Nozzles



## FR-400

■ Contents



■ Specifications

Power consumption	320 W
Temperature range	350 to 500°C
Temperature stability	±5°C at idle temperature
<b>■ Station</b>	
Output voltage	AC 29V
Vacuum generator	Double cylinder type
Vacuum pressure	80 kPa (600mmHg)
Suction flow	15 L/min.
Dimensions	160(W)×137(H)×235(D)mm
Weight	5.7 kg
<b>■ Desoldering tool</b>	
Power consumption	300W (29V)
Nozzle to ground resistance	< 2 Ω
Nozzle to ground potential	< 2 mV
Heating element	Composite heater
Standard nozzle	1.0 mm (Part No. N60-02)
Cord length	1.2 m
Total length (without cord)	183 mm (with 1.0mm nozzle)
Weight (without cord)	245 g (with 1.0mm nozzle)

※Measured at the filter case suction port

Bro\_FR-400e20150218

**HAKKO**  
HAKKO CORPORATION  
OVERSEAS AFFILIATES

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

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

For the HAKKO Sales affiliate near you, please visit  
<http://www.hakko.com>

Specifications and design are subject to change without notice. Copyright Hakko Corporation. All right reserved.