

Desoldering Tool

HAKKO FM-204 ESD SAFE DESOLDERING TOOL

High-Power Desoldering Tool Digital

Nozzle not included



- Vacuum pump built-in type desoldering tool
- Digital display ensures easy and reliable temperature control.
- Sleep function that works with iron holder prevents nozzle oxidation.

Packing List

FM-204	Station, Iron holder, Ceramic paper filter (10 pcs), Cleaning drill for heating element, Filter pipe assembly (1 pc), Control card, Power cord, Connecting cable, Nozzle remover, Desoldering tool (FM-2024), Handle for gun configuration, Instruction manual
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Option

Part No.	Name	Specifications
FM2027-04	HAKKO FM-2027 conversion kit	70 W (24 V)
FM2026-05	HAKKO FM-2026 conversion kit	70 W (24 V)

Specifications

Model No.	FM-204
Power consumption	120 W
Temperature range	FM-2024: 350 to 450°C FM-2026/2027: 200 to 450°C
Temperature stability	±5°C at idle temperature

• Station

Output voltage	AC 24 V
Vacuum generator	Double cylinder type
Vacuum pressure	Max. 80 kPa (600 mmHg)
Suction flow*	15 L/min.
Dimensions	160 (W) × 120 (H) × 225 (D) mm
Weight	3.7 kg

• Desoldering Tool

Power consumption	70 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Composite heater
Cord length	1.2 m
Total length**	180 mm (with ø1.0 mm nozzle)
Weight**	65 g (with ø1.0 mm nozzle)

* Measured at the filter case suction port of the station.

** Without cord and hose

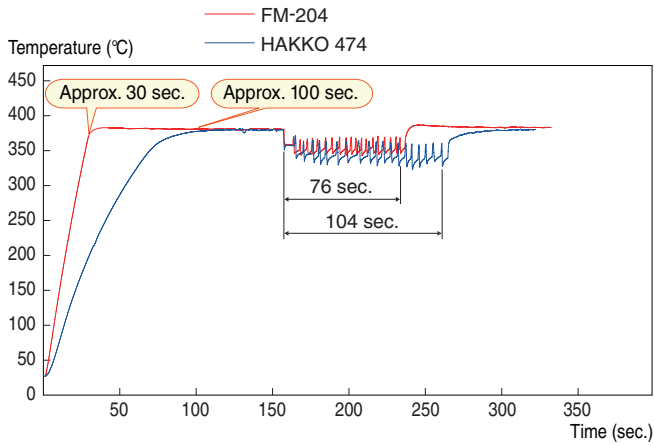
Optional Nozzles

Unit : mm

N1-06 Nozzle ø0.6 	N1-08 Nozzle ø0.8 	N1-10 Nozzle ø1.0 	N1-13 Nozzle ø1.3
N1-16 Nozzle ø1.6 	N1-20 Nozzle ø2.0 	N1-23 Nozzle ø2.3 	N1-L10 Nozzle ø1.0

Features

Excellent thermal recovery



Test criteria

Measurement method	The time until the soldered portion reaches 200°C is measured for 20 points.
Nozzle used	ø1.0 mm
Solder	Lead-free solder

Two way use of grip part

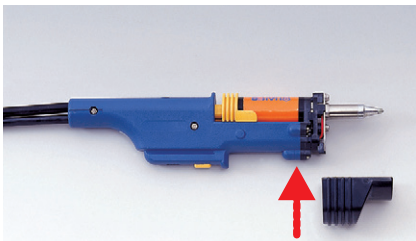


Gun configuration

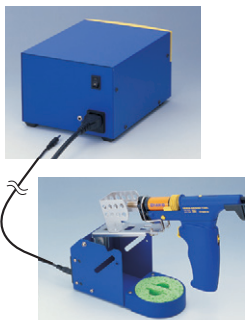


Straight configuration

Simple and safe nozzle replacement by the nozzle remover



Sleep function and Auto Power Shut-off function



Connect the FM-204 station and FH-200 iron holder using a connecting cable.

Replacing the handpiece enables soldering.

■ Soldering



HAKKO FM-2027

■ N₂ System



Set-up example
 HAKKO FM-204
 HAKKO FM-2026
 HAKKO FX-780
 HAKKO FX-791

HAKKO 474 DESOLDERING TOOL ESD SAFE

Vacuum-Pump Type Desoldering Tool Analog

Nozzle included



- Vacuum pump built-in type that is easy to carry

HAKKO 475 DESOLDERING TOOL ESD SAFE

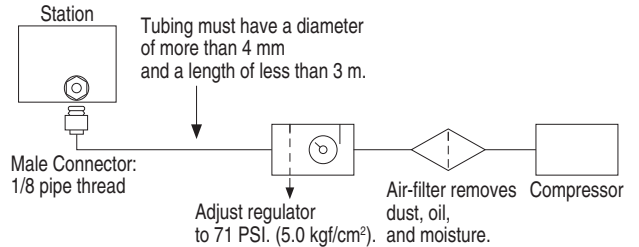
External-Air-Compressor Type Desoldering Tool Analog

Nozzle included



- External air compressor type that has a more powerful vacuum than HAKKO 474

Connection example



Handpiece Variations



HAKKO 809



HAKKO 815



HAKKO 816

Packing List

474, 475 (with 809)	Station, 809 Desoldering gun, Filter pipe, Ceramic paper filter (S; 2 pcs), Ceramic paper filter (L; 4 pcs), Spring filter (3 pcs), Cleaning pin for 1.0 mm diameter nozzle, Cleaning drill for 1.0 mm diameter nozzle, Cleaning pin for heating element, Cleaning pin holder, Wrench, Silicone grease, Iron holder base, Cleaning sponge, Spring iron holder, Instruction manual
474, 475 (with 815)	Station, 815 Desoldering tool, Filter pipe, Ceramic paper filter (S; 2 pcs), Ceramic paper filter (L; 4 pcs), Spring filter (3 pcs), Cleaning pin for 1.0 mm diameter nozzle, Cleaning drill for 1.0 mm diameter nozzle, Cleaning pin for heating element, Cleaning pin holder, Wrench, Silicone grease, Anti-seizure, Iron holder base, Cleaning sponge, Iron receptacle with holder, Instruction manual
474, 475 (with 816)	Station, 816 Desoldering gun, Filter pipe, Ceramic paper filter (S; 2 pcs), Ceramic paper filter (L; 4 pcs), Spring filter (3 pcs), Cleaning pin for 1.0 mm diameter nozzle, Cleaning drill for 1.0 mm diameter nozzle, Cleaning pin for heating element, Cleaning pin holder, Wrench, Silicone grease, Anti-seizure, Iron holder base, Cleaning sponge, Iron receptacle with holder, Instruction manual

Specifications

Model No.	474 (with 809)	474 (with 815)	474 (with 816)	475 (with 809)	475 (with 815)	475 (with 816)
Power consumption	100 W			70 W		
Temperature range	380 to 480°C					

•Station

Output voltage	AC 24 V					
Vacuum generator	Double cylinder type			Ejector type		
Vacuum pressure	Max. 80 kPa (600 mmHg)			Max. 93 kPa (700 mmHg)		
Suction flow*	15 L/min.			20 L/min.		
Applied air pressure	-			490 kPa (5.0 kgf/cm ²) While trigger or button is pressed		
Compressed air consumption	-			46 L/min.		
Dimensions	165 (W) × 135 (H) × 260 (D) mm					
Weight**	3.8 kg			3.0 kg		

•Desoldering Tool

Type	Gun	Pen	Gun	Gun	Pen	Gun
Power consumption	50 W (24 V)					
Nozzle to ground resistance	<2 Ω					
Nozzle to ground potential	<2 mV					
Heating element	Ceramic heater					
Standard nozzle	1.0 mm S type (No. A1003)	ø1.0 mm S type (No. A1499)		ø1.0 mm S type (No. A1003)	ø1.0 mm S type (No. A1499)	
Dimensions	135 (W) × 174 (H) mm	200 (W) × 80 (H) mm	180 (W) × 150 (H) mm	135 (W) × 174 (H) mm	200 (W) × 80 (H) mm	180 (W) × 150 (H) mm
Weight**	200 g	100 g	120 g	200 g	100 g	120 g

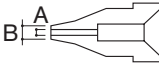
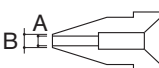
* Measured at the filter case suction port of the station.

** Without cord and hose

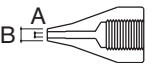


Replacement Nozzles

Unit : mm

For 808 and 809

Part No.	Figure	Size	
		A	B
A1002		0.8	1.8
A1003		1.0	2.0
A1004		0.8	2.3
A1005		1.0	2.5
A1006		1.3	3.0
A1007		1.6	3.0

For 815 and 816

Part No.	Figure	Size	
		A	B
A1496		0.8	1.8
A1499		1.0	2.0
A1498		0.8	2.3
A1500		1.0	2.5
A1501		1.3	3.0
A1502		1.6	3.0
A1503		2.0	3.6
A1497		0.8	2.2

HAJKO FR-300 DESOLDERING TOOL



Portable Desoldering Tool

Nozzle included



- Power switch and adjustable temperature control built into the handle
- Ergonomic grip design provides superior operability



FR-300 is supplied in a carrying case with maintenance parts and simple iron holder.

Packing List

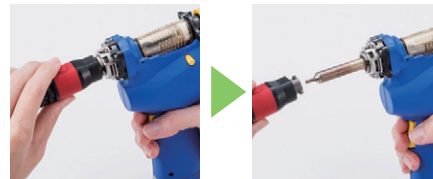
FR-300	Unit, Ceramic paper filter (L; 2pcs), Nozzle changing tool, Protection cover, Pre-filter, Iron holder, Cleaning pin for 1.0 mm diameter nozzle, Cleaning pin for heating core, Instruction manual
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Specifications

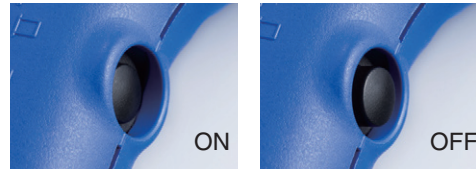
Model No.	FR-300
Power consumption	100 V 98 W (50/60 Hz), 110 V 122 W (50/60 Hz), 120 V 140 W (50/60 Hz), 220 V 105 W (50/60 Hz), 230 V 118 W (50/60 Hz), 240 V 130 W (50/60 Hz)
Temperature range	350 to 500°C
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Vacuum generator	Diaphragm pump
Vacuum pressure	81 kPa (610 mmHg)
Suction flow	11 L/min.
Standard nozzle	ø1.0 mm (No. N50-04)
Dimensions	210 (W) × 226 (H) mm
Weight	0.52 kg

Features

Quick-change nozzle replacement with special tools



Power switch at hand



Simplified iron holder as standard



Replacement Nozzles

Unit : mm

Part No.	Figure	Size	
		A	B
N50-01		0.8	2.0
N50-02		1.0	2.0
N50-03		0.8	2.5
N50-04		1.0	2.5
N50-05		1.3	3.0
N50-06		1.6	3.0

HAKKO SPPON

DESOLDERING TOOL

Desoldering Tool

Nozzle included



- Light-weight and simplified desoldering tool with high suction power
- Use a cleaning shaft that enables the nozzle to be cleaned after each use
- Nozzles can be easily replaced.

Replacement Nozzles

Unit : mm

Part No.	Figure	Adaptation products
18-N		No.18, 18G
20-N		No.20, 20G
DS01-N		No.DS01P

Specifications

Part No.	Absorption capacity
18	12 cm ³ (12 cc)
18G	12 cm ³ (12 cc) with guard
20	20 cm ³ (20 cc)
20G	20 cm ³ (20 cc) with guard
DS01P	28 cm ³ (28 cc)

HAKKO WICK

DESOLDERING WIRE

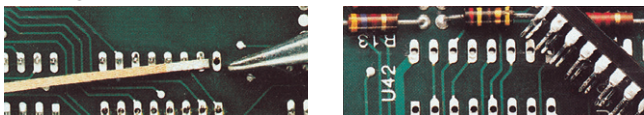
Desoldering Wire



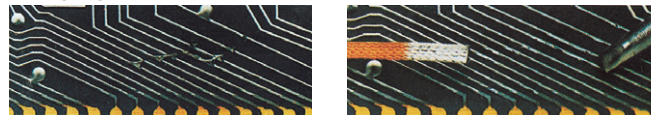
- Handy for removing solder after dismantling surface-mounted components

Features

Through-hole solder removal



Bridging solder removal



Specifications

Regular type (Flux)

Part No.	Description
FR100-00	1.5 m × 0.6 mm
FR100-01	1.5 m × 0.9 mm
FR100-02	1.5 m × 1.4 mm
FR100-03	1.5 m × 1.9 mm
FR100-04	1.5 m × 2.5 mm
FR100-05	1.5 m × 3.3 mm

Unflux type (Unflux)

Part No.	Description
FR110-00	1.5 m × 0.6 mm
FR110-02	1.5 m × 1.4 mm
FR110-03	1.5 m × 1.9 mm
FR110-04	1.5 m × 2.5 mm
FR110-05	1.5 m × 3.3 mm

No clean type (Low residue flux) ESD SAFE package

Part No.	Description
FR120-00	1.5 m × 0.6 mm
FR120-01	1.5 m × 0.9 mm
FR120-02	1.5 m × 1.4 mm
FR120-03	1.5 m × 1.9 mm
FR120-04	1.5 m × 2.5 mm
FR120-05	1.5 m × 3.3 mm

HAKKO 701 REPAIR SYSTEM ESD SAFE

Repair System Analog

Tip included

Nozzle included



Soldering



Soldering (Option)



Desoldering



Hot Tweezer (Option)



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

Packing List

701	Station, Soldering iron (907), Desoldering gun (809), Filter pipe, Cleaning pin for 1.0 mm diameter nozzle, Cleaning pin for heating element, Cleaning drill for 1.0 mm diameter nozzle, Ceramic paper filter (S; 2 pcs), Ceramic paper filter (L; 4 pcs), Spring filter (3 pcs), Silicone grease, Wrench, Iron holder for soldering iron, Iron holder for desoldering gun, Instruction manual
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Replacement Tips and Nozzles

For information on replacement tips and nozzles, see our website (<http://www.hakko.com>).

Specifications

Model No.	701
Power consumption	150 W
Temperature range	Soldering: 200 to 480°C Desoldering: 380 to 480°C

• Station

Output voltage	AC 24 V
Vacuum generator	Double cylinder type
Vacuum pressure	Max. 80 kPa (600 mmHg)
Suction flow	15 L/min.
Dimensions	190 (W) × 130 (H) × 250 (D) mm
Weight*	5 kg

• Soldering Iron

Power consumption	50 W (24 V)
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. 900M-T-B)
Cord length	1.2 m
Total length*	222 mm (with B tip)
Weight*	44 g (with B tip)

• Desoldering Gun

Power consumption	50 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Ceramic heater
Standard nozzle	ø1.0 mm S type (No. A1003)
Cord length	1.2 m
Dimensions**	135 (W) × 174 (H) mm
Weight**	200 g

* Without cord

** Without cord and hose

HAKKO 702B ESD SAFE REWORK SYSTEM

Rework System Analog

Tip included

Nozzle included



Soldering



Soldering (Option)



Desoldering



Hot Tweezer (Option)



Hot Air



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

Packing List

702B	Station, Soldering iron (907 × 1 pc, 900S × 1 pc), Desoldering gun (809), Handpiece (hot air), Nozzle tray, Filter pipe, Cleaning pin for 1.0 mm diameter nozzle, Cleaning pin for heating element, Cleaning drill for 1.0 mm diameter nozzle, Ceramic paper filter (S; 2 pcs), Ceramic paper filter (L; 4 pcs), Spring filter (3 pcs), Silicone grease, Wrench, Iron holder for soldering iron (2 pcs), Iron holder for desoldering gun, Handpiece holder, FP pick-up with S and L wires, Nozzle for handpiece (hot air; A1124B × 1 pc, A1128B × 1 pc), Power cord, Instruction manual, Troubleshooting guide
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Replacement Tips and Nozzles

For information on replacement tips and nozzles, see our website (<http://www.hakko.com>).

Specifications

Model No.	702B
Power consumption	500 W
Temperature range	Soldering: 200 to 480°C Desoldering: 380 to 480°C SMD Rework: 100 to 420°C (use No. A1126B)

• Station

Output voltage	AC 24 V
Vacuum generator	Double cylinder type
Vacuum pressure	Max. 80 kPa (600 mmHg)
Suction flow	15 L/min.
Air flow	23 L/min. (max.)
Dimensions	360 (W) × 150 (H) × 266 (D) mm
Weight*	10 kg

• Soldering Iron

Power consumption	50 W (24 V) × 2 pcs
Tip to ground resistance	<2 Ω
Tip to ground potential	<2 mV
Heating element	Ceramic heater
Standard tip	Shape-B (No. 900M-T-B), Shape-I (No. 900S-T-I)
Cord length	1.2 m
Total length*	907-ESD: 222 mm (with B tip) 900S-ESD: 215 mm (with B tip)
Weight*	907-ESD: 44 g (with B tip) 900S-ESD: 29 g (with B tip)

• Desoldering Gun

Power consumption	50 W (24 V)
Nozzle to ground resistance	<2 Ω
Nozzle to ground potential	<2 mV
Heating element	Ceramic heater
Standard nozzle	ø1.0 mm S type (No. A1003)
Cord length	1.2 m
Dimensions**	135 (W) × 174 (H) mm
Weight**	200 g

• Handpiece (Hot Air)

Power consumption	250 W
Standard nozzle	No. A1124B and A1128B
Total length*	196 mm
Weight*	120 g

* Without cord

** Without cord and hose

HAJKO FR-803B ESD SAFE SMD REWORK STATION

Hot-Air SMD Rework Station Digital

Nozzle not included



- 3-step temperature profile (preheating, heating, and cooling down) is available.
- Vacuum function makes it possible to pick up workpieces.

Packing List

FR-803B	Station with handpiece, Power cord, Control card, Handpiece holder, Connecting cable, Pad (3 mm, 5 mm, 7.6 mm x 2 pcs each), Instruction manual
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NOTE: This product does not come with a nozzle. When purchasing this product, be sure to order a nozzle suitable for the work to be done.

Specifications

Model No.	FR-803B
Power consumption	310 W (100 V), 370 W (110 V), 440 W (120 V), 590 W (220 V), 650 W (230 V), 700 W (240 V)
Temperature range	100 to 500°C (sensor)

•Station

Power consumption	30 W (100 V), 40 W (110-120 V), 50 W (220-240 V) (stand-by power consumption: 4 W [100-120 V, 220-240 V])
Air flow	5 to 20 L/min. (max.)
Operation mode	Auto or manual
Timer	50 files, 3 steps each
Dimensions*	160 (W) x 145 (H) x 230 (D) mm
Weight*	5 kg

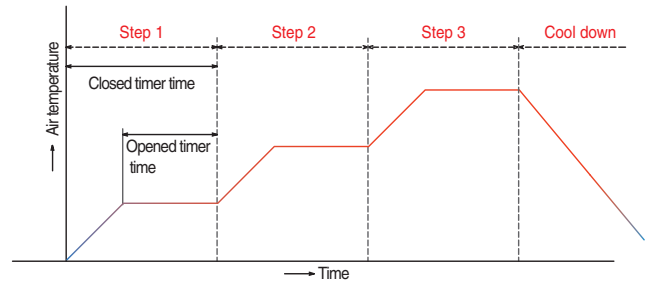
•Handpiece

Power consumption	280 W (100 V), 330 W (110 V), 400 W (120 V), 540 W (220 V), 600 W (230 V), 650 W (240 V)
Total length*	200 mm
Weight*	200 g

* Without cord

Features

Settable 3-step temperature profile



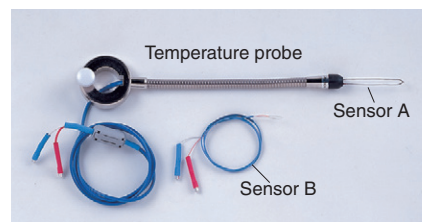
Built-in vacuum pickup



Option

Part No.	Name
C1541	Temperature probe

Controlling the temperatures of the hot air rework system and the workpiece using a temperature probe



Set-up example 1



Set-up example 2



Set-up example 3



Accessories for SMD-BGA Repair System

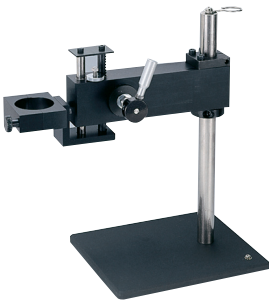
Set-up example; Rework fixture, Omnivise, FR-803B, FR-830, FG-100



- Combination with HAKKO FR-803B allows the SMD and BGA rework equipment to set up at low cost.

Features

REWORK FIXTURE 牌 No.C1392B



- Smooth vertical motion
- The handpiece may be easily installed or removed from the clamp.
- Easy to position

OMNIVISE 牌 No.C1390C (Set of 1 piece)



- The height can be adjusted to 72.5 mm, 78.0 mm, 84.5 mm, 91.0 mm and 97.5 mm.
- The jaws are padded to preclude damage to delicate objects.
- Full rotations of 360° are available without interference.

NOZZLE TRAY 牌 No.C1391B

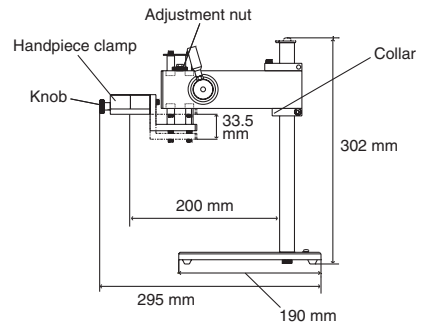


- Holds nozzles in neat rows
- Aids in nozzle installation and removal

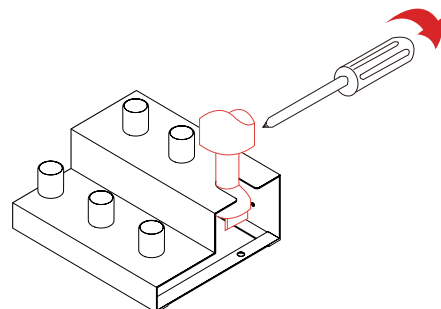
Specifications

Model No.	C1392B	C1390C	C1391B
Dimensions	—	ø57 × 88 mm	305 (W) × 64 (H) × 140 (D) mm
Weight	4.6 kg	1.2 kg (1 pc)	0.87 kg

Dimensional drawing for C1392B

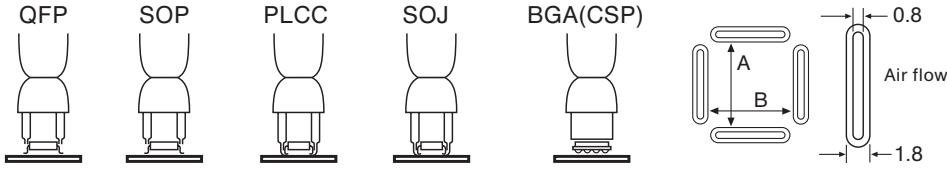


Easy to install and remove the nozzle for C1391B


















Optional Nozzles

Unit: mm














The size in each description indicates the size of the package.










QFP and BQFP

A1125B QFP 10 × 10  A: 10.2 B: 10.2	A1262B QFP 12 × 12  A: 12.2 B: 12.2	A1126B QFP 14 × 14  A: 15.2 B: 15.2	A1128B QFP 14 × 20  A: 15.2 B: 21.2	A1127B QFP 17.5 × 17.5  A: 19.2 B: 19.2
A1261B QFP 20 × 20  A: 20.2 B: 20.2	A1129B QFP 28 × 28  A: 29.7 B: 29.7	A1263B QFP 28 × 40  A: 27.7 B: 39.7	A1265B QFP 32 × 32  A: 32.2 B: 32.2	A1203B QFP 35 × 35  A: 35.2 B: 35.2
A1264B QFP 40 × 40  A: 40.2 B: 40.2	A1215B QFP 42.5 × 42.5  A: 42.5 B: 42.5	A1180B BQFP 17 × 17  A: 18.2 B: 18.2	A1181B BQFP 19 × 19  A: 19.2 B: 19.2	A1182B BQFP 24 × 24  A: 24.2 B: 24.2




SOP and TSOL

A1131* SOP 4.4 × 10  4.8	A1132* SOP 5.6 × 13  5.7	A1133* SOP 7.5 × 15  7.2	A1134* SOP 7.5 × 18  7.2	A1258B SOP 7.6 × 12.7  8.2
A1260B SOP 8.6 × 18  8.7	A1257B SOP 11 × 21  11.7	A1259B SOP 13 × 28  13.5	A1185B TSOL 13 × 10  11.9	A1186B TSOL 18 × 10  11.7 18.2
A1187B TSOL 18.5 × 8  18.5				



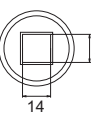


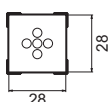
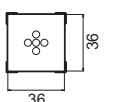
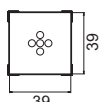
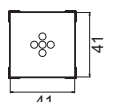
PLCC

A1188B PLCC 9 × 9 (20 pins)  A: 11 B: 11	A1140B PLCC 11.5 × 11.5 (28 pins)  A: 13 B: 13	A1141B PLCC 11.5 × 14 (32 pins)  A: 15 B: 13	A1139B PLCC 12.5 × 7.3 (18 pins)  A: 9 B: 14	A1135B PLCC 17.5 × 17.5 (44 pins)  A: 18.5 B: 18.5
A1136B PLCC 20 × 20 (52 pins)  A: 21 B: 21	A1137B PLCC 25 × 25 (68 pins)  A: 26 B: 26	A1138B PLCC 30 × 30 (84 pins)  A: 31 B: 31	A1189B PLCC 34 × 34 (100 pins)  A: 36.5 B: 36.5	



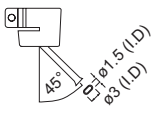

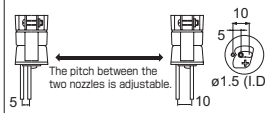
SOJ

A1214B SOJ 10 x 26 	A1183* SOJ 15 x 8 	A1184B SOJ 18 x 8 
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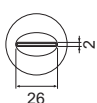
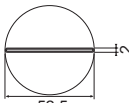
BGA

A1470 BGA 8 x 8 	A1471 BGA 12 x 12 	A1472 BGA 13 x 13 	A1473 BGA 15 x 15 	A1474 BGA 18 x 18 
A1475 BGA 27 x 27 	A1476 BGA 35 x 35 	A1477 BGA 38 x 38 	A1478 BGA 40 x 40 	

Single

A1124B* Single 2.5 	A1130* Single 4.4 	A1142B* Bent single 1.5 x 3 	A1190* Dual single 2.5 x 9.5 	A1325* Dual single ø1.5 x 5 to 10 Adjustable pitch 
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SIP

A1191* SIP 25L 	A1192* SIP 50L 
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* The vacuum function does not operate with these nozzles.
 The vacuum function is not available on the FR-801 and the FR-802.

HAKKO FR-870 PREHEATER ESD SAFE

IR Preheater Digital



- Infrared preheater that provides the optimal heating effect over the whole workpiece surface
- Short heatup time realized by the use of a infrared heater improves work efficiency.
- Non-contact system enables the application of this preheater to doublesided boards.

HAKKO FR-872 PREHEATER ESD SAFE



Large Size IR Preheater Digital



- Large heating area 286 (W) x 350 (D) mm
- 4 independent switch work grids

Mode Selection

Power Mode

Control heater out put from 0% to 100%.

T/C Mode

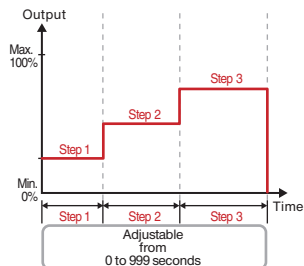
Sense the temperature of the sensor attached to the board and control to maintain the set temperature for the board.



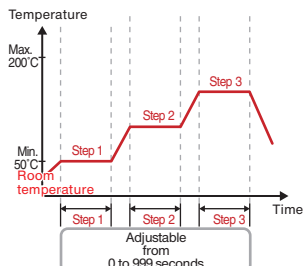
Auto Mode

Auto mode provides three steps (Step 1 to 3) to create an optimal heating profile for the workpiece.

With Power Mode



With T/C Mode



Packing List

FR-870	Unit, Thermocouple, Power cord, Heater lamp, Instruction manual
FR-872	Unit, Thermocouple, Heater, Power cord, Instruction manual

Specifications

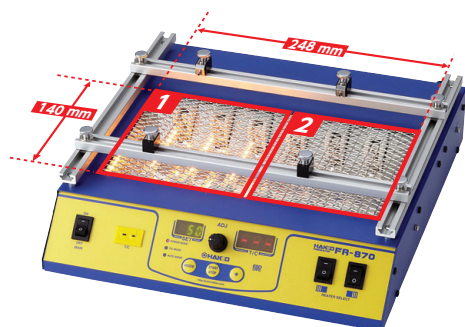
Model No.	FR-870	FR-872
Power consumption	460 W (100 V) 520 W (110 V) 580 W (120 V) 1400 W (220 V) 1500 W (230 V)	1050 W (100 V) 1250 W (110 V) 1440 W (120 V) 1150 W (220 V) 1250 W (230 V)
Operation mode	Power mode, T/C mode Auto power mode, Auto T/C mode	
Setting range	Power mode: 0 to 100% T/C mode: 50 to 200°C Set time: 0 to 999 seconds	
Heating element	Halogen heater: 100 V, 110 V, 120 V Carbon heater: 220 V, 230 V	High efficiency carbon heater
Effective heated area	190 (W) × 80 (D) mm	224 (W) × 266 (D) mm
Heater area dimensions	248 (W) × 140 (D) mm	286 (W) × 350 (D) mm
Heater zone	2	4
Temperature sensor	K-type thermocouple	
Heater lamp lifetime*	2000 hours	2100 hours
Heater control	Power mode: Percentage-based system T/C mode: PID control	
External connections	Start signal input possible	
Dimensions	290 (W) × 100 (H) × 308 (D) mm	AC100 to 120 V: 360 (W) × 97 (H) × 535 (D) mm AC220 to 230 V: 360 (W) × 97 (H) × 524 (D) mm
Weight**	3.4 kg	5.6 kg

* Provided for reference purpose only and is not guaranteed.

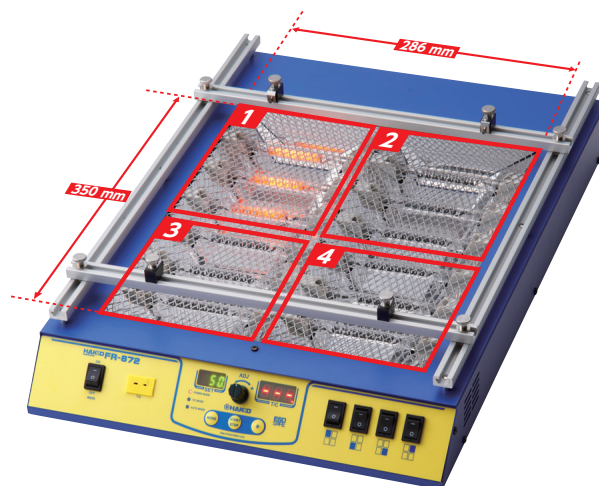
** Without cord

Heating Zone Selectable

FR-870 (2-zone)



FR-872 (4-zone)



HAKKO FR-830 PREHEATER ESD SAFE

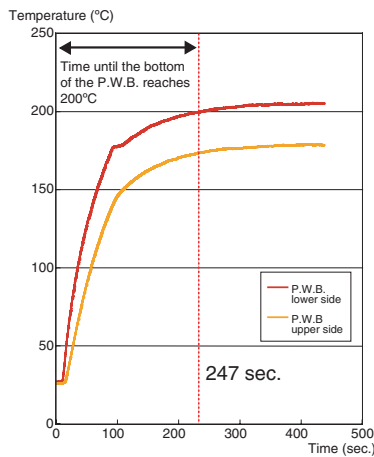
Preheater **Analog**



- Compact pre-heater best suited for heat processing on localized areas
- Featuring quick heatup and less variations in temperature

Features

Preheating in a short time



Test criteria

Measurement method	Temperature measured using sensors mounted on both the top and bottom surfaces of the P.W.B.
Distance between air outlet and P.W.B.	10 mm
Temperature setting	300°C

Set-up example



HAKKO FR-830
HAKKO FR-803B
REWORK FIXTURE
OMNIVISE
HAKKO FG-100

Packing List

FR-830	Unit, Power cord, Instruction manual
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Specifications

Model No.	FR-830
Power consumption	210 W (100 V), 240 W (110 V), 470 W (120 V), 230 W (220 V), 250 W (230 V), 270 W (240 V)
Air flow	0.15 m ³ /min. (fan capability)
Temperature range	150 to 300°C (Above the blow exit)
Dimensions*	140 (W) × 75 (H) × 185 (D) mm
Weight**	0.75 kg

* The height (H) is the distance from the bottom of the feet to the top of the exhaust outlet.
** Without cord

Option

Part No.	Name	Specifications
B3263	Extension pipe	with lid
B2763	Hand switch	-
B1649	Foot switch	-

SMD Rework Station

HAKKO 851 ESD SAFE
SMD REWORK STATION

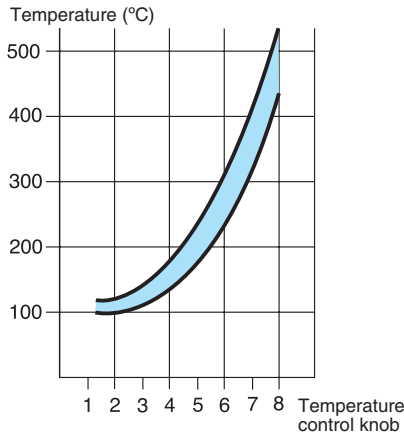
Hot-Air SMD Rework Station Analog

Nozzle included



- Single-nozzle hot air rework system that is perfect for the repair or local heating of small surface-mounted components
- Slim grip is ideal for work in narrow spaces.

Temperature Distribution Chart



Test criteria

Measured at a point	2 mm from the nozzle
Room temperature	20 °C
Nozzle used	A1066 ø2.0 mm

Replacement Nozzles

Part No.	Name	Specifications
A1065	Nozzle	ø1.5 mm
A1066	Nozzle	ø2.0 mm
A1067	Nozzle	ø3.0 mm
A1147	Nozzle	ø1.0 mm

Packing List

851	Station with handpiece, Handpiece holder, Nozzle holder, Instruction manual
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Specifications

Model No.	851
Power consumption	85 W
Hot air temperature	100 to 540°C

• Station

Power consumption	5 W
Air flow	6 L/min. (max.)
Dimensions*	167 (W) × 101 (H) × 182 (D) mm
Weight*	1.8 kg

• Handpiece

Power consumption	80 W
Standard nozzle	ø2.0 mm (No. A1066)
Total length**	217 mm
Weight**	180 g

* Without cord and handpiece

** Without cord