SOLDRON®

IST - 100

HIGH FREQUENCY CURRENT SOLDERING STATION

Thank you for purchasing SOLDRON product, read the instruments before use it, keep the instruction leaflet well for your convenience

Content

Caution

Caution & Attention is defined as follows:

⚠ Caution: Abuse users may result in death or serious injury.

⚠ Attention: Abuse users may result in body injury or involve the Soldering Station

SPECIAL ANNOUNCEMENT

Heating Element & Soldering Iron are the important parts of our product and belong to the consumable, it will be easy damage the Soldering Station & the Parts also affect the actual use if you didn't use our factory's original parts! Our company does not responsible any resulting consequences.

⚠CAUTION:

The Soldering Iron is under the high temperature after plug in ! Misuse may cause the injury and the physical damage. For your own safety, be sure to comply with the following precaution:

*** Do not touch the tip and the metallic of Soldering Iron parts!**

*** Do not work in the area which near inflammable / flammable materials!**

*** Do turn off the power during taking a break or finish working!**

*** Be sure to shut off the power and make sure the Soldering Tip cool down to the indoor temperature before change the tip or the parts & maintenance or cleaning work**

⚠ATTENTION

To avoid any breakdown on Soldering Station and keep a safety working environment, please pay attention:

*** Do connect to a socket with grounded.**

*** Do use the original parts for replacement.**

*** Do not use soldering iron to do the work beyond the soldering work.**

*** Do not hit the soldering iron for remnant cleaning.**

*** Do not disassemble or change the whole set of soldering station.**

*** Do not get wet on soldering station: do not touch the soldering station with wet hands.**

*** Do not do something is not safe during soldering.**

Ventilation is needed in workplace as smoke will be formed during soldering.

Soldering Station Features

*** The Shell is made by Aluminum Alloy with All-in-One;Anodic Oxidation Treatment adopted in surface, Beautiful Designed / Durable / Static-free.**

*** The Heating Core is made by Imported Materials which guarantee the long operating life.**

*** Isolated Power Low Voltage Power Supply is used in soldering Iron, assurance on Static-Free, no leakage, non- interfering, very good in Heat Insulation and no hurt on hand for the long time usage.**

*** Isolation Transformer Power Supply adopted for the whole set of Soldering Station, completely from the power grid and the security is very high!**

Setup & Usage

1.Iron Stand

⚠Caution: The sponge is extruded objects, wet swollen. When you use a sponge, wet and then squeezed, otherwise it will damage the iron tip.

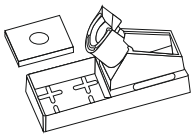
A. Small piece of clean sponge

Small piece of clean sponge wet with water and then squeezed, placed at the base of the iron frame groove.

B. Add water to the iron frame within

Not exceed an intermediate projecting portion. Small piece of sponge to absorb moisture, can be placed in on the large piece of sponge has been kept damp.

C. Finally, wet bulk cleaning sponge placed inside the base of the iron frame.



2. Connect

⚠Caution: connected or removed the soldering station, remember to turn off the power, in order to avoid damage to the soldering station.

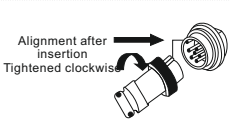
A. Iron handle wire and soldering station " EXT" interface connector (plug gap at the outlet with in the convex-bit).

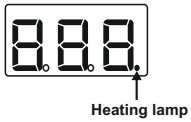
B. soldering iron handle is placed on the iron frame.

C. " IN PUT " socket connection of power to the tail of he main power line after the soldering station (Note direction).

D. the main power cord into the outlet voltage soldering station.

E. Turn the power switch. Heating when the temperature is stable, the heating lamp will be shining (factory set to 320 ˚C).





F. Press the "* " key, the display will show the current set temperature 2 seconds.

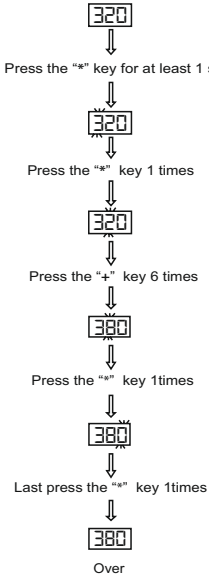
G. ground terminal antistatic wrist strap, if necessary, can be plugged directly into the back cover " ESD" interface.

⚠Warning: soldering station mains plug ground terminal reliable ground must be able to use this interface.

3.Set Temperature

⚠Caution: determine the soldering station is adjustable in temperature state (enter the correct password or the password to the original password). Set temperature, the heating element is powered downs. If pressing the " * " key for less than 1 second, the current setting temperature will be displayed for two seconds, and then display the actual temperature of the soldering iron.

Example: 320°C instead to 380°C.



Temperature setting steps:

1) press the "*" key for at least 1 second, hundreds digit will flash. Indicates the temperature of the soldering station enter the setup mode, the hundreds digit can be adjusted.

2) the need to adjust the figures to replace the hundreds digit. using the "+" or "-" keys to change the number. when the desired number is displayed, press the " * " key. ten-digit begins to flash, said ten the number can be adjusted..

3) the need to adjust the figures to replace the ten-digit.Using the "+" or "-" keys to change the number. When the desired number is displayed, press the " * " key. single digits begin to flash, indicating a bit the number can be adjusted.

4) the need to adjust the figures to replace the single digits. Using the "+" or "-" keys to change the number. when the desired number is displayed, press the " * " key At this point all of the settings value will be automatically saved the display shows the actual temperature, soldering iron begins to heat to the set temperature

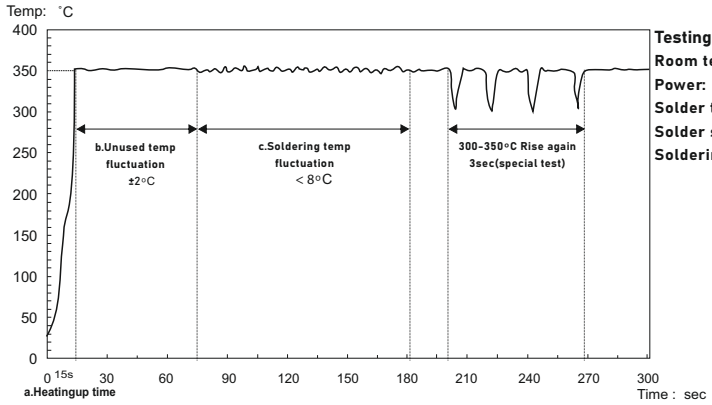
Note: If you turn off the power switch when the set temperature, the set value will not be saved. If the set temperature exceeds the setting range, the display will return to the nearest hundred shiny, if a if this happens, please re-enter the correct temperature value.

Temperature Instant Set ·····▶

For work soldering iron uninterruptible po wer continue to heat set tempe-rature quickly, optional the following method:

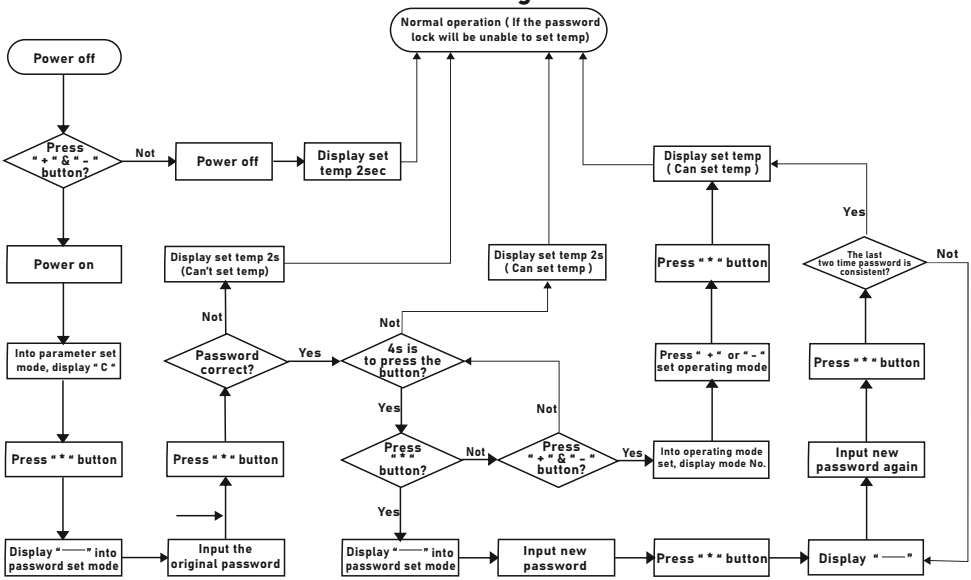
Not press the " * " key, press the " + " or " - " key, each press of the time, the temperature of the changes °C, the display shows the set temperature, the release button, the display settings screen delay temperature for about 2 seconds delay 2 seconds and then press the key change set temperature 1°C if pressed button and hold the set temperature will change as rapidly , until the desired set temperature release key.

Temperature graph



Testing condition
Room temp : 25°C
Power: 100W
Solder tips: RTS10-4C
Solder spots: 4mm
Soldering cycle: 3s / times

Parameter Settings Flowchart



Notes:after modifying password(not original one), must turn off power and turn on to limit temperature adjustment.

Parameter Setting

1. Password Settings

The original soldering station password: " 000 ", soldering station temperature setting is allowed in this state, should limit temperature adjustment, you must modify the password.

A.Enter modifying password mode

1) Turn off the power switch, and then press the " + " and " - " keys, and then turn on the power switch.

2) The display shows "C" the soldering station to enter the parameter setting mode.

B.input original password

3) Press the " * " key, the display shows --- one hundred digital shiny this soldering station has entered the password setting mode, one hundred numbers can be adjusted using the " + " and " - " keys to change the display value, set password value is the same method and the "set temperature". The three digits of the password selected by pressing the " * " key.

C.input wrong password

4) If the display shows the current setting for 2 seconds after soldering station into the normal working state, which means that the input the password is incorrect, the temperature setting will not be carried out.

D.input right password

5) If the display shows 0.!- , which indicates that the entered password is correct, about 4 seconds after soldering station into normal working condition, the temperature setting will beallowed.

E.input new password

6) When the display shows the 0.!- , press the " * " key, the display --- this indicates that the soldering station has entered a new secret code input state, press the " + " or " - " key to change the displayed value, the reference temperature setting.

F.input new password again

7) When the three-digit number is selected, press the " * " key, the screen also displays --- must now be entered again the new password, repeat the same steps.

G.limit temperature adjustment

8) If the last two enter the new password is the same success press the " * " key, then change the password, the new password will be saved.

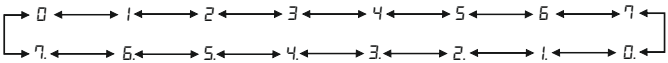
9) If the value of the last two input password, press " * " key, the display --- soldering station must re-enter the new password (reference 6-8 steps), until the same value as the last two enter the password, modify dense the code will be successful

10) Successfully change the password, you must turn off the power, then open, so that it can limit the temperature adjustment until the next time you enter the correct password the rear to change the temperature.

*** Note: password value is ten digits 0-9, or enter a password will be invalid.**

2.Operating Mode Setting

When the display shows the 0.!- pressing the " + " and " - " keys at the same time, and displays the X , this indicates that the soldering station into the operating mode settings, press " + " or " - " key will change the display value of digital change order as follows:



Operating mode is selected, press the " * " key, the selected mode will be saved automatically.
The display digital significance see "mode settings" table.
Note: "X" on behalf of the working mode digital

Several operating modes are available:

Operating mode	Applicalbe soldering iron type	Adjustable temp range	Suitable for high frequency soldering iron type	Remark
0	High-frequency soldering iron	200~420˚C	60W	
1	High-frequency soldering iron		100,150,180,230W	Sleeping and automatic shutdown function
2	High-frequency soldering iron(special large one)		100,150,180,230W	
3	High-frequency soldering iron(special large one)	50~600˚C	100,150,180,230W	
4	High-frequency soldering iron	50~420˚C	60W	
5	High-frequency soldering iron		100,150,180,230W	
6	High-frequency soldering iron	200~480˚C	60W	
7	High-frequency soldering iron		100,150,180,230W	
0.	High-frequency soldering iron	200~420˚C	60W	No sleeping and automatic shutdown function
1.	High-frequency soldering iron		100,150,180,230W	
2.	High-frequency soldering iron(special large one)		100,150,180,230W	
3.	High-frequency soldering iron(special large one)	50~600˚C	100,150,180,230W	
4.	High-frequency soldering iron	50~420˚C	60W	
5.	High-frequency soldering iron		100,150,180,230W	
6.	High-frequency soldering iron	200~480˚C	60W	
7.	High-frequency soldering iron		100,150,180,230W	

⚠ **Warning: long-term operating under high temperature (over 400˚C) can cause the heater and tip server oxidation and shorten the service life! Therefore, carefully chosen, as much as possible to use low-temperature operation.**

Sleep Mode Usage

Sleep and automatic shutdown mode has been selected, a soldering iron over 20 minutes did not use the soldering iron power supply will be reduced, and display --- this state called dormant, will fall to 200 ˚C, the temperature of the iron when soldering station is working in a dormant state (if the set temp is greater than or equal to 200 ˚C) or 50˚C (If the working temp is below 200 ˚C), and return to work to maintain this temp until the soldering station. There are three ways to wake up sleeping:

1. Turn off the welding power switch, and then turn on the power switch.

2.Soldering station any key.

3.Pick up the iron handle.

Soldering station more than 40 minutes into hibernation wake, soldering iron power supply will be automatically cut off, the display will also display.

Temperature Calibrating

Whenever you replace a soldering iron, heating core or tip must recalibrate the temperature of the iron.

Recalibrate iron temp method: use a soldering iron the temp tester correction, this method is more accurate.

1.Set soldering station at a certain temp value.

2.Until the temperature stable, temperature tester to measure the tip temp, and write down the readings.

3.Press and hold the " * " key, and then press the " + " and " - " keys, soldering station to enter temp calibration mode.

4.Then the hundreds digit display flashes, press the " + " or " - " key numerical choice, press the " * " key digital select input temp tester after pressing the " * " key readings, enter soldering station temp correction.

5.Input calibration temp correction of the temp, if the input value is incorrect, the soldering station there will be a correction of the protection function: press the " * " key input correction temp the display temp soldering station back to the nearest hundreds digit shiny, please re-enter the correct value.

6. If the temperature there is error, repeat the correction.

*** Irecommend using the SOLDRON SL-300 temperature meter to measure the tempeature o the iron tip**

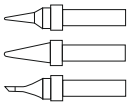
*** Should the password lock, you can not correct the temp, you must enter the correct password before proceeding.**

Solder Tips Selection

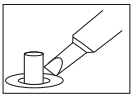
1. Choose a solder tip for maximum contact area, which can produce the most effective heat transfer, so that the operator can soldering high quality solder points quickly.

2.Choose a good path to transfer heat to the solder tip, the shorter length can get more precise control of the tempe-rature, and can protect of the soldering station, but weld dense circuit board, you need to use a longer or a certain angle soldering iron.

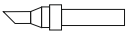
Soldering small CHIP (flaky) component → I, B, 1C



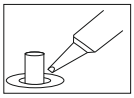
Appropriate



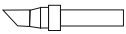
Soldering QFP, SOP chip → 3C



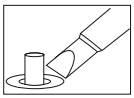
Too small



Soldering ground lug,shield → 4C



Too large



Solder Tips Usage

*Tips Temperature

The high temperature will weaken the iron tip. So, as far as possible choose the low temperature This soldering station back temperature quickly , even if the use of a lower temperature can be sufficiently welded to the tempe rature, and can protect sensitive components.

*Cleaning

Should regularly clean sponge to clean iron tip. after solder tip residual flux derivative health oxide and carbide damage iron head, caused by poor soldering, or make iron head the thermal conductivity of hypothyroidism. continuously for a long time using a soldering iron, a weekly disassemble the iron tip oxide removal to prevent Iron head damage and affect the soldering temperature.

*When not using

Not using a soldering iron, you can not let the soldering iron for a long time at a high temp state, will iron tip flux into oxide, resulting in the thermal conductivity of the iron tip function is greatly diminished.

*After using

After using, you should clean up tip coated with a new layer of tin to prevent oxidation of the iron tip does not stick tin.

Solder Tips Maintenance

Caution: don't use knife to clear black oxide

1) Set the temperature is 250 ˚C.
2) Until the temperature stable, using a clean sponge to clean up the iron tip ans check the condition of the iron tip
3) If the tip tinned portion contains black oxide, it can be plated on the new tin layer, and then clean with a clean sponge. So repeat the cleanup. until thoroughly to remove oxides far and then coated with a new layer of tin
4) If the iron tip deformation of serious corrosion must be replaced.

When the tin is not on the iron tips, there are five kinds of situations :

1) Not covered with new solder iron tip soldering iron idle,
2) Iron tip in the high-temperaure state.
3) Is not fully melted during soldering.
4) Scrub dry or clean sponge iron tip (should use the factory to provide clean cleaning sponge).
5) Flux or plating impurities, the soldering surface not clean.

How to recover

1) After soldering iron cooling, remove the tip.
2) With a # 200 emery paper to remove the dirt and oxides of the tin plating layer on the iron tip.
3) Iron tip back together, wrapped containing soldron solder wire new surface exposed iron tip tinned layer, then turn on the power of the soldering station.

Note: proper routine maintenance can effectively prevent iron tip on the tin.

prolong the iron tips life

1) After each use fresh solder infiltration, which can prevent the oxidation of the tip and extend so useful life.
2) In the case that can be solder to use a lower temperature, a low temperature can be reduced iron tip the oxidation, which can extend the service life of the iron tip.
3) Must only use the thin tip, fine tip coating blunt the iron tip coating durability.
4) Do not let the iron tip by a large impact, iron tip deformation causes the coating rupture, thereby shorten life.
5) Try to use less active soldron flux, because high levels will accelerate the iron tipplating layer corrosion.
6) In the case of using a soldering iron, try to turn off the power to extend the life of soldering station.
7) Do not apply pressure to the iron tip, because the greater the pressure is not equal to the heat and fast, should make solder melts to form a heat transfer between the tip of the solder joints.

Error Code Settlement

When the soldering station problem occurs, will display an error code. If the following code, refer to the "Troubleshooting" content processing.

S-E Sensors error

If any part of the sensor or sensor circuit fails, then the display shows S-E, the input power of the iron will be cut off.

Attention when temperature display flashes

If the power supply input soldering iron, the tip temperature is lower than the set temperature above 50 ˚C, display the temperature will be flashing, should attract the user's attention.

H-E Heating core error

Soldering station soldering iron heater can not input power, the display the H-E , this indicates heating core may be damaged.

Soldering Station Troubleshooting

Before servicing

Warning: * Before servicing should turn off the power soldering station, otherwise electric shock may occur.
*** Soldering station is damaged, please manufacturers or maintenance service agents maintenance to avoid bodily harm or damage to the parts of the soldering station.**

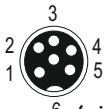
Fault 1 : Soldering station can't operate.

Check 1 . fuse blown?
*** Make sure the fuse blown reason, the replacement of a new fuse of the same specification.**
a. Soldering iron internal short circuit?
b. Ground wire is touching the heating core lead solder joints?
c. Heating core lead short-circuited?
Check 2. wires are intact?
*** Replacement power cord.**

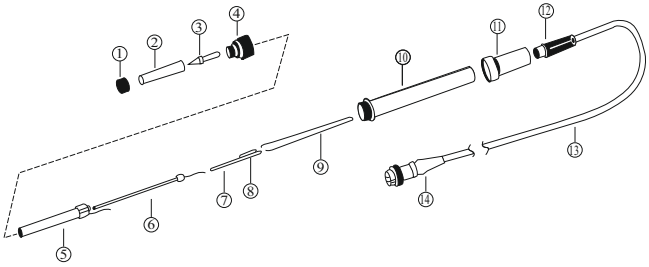
Fault 2: Soldering iron not to heat up, sensor or heating core displays error.	* Reconnect how to check damage for iron cord
Fault 4: Tip dip on solder.	Check 5. tip temperature is too high? * Re-set the appropriate temperature. Check 6. iron tip is clean? * See "iron tip".
Fault 5: Tip temperature is too low.	Check 7. iron tip derivatives oxide? * See "iron tip maintenance". Check 8. corrected temperature soldering iron?
Fault 6: The display shows H-E .	Check 9. the soldering iron line is damaged? * Please refer to "How to check the soldering iron ass'y wire breakage. Check 10. the heating core is damaged ? * Please refer to "How to check the heater and sensor damage". Check 11. soldering iron equipped with iron tip? * Fitted with an appropriate tip.
Fault 7: Temperature display " flashing".	Check 12. Soldering iron line is broken? * Please refer to "How to check the soldering iron ass'y wire breakage. Check 13. soldering point is too large? * Replace it with a higher power soldering station or continue to use.
Fault 8 : can not set the temperature.	Check 14. Lock password? *Enter the correct password to unlock. If you don't know the password : (⚠ Note! apart welded front panel of professionals to operate) (See soldering station parts diagram)' plug the power cord, turn on the power switch, press board on the "Reset" button (see soldering station parts diagram) , set a password will be restored to its original the value " 000 ". Reinstall in reverse order soldering station.

Soldering Iron Troubleshooting

The plug pin bits arranged

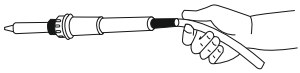


soldering iron block diagram



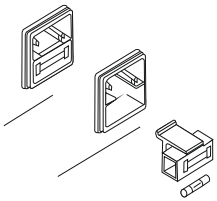
How to check the damage to the iron cord

1) Open soldering station power, the temp is set to the highest value. the various parts of the wire in the flatiron shaking or winding, If you find the display of point-like display flashes, you should replace the wires.
Note: To distinguish is to reach the set temp shiny or break shiny.



Note: Replace fuse

1) Pull out the plug from back power socket
2) pull out the fuse cover plate.
3) Take out the burn fuse and replace the spare fuse and cover back
(1 pc of spare fuse in the fuse holder)



Product Specifications

Soldering Station Host

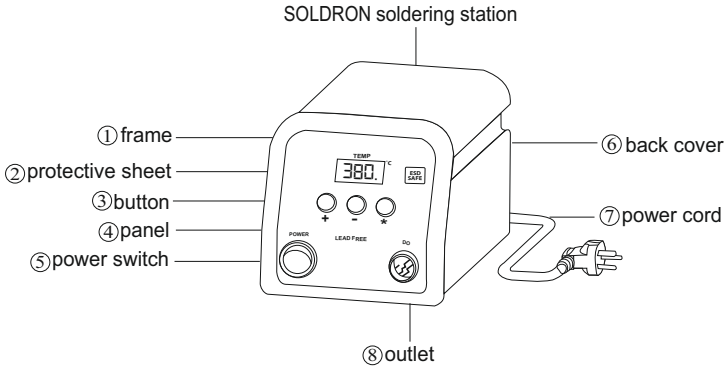
Power	100W	150W	180W	230W
Output voltage	AC36V,380KHZ			
Temperature range	50~600 ˚C (depending on the mode setting)			
Maximum ambient temperature	42 ˚C			
Temperature stability	2 ˚C (in still air, no load)			
Housing Material	Aluminum Alloy			
Size	110* 105* 155mm	110* 105* 175mm		
Net weight	2.5KG	2.6KG	2.8KG	3.2KG

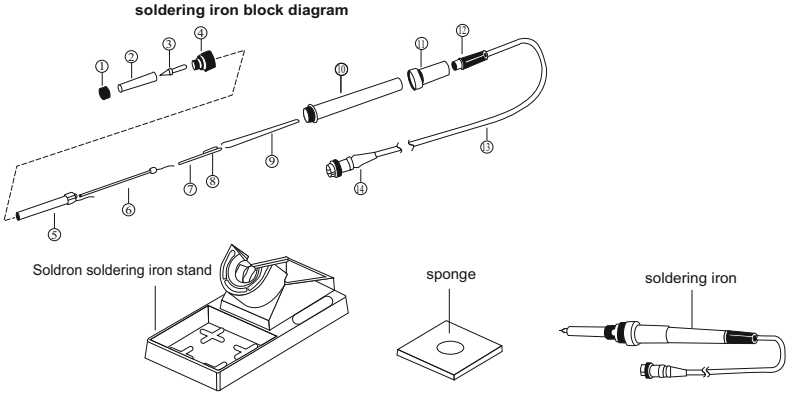
Soldering Iron

Power consumption	100W	150W	180W	230W
Tip-to- ground resistance	<2Ω			
Tip-to- ground voltage	<2mV			
Tip-charged body IR	<5MΩ			
Electromagnetic heating core	Electromagnetic heating core			
Iron cord	1.2m		1.8m	
Handle length	20cm			
Weight	100g		155g	

*Tip temperature based on the 191/192 thermometer measurements.

*Specifications and design are subject to change without notice.





Special Statement

Supplies of the product are the special accessories (like: heater, soldering iron first class etc.), due to the use of high-frequency electromagnetic Induction heating, there are strict requirements the heater (inductor coil), and the parameters of the solder tip, if you use the other available products in the market, will result in the soldering station host of serious damage or up to less than the actual output power. No responsible for our company which caused by the resulting consequences! To avoid causing any unnecessary losses to your company, please do use the genuine parts! Please contact our sales dealer for all the parts,
thank you!
Calibration certificate should be done individuals

Soldering station host

No.	Part No.	Part Name.	Specification				Description
			100W	150W	180W	230W	
1	SS001	surface box	115*108*9mm				ABS material
2	SS002	protective sheet	25*50*1.5mm				tempered (Acrylic) glass
3	SS003	button	§11.5*8mm				ABS material
4	SS004	panel	110*105*1mm				metal materials
5	SS005	power switch	§22mm,6A250VAC				silver alloy contacts
6	SS006	back cover	105*110*1mm				metal materials
7	SS007	power cord	1.5m,6A/250V				3core
8	SS008	aviation socket	GX16-6P(B)				metal material
9	SS009	cooling fan	No		DC24V,0.1A		dimensions, 50 *50* 12mm
10	SS010	power transformer	RT-100	RT-150	RT-180	RT-230	high quality ring
11	SS011	control board	HF-005	HF-005	HF-006	HF-006	glass plate
12	SS012	drive circuit board	HF-001	HF-003	HF-004	HF-007	glass plate
13	SS013	grounded Block	§ 8*4MM				alloy plus lamp materials
14	SS014	power outlet	10A250VAC				copper temp materials
15	SS015	fuse	2A/250V	2.5A/250V	2.5A/250V	3A/250V	§ 5*20mm, slow blow type
16	SS016	Electromagnetic iron	SI-100	SI-150	SI-180	SI-230	electromagnetic heating

Soldering Iron

No.	Part No.	Part Name.	Specification				Description
			SI-100	SI-150	SI-180	SI-230	
1	SI001	nut	M11			M13	stainless steel
2	SI002	tip sheath	§ 8.5*43mm			§ 12*46mm	stainless steel
3	SI003	soldering tip	§ 4*16.5mm			§ 6*18mm	copper plus coating
4	SI004	hedging	M15*22mm			M16*28mm	high temp materials
5	SI005	heater	HT-100	HT-150	HT-180	HT-230	silver wire wound
6	SI006	sensor	§ 2*85mm			§ 1.3*85mm	K-type thermocouple
7	SI007	board	10*50mm			6*58mm	fiberglass board
8	SI008	vibration switch	SW-18010P				temperature 100˚C
9	SI009	hook spring	§ 0.8*86mm			No	stainless steel
10	SI010	handle	§ 20*110mm			§ 20*126mm	ABSmaterial
11	SI011	handle sheath	§ 22*40mm			§ 22*45mm	Silica gel
12	SI012	wire sheath	§ 10*40mm			§ 10*35mm	rubber
13	SI013	assembled wire	1.2m			1.8m	anti-scald silicone line
14	SI014	air plugs	GX16-6				metal

Packing List

No.	Part Name.	Quantity	Description
1	Soldron soldering station	1set	aluminum case
2	Soldron soldering iron	1pcs	high-frequency heating
3	Soldron iron frame	1pcs	cast aluminum
4	cleaning sponge	1pcs	high temperature
5	Manual (including warranty card)	1pcs	128coated paper

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