

## Company History :

The History of our company :

In 2010, our company was founded in Hangzhou.

In 2012, the scale was expanded , Shenzhen branch was established;

In 2014, the scale was expanded again , Guangzhou branch was established;

In 2015, our company established Shandong branch to further development in North China, and our business covered the whole country.

In 2016, our business expanded to the world, our products received unanimous praise in Europe and the United States ;

In 2017, our company established a joint SMT laboratory with Hangzhou Dianzi University;

In 2018 , our company owned more than 50 patents of pick and place machine .A number of products obtained CE and ISO 9000 certificate.

In 2019, our company passed the certification of National High-tech Enterprise.

In 2020, our company finished the joint-stock reform.



## Company and office address:

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# TRONSTOL

## 2020 Tronstol Pick and place machine

One Stop SMT Equipments Manufacturer and Provider

## Brochure



Model name **TRONSTOL A1**

## Scope of domestic and foreign trade:

After years of development, HangZhou Tronstol technology Co., Ltd has expanded its business scope to all over the world. In addition to the Chinese market, there are other overseas agents around the world. More offices will be established in the future, and more agents will join our team...



## Qualification honor and patent:

ISO9001/CE Certificate



Outstanding Enterprise in Innovation and Entrepreneurship Competition



More than 50 independent patents



## Tronstol A1 Overview of Pick and place machine:

Tronstol A1 is the latest high-precision laser flying mounter developed by our company, which can stably and efficiently mount high-precision components such as 0201 and BGA. Based on the Linux system platform, A1 combines the advantages of CAN hardware and LIN communication protocol, and systematically connects nearly 80 sub-devices of the whole machine with 5 modules, providing you with industrial-grade performance and stability.

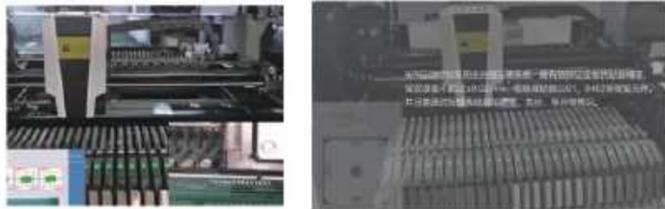


## Tronstol A1 Basic parameter table:

|                  |  |  |
|------------------|--|--|
| Product          |  |  |
|                  | Product model  |  |
| Placement system | Number of Head with Vision enabled   | 4  |
|                  | Positioning accuracy   | ±0.02mm  |
|                  | Rotation   | ±180°  |
|                  | Placement Rate   | High-speed placement mode:6000pcs/h<br>Sensitive placement mode:2500pcs/h                      |
|                  | Smallest Component size  | 0201   |
|                  | Largest Component size   | 35*35mm  |
|                  | Component Height Maximum   | 8mm  |
| Feeding system   | Placement Area   | 280mm*1500mm   |
|                  | Tape width of electric feeder  | 8mm 12mm 16mm 24mm   |
|                  | Maximum number of electric feeders   | 58(All 8mm)  |
|                  | Maximum number vibration feeders   | 5  |
|                  | Customized feed bank   | 94(Only for IC)  |
| Visual system    | Visual system  | Laser flight vision camera + Fixed camera<br>area array light source + Dark field light source |
|                  | Number of CHIP camera  | Two line laser flying camera + Two line Mark camera  |
|                  | Fixed number of camera   | One line IC camera   |
| Control System   | Operating software   | Independent research and development   |
|                  | Programmatically   | Coordinate file import/Machine manual programming  |
| Basic parameters | Machine size   | Length 980 * width 760 * height1200mm(With Working Table)                                      |
|                  | Machine voltage  | 110v/220v  |
|                  | Machine power  | 150w   |
|                  | Machine weight   | 98kg   |

**Tronstol A1 Hardware features:**

**Real flying shot, invisible identification**



Flying 3D Laser Identification and Correction Technology Grating Full Feedback System

Using Flying 3D Laser Identification and Correction Technology, the component is scanned and recognized as picked up, and the mounting coordinate error is calibrated in real time.

The identification and calibration have been completed before the CHIP components are mounted, which is the real flying shot with invisible identification process.



Screen recording and screenshot function, after-sale feedback makes communication smoothly.



The 3D graphical interface intuitively reflects the machine data performance, making the operation easier.

**Precision-0201 High Speed-6000cph**

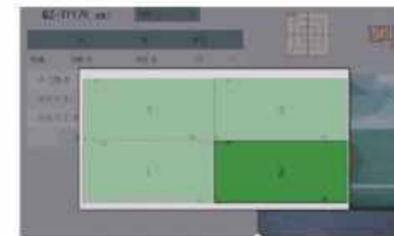


0402/0201 the perfect partner for precise placement of components



With independent feed bank, the line change can be completed in 1 minute

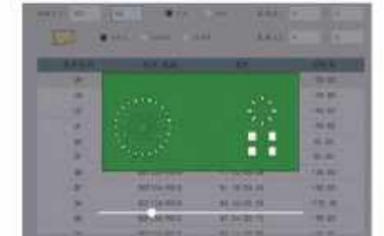
The software system can provide preview function from file import to final mounting, which makes users directly verify the accuracy of data during the editing process and improve the programming efficiency



Imposition Preview



Mounting Preview



Import Preview

**Tronstol A1 Software features:**



Independently developed software system based on Linux platform, with industrial-grade full touch screen, provides you a unique sensory experience. The software has a number of built-in functions and a user-friendly design, making it easier and faster for you to use. The software functions can also be customized for your individual needs.



The automatic following intelligent track can stay at any position and optimize the mounting schedule according to the actual situation.



The automatic feeder stack calibration can greatly save manual calibration time.

**Tronstol A1 Diversified customization:**

**Why not try A1 customized to meet your diversified needs?**



## Tronstol 3V Overview:

Tronstol 3V features dual head, 44 feeder slots, vision system and flexible positioning system, which is suitable for prototyping, small-medium batch production with stable performance and affordable price.

**TRONSTOL**



## Tronstol 3V Basic parameter table:

| Product                | Tronstol 3V (Standard)  | Tronstol 3V (Advanced)  |
|------------------------|---|---|
| Model                  | Tronstol 3V (Standard)  | Tronstol 3V (Advanced)  |
| Number Of Heads        | 2   | 2   |
| Placement Accuracy     | ±0.02mm   | ±0.02mm   |
| Rotation               | ±180°   | ±180°   |
| Mounting speed         | 3500pcs/h(Close vision) 2500pcs/h(Open vision)                            | 3500pcs/h(Close vision) 2500pcs/h(Open vision)                            |
| Mounting area          | 320*420mm(X*Y) (Feed only on the left)                                    | 320*390mm(X*Y) (Feeding on the left and rear sides)                       |
| Visual system          | Up and down vision  | Up and down vision  |
| Nozzle type            | CN030, CN040, CN065, CN100, CN140, CN220, CN400,                          | CN750 etc (Support special-shaped components customization)               |
| Applicable components  | 0402-5050, SOP,TQFP etc   | 0402-5050, SOP,TQFP etc   |
| Number of tube stacks  | 5(Vibration feeder is optional in full sop8)                              | 5(Vibration feeder is optional in full sop8)                              |
| Tape width             | 8mm, 12mm, 16mm, 24mm   | 8mm, 12mm, 16mm, 24mm   |
| Feeder Capacity        | 44(Full 8mm )   | 44(Full 8mm )   |
| Operating software     | Independent research and development                                      | Independent research and development                                      |
| Compatible file format | csv format  | csv format  |
| Programmatically       | Online and offline programming  | Online and offline programming  |
| Vacuum pump            | Brushless hollow cup mute type: 0.92KPA (no external air source required) | Brushless hollow cup mute type: 0.92KPA (no external air source required) |
| Numbers Of Pumps       | 3   | 3   |
| Power                  | 160~200W  | 160~200W  |
| Electricity Supply     | AC220V/110V   | AC220V/110V   |
| Machine Size           | 820(L)*680(W)*410(H)mm  | 820(L)*680(W)*410(H)mm  |
| Net Weight             | 60KG  | 60KG  |

## Tronstol 3V Features:

### Full Vision 2 Head System

2 high-precision placement heads with ±180° rotation could satisfy the need of wide range components.



### Patented Automatic Peel-box

Patented electromagnetic actuators, you don't need to get rid of the wasted nylon film manually, which saves you more time and effort.



### Flexible PCB positioning

By using PCB support bars and pins, wherever you want to put the PCB and whatever the shape of your PCB is, all can be handled well



### Integrated Controller

More stable performance and easier to do maintenance.



**Reflow oven overview:**

Reflow oven worked with hot wind to solder PCB, support most normal components, LED and kinds of IC.

Crawler-type structure matched with different heating zones can make inside temperature more accurate and well-proportioned, just need 15-20min to reach the working temperature.

Chain type transmission way. Speed adjustment is controlled by automatic electronic analog switch, which sensitivity no more than 1 degree, control accuracy  $\pm 10\text{mm}/\text{min}$ .



Reflow oven D5



Reflow oven L8

**Reflow oven basic parameter table:**

| Model                      | L5            | L8            | D5           | D8           |
|----------------------------|---------------|---------------|--------------|--------------|
| N.W(KG)                    | 210           | 300           | 120          | 230          |
| Peak Power(KW)             | 7             | 12            | 7            | 12           |
| Working Power(KW)          | 3             | 5             | 3            | 5            |
| Input Voltage(V)           | 380/220       | 380/220       | 380/220      | 380/220      |
| Conveyor Width(mm)         | 300           | 300           | 300          | 300          |
| Components Max Height (mm) | 55            | 55            | 55           | 55           |
| Max Speed of Conveyor (mm) | 1200          | 1200          | 1200         | 1200         |
| heating zones              | 5             | 8             | 5            | 8            |
| Len*Wid*Hei(mm)            | 1700*700*1280 | 2100*700*1280 | 1700*612*650 | 2100*700*700 |

**Reflow oven features:**

Using AC motor to drive the conveyor



Uniform heating and stable temperature



Simple operation and high efficiency



Accurate lateral temperature difference  $\pm 2^\circ\text{C}$



**SMT ASSEMBLY LINE:**

Application industries: household appliances industry, automotive electronics industry, power industry, instrumentation industry, communication industry, intelligent control industry, Internet of things industry and military industry, etc.

Solution 1: An Economical SMT Line for Sample Production with 0402 accuracy and about 30 types of components



Stencil Printer



Tronstol 3V Pick and place machine



D5 reflow Oven

Solution 2: An Economical SMT Line for Small Production with 0201 accuracy and about 60 types of components



Semi-automatic printing table



Tronstol A1 Pick and place machine



Conveyor



L5 reflow Oven

Solution 3: An Economical SMT Line for mass production line with 0201 accuracy and about 120 types of components



Automatic printing table



Conveyor



Tronstol A1 Pick and place machine



Conveyor



L8 reflow Oven