



®

# HAKKO

*Quality tools for  
the electronics industry.*



# HAKKO 942 ESD SAFE

SOLDERING STATION



- Powerful thermal recovery.
- Using "Control Card" can lock the temperature settings.
- The low temperature alarm function is provided.
- Quick and easy tip temperature-offsetting by the digital offset function.
- A slender handle and a short length to the tip end make soldering work easier.
- Quick and easy tip replacement.
- ESD safe by design.
- Auto power shut off.

## Specifications

Model No.	942
Power Consumption	75W

### Station

Output Voltage	AC 24V
Temperature Range	200-450°C
Outer Dimensions (w/o cord)	100(W) × 106(H) × 188(D)mm
Weight (w/o cord)	2.5kg

### Iron

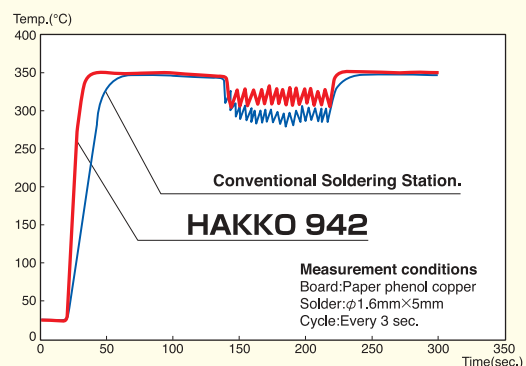
Model No.	912
Power Consumption	AC 24V/70W
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV (Typ. 0.6mV)
Total Length (w/o cord)	172mm (with T2-24D tip)
Weight (w/o cord)	30g (with T2-24D tip)

## Packing List

Name	Contents	Accessories
HAKKO 942	Station Iron Power Cord	Tip Tray Control Card Heat Resistant Pad



## Heat Recovery Graph



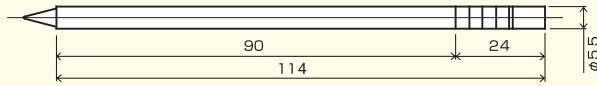
※ Tips are optional parts.

※ The HAKKO 942 is not available for sale or use in the USA.

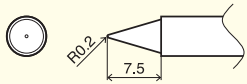


**Replacement Tips**

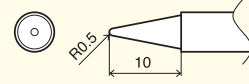
Unit : mm



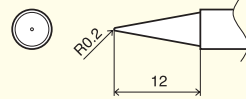
**T2-B Shape-B Conical**



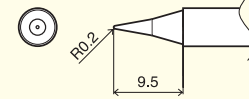
**T2-B Shape-2B Conical**



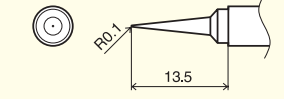
**T2-LB Shape-LB Long Conical**



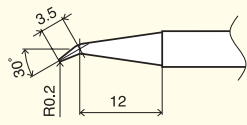
**T2-I Shape-I Sharp Conical**



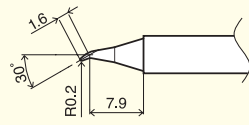
**T2-LI Shape-LI Long Sharp Conical**



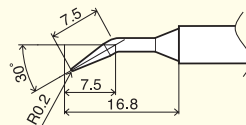
**T2-02J Shape-0.2RSSB Bent**



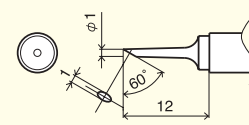
**T2-02JS Shape-0.2RSSB Bent**



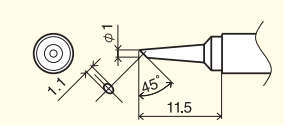
**T2-02JL Shape-0.2RLB Bent**



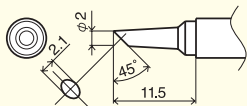
**T2-1C Shape-1C Bevel**



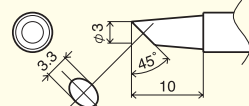
**T2-1BC Shape-1BC Bevel  
T2-1BCF ※1**



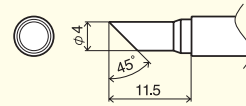
**T2-2BC Shape-2BC Bevel  
T2-2BCF ※1**



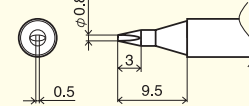
**T2-3BC Shape-3BC Bevel  
T2-3BCF ※1**



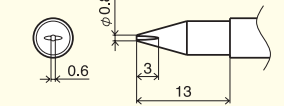
**T2-4C Shape-4C Bevel  
T2-4CF ※1**



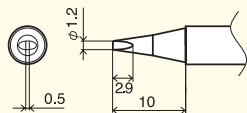
**T2-08D Shape-0.8D Chisel**



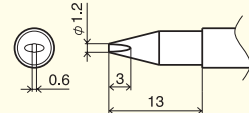
**T2-08LD Shape-0.8LD Long Chisel**



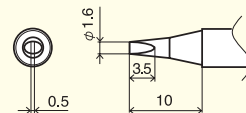
**T2-12D Shape-1.2D Chisel**



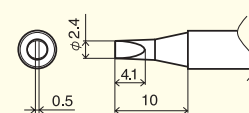
**T2-12LD Shape-1.2LD Long Chisel**



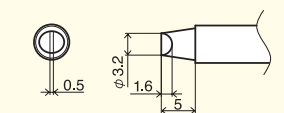
**T2-16D Shape-1.6D Chisel**



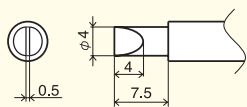
**T2-24D Shape-2.4D Chisel**



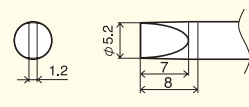
**T2-32D Shape-3.2D Chisel**



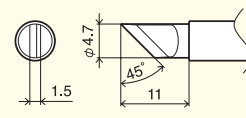
**T2-4D Shape-4D Chisel**



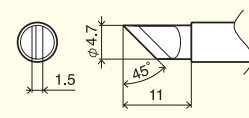
**T2-52D Shape-5.2D Chisel**



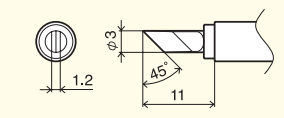
**T2-K Shape-K Knife**



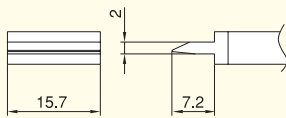
**T2-KL Shape-KL Knife**



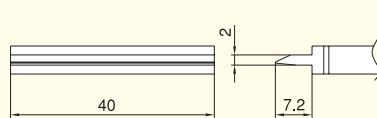
**T2-KU Shape-KU Knife**



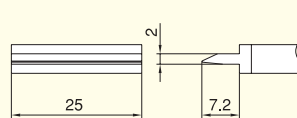
**T2-1401 Shape-Spatula 15.7 ※2**



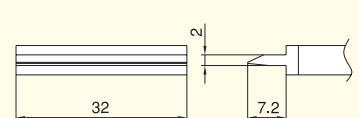
**T2-1402 Shape-Spatula 40 ※2**



**T2-1403 Shape-Spatula 25 ※2**



**T2-1404 Shape-Spatula 32 ※2**



※1 These tips are tinned on the soldering surface only.  
 ※2 Maximum Temperature : 420°C

# HAKKO 936 ESD SAFE

SOLDERING STATION

- Compact unit takes up little space on the workbench.
- Thinner grip for easier use.
- Lock screw prevents inadvertent changes in the temperature setting.
- The unit is also available in regular style other than ESD safe.



Stackable design puts two units in the bench space of one unit.

# HAKKO 937 ESD SAFE

SOLDERING STATION

- Digital indicator ensures accurate temperature setting by all personnel.
- Once set, temperature cannot be changed without inserting the key card, providing easy temperature management.
- Compact unit takes up little space on the workbench.
- Thinner grip for easier use.
- ESD safe by design.



### Specifications

Model No.	936	937
Power Consumption	60W	

### Station

Output Voltage	AC 24V
Temperature Range	200-480°C
Outer Dimensions (w/o cord)	120(W) × 93(H) × 170(D)mm
Weight (w/o cord)	1.3kg

### Iron

Model No.	900(S)	907	908
Type	S	M	L
Style	Regular	ESD	Regular
Power Consumption	AC 24V/50W		
Standard Tip	900S-T-I	900M-T-B	900L-T-B
Tip to Ground Resistance	< 2Ω		
Tip to Ground Potential	< 2mV(Typ. 0.6mV)		
Heating Element	Ceramic Heater		
Total Length (w/o cord)	176mm	190mm	200mm
Weight (w/o cord)	25g	44g	54g

### Packing List

Station	Iron	Iron Holder

When ordering HAKKO 936 or HAKKO 937, please specify the style of Iron (S, M or L).

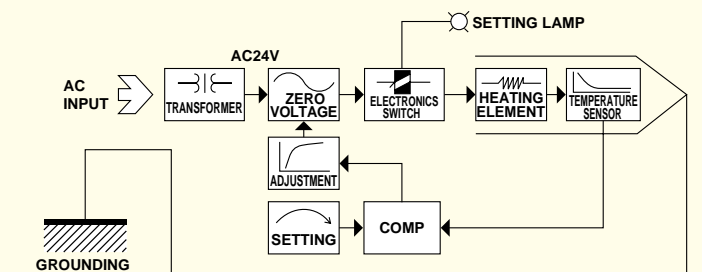
### Replacement Tips

Please refer to page 11.

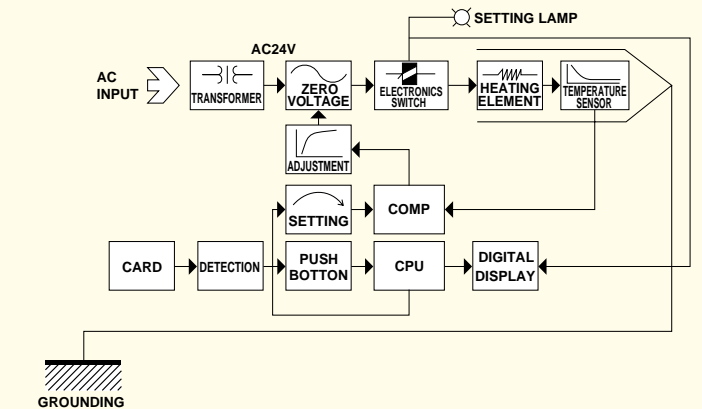
### Optional Parts

Please refer to page 9.

### Electronic Control System HAKKO 936



### Electronic Control System HAKKO 937



# HAKKO 928 ESD SAFE

SOLDERING STATION



- Two soldering irons of different thermal capacities may be used simultaneously.
- Choose the exact irons you need for your soldering applications.
- Cost effective and practical in production, using up less available space.
- Super quick heat-up and faster thermal recovery, permitting high quality soldering at lower temperature.
- Two separate controls, independent of each other.

## Specifications

Model No.	928
Power Consumption	120W

## Station

Output Voltage	AC 24V
Temperature Range	200-480°C
Outer Dimensions (w/o cord)	135(W) × 88(H) × 190(D)mm
Weight (w/o cord)	2.7kg

## Iron

Model No.	900S-ESD	900M-ESD	900L-ESD
Power Consumption	AC 24V/50W		
Standard Tip	900S-T-I	900M-T-B	900L-T-B
Tip to Ground Resistance	< 2Ω		
Tip to Ground Potential	< 2mV(Typ. 0.6mV)		
Heating Element	Ceramic Heater		
Total Length (w/o cord)	176mm	190mm	200mm
Weight (w/o cord)	25g	45g	55g

## Replacement Tips

Please refer to page 11.

## Optional Parts

Please refer to page 9.

## Packing List

Name	Contents
HAKKO 928 (LL) E.S.D.	Station E.S.D. Iron (900L-ESD + 900L-ESD) Iron Holder (631-03)
HAKKO 928 (LM) E.S.D.	Station E.S.D. Iron (900L-ESD + 900M-ESD) Iron Holder (631-03)
HAKKO 928 (LS) E.S.D.	Station E.S.D. Iron (900L-ESD + 900S-ESD) Iron Holder (631-04)
HAKKO 928 (MM) E.S.D.	Station E.S.D. Iron (900M-ESD + 900M-ESD) Iron Holder (631-03)
HAKKO 928 (MS) E.S.D.	Station E.S.D. Iron (900M-ESD + 900S-ESD) Iron Holder (631-04)
HAKKO 928 (SS) E.S.D.	Station E.S.D. Iron (900S-ESD + 900S-ESD) Iron Holder (631-05)

# HAKKO 950 ESD SAFE

SMD HOT TWEEZER



- Available for your HAKKO 936,937,701,702B,928 stations.
- Direct heating-less influence upon surrounding components on crowded boards.
- Easy removes SMD chips and flat pack's up to 25mm.
- The collet allows easy replacement and alignment of the tips.



Operation



Easy replacement of tip



Easy alignment of tip

### Specifications

Output Voltage	AC 24V
Power Consumption	50W
Temperature Range	200-400°C
Standard Tip	A1378(2.0mm)
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV(Typ.0.6mV)
Heating Element	Ceramic Heater
Total Length (w/o cord)	186mm
Weight (w/o cord)	93g

### Packing List

Name	Contents	Accessories
HAKKO 950	SMD Hot Tweezers	Heat Resistant Pad .....1 Tip Alignment Tool .....1

### Optional Parts

Part No.	Name
C1313	Iron Holder(with Cleaning Sponge)
A1386	Cleaning Sponge

### Replacement Parts

Unit : mm

	A(a)	T	H	Part No.	Name	Size A(a)×T(Thickness)×H(Height)	
CHIP	1.0	1.0	13.0	A1379	Tip/Chip 1L		
	2.0	1.0	13.0	A1378	Tip/Chip 2L		
		1.5(0.5)	1.0	13.0	A1388	Tip/Chip 0.5C	
SOP			R0.25	18.5	A1389	Tip/Chip 0.5I	
	4.0	1.0	8.0	A1390	Tip/SOP 4L		
	6.0	1.0	8.0	A1391	Tip/SOP 6L		
	8.0	1.0	8.0	A1380	Tip/SOP 8L		
	10.0	1.0	8.0	A1381	Tip/SOP 10L		
	13.0	1.0	8.0	A1382	Tip/SOP 13L		
	15.0	1.0	8.0	A1392	Tip/SOP 15L		
	18.0	1.0	8.0	A1383	Tip/SOP 18L		
	20.0	1.0	8.0	A1384	Tip/SOP 20L		
25.0	1.0	8.0	A1385	Tip/SOP 25L			

### Recommended Iron Holder

No. C1313





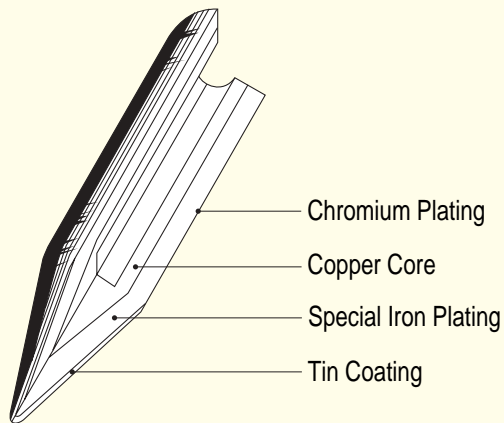
# Irons for Soldering Stations

3 Types of iron available: for HAKKO 936, HAKKO 937 Soldering Stations

Type	Model No	Recovery Graph*	
Small For micro soldering	<b>900S</b> <b>900S-ESD</b>	<p>(with 900S-T-I Tip.)</p> <p>A: Room Temperature 25°C(77°F) B: Time for Heat-Up C: Temperature Drop D: Time for Operation E: Time for Thermal Recovery</p>	<p><b>ESD SAFE</b></p>
Medium Standard	<b>907</b> <b>907-ESD</b>	<p>(with 900M-T-B Tip.)</p>	<p><b>ESD SAFE</b></p>
Large For heavy duty soldering	<b>908</b> <b>908-ESD</b>	<p>(with 900L-T-B Tip.)</p>	<p><b>ESD SAFE</b></p>

\*Test criteria Board : Paper phenol copper. Solder :  $\phi 1.6 \times 5 \text{mm}$ . Cycle : Every 3 sec.

## HAKKO SOLDERING TIP



- 'HAKKO' soldering iron tips are shaped from a copper bar, then, coated with protective iron plating.
- Though the coating is thick for improved durability, it has good heat conductivity for more efficient thermal recovery.

Basic Style of 'HAKKO' Soldering Iron Tips			
SHAPE 'A'	920-T-A		Pyramid Type
SHAPE 'B'	900M-T-B 918-T-B 371-T-1B		Conical Type
SHAPE 'C'	900M-T-1C 918-T-3C 371-T-1C		Bevel Type
SHAPE 'D'	900M-T-1.6D 918-T-D 371-T-1D		Chisel Type

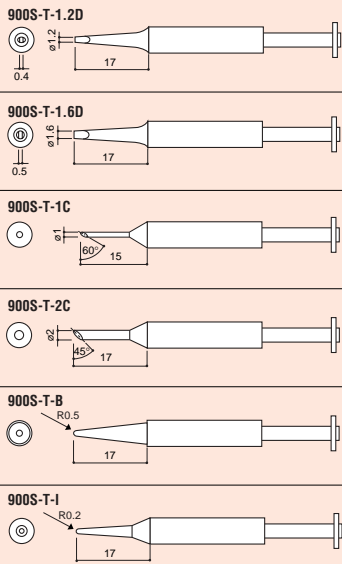
\*Other tip shapes are also available.

### ⚠ CAUTION

When seeking tip replacements, select only 'HAKKO' soldering iron tips that are intended for your particular model of soldering iron. If an incompatible tip or a tip made by another manufacturer is used, the original performance of the soldering iron may not be obtained. Furthermore, the heater unit may be overloaded resulting in failure.

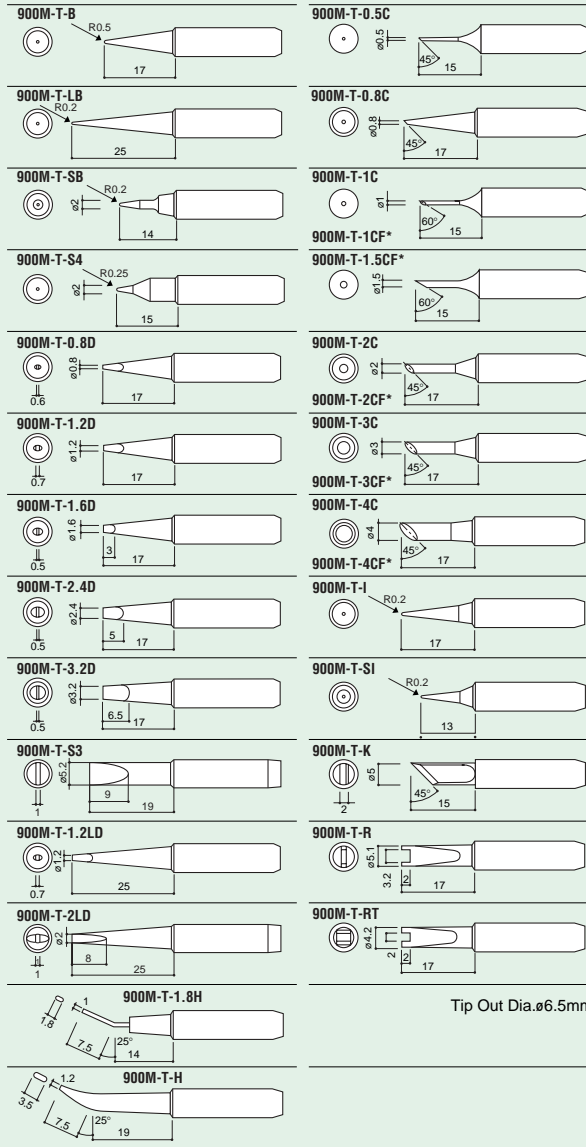
**Replacement Tips**

**Small**  
For 900S, 900S-ESD



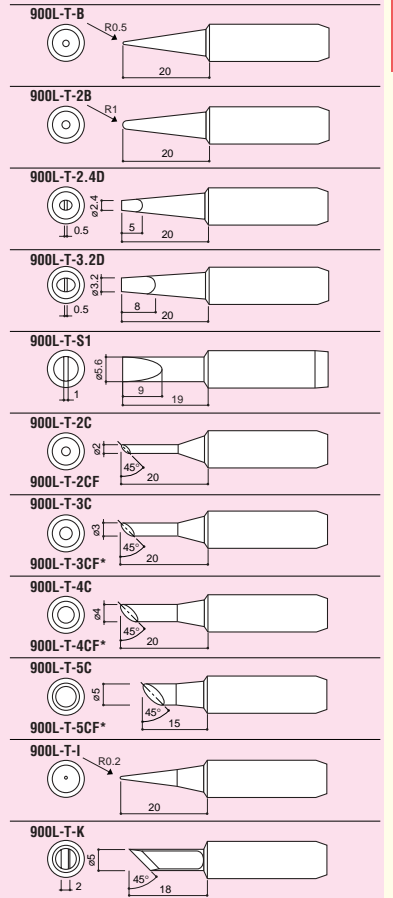
Tip Out Dia.  $\phi$ 5.8mm

**Medium**  
For 900M, 900M-ESD, 907, 907-ESD



Tip Out Dia.  $\phi$ 6.5mm

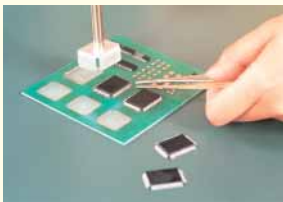
**Large**  
For 900L, 900L-ESD, 908, 908-ESD



Tip Out Dia.  $\phi$ 8.5mm

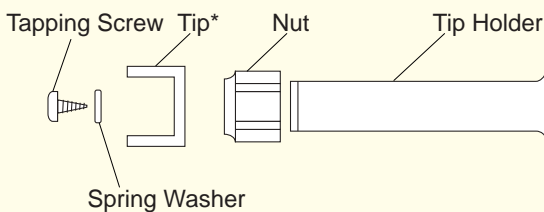
\*These tips are tinned on the soldering surface only.

**For SMD Desoldering**



907	907 ESD	900M	900M ESD
+			
Tip Holder(No.900M-1000)			
+			
Tip			

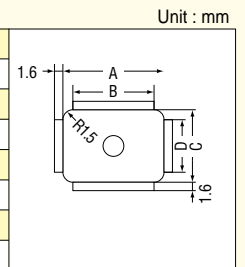
**No.900M-1000**



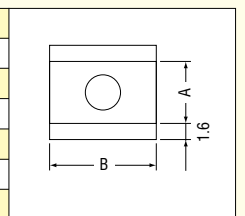
\*Tip is not included.

**Optional Tips**

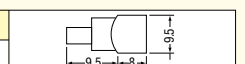
Part No.	Tip Size			
	A	B	C	D
924-T-1002	12.5	9.5	12.5	9.5
924-T-1003	15.5	12.5	15.5	12.5
924-T-1004	16.3	13.3	16.3	13.3
924-T-1005	17.0	14.0	17.0	14.0
924-T-1006	23.0	20.0	17.0	14.0
924-T-1007	20.0	17.0	20.0	17.0



Part No.	Tip Size	
	A	B
924-T-1010	6.0	5.0
924-T-1011	6.0	10.0
924-T-1012	7.0	12.5
924-T-1013	9.0	15.2
924-T-1014	9.0	18.0



Part No.	Type
924-T-1020	Spatula 9.5





# HAKKO 951·952 ESD SAFE SOLDERING GUN



- Available for your Hakko 701, 702B, 928, 936, or 937.
- ESD safe by design.
- Compact design and light weight.
- Easy positioning for the solder feeding.
- A variety of tip type.

## Specifications

Model No.	951	952
Type	M	L
Power Consumption	AC 24V/50W	
Standard Tip	900M-T-S10	900L-T-B
Temperature Range	200-480°C	
Tip to Ground Resistance	< 2Ω	
Tip to Ground Potential	< 2mV (Typ. 0.6mV)	
Heating Element	Ceramic Heater	
Standard Guide Nozzle	ø1.0 (B2654)	
Usable Solder Dia.	ø0.6, 0.8, 1.0, 1.2, 1.6	
Outer Dimensions	170(W) x 180(H)mm	
Weight (w/o cord)	177g	187g

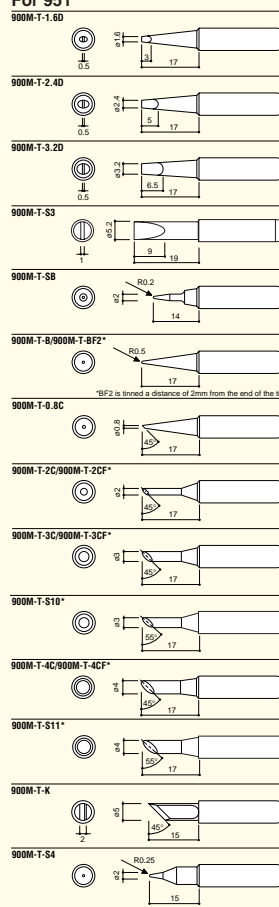
## Optional Parts

Part No.	Name/Description
B2652	Guide Nozzle for ø 0.6mm/ESD
B2653	Guide Nozzle for ø 0.8mm/ESD
B2654	Guide Nozzle for ø 1.0mm/ESD
B2655	Guide Nozzle for ø 1.2mm/ESD
B2656	Guide Nozzle for ø 1.6mm/ESD
A1321	Heating Element
C1437	Iron Holder

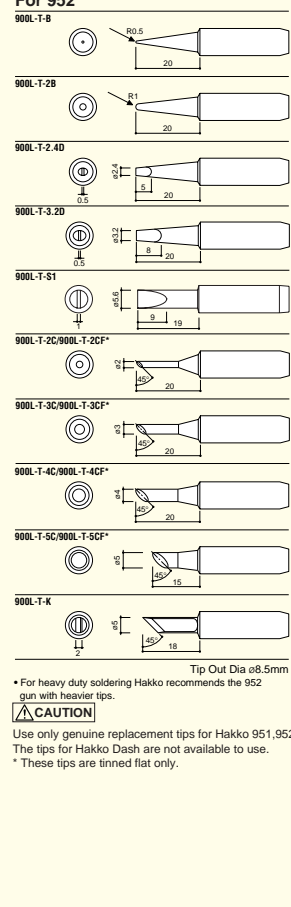
## Replacement Tips

Unit : mm

### Medium For 951



### Large For 952





- Only one-third start-up time of conventional soldering irons with ceramic heaters (based on Hakko tests).
- Can be used to solder places on multi-layer boards where heat loss is great.
- Excellent conduction of heat from the heater increases heating efficiency, shortens start-up time, and minimizes temperature fluctuations during soldering.
- Faster sensor response makes the supply of heat uniform and enables more accurate control over tip temperature.
- High quality, uniform soldering is possible even with fine soldering iron tips.

### Specifications

Model No.	931
Power Consumption	100W

### Station

Output Voltage	AC 24V
Temperature Range	200-450°C
Outer Dimensions	135(W) × 95(H) × 190(D)mm
Weight (w/o cord)	2.7kg

### Iron

Model No.	902
Power Consumption	AC 24V/90W
Standard Tip	A1080(2.4D)
Tip to Ground Resistance	< 2.0Ω
Tip to Ground Potential	< 2mV(Typ. 0.6mV)
Heating Element	Integrated Heater
Total Length (w/o cord)	180mm
Weight (w/o cord)	45g

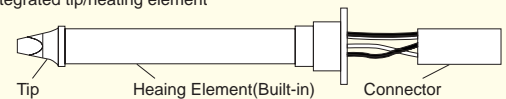
### Packing List

Name	Contents
HAKKO 931	Station Iron(C1051) Iron Holder(631-01)

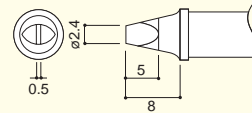
### Replacement Tips

Unit : mm

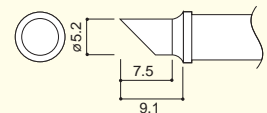
The integrated tip/heating element



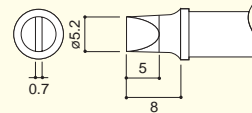
A1080 / Shape-2.4D



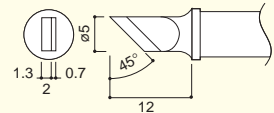
A1162 / Shape-5C



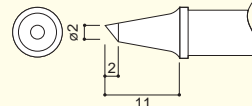
A1081 / Shape-5.2D



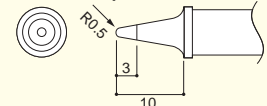
A1163 / Shape-K



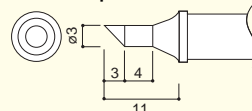
A1160 / Shape-2C



A1173 / Shape-B



A1161 / Shape-3C



# HAKKO 933·934

SOLDERING IRON



- Simple and quick temperature setting by inserting the appropriate temperature button into the handle.
- Easy temperature management—preset temperature can be seen at a glance.
- More efficient use of work space.

## Specifications

Model No.	933	934
Power Consumption	51W	
Standard Tip	900M-T-B	900L-T-B
Temperature	300 · 330 · 360 · 390 · 420 · 450 · 480°C	
Tip to Ground Resistance	< 2Ω	
Tip to Ground Potential	< 2mV (Typ. 0.6mV)	
Heating Element	Ceramic Heater	
Total Length	200mm	210mm
Weight (w/o cord)	55g	65g

## Replacement Tips

Please refer to page 11.

- Tips for HAKKO 933 = Tips for M-Type Iron
- Tips for HAKKO 934 = Tips for L-Type Iron

## Optional Parts

Part No.	Name/Description
B1766	Temp. Setting Button 300°C
B1767	Temp. Setting Button 330°C
B1768	Temp. Setting Button 360°C
B1769	Temp. Setting Button 390°C
B1770	Temp. Setting Button 420°C
B1771	Temp. Setting Button 450°C
B1772	Temp. Setting Button 480°C

## Packing List

Iron	Temperature Setting Button		
	360°C	390°C	420°C

\*390°C button is originally set into the iron.  
Other setting buttons are available as optional parts.

## Recommended Iron Holders

No. 606



No. 633-01



No. 633-02



## Temp. Setting Button







- Begin soldering in only 10 seconds!
- Greater thermal capacity and rapid transmission to the tip means faster thermal recovery.
- The temperature control sensor is built into the heating element for faster, more stable temperature control.
- The highly insulated ceramic heater never overheats. An insulation factor of over 100MΩ can be maintained even during actual use.
- The compact, lightweight design with high cooling efficiency at the handle permits fatigue-free soldering over long periods for maximum work efficiency.

### Specifications

Model No.	918	920	921	922
Power Consumption	55W			
Standard Tip	918-T-B	920-T-SB	920-T-B	
Temperature	420°C	300°C	370°C	420°C
Heating Element	Ceramic Heater			
Insulation Resistance	100MΩ			
Total Length	220mm	210mm		
Weight (w/o cord)	70g	50g		

### Recommended Iron Holders

No. 606



No. 633-01



No. 633-02

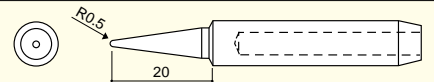


### Replacement Tips

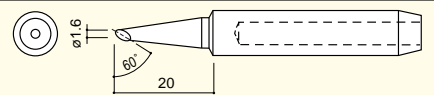
For 918

Unit : mm

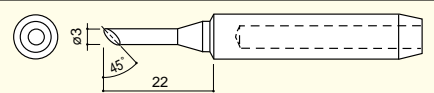
918-T-B



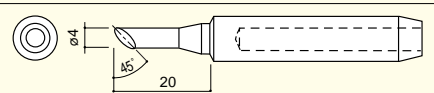
918-T-BC



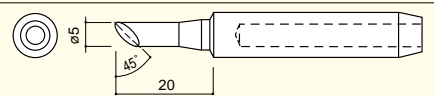
918-T-3C  
918-T-3CF\*



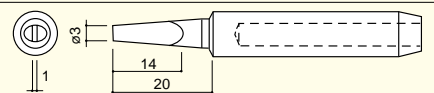
918-T-4C  
918-T-4CF\*



918-T-5C  
918-T-5CF\*



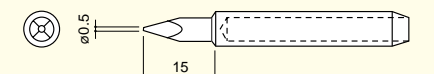
918-T-3D



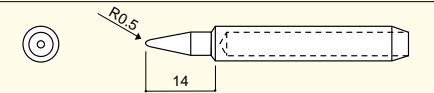
For 920, 921, 922

Unit : mm

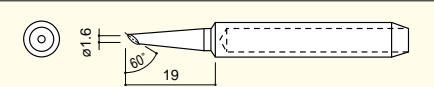
920-T-A



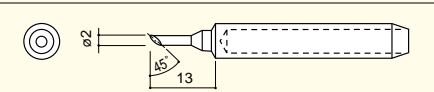
920-T-B



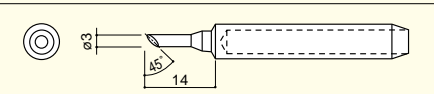
920-T-BC



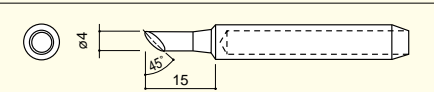
920-T-2C  
920-T-2CF\*



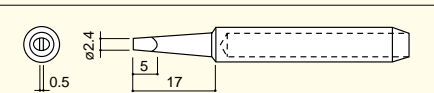
920-T-3C  
920-T-3CF\*



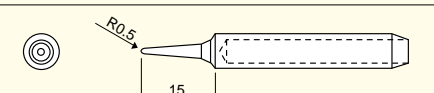
920-T-4C  
920-T-4CF\*



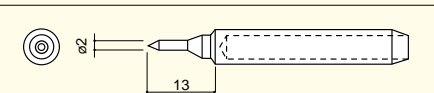
920-T-2.4D



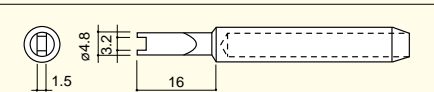
920-T-I



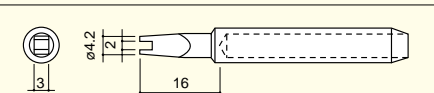
920-T-SB



920-T-R



920-T-RT



\*These tips are tinned on the soldering surface only.



- Compact, lightweight design with a slender handle for a more comfortable grip.
- Rod-type ceramic heater brings high insulation, and reduces the handle-to-tip distance for faster soldering with a minimum of movement.
- Special alloy heating element is printed in the alumina ceramic insulating layer and then sintered to the ceramic main body, thus completely sealing the heating element off from air. This protects the heating element from oxidation, and ensures years of trouble-free use.

### Specifications

Model No.	N452	N453	N454
Power Consumption	15W	20W	25W
Standard Tip	N452-T-B		N454-T-B
Heating Element	Ceramic Heater		
Insulation Resistance	200MΩ	100MΩ	
Total Length	185mm		192mm
Weight (w/o cord)	47g		57g

### Recommended Iron Holders

No. 602



No. 603



No. 606



No. 633-01



No. 633-02

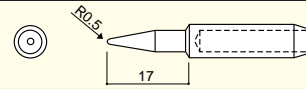


### Replacement Tips

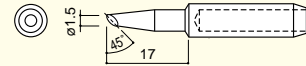
For N452, N453

Unit : mm

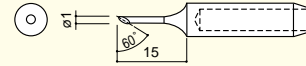
N452-T-B



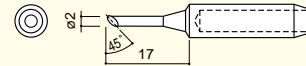
N452-T-C



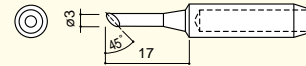
N452-T-1C  
N452-T-1CF\*



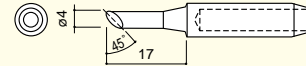
N452-T-2C  
N452-T-2CF\*



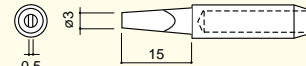
N452-T-3C  
N452-T-3CF\*



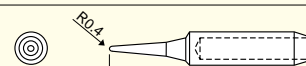
N452-T-4C  
N452-T-4CF\*



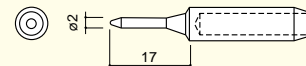
N452-T-D



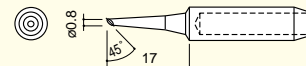
N452-T-I



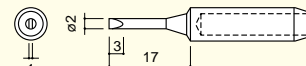
N452-T-SB



N452-T-SC



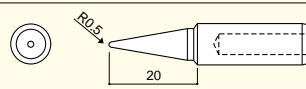
N452-T-SD



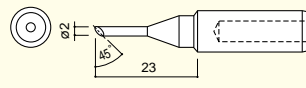
For N454

Unit : mm

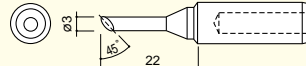
N454-T-B



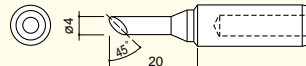
N454-T-2C  
N454-T-2CF\*



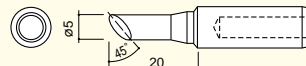
N454-T-3C  
N454-T-3CF\*



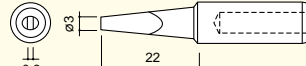
N454-T-4C  
N454-T-4CF\*



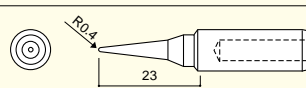
N454-T-5C  
N454-T-5CF\*



N454-T-D



N454-T-I



\*These tips are tinned on the soldering surface only.

# HAKKO 455·456

SOLDERING IRON



- Both the HAKKO 455·456 incorporate a ceramic heating element, which provides a longer service life than conventional nichrome iron element.
- Alloy-coated iron tips ensure long-lasting protection from corrosion.
- The HAKKO 455 is perfect for soldering tuners, inverters and similar components.
- The HAKKO 456 is ideal for soldering chassis, dynamos, large harnesses, transformers and other parts which require a large amount of soldering.

## Specifications

Model No.	455	456
Power Consumption	40W	60W
Standard Tip	A1047(B)	A1023(2B)
Heating Element	Ceramic Heater	
Total Length	215mm	250mm
Weight (w/o cord)	100g	150g

## Recommended Iron Holders

No. 633-01



No. 633-02

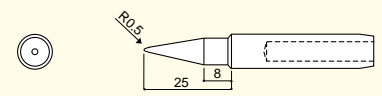


## Replacement Tips

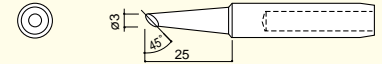
For 455

Unit : mm

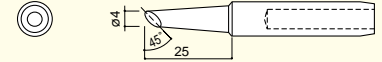
A1047 / Shape-B



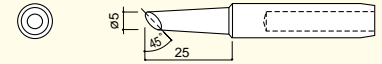
A1048 / Shape-3C



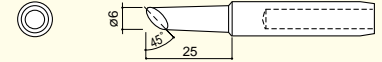
A1049 / Shape-4C



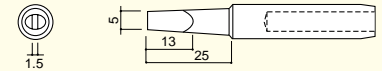
A1050 / Shape-5C



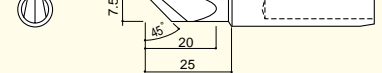
A1051 / Shape-6C



A1052 / Shape-5D



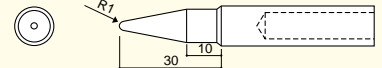
A1053 / Shape-K



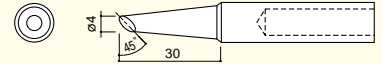
For 456

Unit : mm

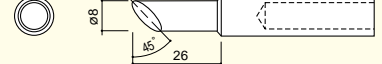
A1023 / Shape-2B



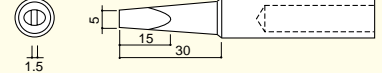
A1024 / Shape-4C



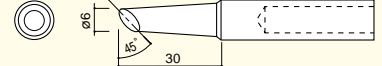
A1025 / Shape-8C



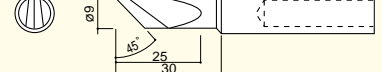
A1026 / Shape-5D



A1031 / Shape-6C



A1032 / Shape-K





# HAKKO PRESTO

SOLDERING IRON



- The HAKKO PRESTO features two operating wattages-20W and 130W, which can be switched by simply pressing a button according to the component size you want to solder.
- The HAKKO PRESTO is available in both pen and gun types so you can select the type that best matches your needs.
- A Safety cap is available for 984 and 985. You can put in a toolbox immediately after finishing soldering work.

## Specifications

	Pen Type	Gun Type	Pen Type	Gun Type
Model No.	980	981	984	985
Safety Cap	—	○	—	○
Power Consumption	20W/130W			
Standard Tip	980-T-B			
Heating Element	Ceramic Heater			
Insulation Resistance	Over 100MΩ(20W)			
Total Length	205mm	160mm	205mm	160mm
Weight (w/o cord)	48g	92g	56g	100g

## Recommended Iron Holders

No. 606



No. 633-01



No. 633-02

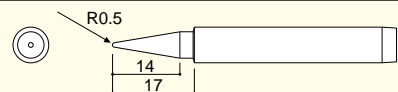


## Replacement Tips

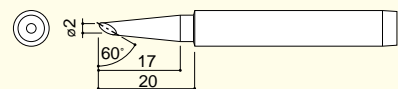
For 980, 981, 984, 985

Unit : mm

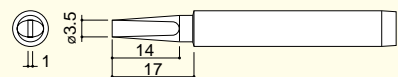
980-T-B



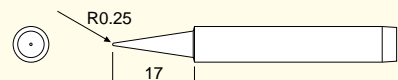
980-T-BC



980-T-D



980-T-BI





- Ideal for use in a variety of soldering works like hobbies, repairing electric household appliances.
- 20W-40W ...  
Circuit Boards, small electrical parts, etc.
- 60W ...  
Connectors, heavier wiring connections, etc.

### Specifications

Model No.	500	501	502	503
Power Consumption	20W	30W	40W	60W
Standard Tip	BB3	BB4		BB6
Heating Element	Nichrome Heater			
Total Length	197mm	205mm		238mm
Weight (w/o cord)	40g			70g

### Replacement Tips

Part No.	Name/Description
BB3	Black Tip ø3mm
BB4	Black Tip ø4mm
BB6	Black Tip ø6mm

### Recommended Iron Holders

No. 602



No. 603



# HAKKO MG

SOLDERING GUN



- Trigger operation for easy one-hand soldering.
- Quick solder wire replacement with a simple upward push of the trigger.
- Solder feed control for precise adjustment of the amount of solder wire feed to the tip. <Min: 3mm Max: 8mm>
- Simple heating element replacement procedure requires no special skills.



## Specifications

Model No.	582	583	585	587	589	592
Power Consumption	30W	40W	60W	80W	100W	150W
Standard Tip	582-T-4	585-T-6	587-T-8	592-T-10		
Packed in Guide Nozzle	582-N-1.6 & 582-N-2.3					
Heating Element	Nichrome Heater					
Outer Dimensions (W) × (H)	197 × 149mm	213 × 149mm	227 × 149mm	241 × 149mm		
Weight (w/o cord)	266g	290g	318g	322g	380g	

## Replacement Tips

Part No.	Name/Description
582-T-4	Tip ø4mm
585-T-6	Tip ø6mm
587-T-8	Tip ø8mm
592-T-10	Tip ø10mm

## Optional Parts

Part No.	Name/Description
582-N-0.8	Guide Nozzle for ø0.8mm
582-N-1.0	Guide Nozzle for ø1.0mm
582-N-1.2	Guide Nozzle for ø1.2mm
582-N-1.6	Guide Nozzle for ø1.6mm
582-N-2.3	Guide Nozzle for ø2.0-2.3mm
582-022	Spool Holder<Core Size 29mm×ø19mm>
607	Iron Holder

## Recommended Iron Holder

No. 607



## Spool Holder

No. 582-022





# HAKKO SF

SELF FEEDER **370**

<SF>SOLDERING GUN **371 372**

<SF>SOLDERING IRON **376**



- The feeder unit incorporates a torque limiter which prevents the motor from overloading should something go wrong with the solder feeding operation.
- Permits to select 'Manual' or 'Auto' feeding by mode switch.

### Specifications

Model No.	<b>370</b>	
Frequency	50Hz	60Hz
Input Voltage	AC 100-120V	
Power Consumption	48W	
Motor Output	8W	
Solder Feed Q'ty	1.6mm-16mm	2.0mm-20mm
Usable Solder Dia.	0.6mm, 0.8mm, 1.0mm, 1.2mm, 1.6mm	
Usable Solder	1kg roll bobbin (Max.)	
Standard Setting	for 1.0mm dia. solder use	
Outer Dimensions	135(W) × 125(H) × 280(D)mm	
Weight (w/o cord)	2.6kg	

### Iron

	Gun Type		Pen Type
Model No.	371	372	376
Heating Element	40W Ceramic Heater	60W Ceramic Heater	40W Ceramic Heater
Standard Tip	371-T-B	372-T-B	900M-T-B
Temperature Range	300-420°C	330-450°C	300-420°C
Usable Solder Dia.	0.6mm, 0.8mm, 1.0mm, 1.2mm		0.6mm, 0.8mm, 1.0mm, 1.2mm, 1.6mm
Standard Setting	for 1.0mm dia. solder use		
Outer Dimensions (Total Length)	146(W) × 132(H)mm	161(W) × 132(H)mm	196mm
Weight (w/o cord)	180g	190g	80g

\*When ordering Nos. 371,372 or 376, No.607 iron holder is included.

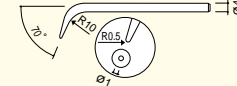
### Replacement Tips

For 371

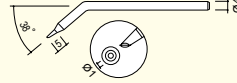
371-T-B



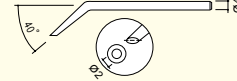
371-T-1B



371-T-1C



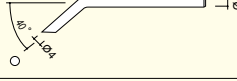
371-T-2C



371-T-3C



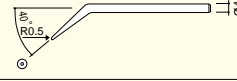
371-T-4C



371-T-1D



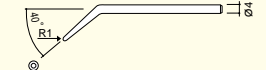
371-T-L1B



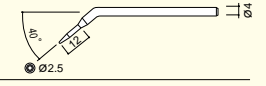
For 376

Unit : mm

371-T-L2B

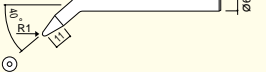


371-T-SB

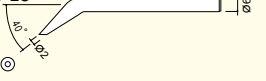


For 372

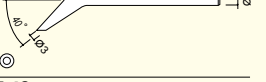
372-T-B



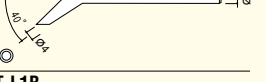
372-T-2C



372-T-3C



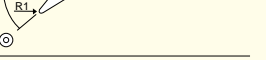
372-T-4C



372-T-L1B



372-T-L2B



\*Please refer to page 11.

\*900M-T series (except LB,1.2LD,H,1.8H)are available for 376.

# HAKKO 373 ESD SAFE SELF FEEDER



- Can be used with a wide range of Hakko brand soldering irons, permitting selection of the most appropriate iron for the task at hand. If you already own one of these compatible Hakko soldering irons, you won't need to buy another.
- ESD design helps protect electrically sensitive parts.
- Can be connected to simple soldering equipment by using a switching jack.
- Adjustable solder return function reduces waste, permits fully automatic soldering.

### Specifications

Model No.	373
Power Consumption	6W
Motor Output	DC 24V, 3.2W
Solder Feed Time	0~7 sec. (Auto Mode)
Solder Feed Speed	4.5~26mm/sec.
Solder Feed Q'ty	0~182mm (Auto Mode)
Solder Return Q'ty	0~5mm
Usable Solder Dia.	0.6mm, 0.65mm, 0.8mm, 1.0mm, 1.2mm, 1.6mm
Usable Solder	1kg roll bobbin (Max.)
Outer Dimensions	107(W) × 110(H) × 215(D)mm
Weight (w/o cord)	1.5kg

### Set Up



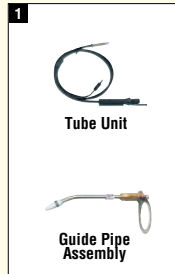
HAKKO 373

+



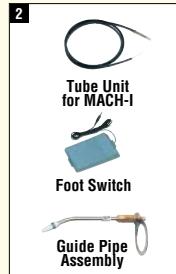
Solder Dia.  
Adjustment  
Ring

+



Tube Unit

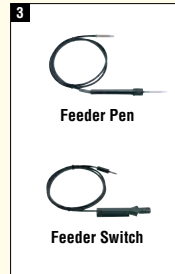
Guide Pipe  
Assembly



Tube Unit  
for MACH-I

Foot Switch

Guide Pipe  
Assembly



Feeder Pen

Feeder Switch



Feeder Pen

Foot Switch

### Compatible Soldering Iron

HAKKO 936\*



HAKKO 937\*



HAKKO 928\*



HAKKO 931



HAKKO MACH-I



HAKKO DASH



\* 900S soldering iron is not compatible with HAKKO 373.

# HAKKO 375

SELF FEEDER



- Reducing flux splashing and solder balls generated during soldering operation.
- Compact design to save work bench.
- Can be installed to your solder reel stand.

### Specifications

Model No.	375
Rating	DC24V 75mA
Motor rating	DC24V 130mA
Outer dimensions	76(W) x 96(H) x 50(D)mm
Weight (w/o cord)	590g

### AC adaptor

Rating	DC 24V 250 mA
--------	---------------

### Packing List

Name	Contents
HAKKO 375	Unit AC Adaptor

### Optional Parts

Part No.	Part Name
B1649	Foot switch
B2763	Hand switch

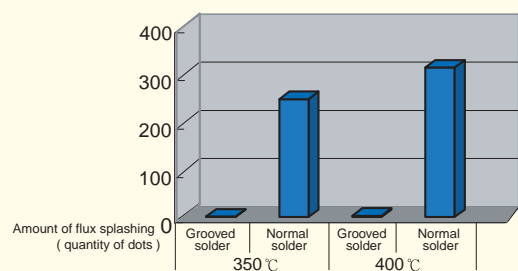


B1649 Foot switch



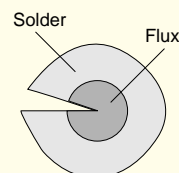
B2763 Hand switch

### Effects of using cut solder

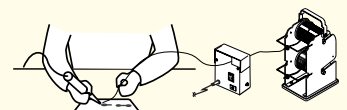


- Test criteria  
Feed  $\phi 1.0 \times 500$  mm of lead-free solder (Sn-3Ag-0.5Cu) to one of our soldering irons, which has tip temperature setting at 350 and 400°C and measure the amount of flux splashing.  
The effects of flux splashing prevention may differ under different test criteria.

### Cross section of solder



### Set Up



# HAKKO 191

THERMOMETER



- Fast, accurate tip temperature measurements using a fine CA wire sensor (Dia. 0.2).
- Large easy-to-read digital temperature display.
- Quick and easy sensor replacement.

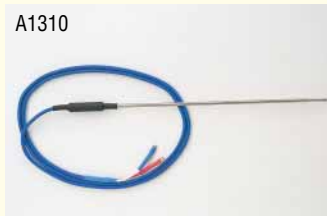


Specifications	
Model No.	191
Resolution	1°C
Measurement Range	0-600°C
Applied Sensor	K (CA) Thermocouple
Precision	±3°C (in 300-500°C range)
Display	a) 3.5-digit Liquid Crystal Display b) Battery Alarm <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> c) Burn out <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Power Supply	006P, 9V Dry Battery
Battery Life	More than 150 hours
Environmental Temperature Range	0-40°C
Accessories	Sensor (10 pcs)
Outer Dimensions	160(W) × 45(H) × 80(D)mm
Weight	200g
Operating Environment	0 to 40°C, 20 to 90%RH, no dew formation

Replacement Parts	
Part No.	Name/Description
191-211	Sensor (10 pcs)

Optional Parts	
Part No.	Name/Description
A1310	Temperature Probe (Total Length 1.2m)
C1220	Temperature Probe (Total Length 1.1m)

### Temperature Probes



\*For measuring the temperature of solder in pots.



\*For measuring the temperature of automatic solder machine.

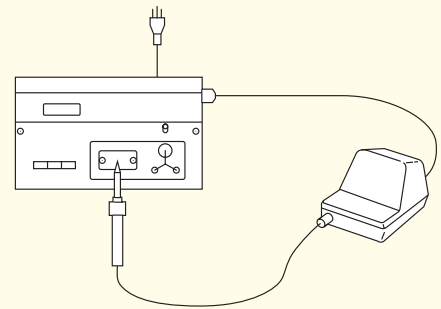


# HAKKO 192

SOLDERING TESTER



- Measures tip temperature, leak voltage and ground resistance.
- Meets MIL-STD-2000 for leak voltage measurement.
- Measures true root-mean-square (TRMS) values.
- Resistant to drift and temperature changes, ensuring highly reliable measurements.
- Measurements can be output to a monitor, printed out on a recorder, etc.



### Specifications

<b>Temperature</b>	Resolution	1°C
	Measurement Range	0-600°C
	Precision	±3°C (in 300-500°C range)
	Applied Sensor	K (CA) thermocouple
<b>Voltage</b>	Resolution	0.1mV
	Measurement Range	0~90mV (AC)
	Accuracy	±(5%+1 digit)
	Conforms to MIL-STD-2000	
<b>Resistance</b>	Resolution	0.1Ω
	Measurement Range	0~90Ω
	Accuracy	±(5%+1 digit)
<b>Display</b>	Liquid Crystal Display (LCD)	3 1/2 digits
	Burn Out	[-/□□□]
<b>Monitor Output</b>	Temperature	1mV/°C
	Voltage	10mV/mV
	Resistance	10mV/Ω
<b>Power Consumption</b>	1W	
<b>Outer Dimensions</b>	200(W) × 50(H) × 120(D)mm	
<b>Weight (w/o cord)</b>	1.1kg	
<b>Operating Environment</b>	0 to 40°C, 20 to 90%RH, no dew formation	

Caution: The HAKKO 192 cannot be used with soldering irons equipped with ungrounded tips.

### Replacement Parts

Part No.	Name/Description
<b>191-211</b>	Sensor (10 pcs)
<b>B1752</b>	Conduction Plate
<b>B1754</b>	Grounding Clip

### Optional Parts

Part No.	Name/Description
<b>A1310</b>	Temperature Probe (Total Length 1.2m)
<b>C1220</b>	Temperature Probe (Total Length 1.1m)

### Temperature Probes

A1310



\*For measuring the temperature of solder in pots.

C1220



\*For measuring the temperature of automatic solder machine.

# HAKKO 96

SOLDERING POT



- Large-capacity solder bath holds a larger amount of solder, the solder temperature remains high even during continuous soldering operations.
- The stainless steel solder bath and other heavy-duty components offer greater durability, while the solder overflow prevention rim around the bath provides greater safety.
- The raised rim around the bath enhances soldering and desoldering efficiency.
- A waste collector adds a final touch of operating ease and efficiency.

## Specifications

Model No.	96	96-1
Power Consumption	200W	
Heating Element	Ceramic Heater	
Temperature	100-450°C	100-380°C
Insulation Resistance	Over 100MΩ (250°C)	
Dimension of Solder Bath	50(W) × 54(H) × 50(D)mm	70(W) × 64(H) × 70(D)mm
Capacity of Solder Bath	Approx. 850g of melted solder	Approx. 1200g of melted solder
Outer Dimensions	135(W) × 105(H) × 224(D)mm	135(W) × 120(H) × 224(D)mm
Weight (w/o cord)	1.5kg	1.6kg

## Temperature Probe

Part No.	Name/Description
A1310	Temperature Probe (Total Length 1.2m)/for HAKKO 191,192



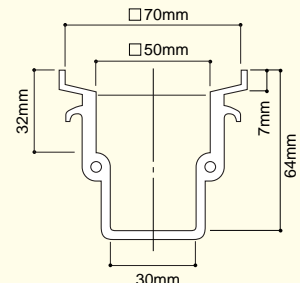
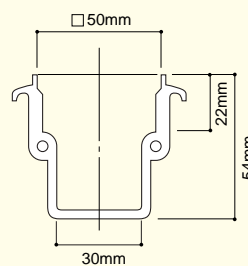
\*For measuring the temperature of solder in pots, other applications as required.



## Dimensions of Solder Bath

No. 96 : 50(W) × 54(H) × 50(D)mm

No. 96-1 : 70(W) × 64(H) × 70(D)mm



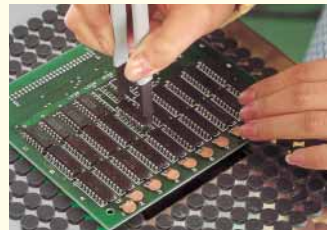
# HAKKO 485

SOLDERING SYSTEM



- Compact and high performance soldering system developed for soldering and desoldering components and connectors mounted on circuit boards.
- The solder flow is both temperature controlled and time controlled.
- Many different nozzle sizes are available.
- Soldering and desoldering cycles are automatic and precise.
- A built-in locator light pinpoints the exact position for component placement.
- Solder remaining in the through hole is completely removed by utilizing the air unit.

### Operation



### Specifications

<b>Model No.</b>	<b>485</b>	
<b>Input Voltage</b>	AC100V 50Hz/60Hz	
	Body	Air Unit
<b>Part No.</b>	485-1	486
<b>Power Consumption</b>	850W	
<b>Room Temperature</b>	-5-40°C	---
<b>Temperature Control</b>	Normal Temperature~299°C	---
<b>Capacity of Solder Bath</b>	Approx. 10kg	---
<b>Heating Element</b>	800W (400W×2)	---
<b>Air Pressure</b>	---	2kgf/cm <sup>2</sup> ~7kgf/cm <sup>2</sup> (196~686KPa)
<b>Outer Dimensions</b>	500(W) × 245(H) × 550(D)mm	150(W) × 100(H) × 300(D)mm
<b>Weight (w/o cord)</b>	35kg w/o Solder	3.5kg

### Packing List

Name	Contents	Accessories
HAKKO 485	Body(485-1)	Nozzle (Part No.485-N-01~04) .....1 each Air Hood (Part No.485-28~31) .....1 each IC Tweezers .....1 Anti-Oxidizer .....1 Spatula .....1 Lamp (6V-10W) .....1
	Air Unit(486)	Horizontal Gauge .....1 Positioning Board .....1 Waste Collector.....1 Locator Light.....1 Foot Switch .....1

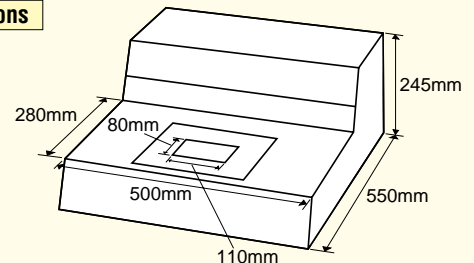
### Nozzle

Part No.	Inner Dia	Unit : mm
485-N-01	21 × 11	
485-N-02	26 × 11	
485-N-03	38 × 18	
485-N-04	54 × 19	
485-N-11	55 × 7	
485-N-12	68 × 7	
485-N-13	81 × 7	
485-N-14	30 × 30	
485-N-15	50 × 50	
485-N-16	11 × 21 Cross	
485-N-17	11 × 26 Cross	
485-N-18	18 × 38 Cross	
485-N-19	19 × 54 Cross	

### Air Hood

Part No.	Inner Dia	Unit : mm
485-28	21 × 10	
485-29	25 × 10	
485-30	34 × 17	
485-31	52 × 17	
485-32	51 × 7	
485-33	64 × 7	
485-34	77 × 7	
485-35	30 × 30	
485-36	50 × 50	

### Outer Dimensions



# HAKKO IRON HOLDER



## Specifications

Part No.	Dimensions of Cleaner	Outer Dimensions	Weight
599B*		ø70 × 71(H)mm	65g
602	65 × 45 × 15mm	92(W) × 108(D)mm	80g
603	70 × 70 × 15mm	82(W) × 95(D)mm	500g
606	65 × 45 × 15mm (w/Aluminum Case)	100(W) × 160(D)mm	310g
607	70 × 70 × 15mm	98(W) × 166(D)mm	600g
631-01	70 × 70 × 15mm	80(W) × 137(D)mm	430g
633-01	ø70 × 71(H)mm	84(W) × 186(D)mm	380g
633-02	ø70 × 15mm	84(W) × 186(D)mm	340g

### HAKKO 599B\*

- Replacement cartridge for HAKKO 633.
- No water required.



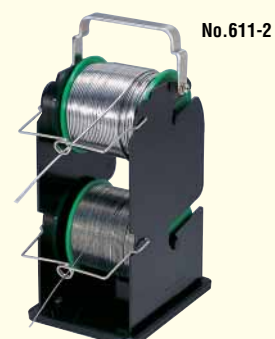
# HAKKO 611 ESD SAFE

SOLDER REEL STAND

- ESD safe by design.
- Keep your bench neat.
- Draw out the solder wire smoothly.

## Specifications

Part No.	611-1	611-2
Outer Dimensions	86(W) × 114(H) × 78(D)mm	87(W) × 200(H) × 141(D)mm
Shaft Dia	ø15mm	
Usable Solder	1kg roll bobbin (Max.) × 1	1kg roll bobbin (Max.) × 2
Weight	550g	750g





# HAKKO 474·475 ESD SAFE

DESOLDERING TOOL



## Choose the system that best fits your needs!

The portable HAKKO 474 vacuum pump type or the economical HAKKO 475 air compressor type.

- Both models are constructed of static dissipative materials using an ESD design which prevents damage to circuit boards and parts caused by electro-static discharge.
- Heating element and motor features zero-cross switching in order to prevent electrical surges.
- An insulated transformer completely isolated the output circuit from the power input circuit.

### Specifications

Model No.	474	475
Power Consumption	100W	70W

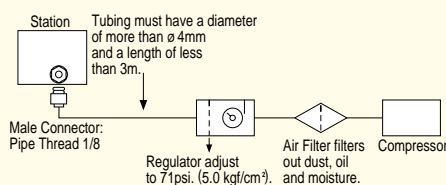
### Station

Output Voltage	AC 24V	
Vacuum Generator	Vacuum Pump, Double Cylinder Type	Ejector Type
Vacuum Pressure(Max.)	600mmHg (80KPa)	700mmHg (93KPa)
Suction Flow	15ℓ/min.	28ℓ/min.
Tip to Ground Resistance	< 2Ω	
Tip to Ground Potential	< 2mV (Typ. 1.2mV)	
Applied Air Pressure	---	71psi (5.0kgf/cm <sup>2</sup> )(490KPa)
Compressed Air Consumption	---	1.62 c.f.m. (46ℓ/min.)
Outer Dimensions	165(W) × 135(H) × 260(D)mm	
Weight (w/o cord)	3.8kg	3.0kg

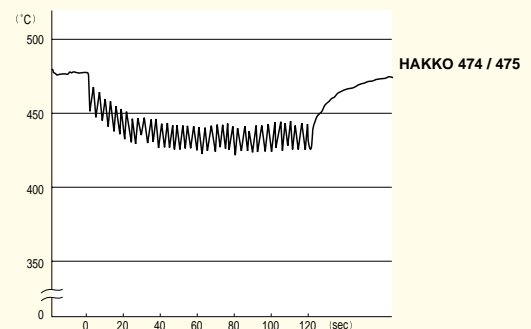
## HAKKO 475 - external air compressor type

- Use filtered air to clean away any dust, oil and moisture.
- With the trigger pulled and air flowing, adjust the regulator air pressure to 71 psi (5.0kgf/cm<sup>2</sup>).

### Connections



### Thermal Recovery Graph



# Desoldering Gun for HAKKO 474.475

## Specifications

### Desoldering Gun

Model No.	809
Power Consumption	AC 24V/50W
Temperature	380-480°C
Standard Nozzle	A1003 (Nozzle S $\phi$ 1.0mm)
Heating Element	Ceramic Heater
Outer Dimensions	135(W) × 174(H)mm
Weight (w/o cord & hose)	200g

## Replacement Nozzles

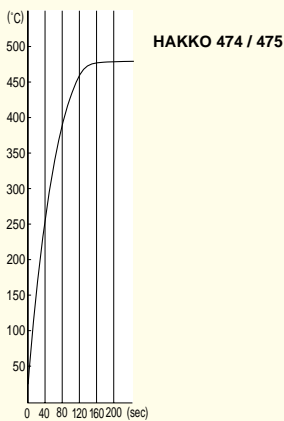
Unit : mm

Part No.	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	

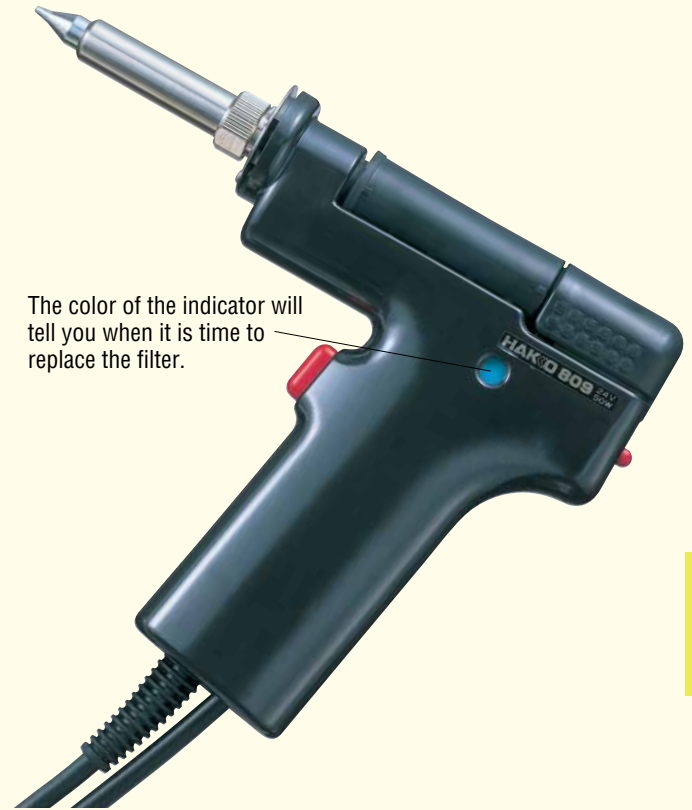
## Packing List

Name	Contents	Accessories
HAKKO 474	Station	Filter Pipe.....1
	Desoldering Gun (C1183)	Cleaning Pin for $\phi$ 1.0mm Nozzle .....1
		Cleaning Pin for Heating Element.....1
		Cleaning Drill for $\phi$ 1.0mm Nozzle .....1
HAKKO 475	Station	Ceramic Paper Filter (S) .....2
	Desoldering Gun (C1183)	Ceramic Paper Filter (L) .....4
		Spring Filter .....3
		Silicone Grease .....1
		Iron Holder .....1
		Spanner Wrench .....1

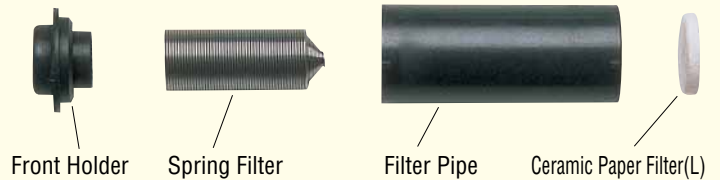
## Nozzle Temperature Start-up Graph



Temperature	Heat-up Time
400°C	80 sec.
480°C	180 sec.



## Construction of Filter Pipe



# HAKKO 484

DESOLDERING TOOL



- Complete with an inner pump, which can be easily carried. Therefore, suction work is possible anywhere that there is an electric source available.
- The nozzle and heating core have been specially designed so solder can be absorbed in the filter while it is still in the molten state. Consequently maintenance time has been reduced and work efficiency improved.
- To clean, simply pull the knob to remove the filter pipe. The filter pipe is made of heat-proof transparent glass, therefore the accumulation of solder can be easily checked from the outside.

## Specifications

Model No.	484
Power Consumption	60W

## Station

Vacuum Generator	Double Cylinder Type
Vacuum Pressure(Max.)	600mmHg (80KPa)
Suction Flow	10/12 ℓ/min (50/60Hz)
Motor Output	12W
Outer Dimensions	135(W) × 75(H) × 180(D)mm
Weight (w/o cord)	2.5kg

## Desoldering Gun

Standard Nozzle	481-T-1.0
Heating Element	Ceramic Heater
Insulation Resistance	100MΩ
Weight (w/o cord & hose)	230g

## Replacement Nozzles

Unit : mm

Part No.	A	B
481-T-0.8	0.8	2.5
481-T-1.0	1.0	2.5
481-T-1.3	1.3	2.5
481-T-1.6	1.6	3.0

## Packing List

Name	Contents	Accessories
HAKKO 484	Station	Filter Set .....5 Cleaning Pin for Heating Core .....1 Cleaning Pin for ø1.0mm Nozzle .....1
	Desoldering Gun	Cleaning Wrench .....1 Silicone Grease .....1 Anti-seizure .....1 Iron Holder .....1

# HAKKO 808

DESOLDERING TOOL



- The unique Hakko design places the pump and motor above, not inside the grip, so vibration is minimal and the grip is thin and easy to hold.
- The new, miniature, high-performance diaphragm pump is housed in the pump chamber at the rear of the unit. So, pump maintenance is quick and easy - simply remove the cover of the pump chamber.
- The optional carrying case makes it easy to transport the unit to wherever it is needed.

## Specifications

Model No.	808
Power Consumption	70W
Motor Output	6.5W
Temperature	380-480°C
Standard Nozzle	A1005 (Nozzle $\phi$ 1.0mm)
Tip to Ground Resistance	$< 2\Omega$
Tip to Ground Potential	$< 2\text{mV}$
Pump	Double-Cylinder Type
Vacuum Pressure	600mmHg (80KPa)
Suction Flow	10 $\ell$ /min.
Outer Dimensions	235(W) $\times$ 170(H)mm
Weight (w/o cord)	420g

## Replacement Nozzles

Unit : mm

Part No.	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	

## Packing List

Name	Contents	Accessories
HAKKO 808	Desoldering Gun	Filter Pipe with Filter Holder and Pre-filter(Alum.) ...1 Cleaning Pin for Nozzle $\phi$ 1.0mm .....1 Cleaning Pin for Heating Element .....1 Pre-filter(Alum.) .....3 Ceramic Paper Filter (L) .....4 Spanner Wrench .....1

## Options

Carrying Case (Part No. C1099)



Iron Holder (Part No. 633-02)





# HAKKO SPPON

DESOLDERING TOOL



- Lightweight and economical design.
- Powerful enough for both occasional and heavy-duty desoldering applications efficiently.
- Unique cleaning shaft allows you to clean the nozzle quickly and easily.

### Specifications

Model No.	18	18G	20	20G
	---	w/guard	---	w/guard
Absorption Capacity	12 c.c. (12cm <sup>3</sup> )		20 c.c. (20cm <sup>3</sup> )	
Spare Nozzle	18-N		20-N	



# HAKKO WICK

DESOLDERING WIRE



### HAKKO WICK Regular Type

- Faster thermal transmission for superior performance at lower temperature and with lower wattage soldering irons.
- Leaves less residue on the desoldered connection.

### HAKKO WICK Unfluxed Type

- Using oxide and corrosion-free braid.

### Specifications

#### Regular Type

Part No.	Description
83-101	1.5m × 0.6mm
83-102	1.5m × 1.3mm
83-103	1.5m × 2.0mm
83-104	1.5m × 2.5mm
83-105	1.5m × 3.0mm
87-2-30	30m × 1.5mm
87-3-30	30m × 2.0mm
87-4-30	30m × 2.5mm
87-4-100	100m × 2.5mm

#### Unfluxed Type

Part No.	Description
84-101	1.5m × 0.6mm
84-102	1.5m × 1.3mm
84-103	1.5m × 2.0mm
84-104	1.5m × 2.5mm
84-105	1.5m × 3.0mm

Removal for thru-hole...



Removal for bridging...



# HAKKO 852 ESD SAFE

SMD REWORK STATION



- Built-in vacuum pickup.
- Two modes of operation: MANUAL: Simple operation.  
AUTO: Programmable process control.
- ESD safe by design.
- Auto cooling mode for safety.

Note: Nozzles are optional. Please refer to page 39.

### Specifications

Model No.	852
Power Consumption	100V-300W 110V-360W 120V-410W 220V-550W 230V-600W 240V-650W

Station	
Power Consumption	30W
Pump	Diaphragm Type
Capacity	7ℓ/min. (Min.)-20ℓ/min. (Max.)
Mode	Manual/Auto (Install & Remove)
Timer	15-999 sec (Max.)
Outer Dimensions	180(W) × 170(H) × 260(D)mm
Weight (w/o cord)	5kg

Iron	
Power Consumption	100V-270W 110V-330W 120V-380W 220V-520W 230V-570W 240V-620W
Method of Temp. control	Sensor feed back
Hot Air Temperature	*100-420°C
Switch for Start & Vacuum	Built in the Handle
Vacuum Pad	7.6mm / 5mm (ESD Safe)
Length (w/o cord & hose)	200mm
Weight (w/o cord & hose)	200g

\*Measured at the sensor position.

### Packing List

Name	Contents	Accessories
HAKKO 852	Station Hot Air Rework Iron Iron Holder Power Cord	Pad ø5mm, ø7.6mm .....2 each

### Optional Parts

Part No.	Name/Description
B2478B	Foot Switch
C1390C	Omnivise
C1391B	Nozzle Tray
C1392B	Rework fixture



Omnivise      Foot Switch      Nozzle Tray      Rework fixture

Combination of HAKKO 852 and HAKKO 853.



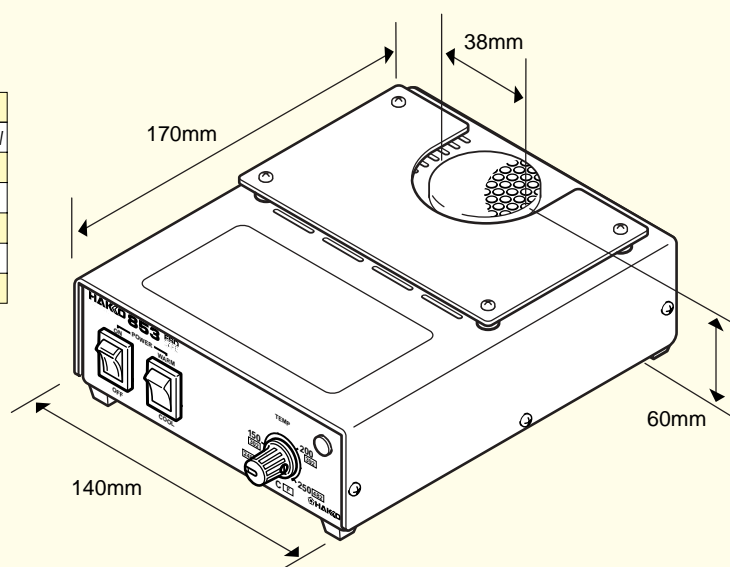
# HAKKO 853 ESD SAFE PREHEATER



- Compact design.
- Fast heating.
- Temperature range 120 to 250°C.
- Excellent thermal stability.
- Closed loop variable temperature control.
- ESD safe by design.

## Specifications

<b>Model No.</b>	<b>853</b>
<b>Power Consumption</b>	100V-350W 110V-400W 120V-500W 220V-460W 230V-500W 240V-540W
<b>Input Voltage</b>	100V-240V AC
<b>Hot Air Temperature</b>	120-250°C (Above the blow exit)
<b>Air Flow</b>	0.18mm <sup>3</sup> /min. (Fixed)
<b>Outer Dimensions</b>	140(W) × 50(H) × 170(D)mm
<b>Weight (w/o cord)</b>	1kg



# HAKKO 850B ESD SAFE

SMD REWORK STATION



- A wide range of adjustment of the air flow rate and temperature permits soldering and desoldering of SMD's
- ESD safe by design.
- Automatic Cooling Mode.  
Protects the heating element and handle when the power switch is turned off.
- A compact design takes up less bench space.

## Specifications

Model No.	850B
Power Consumption	100V-280W 110V-270W 120V-300W 220V-300W 230V-310W 240V-310W

## Station

Power Consumption	30W (Stand-by power consumption 100-120V 2W / 220-240V 4W)
Pump	Diaphragm Type
Capacity	23ℓ/min. (Max.)
Control Temperature	100-420°C (Use A1126B)
Outer Dimensions	160(W) × 145(H) × 225(D)mm
Weight (w/o cord)	4kg

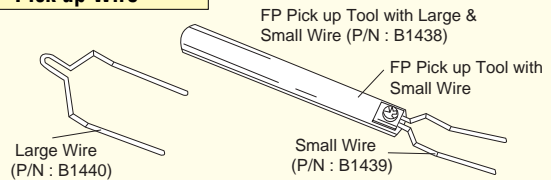
## Iron

Power Consumption	100V-250W 110V-240W 120V-270W 220V-270W 230V-280W 240V-280W
Total Length (w/o hose)	196(L)mm
Weight (w/o hose)	120g

## Packing List

Name	Contents	Accessories
HAKKO 850B	Station	FP Pick up Tool with Small Wire ..... 1
	SMD Rework Iron	Large Wire ..... 1
	Iron Holder	Power Cord ..... 1

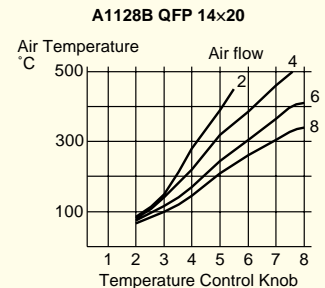
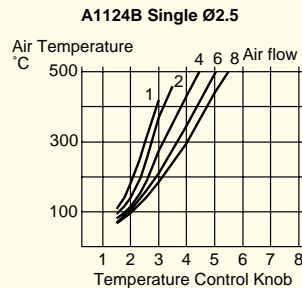
## Pick up Wire



## Temperature Distribution Chart

\*Test Criteria : Measured at the point 3mm from the nozzle by recorder.

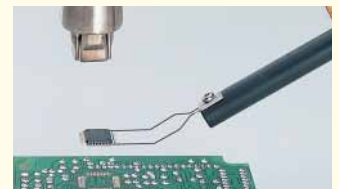
\*The charts shown below are for reference.



## Operation-QFP Desoldering



1. Place the FP pick-up into the lead frame. Place the nozzle over the lead frame and melt the solder.



2. Gently lift the SMD from the circuit board.

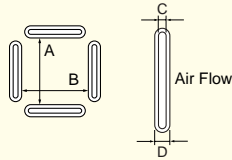


# Optional nozzles for Hakko 850B/852

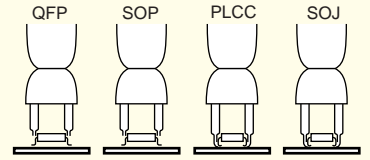
Unit : mm

## • Nozzles NOTE

The size in Name/Specifications indicates the size of IC package.

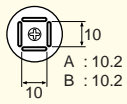


No.	C 0.8	C 1.0	C 0.8
	D 1.8	D 2.0	D 2.0
	A1125B-A1129B	A1191	A1192
	A1131-A1141B		
	A1180B-A1189B		
	A1203B-A1266B		

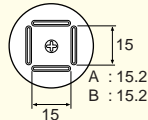


## • VACUUM FUNCTION OPERATIVE NOZZLES. \*When attaching the nozzle to the Hakko 852

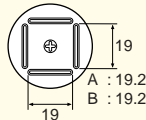
**A1125B**  
QFP 10 × 10



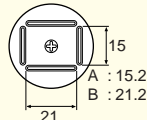
**A1126B**  
QFP 14 × 14



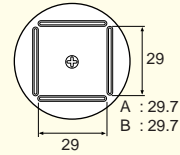
**A1127B**  
QFP 17.5 × 17.5



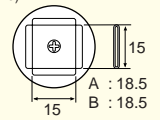
**A1128B**  
QFP 14 × 20



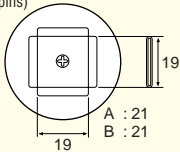
**A1129B**  
QFP 28 × 28



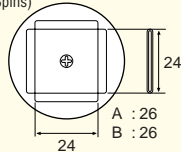
**A1135B**  
PLCC 17.5 × 17.5  
(44pins)



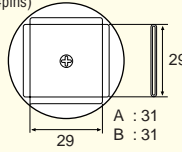
**A1136B**  
PLCC 20 × 20  
(52pins)



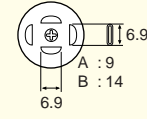
**A1137B**  
PLCC 25 × 25  
(68pins)



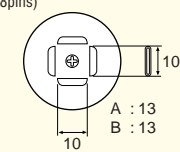
**A1138B**  
PLCC 30 × 30  
(84pins)



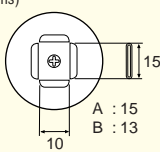
**A1139B**  
PLCC 12.5 × 7.3  
(18pins)



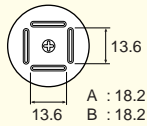
**A1140B**  
PLCC 11.5 × 11.5  
(28pins)



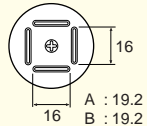
**A1141B**  
PLCC 17.5 × 14  
(32pins)



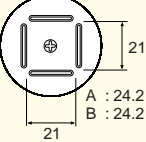
**A1180B**  
BQFP 17 × 17



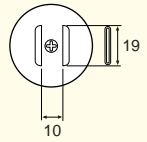
**A1181B**  
BQFP 19 × 19



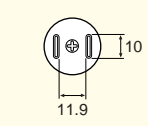
**A1182B**  
BQFP 24 × 24



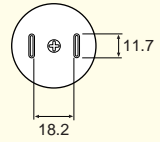
**A1184B**  
SOJ 18 × 8



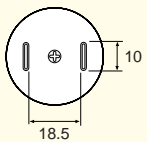
**A1185B**  
TSOL 13 × 10



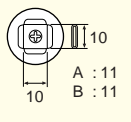
**A1186B**  
TSOL 18 × 10



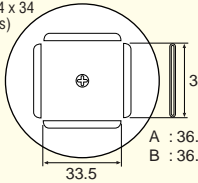
**A1187B**  
TSOL 18.5 × 8



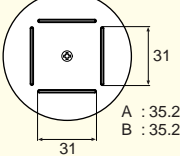
**A1188B**  
PLCC 9 × 9  
(20pins)



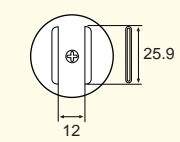
**A1189B**  
PLCC 34 × 34  
(100pins)



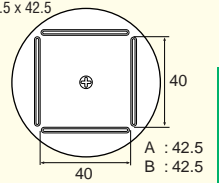
**A1203B**  
QFP 35 × 35



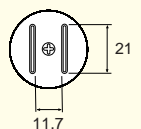
**A1214B**  
SOJ 10 × 26



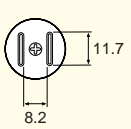
**A1215B**  
QFP 42.5 × 42.5



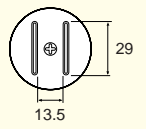
**A1257B**  
SOP11 × 21



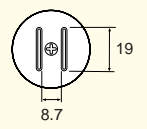
**A1258B**  
SOP 7.6 × 12.7



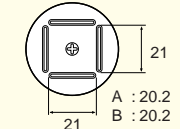
**A1259B**  
SOP 13 × 28



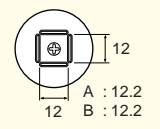
**A1260B**  
SOP 8.6 × 18



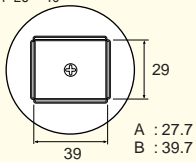
**A1261B**  
QFP 20 × 20



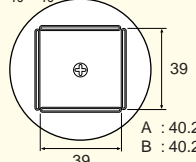
**A1262B**  
QFP 12 × 12



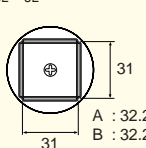
**A1263B**  
QFP 28 × 40



**A1264B**  
QFP 40 × 40



**A1265B**  
QFP 32 × 32



## • VACUUM FUNCTION INOPERATIVE NOZZLES. \*When attaching the nozzle to the Hakko 852

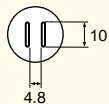
**A1124B**  
Single ø2.5



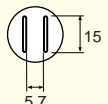
**A1130**  
Single ø4.4



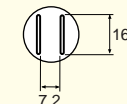
**A1131**  
SOP 4.4 × 10



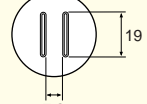
**A1132**  
SOP 5.6 × 13



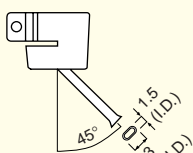
**A1133**  
SOP 7.5 × 15



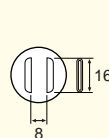
**A1134**  
SOP 7.5 × 18



**A1142B**  
Bent Single 1.5 × 3



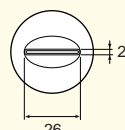
**A1183**  
SOJ 15 × 8



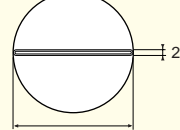
**A1190**  
Dual Single  
2.5 × 9.5  
Pitch



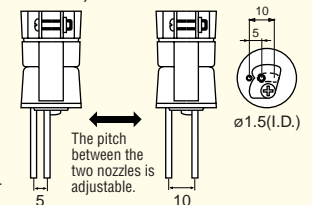
**A1191**  
SIP 25L



**A1192**  
SIP 50L



**A1325** Dual Single ø1.5 × 5 - 10  
Adjustable Pitch



# HAKKO 851 ESD SAFE

SMD REWORK STATION



- Adjustable temperature control: 100-540°C.
- Air volume selector switch with ultra-light setting.
- ESD design and grounding measure to minimize damage from current leakage and electrostatic discharge.

## Applications

- Soldering and desoldering of small surface-mounted chip components.
- Shrinking tubing, heating tests and other local heating operations.

### Specifications

Model No.	851
Power Consumption	85W

#### Station

Pump	Diaphragm Type
Capacity	6ℓ/min. (Max.)
Outer Dimensions	167(W) × 101(H) × 182(D)mm
Weight (w/o cord)	1.8kg

#### Iron

Power Consumption	80W
Hot Air Temperature	100-540°C
Standard Nozzle	A1066 (ø2.0mm)
Total Length (w/o hose)	217mm
Weight (w/o hose)	180g

### Optional Nozzles

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

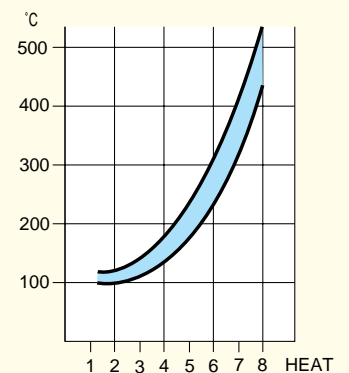
### Packing List

Name	Contents
HAKKO 851	Station SMD Rework Iron Iron Holder Nozzle ø2.0mm(Attached to iron)

### Temperature Distribution Chart

#### Test Criteria

- \* Measured at the point 2mm from the nozzle.
- \* Room Temperature 20°C.
- \* Used Nozzle : A1066 ø2.0mm.



# HAKKO MACH-FP

FP DESOLDERING



- The economical iron for desoldering flat packages.
- The answer to every professional engineering need.
- The ceramic heating element provides faster heat transmission and excellent insulation.

## Specifications

Model No.	924
Power Consumption	55W
Heating Element	Ceramic Heater
Insulation Resistance	Over 100MΩ
Total Length	210mm
Weight (w/o cord)	60g

\*Tips are optional parts. They are not included in HAKKO MACH-FP.

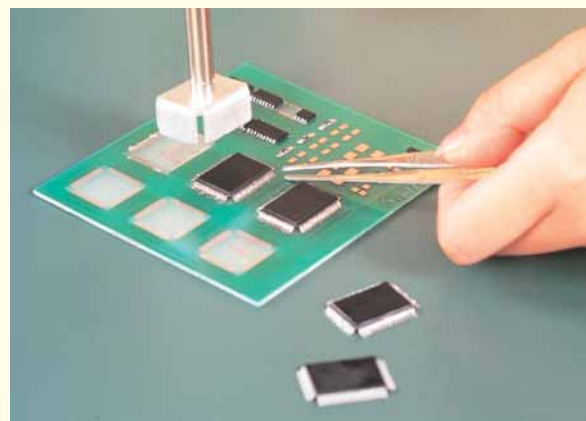
## Optional Tips

Unit : mm

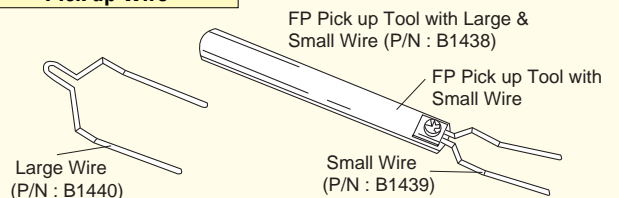
Part No.	Tip Size			
	A	B	C	D
924-T-1002	12.5	9.5	12.5	9.5
924-T-1003	15.5	12.5	15.5	12.5
924-T-1004	16.3	13.3	16.3	13.3
924-T-1005	17.0	14.0	17.0	14.0
924-T-1006	23.0	20.0	17.0	14.0
924-T-1007	20.0	17.0	20.0	17.0

Part No.	Tip Size	
	A	B
924-T-1010	6.0	5.0
924-T-1011	6.0	10.0
924-T-1012	7.0	12.5
924-T-1013	9.0	15.2
924-T-1014	9.0	18.0

Part No.	Spatula Type
924-T-1020	Spatula 9.5



## Pick up Wire





- The all-in-one systems for soldering and desoldering.
- ESD safe by design.
- Compact design for minimum use of bench space.

### Specifications

Model No.	701
Power Consumption	150W

### Station

Station	Output Voltage	AC 24V
Soldering	Temperature	200-480°C
	Output Voltage	AC 24V
Desoldering	Vacuum Generator	Vacuum Pump, Double Cylinder Type
	Vacuum Pressure	600mmHg (80KPa)
	Motor Output	12W
	Temperature Range	380-480°C
	Suction Flow	15ℓ/min
	Outer Dimensions	190(W) × 130(H) × 250(D)mm
Weight (w/o cord)	5kg	

### Soldering Iron

Model No.	907-ESD
Power Consumption	24V/50W
Standard Tip	900M-T-B
Tip to Ground Resistance	< 2Ω
Tip to Ground Potential	< 2mV
Heating Element	Ceramic Heater
Total Length (w/o cord)	190mm
Weight (w/o cord)	44g

### Desoldering Gun

Model No.	809
Power Consumption	24V/50W
Standard Nozzle	A1003 (Nozzle S ø1.0mm)
Heating Element	Ceramic Heater
Outer Dimensions	135(W) × 174(H)mm
Weight (w/o cord)	200g

### Replacement Nozzles

Unit : mm

Part No.	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	

### Replacement Tips

Please refer to page 11 (for M-Type Iron).

### Packing List

Name	Contents	Accessories
HAKKO 701	Station	Ceramic Paper Filter (S) .....2
	Soldering Iron (HAKKO 907-ESD)	Ceramic Paper Filter (L) .....4
	Desoldering Gun (HAKKO 809)	Spring Filter .....3
		Cleaning Pin for Heating Core .....1
		Cleaning Pin for ø1.0mm Nozzle .....1
		Cleaning Drill for ø1.0mm Nozzle .....1
		Silicone Grease .....1
		Spanner Wrench .....1
		Filter Pipe .....1
		Iron Holder for Soldering Iron .....1
		Iron Holder for Desoldering Gun .....1



# HAKKO 702B ESD SAFE

REWORK SYSTEM



- ESD design for static free performance and safety.
- Compact design for minimum use of bench space, incorporating : medium & slim style soldering irons.  
familiar gun type desoldering tool.  
hot-air SMD rework iron.
- Replacement tip/nozzle are available from Hakko's well-known series.

## Specifications

<b>Model No.</b>	<b>702B</b>	
<b>Power Consumption</b>	500W	
<b>Station</b>		
<b>Soldering</b>	<b>Output Voltage</b>	AC 24V
	<b>Temperature</b>	200-480°C
<b>Desoldering</b>	<b>Output Voltage</b>	AC 24V
	<b>Vacuum Generator</b>	Vacuum Pump, Double Cylinder Type
	<b>Vacuum Pressure</b>	600mmHg (80KPa)
	<b>Suction Flow</b>	15ℓ/min
	<b>Temperature</b>	380-480°C
<b>SMD Rework</b>	<b>Input Voltage</b>	AC 100,110,220-240V
	<b>Pump</b>	Diaphragm Pump
	<b>Capacity</b>	23ℓ/min (max.)
	<b>Temperature</b>	100-420°C (Use : A1126B)
<b>Outer Dimensions</b>	360(W) × 266(D) × 150(H)mm	
<b>Weight (w/o cord)</b>	10kg	

## Packing List

Contents	Station	Soldering Iron 900S-ESD & 907-ESD	Desoldering Gun 809	SMD Rework Iron
<b>Accessories</b>	Iron Holder .....	3	Cleaning Pin for Nozzle ø1.0mm .....	1
	Holder (for SMD Rework Iron) ...	1	Cleaning Pin for Heating Core .....	1
	Nozzle Tray .....	1	FP Pick-up Tool .....	1
	Spring Filter .....	3	Cleaning Drill for Nozzle ø1.0mm.....	1
	Ceramic Paper Filter (L) .....	4	Nozzle for SMD Rework Iron (A1124B & A1128B)...	2
	Ceramic Paper Filter (S) .....	2		

## Soldering Iron

Model No.	900S-ESD	907-ESD
<b>Power Consumption</b>	24V/50W	
<b>Tip to Ground Resistance</b>	< 2Ω	
<b>Tip to Ground Potential</b>	< 2mV	
<b>Heating Element</b>	Ceramic Heater	
<b>Standard Tip</b>	900S-T-I	900M-T-B
<b>Cord Assembly</b>	1.2m	
<b>Total Length (w/o cord)</b>	176mm	190mm
<b>Weight (w/o cord)</b>	25g	44g

## Desoldering Gun

Model No.	809
<b>Power Consumption</b>	24V/50W
<b>Nozzle to Ground Resistance</b>	< 2Ω
<b>Nozzle to Ground Potential</b>	< 2mV
<b>Standard Nozzle</b>	A1003 (Nozzle S ø1.0mm)
<b>Outer Dimensions</b>	135(W) × 174(H)mm
<b>Weight (w/o cord &amp; hose)</b>	200g

## SMD Rework Iron

<b>Power Consumption</b>	250W
<b>Total Length (w/o cord)</b>	196mm
<b>Weight (w/o hose)</b>	120g

### Replacement Tips

Please refer to page 11.

### Replacement Nozzles for Desoldering Gun

Please refer to page 31.

### Replacement Nozzles for SMD Rework Iron

Please refer to page 39.

# HAKKO 392 ESD SAFE

VACUUM PICK-UP



- A built-in diaphragm pump eliminates the need for a separate air supply unit.
- Lifts objects weighing up to 120g.
- Pen, suction pads and air hoses are all made of anti-static materials for greater safety and reduced risk of damage to delicate parts.

### Easy to set up, easy to use

1. Place the nozzle or pad on the object to be picked up.
2. Place a finger over the hole in the pen.  
A vacuum is instantly created and the resulting suction at the tip of the pen "holds" the object to the pen.
3. Now raise the pen and the object is lifted along with the pen.



### Specifications

<b>Model No.</b>	<b>392</b>
<b>Power Consumption</b>	5W
<b>Pump</b>	Diaphragm Type
<b>Maximum Pressure</b>	280mmHg (37.3KPa)
<b>Accessories</b>	Bent Nozzle×2 (Inner Dia. 0.4mm & 1.1mm) Pad×2 (Outer Dia. 3mm & 7mm)
<b>Outer Dimensions</b>	Station : 132(W) × 83(H) × 170(D)mm Pen : 123(L) × 10(outer dia.)mm Air Hose : 1100(L) × 6(outer dia.)mm
<b>Weight (w/o cord)</b>	Station : 1.65kg Pen : 25g

### Vacuum Pickup Performance

Nozzle/Pad	Maximum Item Weight	Applications
Bent Nozzle <0.4mm>	0.6g	Chip resistors and tiny components
Bent Nozzle <1.1mm>	2g	Small ICs (8~40 pins)
Bent Nozzle <1.1mm> + Pad <3mm>	20g	ICs (40 pins or greater)
Bent Nozzle <1.1mm> + Pad <7mm>	120g	Large electronic components, etc.

# HAKKO 394

VACUM PICK-UP



- A built-in very small, but powerful pump eliminates the needs of Power Cord and Air Tube.
- Easy to handle for continuous pickup.
- Anti-static material are used.

### Specifications

Model No.	394
Power supply	AAA alkaline battery x 2
Outer Dimensions	130(L) x 22(W) x 29(H) mm
Weight (w/o batteries)	43 g

### Packing List

Name	Contents	Accessories
HAKKO 394	Unit	Bent Nozzle/1.1mm (with stopper) Pad/5 mm Pad/10 mm AAA alkaline battery

### Option/Replacement Parts

Part No.	Name/Description
A1164	Bent Nozzle/0.4 mm
A1165	Bent Nozzle/1.1 mm With stopper
A1166	Pad/3 mm
A1312	Pad/5 mm
A1167	Pad/7 mm
A1311	Pad/10 mm
A1486	Straight Nozzle/1.1 mm With stopper

### Pickup Power

Pad No	Name/Description	Pick-up performance
A1166	Pad/3 mm	6 gf
A1312	Pad/5 mm	40 gf
A1167	Pad/7 mm	80 gf
A1311	Pad/10 mm	120 gf

The max. pickup performance shown above slightly differs depending on the surface of the object.

### Service life of battery

Pickup repetition limit *1	Continuous pickup time *2
Approx. 30,000 pickup times (With alkaline batteries)	Approx. 15 hours

\*1. 26 mm x 26 mm QFP is pickup for 2 seconds using a 10 mm dia. pad and then released for 1 second. This cycle is repeated continuously until the QFP is no longer picked up.

\*2. This is the time period from the moment 26 mm x 26 mm QFP starts being pickup using a 10 mm dia. pad to the moment the QFP drops.



Applicable for Chip Components (With A1164 Bent Nozzle)



# HAKKO 490

SMOKE CLEANER



- Compact and noise free, making it perfect for low-noise environments and desktop use.
- Use compressed air - no power supply is necessary.

## Specifications

Model No.	490
Height	200mm
Diameter	120mm
Weight	1.5kg
Noise Level	39db
Working Pressure	4~7kgf/cm <sup>2</sup> (392~686KPa)
Air Consumption	40ℓ/min (5kgf/cm <sup>2</sup> )
Suction Flow	2.3ℓ/min (5kgf/cm <sup>2</sup> )

## Packing List

Unit	Absorption Pipe Set
------	---------------------

A second soldering iron can be attached to HAKKO 490 by purchasing an additional Absorption Pipe Set.

## Compatible Soldering Irons

HAKKO 936\*



HAKKO 937\*



HAKKO 928\*



HAKKO 931



HAKKO 933,934



HAKKO DASH



HAKKO MACH-I



HAKKO 701\*



HAKKO 702B\*

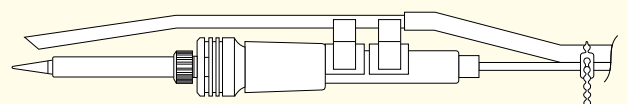
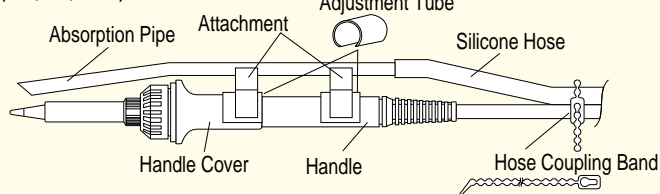


\* 900S soldering iron and desoldering guns are not compatible with HAKKO 490.

(907,908,DASH)

Adjustment Tube

(MACH-I,902,904,933,934)





# HAKKO 494

SMOKE ABSORBER

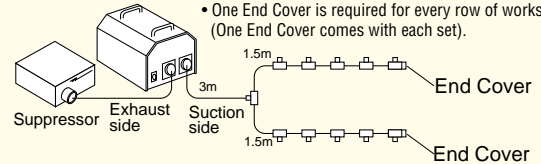


- Compact, lightweight design.
- Convenient operation—easy to install flexible ducts permit quick and simple system adaption to longer or relocated production lines.
- Highly efficient operation—fumes and flux are absorbed at their source and trapped by a double filter system.
- One HAKKO 494 system handles Max. 10 soldering irons.

### Examples of Installation

Parallel piping joint (No. B1246) permits a variety of piping layouts to be used.

- One End Cover is required for every row of workstations. (One End Cover comes with each set).



### Specifications

Model No.	494	
Frequency	50Hz	60Hz
Power Consumption	150W	200W
Static Pressure	240mm/Aq (2.3KPa)	325mm/Aq (3.2KPa)
Absorption Capacity	1.56m <sup>3</sup> /min.	1.82m <sup>3</sup> /min.
Length of Duct (Inlet)	< 20m	
Length of Duct (outlet)	< 5m	
Outer Dimensions (w/o duct)	322(W) × 300(H) × 386(D)mm	
Weight (w/o cord & duct)	18kg	

\*Above Measurement Value : Body only

### Packing List

Name	Contents
HAKKO 494	Absorption Pipe Set ..... 1
	Body ..... 1
	Duct 3m ..... 1
	Filter Case ..... 1
	Filter Cap ..... 1
	End Cover ..... 1
	Nylon Strap ..... 2
	Main Filter ..... 5
	Exhaust Duct 5m ..... 1
	Pre-filter ..... 5
	Suppressor ..... 1
	Inlet Socket for Smoke Absorber ..... 1

When ordering HAKKO 494, please specify the model number of soldering station/iron and q'ty to be used for additional parts arrangement.

### Optional Attachments

Part No.	Name/Description	Accessories
C1029	Absorption Pipe Set A for HAKKO DASH, 900M, 900L	Absorption Pipe ..... 1 Silicone Hose 1m ..... 1 Hose Coupling Band ..... 5 Metal Fitting for Absorption Pipe ..... 1
C1030	Absorption Pipe Set B for HAKKO MACH-I(920-922)	
C1031	Absorption Pipe Set C for HAKKO MACH-I(918)	
C1033	Absorption Pipe Set E for HAKKO MG(except 150W)	
C1034	Absorption Pipe Set F for HAKKO 455	
C1035	Absorption Pipe Set G for HAKKO 456	
C1086	Absorption Pipe Set H for HAKKO 902, 904	
C1125	Absorption Pipe Set Q for HAKKO 907, 908, 933, 934	Absorption Pipe ..... 1 Attachment ..... 2 Silicone Hose 1.5m ..... 1 Adjustment Tube ..... 3 Hose Coupling Band ..... 5

### Duct Set

Part No.	Part Name	Contents
C1028	Duct Set	Filter Cap ..... 1 Pre-filter ..... 5 Filter Case ..... 1 Duct 1.5m ..... 1 Nylon Strap ..... 2

# HAKKO 493 ESD SAFE

SMOKE ABSORBER



- Fully-adjustable, low-noise, high performance fan.
- Use the filter made by joining specific urethan foam with refined activated carbon having a high absorbing performance.
- The entire unit is processed with a non sloughing static dissipative, conductive material.

## Specifications

<b>Model No.</b>	<b>493</b>	
<b>Frequency</b>	50Hz	60Hz
<b>Power Consumption</b>	16W	14W
<b>Absorption Capacity (w/Filter)</b>	0.93m <sup>3</sup> /min.	1.07m <sup>3</sup> /min.
<b>Accessories</b>	Filter (3 pcs)	
<b>Outer Dimensions</b>	220(W) × 270(H) × 168(D)mm	
<b>Weight</b>	1.5kg	

## Replacement Parts

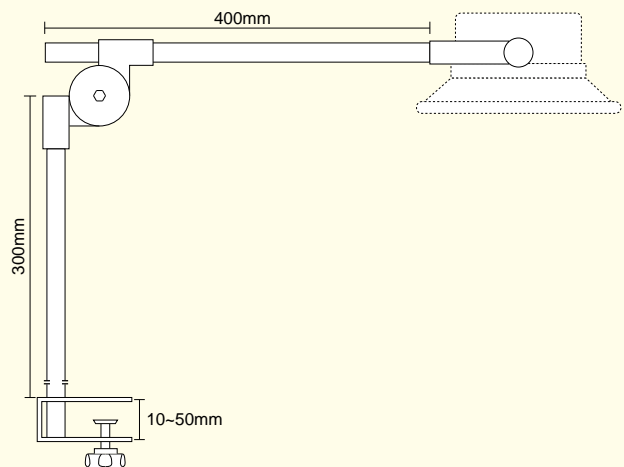
Part No.	Name/Description
A1001	Filter Set (5 pcs)

## Activated-Carbon Filter

<b>Size</b>	130 × 130 × 10mm
<b>Amount of Activated-Carbon per one filter</b>	7g
<b>Max. Absorbing weight of noxious components per one filter</b>	2g

## Optional Attachments

Part No.	Name/Description
C1023	Arm Stand/1.8kg



# HAKKO 913·914 ESD SAFE

SOLDERING IRON



- Built-in smoke absorption pipe removes noxious fumes, making soldering work easier and more comfortable.
- Can be used with Hakko soldering stations 936, 937 & 928 and all Hakko rework stations.
- ESD-safe by design.
- Can be combined with HAKKO 490 (p.48), 494 (p.49) Smoke Cleaner/Absorber and can also be connected to any factory filtering system with compatible outlet.

### Specifications

Model No.	913	914
Output Voltage	AC24V	
Power Consumption	50W	
Tip to Ground Resistance	< 2Ω	
Tip to Ground Potential	< 2mV	
Heating Element	Ceramic Heater	
Hose Diameter & Length	ø5mm × ø8mm × 2m	
Cord Length	1.2m	
Total Length	190mm	200mm
Weight(w/cord & hose)	57g	67g

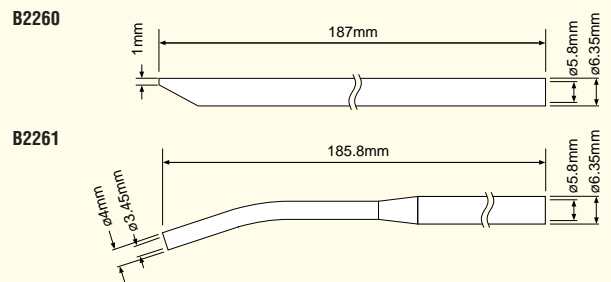
### Set up

490 or 494	+	913 or 914	+	936 937 701	928 702B
------------------	---	------------------	---	-------------------	-------------

### Optional Parts

Part No.	Name/Description
B2260	Absorption Pipe/L
B2261	Absorption Pipe/S
B2263	Absorption Hose/2m
B2264	Absorption Hose/10m
B2265	Absorption Hose/50m

Compatible with a wide selection of tip for the HAKKO 907(900M)&908(900L) Soldering Irons. Please refer to page 11.



# HAKKO 443

STATIC ELIMINATOR

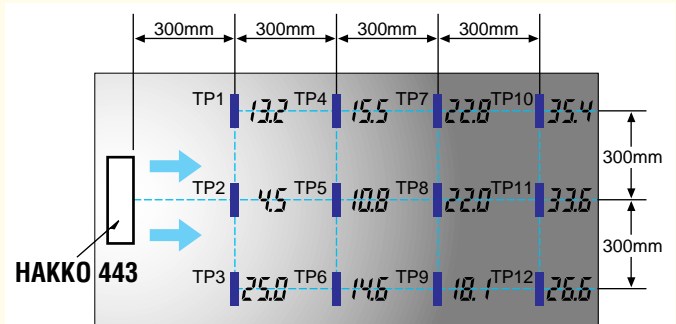


- The compact, lightweight, and upright design is well suited for use on a desktop, in the production line, and various other applications.
- Utilization of AC corona discharge provides for a good balance of positively charged ion generation and faster neutralization time that changes little over time.
- The airflow direction can be raised and lowered.
- A function for adjusting the airflow rate is provided.

Specifications	
Model No.	443
Power Consumption	10W
Output Voltage	3.5 kV AC
Ion Balance	Factory adjusted to within $\pm 10V$ (at 600mm from the front panel)
Airflow	1.2 to 2.4m <sup>3</sup> /min(variable)
Noise	40 dB (A)
Ozone Production	0.01 ppm or less (at a point 150mm from the outlet and aligned with the center of the outlet)
Maximum Allowable Ambient Temperature	50°C
Filter	Pre-Filter level
Outer Dimensions	140(W) × 190(H) × 83(D)mm
Weight(w/o cord)	1.4kg

Packing List	
Contents	Main unit ..... 1
Accessories	Cotton swabs (cleaning for electrodes) ..... 3

### Neutralization time (in sec.) from 1,000V to 10V



Airflow rate : Maximum.  
 \*Method of measurement is in accordance with ANSI-EOS/ESD-S3.1-1991.  
 \*Above data is for reference.

### Optional attachment

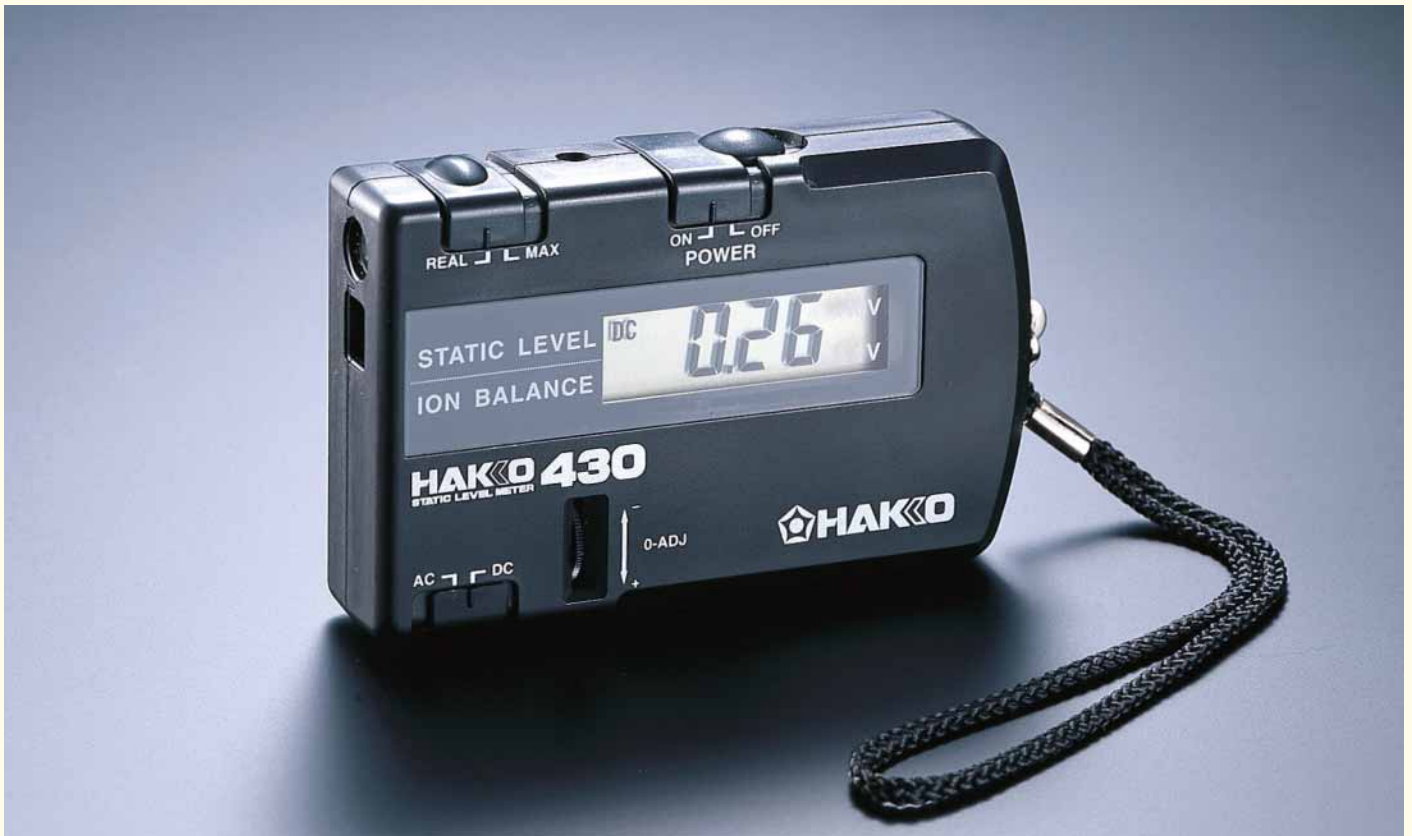
Part No.	Name/Description
C1023	Arm Stand/1.8kg





# HAKKO 430

STATIC LEVEL METER



- Three modes for measuring electric potential:
  - (1) Momentary value of static electric potential.
  - (2) Peak value of static electric potential.
  - (3) AC potential.
- Measurement of ion balance in 1-V intervals.
- High sensitivity and high precision.
- Simple adjustment of measurement distance.
- Pocket size: compact and lightweight.

Specifications		
<b>Model No.</b>	430	
<b>Electric Potential Measurement</b>	<b>Range</b>	0 to ± 19.99kV
	<b>Resolution</b>	10V
	<b>Distance</b>	50mm (between detector and object being measured)
	<b>Output</b>	1V for 10kV display, output impedance 100Ω
	<b>Measurement Distance Adjustment</b>	Red LED beam (find distance where light spot is in focus)
<b>Ion Balance Measurement</b>	<b>Range</b>	0 to ± 1,999V
	<b>Resolution</b>	1V
	<b>Distance</b>	Any (when plate is attached)
	<b>Output</b>	1V for 1kV display, output impedance 100Ω
<b>Measurement precision</b>	±5% of reading ±2 digits (in range from -10kV to +10kV)	
<b>Display</b>	<b>Over Range</b>	# □ □ □
	<b>Battery Alarm</b>	AC (DC) blinks
	<b>Polarity</b>	Indicates negative (-) polarity only
<b>Power Supply</b>	One 1.5V (size "AA") alkaline dry battery (provide approximately 10 hours of continuous use)	
<b>Operating Environment</b>	0 to 40°C , 20 to 90% RH, no dew formation	
<b>Outer Dimensions</b>	106(W) × 23(H) × 66(D)mm	
<b>Weight (w/battery)</b>	120g	

Packing List	
<b>Contents</b>	Main unit ..... 1
<b>Accessories</b>	Alkaline dry battery "AA" .....1
	Plate for measuring (Ion balance) .....1
	Grounding wire (with screw and nut) .....1
	Monitor cord .....1

# HAKKO 442B

WRIST STRAP



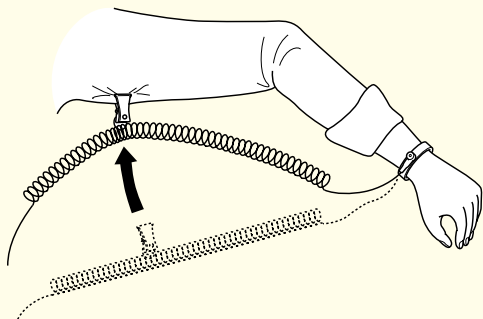
- Comfortable and lightweight.
- Standard ground termination is alligator clip & w/banana plug.
- With adjustable wrist band.
- Available in blue colour.

Specifications		
Part No.	442B-01	442B-02
Color	Blue	
Grounding Wire	1.5m	2.5m

Replacement Parts	
Part No.	Name/Description
B2760	Strap
B2758	Grounding Wire / 1.5m
B2759	Grounding Wire / 2.5m

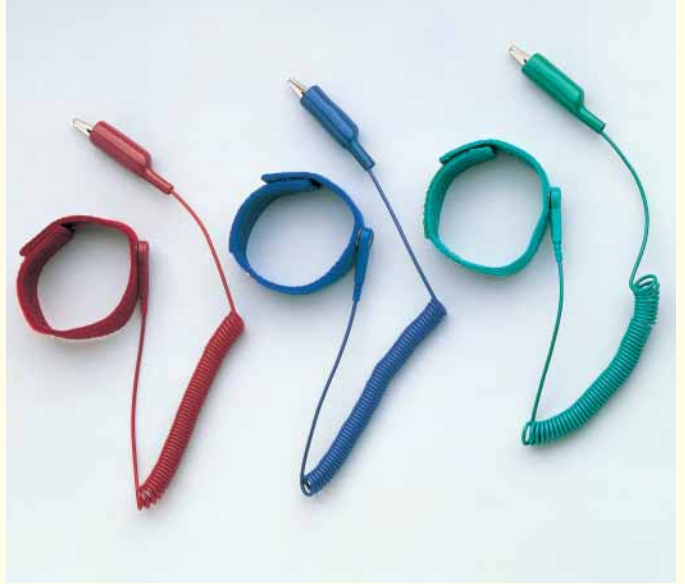
Packing List	
Name	
Wrist band .....	1
Grounding wire.....	1
Cord helper .....	1

### How to use the cord helper



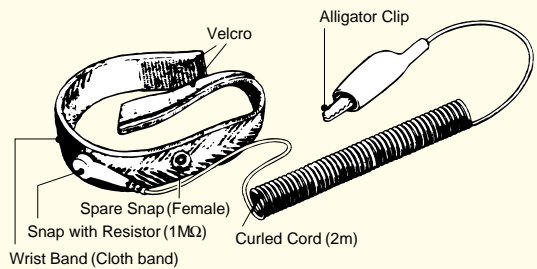
# HAKKO 496

WRIST STRAP

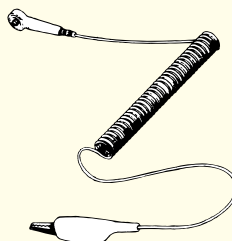
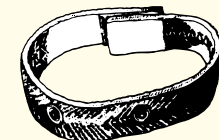


- Comfortable and lightweight.
- Available in blue, red and green color.
- 'Velcro' & 'Snap' help quick and easy adjusting.
- Standard ground termination is alligator clip.

Specifications			
Part No.	496B	496R	496G
Color	Blue	Red	Green
Grounding Wire	2m		



### Replacement Parts



### Wrist Band Only

Part No.	Color
496-1B	Blue
496-1R	Red
496-1G	Green

### Grounding Wire

Part No.	Color
496-2B	Blue
496-2R	Red
496-2G	Green

# HAKKO 498

SYSTEM TESTER



- Can be used anywhere to quickly and easily check a variety of grounding systems.
- Ensures employee's safety.
- Eliminates product defects caused by static electricity.

### Specifications

<b>Model No.</b>	<b>498</b>
<b>Power Supply</b>	9V Dry Battery
<b>Grounding Wire</b>	2.5m
<b>Operating Environment</b>	0 to 40°C, 20to 90%RH, no dew formation

LED Indication	Calibration Resistance	Buzzer
<b>LOW</b> (Red)	$R < 800K\Omega$	OFF
<b>GOOD</b> (Green)	$800K\Omega \leq R \leq 9M\Omega$	ON
<b>HIGH</b> (Red)	$R > 9M\Omega$	OFF

### Quickly and simply checks

- Wrist straps and grounding wires.
- The contact resistance between the wrist strap and the skin.

### Operation

Simply connect the grounding wire and press the pad.

If the grounding system is safe, the green 'GOOD' lamp will light up and an audible signal will be heard.



# HAKKO 153·154

LEAD FORMER



## Cutting and forming for tape-type axial components

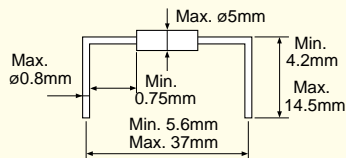
- Easy to use—simply set the taped components in place and turn the handle. Ideal for processing tape-type components.
- Improved, longer-life cutting blade for a clean, smooth cut.
- Sealed bearings for longer service life and greater durability and efficiency.
- Can be used for forming and cutting, forming only, or cutting only.

### Specifications

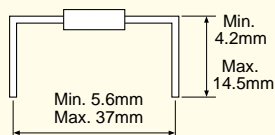
Part No.	153-1	154-1
Forming Size	5.6mm Pitch	5mm Pitch
Max. Diameter of Lead *	ø0.8mm	ø0.5mm
Compatible Taping Dimension	Outer Width of Tape	Max. 85mm
	Pitch	5mm
Outer Dimensions	125(W) × 130(H) × 110(D)mm	
Weight	2kg	

Caution: \* For annealed copper lead only.

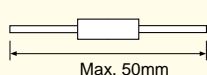
#### HAKKO 153 • Cutting & Forming



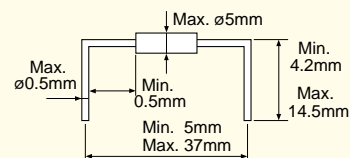
##### • Forming only



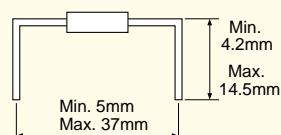
##### • Cutting only



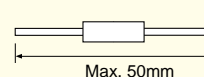
#### HAKKO 154 • Cutting & Forming



##### • Forming only



##### • Cutting only





# HAKKO 152B

MOTOR DRIVE



\*Combination with HAKKO 153.

\*The HAKKO 153 is not included with the HAKKO 152B.

## Automatic cutting and forming

- Constant-torque drive ensures uniform processing quality.
- Processes up to 36,000 pieces per hour when used with the HAKKO 153.154, up to 18,000 pieces per hour with the HAKKO 155.
- Speed control knob permits adjustment of the processing speed.

### Specifications

<b>Model No.</b>	<b>152B</b>	
<b>Rotary</b>	28rpm (50Hz), 34rpm (60Hz)	
<b>Max. Processing Capacity</b>	36,000 pcs/hr (W/HAKKO 153. 154)	18,000 pcs/hr (W/ HAKKO 155)
<b>Outer Dimensions</b>	430(W) × 150(H) × 140(D)mm	
<b>Weight(w/o cord)</b>	5.6kg	

# HAKKO 155

LEAD CUTTER



## Cutting for tape-type radial components

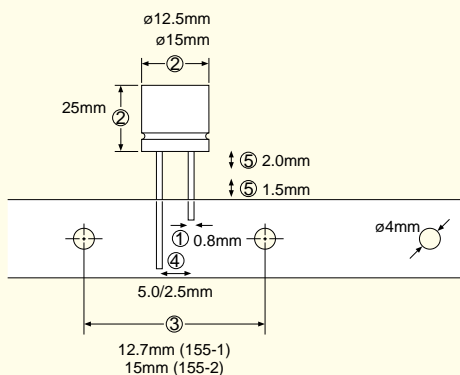
- Easy to use - simply set the taped components in place and turn the handle. The super-sharp, high quality cutting blade allows you to cut all types of tape-type radial parts, including resistors, capacitors, transistors, etc. cleanly and smoothly. Continuous operation ensures faster, more efficient processing.
- Sealed bearings make it long-lasting, durable and efficient.
- The compact design allows you to place it virtually anywhere.

### Specifications

Part No.	155-1	155-2
① Max. Diameter of Lead Wire	ø0.8mm	
② Max. Processing Part Size	ø12.5mm~25mm	ø15mm~25mm
③ Feed Hole Pitch	12.7mm	15mm
④ Lead Pitch	*2.5mm, 5.0mm	5.0mm
⑤ Min. Processing Size	1.5mm from taping end 2.0mm from part end	
Outer Dimensions	125(W) × 110(H) × 140(D)mm	
Weight	1.7kg	

\*When processing a part with a lead pitch of 2.5mm, be sure to adjust the cutting wheel. Parts with a pitch of 2.5mm can be processed only on the No.155-1.

### Cutting only



# HAKKO LEAD STRAIGHTENER

# DIP LINER



- Low-cost, high-performance tool for reforming IC and LSI leads.
- Speeds IC and LSI insertion.
- No more broken leads during IC and LSI insertion or transportation.
- Simply insert the IC case into the Dipliner chute, and the leads are protected right through circuit board insertion.
- Adjustable lead former fits all types, sizes and makes of ICs and LSIs.
- Simple mechanism for maintenance-free operation.

### Specifications

Model No.	Width of IC	Number of IC Leads
FT100	7.5mm	8,14,16,18,20
FT150	10mm	22
FT200	15mm	24,28,40,42
FT300	19mm	64



# HAKKO CUTTING TOOL



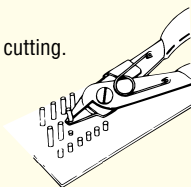
- Small, lightweight cutting tools designed for precision assembly of delicate, complex electronic work.
- Soft-touch grip ensures long and comfortable work.
- Recommend to cut copper & soft lead wires.

## Specifications

Model No.	Name	Size	Maximum cutting capability	
			Copper Wire	Iron Wire
100	Safety Nippers	125mm	1.2mm	0.9mm
101	Micro Nippers	125mm	2.0mm	1.2mm
102	Micro Nippers	100mm	1.2mm	0.8mm
103	Edge Nippers	115mm	1.0mm	
104	Micro Nippers	125mm	1.2mm	0.8mm
111	Needle Pliers	130mm		
112	Bent Pliers	130mm		

### No.100 Size;125mm

Jaws firmly grip the cut-off wire tip for faster, safer wire cutting.



### No.104 Size;125mm

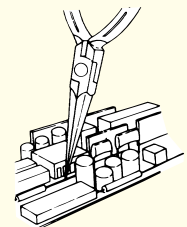


### No.101 Size;125mm



### No.111 Size;130mm

Easily picks up thin copper wires from a glass surface.

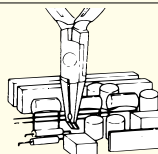


### No.102 Size;100mm



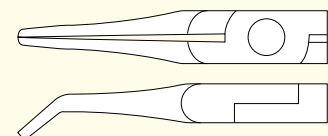
### No.103 Size;115mm

The most suitable tool for complicated cutting work. The oblique-edge pointed tip reaches deep into mounted components for quick and easy cutting of thin wires.



### No.112 Size;130mm

For a narrow part and precise work.



# HAKKO HEATING GUN



No.880B / 881



No.882

- Ideal for use in a variety of heating operations including drying paint, processing shrink films and shrink tubing, drying resin putty for sheet metal, repairing automobile urethane bumpers and applying long-length floor materials or vinyl moldings.
- Powerful heating for a wide range of work.
- Lightweight, ergonomic design for easier handling and simpler operation.

## Specifications

Model No.	880B	881	882
Power Consumption	800W	1000W	
Maximum Temperature*	400°C	450°C	
Temp. Control Function	---	---	Room Temp. ~450°C
Air Velocity	330m/min.	360m/min.	
Air Flow	0.18m <sup>3</sup> /min.	0.2m <sup>3</sup> /min.	
Outer Dimensions	245(W) × 185(H) × 70(D)mm		285(W) × 185(H) × 70(D)mm
Weight(w/o cord)	550g		700g

\*Max. Temp. is approximate one which measured at the point 10mm from the pipe.

## Compatibility Chart

The optional attachments that can be used depend on the model. Use the chart below to check for compatibility.

Part No.	Model No.	880B	881	882
A1108				
A1109		•	•	•
A1110		•	•	•
A1111		•	•	•
*A1112			•	•
*A1113		•		
*A1114		•	•	•
B1419		•	•	
B1420				•

•... Usable

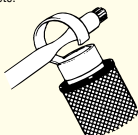
\*Indicate optional attachments that require the A1111 for use.

## Optional Parts & Operating Technique

(The temperature of No. 882 is at Temp. Control knob 6.)

### No. A1109 Nozzle/Hook Type

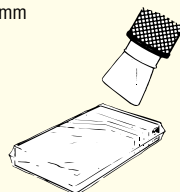
Ideal for the circumference heating of shrink tubing, plastic shafting etc.



### No. A1110 Nozzle/Spatula Type 62mm

Ideal for heating of large items like shrink film.

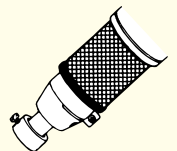
	880B	881.882
Temperature	350°C	400°C
Air Velocity	270m/min.	300m/min.



### No. A1111 Nozzle Holder

Attach this Nozzle according to drawing, and use for partial heating.

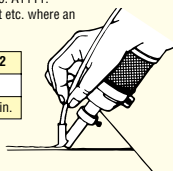
	880B	881.882
Temperature	450°C	500°C
Air Velocity	580m/min.	630m/min.



### No. A1112 Nozzle

Insert this Nozzle into No. A1111. Ideal for repairing carpet etc. where an adhesive agent is used.

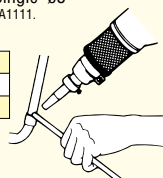
	881.882
Temperature	550°C
Air Velocity	780m/min.



### No. A1113 Nozzle/Single φ5

Insert this Nozzle into No. A1111. Ideal for partial heating.

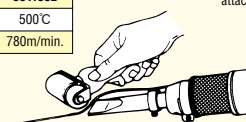
	880B
Temperature	550°C
Air Velocity	780m/min.



### No. A1114 Nozzle/Spatula Type 20mm

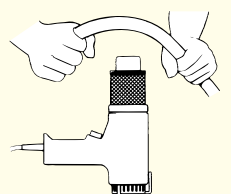
Attach this Nozzle on No. A1111. Ideal for adhesion of vinyl chloride sheet etc.

	880B	881.882
Temperature	450°C	500°C
Air Velocity	720m/min.	780m/min.



### No. B1419 Stand

For vertical operation. Remove original and attach.





# HAKKO MELTER



- Temperature control function enables use of polyamide adhesives that are ideal for use with electronic components.
- Superior thermal recovery makes the unit tough enough to handle several operations in succession.
- Anti-overheat mechanism  
–Built-in thermal fuse near the heater, preventing the temperature from rising too high.

## Specifications

<b>Model No.</b>	<b>804</b>
<b>Power Consumption</b>	100W
<b>Standard Nozzle</b>	A1083(ø2.0mm)
<b>Melting Temperature</b>	100-200°C variable
<b>Discharge Capacity</b>	900g/hour
<b>Fusing Temperature</b>	187°C
<b>Outer Dimensions</b>	215(W) × 170(H) × 45(D)mm
<b>Weight (w/o cord)</b>	350g

## Replacement Nozzles

Part No.	Name/Description	Diagram
A1088	Nozzle ø1.0mm	
A1086	Nozzle ø1.5mm	
A1083	Nozzle ø2.0mm	
A1089	Long Nozzle ø1.0mm	
A1087	Long Nozzle ø1.5mm	
A1084	Long Nozzle ø2.0mm	

## Adhesive Used

This model has been designed for stick adhesives (those hardened into the shape of a stick) only. Be sure to use adhesives recommended by Hakko.  
(No.810: UL94V-0 Recognized)

Part No.	810	811	812
<b>Name</b>	Polyamide	EVA	EVA
<b>Packing</b>	1kg	1kg	14 pcs
<b>Color</b>	Yellowish-Brown	Milky-White	
<b>Size</b>	ø11.5×220mm		
<b>Viscosity</b>	2,300 cps.(2,300mPa · s)	5,800 cps.(5,800mPa · s)	
<b>Open Time*</b>	10 seconds	40 seconds	
<b>Temperature at which adhesive is heat-resistant</b>	100°C	55°C	
<b>Suitability</b>	<b>P. W. B.</b>	●	●
	<b>Wood</b>	●	●
	<b>Paper</b>	●	●
	<b>Metal</b>	●	●
	<b>Plastic</b>	●	●
<b>Packaging</b>	in aluminum foil bag	in polyethylene bag	in blister pack

\*Adhesives marked with ● are more suited for that material than ●.

\*Application Period

## Major Applications

### When using polyamide adhesives

- Reinforce and insulate soldered parts.
- Fasten capacitors, resistors, etc.
- Fasten jumper wires.
- Perform insulation potting for terminals.
- Fasten the ends of coils.
- Fasten deflecting yokes and variable coils.

### When using EVA adhesives

- Glue paper products. (cardboard boxes, gift boxes, etc.)
- Fasten wood products.
- Fasten plastics & metals.
- Fasten textiles and shock absorbent packing.
- Reseal products during packaging.

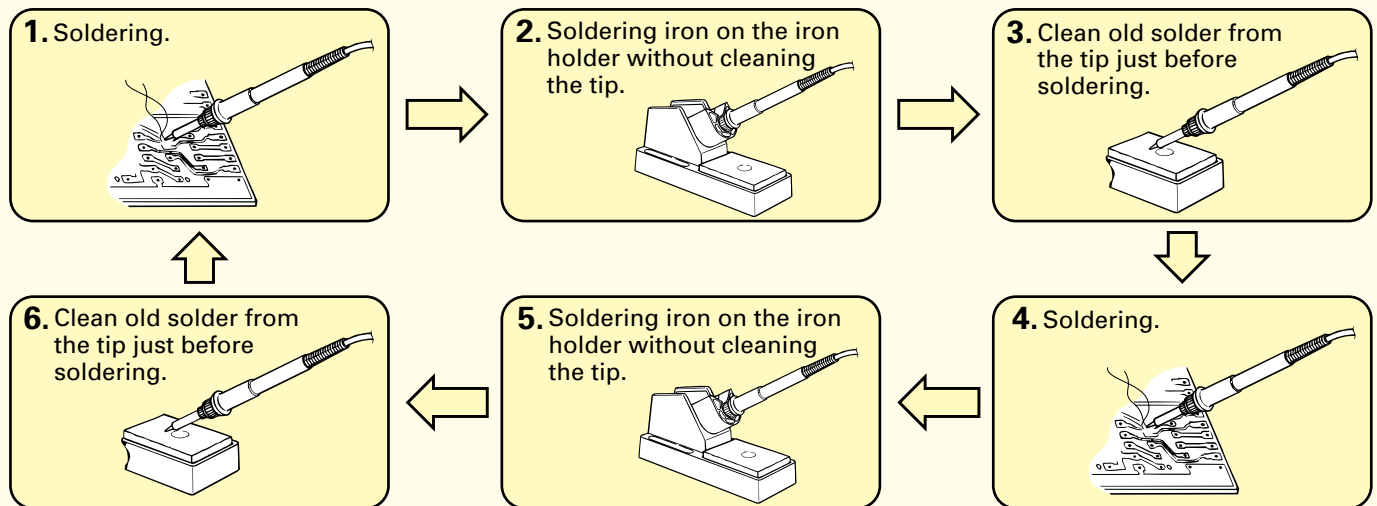
# Tip Maintenance

## • During Use

Clean old solder from the tip just before performing soldering operations. When a cleaning sponge is used, be sure to soak the sponge in water and wring it out well before using.

When soldering operations are temporarily interrupted, apply fresh solder to the tip and place the soldering iron on the soldering iron holder without cleaning the tip.

### Tip Cleaning Procedure

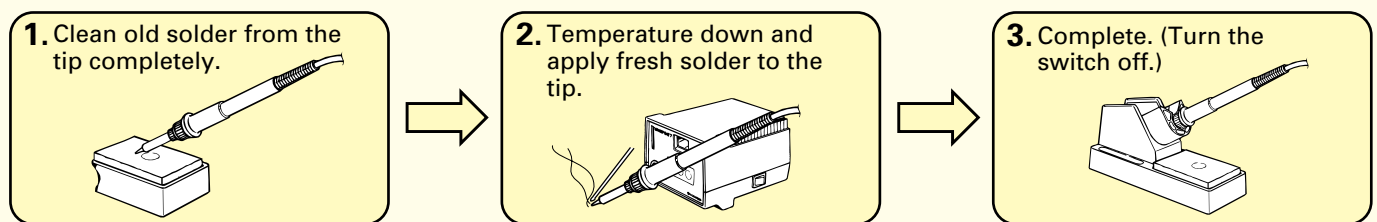


## • After Use

When soldering operations are complete, clean old solder from the tip and turn the temperature controller down (about 250°C) or, for soldering irons with no temperature controller, unplug the power cord. Then wait a short while before applying fresh solder to the tip.

When the solder is applied while the temperature of the tip is low, it forms a thick layer that prevents the tip from oxidizing.

### Tip Cleaning Procedure



## • When the Tip is Worn

When the tip end becomes black or turns red with rust, then the tip will repel the solder and be inconvenience for proper soldering. When this layer of oxidation cannot be removed with the cleaning sponge, remove it with fine sand paper (#800 to #1200) and then apply fresh solder to the tip at low temperature.

Caution: Do not apply coarse sand paper or machining to the tip.

### CAUTION

When seeking tip replacements, select only 'HAKKO' soldering iron tips that are intended for your particular model of soldering iron. If an incompatible tip or a tip made by another manufacturer is used, the original performance of the soldering iron may not be obtained. Furthermore, the heater unit may be overloaded resulting in failure.



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

**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

**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 INDUSTRIAL  
BUILDING, SINGAPORE 349518  
TEL: 6748-2277 FAX: 6744-0033  
<http://www.hakko.com.sg>  
E-mail:sales@hakko.com.sg

Please access to the following address for the other Sales affiliates.  
<http://www.hakko.com/address>

CA00028EE011  
Jun. 2003