

## FR-400 ESD SAFE

Nozzle quick change type



Heavy Duty Desoldering Tool **Digital**

Nozzle included

Power Consumption  
**300 W**



**NEW**  
FR-4003



- 300 W heavy duty desoldering tool with built-in vacuum pump
- Secure desoldering with valve function
- Reduction of solder clogging
- Improvement in maintainability

## FR-410 ESD SAFE

Nozzle quick change type



High-Power Desoldering Tool **Digital**

Nozzle included

Power Consumption  
**140 W**

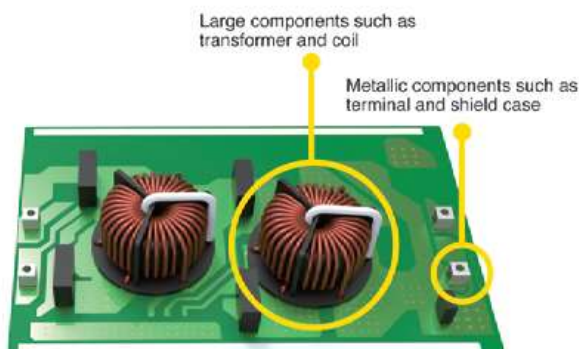


**NEW**  
FR-4103

- 140 W high power enables perfect desoldering for the components on multi-layer P.W.B.
- A wide selection of nozzles is available for a variety of desoldering works.

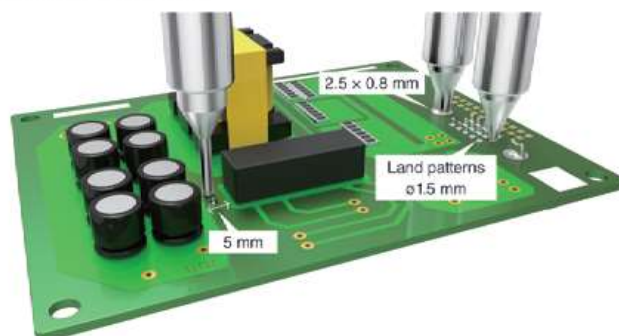
### Feature of FR-400

300 W tremendous power makes incredible heating.



### Feature of FR-410

A wide selection of nozzles is available for a variety of desoldering works.



### Common Features of FR-400 and FR-410

#### Secure desoldering, valve function that suctions with high pressure

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

#### Improvement in heating core

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

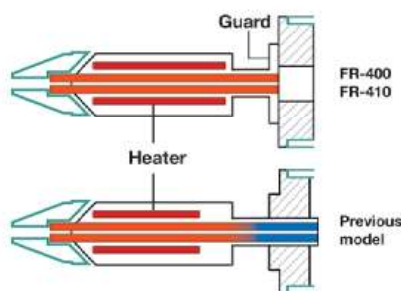
#### Featuring ACF (Anti Clogging Function)

ACF ensures suctioned solder be carried to filter pipe by keeping pump running for a second after releasing trigger.

#### Reduction of solder clogging by improved heating core

The additional guard prevents a temperature drop of the heating core by making contact with the front holder and it enables to reduce solder clogging.

\* In comparison with the previous model



### Improvement in maintainability

#### Easy heater replacement



By removing 3 screws

#### Tool box for maintenance kit



#### Quick change nozzle replacement with optional accessory

Quick and safe nozzle replacement with nozzle quick changer

\* It can't be used for previous desoldering tools (FR-4001 or FR-4101).

Nozzle quick changer for FR-4003: Part No. C5045

Nozzle quick changer for FR-4103: Part No. C5046



\* The positioning jig below is separately required for oval type nozzle.

Oval nozzle positioning jig: part No.B5229 for FR-4003  
part No.B5230 for FR-4103

### Packing List

<b>FR-400</b>	Station, Desoldering tool (FR-4003), Power cord, Iron holder (with cleaning wire), Tool box (Cleaning pin for ø1 mm, Cleaning pin for heating element, Cleaning drill for ø1 mm, Nozzle wrench, Filter [qty 2], Ceramic paper filter [qty 4]), Instruction manual
<b>FR-410</b>	Station, Desoldering tool (FR-4103), Power cord, Iron holder (with cleaning wire), Tool box (Cleaning pin for ø1 mm, Cleaning pin for heating element, Cleaning drill for ø1 mm, Nozzle wrench, Filter [qty 2], Ceramic paper filter L [qty 4]), Instruction manual

### Specifications

Model No.	FR-400	FR-410
Power consumption	320 W	190 W
Temperature range	350 to 500 °C	330 to 450 °C
Temperature stability	±5 °C at idle temperature	±5 °C at idle temperature

#### Station

	FR-400	FR-410
Output voltage	AC 29 V	AC 24 V
Vacuum generator	Vacuum pump, double cylinder type	Vacuum pump, double cylinder type
Vacuum pressure	80 kPa (600 mmHg, max.)	80 kPa (600 mmHg, max.)
Suction flow*	15 L / min.	15 L / min.
Dimensions	166 (W) × 137 (H) × 264 (D) mm	165 (W) × 137 (H) × 244 (D) mm
Weight	5.7 kg	4.8 kg

#### Desoldering Tool

	FR-400	FR-410
Power consumption	300 W (29 V)	140 W (24 V)
Nozzle to ground resistance	<2 Ω	<2 Ω
Nozzle to ground potential	<2 mV	<2 mV
Heating element	Composite heater	Composite heater
Standard nozzle	ø1 mm (No. N60-02)	ø1 mm S type (No. N61-05)
Cord length	1.2 m	1.2 m
Total length**	183 mm (with ø1 mm nozzle)	168 mm (with ø1 mm S type nozzle)
Weight**	270 g (with ø1 mm nozzle)	190 g (with ø1 mm S type nozzle)

\* The suction flow is measured at the filter case suction port of station.

\*\* Without cord and hose



# Desoldering Tool

## Replacement Nozzles for FR-400

Unit : mm

<b>N60-01 Nozzle <math>\phi 0.8</math></b> 	<b>N60-02 Nozzle <math>\phi 1</math></b> 	<b>N60-03 Nozzle <math>\phi 1.3</math></b> 	<b>N60-04 Nozzle <math>\phi 1.6</math></b> 	<b>N60-05 Nozzle <math>\phi 2</math></b> 
<b>N60-06 Nozzle <math>\phi 2.6</math></b> 	<b>N60-07 Nozzle <math>\phi 3</math></b> 	<b>N60-08 Nozzle 4.2 x 1.5</b> 	<b>N60-09 Nozzle 6.2 x 1.5</b> 	

## Replacement Nozzles for FR-410

Unit : mm

<b>SS type</b> N61-01 	<b>N61-02</b> 	<b>N61-03</b> 		
<b>S type</b> N61-04 	<b>N61-05</b> 	<b>N61-06</b> 		
<b>Standard type</b> N61-07 	<b>N61-08</b> 	<b>N61-09</b> 	<b>N61-10</b> 	
<b>Long type</b> N61-11 	<b>N61-12</b> 	<b>N61-13</b> 	<b>N61-14</b> 	
<b>Oval type</b> N61-15 	<b>N61-16</b> 	<p>* N61 series nozzles can also be used for FR-301 desoldering tool.</p>		