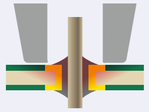
Quick and safe nozzle change!

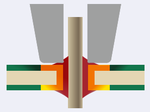
Selecting the right nozzle for your workpiece is very important for quality of desoldering !

Do you use the right nozzle for your workpieces?



If nozzle size is too big

It takes longer dwell time due to its ineffective heat transfer and may damage P.W.B.



If nozzle size is just right

It takes shorter dwell time due to its effective heat transer and ensure quality of P.W.B.

Quick and safe nozzle replacement with Nozzle quick changer (optional item) can help select a suitable nozzle from 3 different ones in max. for each work. (Enclosure pipe is required for setting with each nozzle.)

A variety of nozzles to select from N60 and N61 series.

Nozzle quick changer

Part number	Applicable products
C5045	FR-4003
C5046	FR-4103 FR-301

Easy 3 steps for nozzle change

Desoldering Tool

FR-301

Portable Desoldering Tool

Provided in a carrying case

Power switch and adjustable temperature control built in the handle

Packing List

FR-301	Unit, Pre-filter, Ceramic paper filter (L, qty 2), Nozzle wrench, Iron holder (simple type), Cleaning pin for heating core, Cleaning pin for ø1 mm nozzle, Instruction manual

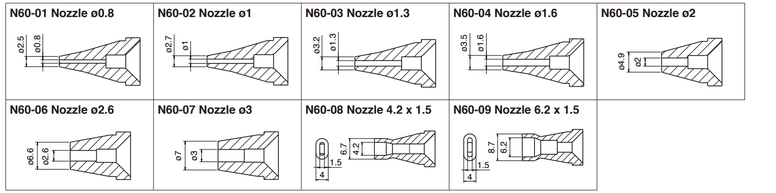
Specifications

Model No.	FR-301
Power consumption	100 V 98 W (50/60 Hz) 110 V 122 W (50/60 Hz) 120 V 140 W (60 Hz) 220 V 100 W (50/60 Hz) 230 V 110 W (50/60 Hz) 240 V 120 W (50/60 Hz)
Temperature range	350 to 500°C
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Vacuum generator	Diaphragm pump
Vacuum pressure	81 kPa (610 mmHg)
Suction flow	11 L/min.
Heating element	Ceramic heater
Standard nozzle	ø1 mm (No.N61-08)
Dimensions*	215 (W) × 226 (H) mm (with ø1 mm (No.N61-08) nozzle)
Weight*	0.52 kg (with ø1 mm (No.N61-08) nozzle)

* Without cord

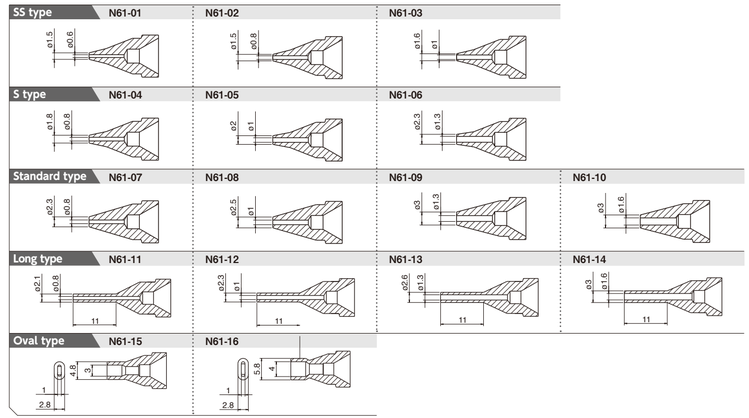
Replacement Nozzles for FR-400

Unit : mm



Replacement Nozzles for FR-410, FR-701, FR-702 and FR-301

Unit : mm



Replacement parts

Enclosure pipe

Part number	Applicable products
B5221	FR-4003
B5222	FR-4103
B5193	FR-301

FR-4003 Desoldering tool for FR-400
FR-4103 Desoldering tool for FR-410, FR-710 and FR-702

Optional parts

Oval nozzle positioning jig

Part number	Applicable products
B5229	FR-4003
B5230	FR-4103
B5231	FR-301

HAKKO CORPORATION

HEAD OFFICE
4-5, SHIOKUSA 2-CHOME, NANIWA-KU, OSAKA, 556-0024 JAPAN
TEL:+81-6-6561-3225 FAX:+81-6-6561-8466
http://www.hakko.com E-mail:sales@hakko.com

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
URL: http://www.hakko.com.cn
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
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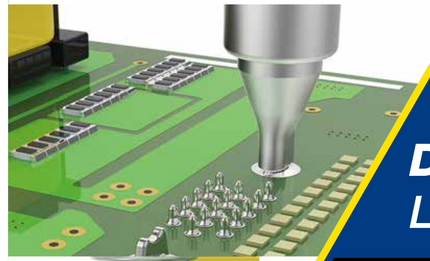


Desoldering Tools Line-up

FR-400/FR-410

FR-701/FR-702

NOZZLE QUICK CHANGER

FR-301

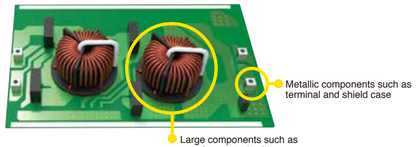
FR-400

Heavy Duty Desoldering Tool

Power Consumption
300 W

GOOD DESIGN

300 W heavy duty desoldering tool with built-in vacuum pump

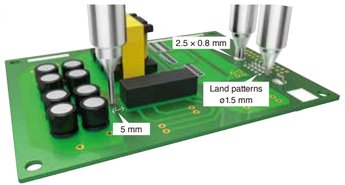


FR-410

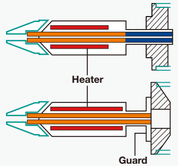
High-Power Desoldering Tool

Power Consumption
140 W

140 W high power enables perfect desoldering for the components on multi-layer P.W.B.



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

■ **Quick nozzle replacement with special tools**

■ **Easy heater replacement** ■ **Tool box for maintenance kit**

By removing 3 screws

■ **Larger filer and more transparency**

■ **LCD display for temperature and suction indicator**

suction with clogging

Packing List

FR-400	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
FR-410	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		
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		
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

FR-701

All-in-one repair system that enables both soldering and desoldering

Packing List

FR-701	Station, Soldering iron (FX-8801), Desoldering tool (FR-4103), Iron holder for soldering iron (with cleaning sponge and wire), Iron holder for desoldering tool (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]), Power cord, Instruction manual

Specifications

Part No.	FR-701
Power consumption	260 W
Station (Soldering iron)	
Output voltage	AC 26 V
Temperature range	50 to 480°C
Temperature stability	±1°C at idle temperature (when set to 200 to 480°C)
Station (Desoldering tool)	
Output voltage	AC 24 V
Vacuum generator	Vacuum pump, double cylinder type
Vacuum pressure	80 kPa (600 mmHg) max.
Suction flow	15 L /min.
Temperature range	330 to 450°C
Temperature stability	±5°C at idle temperature
Station	
Dimensions	190 (W) × 140 (H) × 220 (D) mm
Weight	6.2 kg
Soldering Iron	
Power consumption	65 W (26 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. T18-B)
Cord length	1.2 m
Total length*	217 mm (with B tip)
Weight*	46 g (with B tip)
Desoldering tool	
Power consumption	140 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Standard nozzle	ø1 mm S type (No. N61-05)
Cord length	1.2 m
Total length**	168 mm (with ø1 mm S type nozzle)
Weight**	190 g (with ø1 mm S type nozzle)

* Without cord
** Without cord and hose

FR-702

Multi-station that enables soldering, desoldering, and SMD rework all with a single unit

Packing List

FR-702	Station with hot air handpiece, Nozzle (ø4 mm) for hot air, Handpiece holder for hot air, Vacuum pipe control knob L (with screw), Pads (qty 2 each of ø3 mm, ø5 mm, ø7.6 mm), Soldering iron (FX-8801), Desoldering tool (FR-4103), Iron holder for soldering iron (with cleaning sponge and wire), Iron holder for desoldering tool (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]), Heat resistant pad, Color band (qty 2), Power cord, Instruction manual

Specifications

Part No.	FR-702
Power consumption	1030 W (100 V), 1170 W (110 V), 1430 W (220 V), 1530 W (230 V), 1630 W (240 V)
Station (Soldering iron)	
Output voltage	AC 26 V
Temperature range	50 to 480°C
Temperature stability	±1°C at idle temperature (when set to 200 to 480°C)
Station (Desoldering tool)	
Output voltage	AC 24 V
Vacuum generator	Vacuum pump, double cylinder type
Vacuum pressure	80 kPa (600 mmHg) max.
Suction flow	15 L /min.
Temperature range	330 to 450°C
Temperature stability	±5°C at idle temperature
Station (SMD rework station)	
Power consumption	30 W
Air flow*	1 to 9 (5 to 115 L /min.)
Temperature range	50 to 600°C
Station	
Dimensions	370 (W) × 150 (H) × 220 (D) mm
Weight	9 kg
Soldering Iron	
Power consumption	65 W (26 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (Part No. T18-B)
Cord length	1.2 m
Total length**	217 mm (with B tip)
Weight**	46 g (with B tip)
Desoldering tool	
Power consumption	140 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Standard nozzle	ø1 mm S type (No. N61-05)
Cord length	1.2 m
Total length***	168 mm (with ø1 mm S type nozzle)
Weight***	190 g (with ø1 mm S type nozzle)
Handpiece (Hot air)	
Power consumption	670 W (100 V), 810 W (110 V), 1070 W (220 V), 1170 W (230 V), 1270 W (240 V)
Standard nozzle	ø4 mm (No. N51-02)
Total length**	250 mm
Weight**	180 g

* Air flow capacity is rated as free flowing. Restrictions created by various nozzles may reduce the maximum airflow capacity.
** Without cord
*** Without cord and hose