

## SURFACE MOUNT EQUIPMENT FOR PROTOTYPES AND SMALL PRODUCTION



- New improved model, added a prism for direct viewing of components being placed, eliminated the angle distortion.
- Suitable for prototype and small quantity production.
- Can be used for QFP, PLCC, BGA, SMT resistors, capacitors, etc.
- Can be used to work on pitches as fine as 0.5mm.
- Max. Working area 370mmx300mm.
- Max. X direction movement 500mm.
- Max. Y direction movement 300mm.
- Max. Z direction movement 10m, 360 degree rotation.



- Electrical vacuum pick tool for easy and accurate operation.
- Foot vacuum switch.
- No computer or software programming needed.
- Optional additional reel frames. It comes with one reel frame. The platform has room for six frames. Each frame can mount five reel feeders.
- Color microscope CCD video camera.
- Shipping weight: 100 lb.
- One-year manufacture's warranty.

**Note: the manual pick and place machine is an entry level SMT device. Its ability is limited.**

**Video monitor or TV not included.**

**Operation:** Pull the little handle underneath the header in X or Y direction movements. The

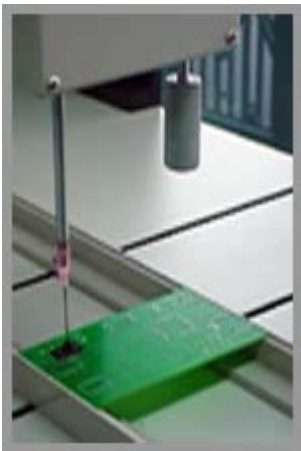
handle can also be turned around and pulled down. First move the header to the reel feeder, or parts on the platform board, pull down the handle. The part will be sucked on the vacuum tool. Then move the header anywhere on the PCB board, aiming it from several directions while pulling the handle downwards. As soon as the component touches the PCB board, it will be released automatically. Gently release the handle to its original position. Repeat this process for other parts. Chips or other loose parts can just be arranged on the platform areas which are not occupied by the PCB board.

The manual pick and place machine is designed for prototype or low volume PCB assembling. Its movement is total manually controlled by an operator. It can move in x,y,z and  $\theta$  directions. Placement speed and accuracy are dependent on the operator's skill.

The machine has a built in vacuum pump, the same vacuum pump as in the electrical vacuum pen which is sold separately. The vacuum pump has two outlets, one is used by the pick and place vacuum header, the other is connected to a vacuum pen which can be used to pick up parts by hand. The two air outlets can be combined into one by using a T connector to increase the vacuum strength. At most situations, that is not necessary.

The color CCD video camera has a 6X magnifications to help viewing the components clearly. The video camera does not directly help the placing process as it is mounted in an angle, hence the component is not viewed in a direct up-down direction.

The vacuum needle pipe is connected to a movement sensor inside the pick and place header. When the vacuum pipe moves upwards, it trigs the sensor and switches on or off the vacuum pump. The part is picked up or released accordingly.







**AGATE & AGATE MARKETING RESOURCES (I) PVT LTD**  
327 , SIDDHARTH TOWERS, 12/3B, KOTHRUD, PUNE 411038, INDIA  
Tel : 91 20 25469864 / 65 Fax : 91 20 25469866  
Email : [agate@smt-india.com](mailto:agate@smt-india.com)