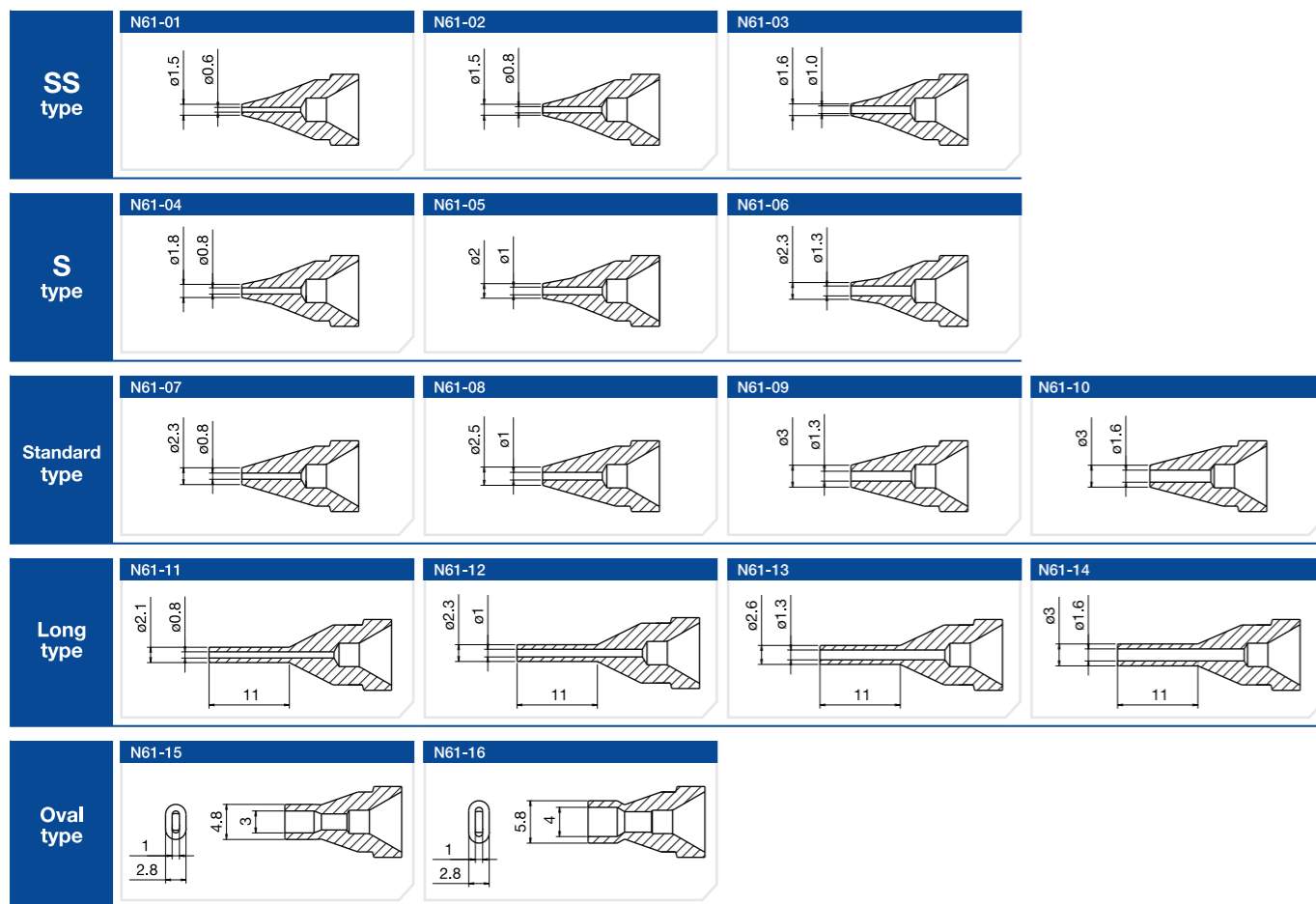


Replacement nozzles

(Unit: mm)



Desoldering • Rework

Station Type
Desoldering Tool

HAKKO FR-410 ESD SAFE
DESOLDERING TOOL

**High Power of 140 Watts !
Ideal for Micro Land Pattern
and Narrow Space**



FR-410

Packing list



Station, Desoldering tool (FR-410), Iron holder (with cleaning wire), Power cord, Tool box (Cleaning pin for $\phi 1.0$ mm, Cleaning pin for heater, Cleaning drill for $\phi 1.0$ mm, Nozzle wrench, Filter [qty 2], Ceramic paper filter [qty 4], Instruction manual

Specifications

Power consumption	190 W
Temperature range	330 to 450°C
Temperature stability	$\pm 5^\circ\text{C}$ at idle temperature
Station	
Output voltage	AC 24 V
Vacuum generator	Double cylinder type
Vacuum pressure	80 kPa (600 mmHg)
Suction flow	15 L /min.
Dimensions	165 (W) x 137 (H) x 244 (D) mm
Weight	4.8 Kg
Desoldering tool	
Power consumption	140 W (24V)
Nozzle to ground resistance	< 2 Ω
Nozzle to ground potential	< 2 mV
Heating element	Composite heater
Standard nozzle	$\phi 1.0$ mm S type (Part No.N61-05)
Cord length	1.2 m
Total length (without cord)	168 mm (with $\phi 1.0$ mm S type nozzle)
Weight (without cord)	170 g (with $\phi 1.0$ mm S type nozzle)

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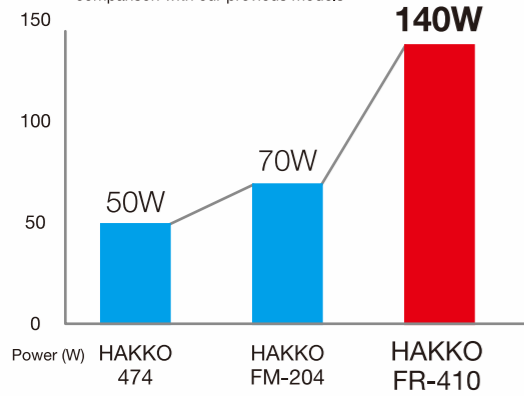
140 W high powers enable perfect desoldering for the components on multi-layer PWB

3 times more powerful than the previous models!
The high power makes it easy to desolder on multi-layer PWB.

*HAKKO 474 · 475

Heating power

almost **3 times increased**
comparison with our previous models



Unique functions increase desoldering work efficiency

Secure desoldering - High suction pressure with valve function

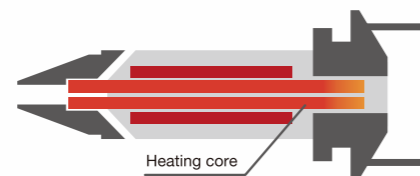
Suction starts 0.2 seconds after pulling the trigger for immediate and high pressure suction to achieve complete desoldering.



Reduction of solder clogging

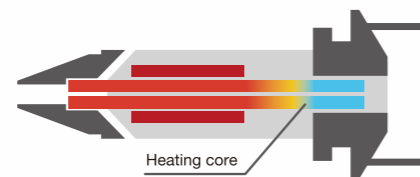
1. Improvement in heating core

Heating ability for backside of heating core is increased to ensure suctioned solder be carried to filter pipe.



HAKKO FR-410

No solder clogging due to higher temperature at the back side of heating core



previous model

Solder clogs at the backside of heating core

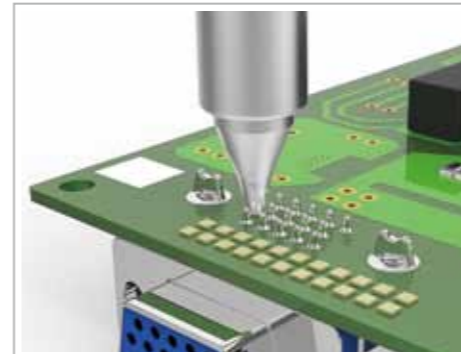
Image

2. Featuring ACF (Anti Clogging Function)

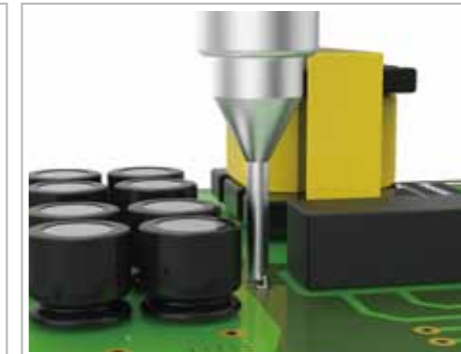
ACF ensures suctioned solder be carried to filter pipe by keeping pump running for a certain period of time (1 to 5 seconds) automatically after releasing trigger.

A wide selection of nozzle is available for a variety of desoldering works

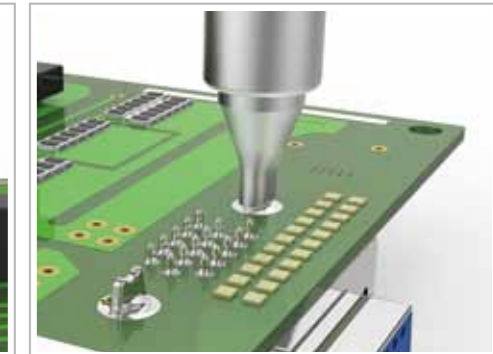
New added nozzles make it possible to desolder even on micro lands, components in narrow space and flat type terminals



SS type nozzles for micro land-patterns
Close-fitting nozzles on micro land pattern secure desoldering.



Long type nozzles for narrow space
Slim and long nozzles reach to target easily in a narrow space.



Oval shape nozzles for flat type terminals
No solder left-over because of the nozzles that match square shape terminals.



Improvement in maintainability

1. Easy nozzle replacement

The dedicated wrench allows safe, easy and smooth nozzle replacement.



2. Easy heater replacement

Easy heater replacement by removing 3 screws on the part of heating core.



3. Lager filter and more transparency

Filter size has been increased to protect the pump from contaminants, and transparent filter cover allows quick visual check of the filter condition.



4. Tool box

FR-410 comes with a tool box that contains of maintenance tools to keep nozzle and heater in a good condition.



Easy-to-read large LCD

The large LCD display clearly shows set temperature and indicates a level of solder clogging.



Suction with no clogging



Suction with clogging