

MS5000 Solder Cleaner

MS5000 is a cleaner for solder of the board; furthermore, it can be used for easy reworking.



MS5000 Solder Cleaner

- It can be solder cleaning, under the temperature controlled. **(No-heat damaged)**
- Cleaning process to the land will be always gently **(No need of special worker)**
- Processing of removed scum solder is easy. **(Very easy operation)**
- The vacuum bit can be cleaning automatically. **(Exactly operation)**
- The XY table has air lock system **(Almighty to the board hold)**
- It is also easy rework system. **(Remove and Soldering is possible)**

Outline of Operation

MS5000 is solder cleaner by vacuum suction with hot air heating. The hot air heating system is already we have the technical know-how by the rework system.

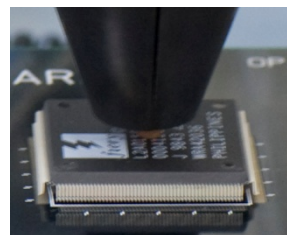


The removal of solder on the land on a board is very difficult. It is because; it must be high temperature operation such as 240 degrees or more. It probably depends on the special worker with technical skilled. However, If MS5000 is used; probably anyone could be removal of solder with quickly and correctly. The reason could check by the following reports.

MS5000 is the system for removal of solder; however, it is used as easy rework system by the function of high efficient temperature controller. The XY table of MS5000 will be suitable also for reworking.



Cleaning



Reworking

The vacuum bit for solder remove can be chosen according to the conditions of the board, such as a large size BGA and or small size CSP. When reworking, the vacuum bit is for pick-up of the component, such as QFP.



Guide pin type board holder



Clip type board holder

The board holder has two kinds; they are by the guide pin type and by the clip type. And they can be locked on the table with free position.

Top Heater

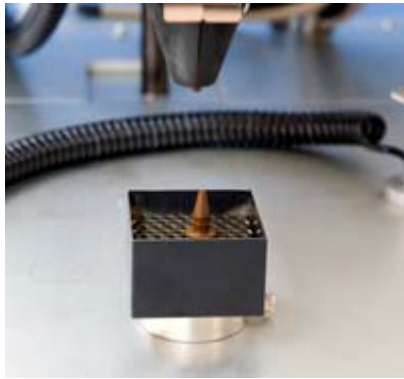


Top heater unit



Vacuum rod

The top heater are consisted of 4 cartridge type heater, it has an actual result with rework system. The central rod is for solder remove, the unit can open and close, thus, maintenance is easy. The bit for cleaning of top of the vacuum rod is by special high temperature resin. The bit will be touched with gently on the land of the board, and also flatly pressure. Therefore, the land will be no- accident. It is even if who operates it.



Bottom Heater



Nozzles Hood for top heater

The bottom heater is by hot air type, and it is 50 x 50mm size, and also it has a under support pin. The pin can be set with position free. The top side heating hood can be change. It is changed for the optimal size to the package, when reworking.

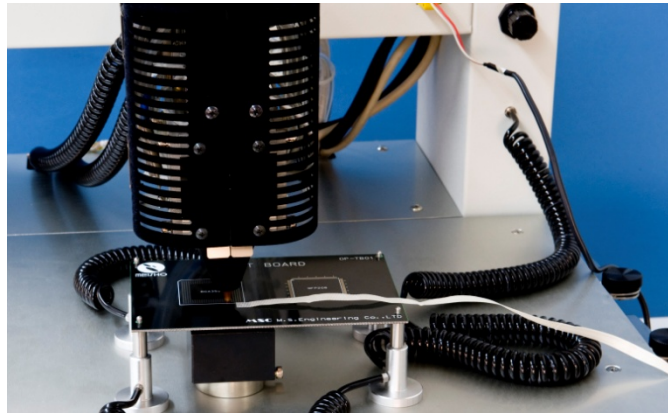
Operation for Cleaning.

When solder cleaning, it is sucked up after melting the solder on the land. The heating control for melting solder is set up on the controller with touched panel. MS5000 has three kinds of heating style as following:

1. Operation temperature is set up by the controller.
2. Operation temperature is controlled by a sensor.
3. Operation temperature is controlled by two positions sensor.

In the case of No.1: The heater temperature of the machine is controlled, thus beforehand, you have to check the temperature to the land. then the temperature of the land does not go up any more.

In the case of No.2: the temperature is controlled by the sensor temperature. in this case, you have to set up the actual temperature of your required. When the sensor is on the land, it will be for top heater control, thus the bottom heater must be set up by on the controller.



Controlled by a sensor

In the case of No.3: The temperature is controlled by the sensors. in this case, you have to set up the actual temperature of your required for each. This is closed control system, you have to set up only actual temperature for solder cleaning and or reworking.



Controller-



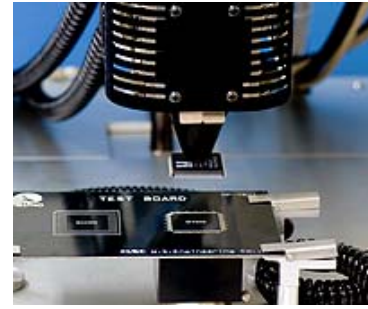
Operation Knob

The heating operation is by operation knob, it is relation moves with the nozzle head. And the range of moves for the nozzle head can be limited by the range adjuster of the machine. Thus, operator will be easy operation.

Operation for reworking.:

The operation for reworking is almost same as cleaning; however, the vacuum bit sucks up not solder but the package. In that case, the vacuum ring should be attached to the top of the vacuum bit. It should be change to the size of the package.

The vacuum bit may also be able to be picking up if it is a small and light weight package. The nozzle hood should be change of the optimal size to the package. However, probably, it will also be possible to move and heat by the operation knob, even if it is somewhat small. The temperature control in the case of heating is same as the case of cleaning.



QFP Pick-up

Auto bit Cleaning:



Cleaning position for the bit



Auto cleaning of the bit

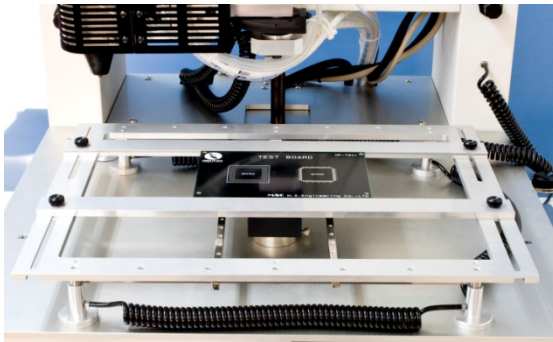
The bit for solder rod will be easy to get it blocked by sucks up solder. Therefore, it has to clean in sometimes. MS5000 has a function of auto cleaning of the Vacuum bit. The heater head is removed to the cleaning position. Then the bit will be automatically cleaning.

Accessories

1. Nozzle for circular: x 1
2. Nozzle for square x 1
3. Vacuum bit x 1 (inner size 1.5Φmm /outside 3.5Φmm)
4. Vacuum Pad x 3 (6.4Φmm)
5. Clip type board holder jig x 4
6. Guide pin type board holder jig x 4

Options

1. XY Table
2. CCD Camera with LCD Monitor
3. Pedal Switch (Linkage with the vacuum Lever)
4. Nozzles (for custom made)
5. Vacuum Bit (for custom made)



XY Table



CCD Camera & Monitor

Specification:

Item	Spec	Description
Board Size	250 x 330mm Max	
Parts Size	5 ~ 50mm□	
Top Heating	1560VA by Hot Air	000~600°C
Bottom heater	520VA by Hot Air	000~600°C
Time Range		000~999 sec
Temperature Controller	Logic Control	P I D
Temperature Measuring	2 C H	C A -K
Profile Operation	Manual	Heater Control
	Auto Control by 1CH	Closed Control by actual data
	Auto Control by 2CH	Closed Control by actual data
Top Nozzle	5~50mm	Custom made possible
Bottom Nozzle	50mm□	Custom made possible
Cleaning Bit	1.5 and 3..5Φmm(out side)	1.0/2.0/3.0mm by option
Vacuum Pad	6.4Φmm	2.5/3.9/8.3mmΦ by option
Board Holder Jig	Guide pin 2.5mmΦ	Custom made possible
Board Holder Jig	Clip Type	
Filter	SUS net	Solder filter
Body size	500W x 650D x 510H mm	Without monitor
Weight	30K g approx.	Without monitor
Power	AC220V~240V 2500VA	Single phase
エア	0.5Mpa ~0.8Mpa	Dry and Clean, required.

Option:

Item	Spec	Description
Nozzle Hood	MS5000-NH0000	0000 is by size
Vacuum Bit	MS5000-VC1.0/1.5/3.9/8.3	4 types
Top Heater	MS5000-00	240V/390W
Bottom heater	MS5000-05	240V/260W
Top Sensor	MS5000-11	CA
Bottom Sensor	MS5000-14	CA
Filter for solder	MS5000-FL	SUS ウール
Vacuum Pad	MS5000-PD2.5/3.9/6.4/8.3	4 types

The specification are subject to change without notice.