

## **Fully Automatic Vacuum Chamber Glue Potting Solution**



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### **First : Company Profile**

#### **1、 Company profile**

Guangzhou Daheng Automation Equipment CO., Ltd is specialized in the R&D and sale of glue metering, mixing and dispensing machinery. We believe in “the creation improves future”. Core technology is the only true creation. The e core of all the liquid controlling device is its metering and mixing system. Daheng, always taking its continuous efforts in the new technology, new products and new working process, created its unique tech “double- cylinder pump”, which is a liquid control system of high precision, changeable, continuous and long span time, and can be applied with

glues of different viscosity. The core technology makes us the first pioneer in the gluing machine industry which passed CE certificate, SGS. We have over 20 patents, many original products and many “first” in the industry.

Including the standard machines we already have, we also accept customized services. We,

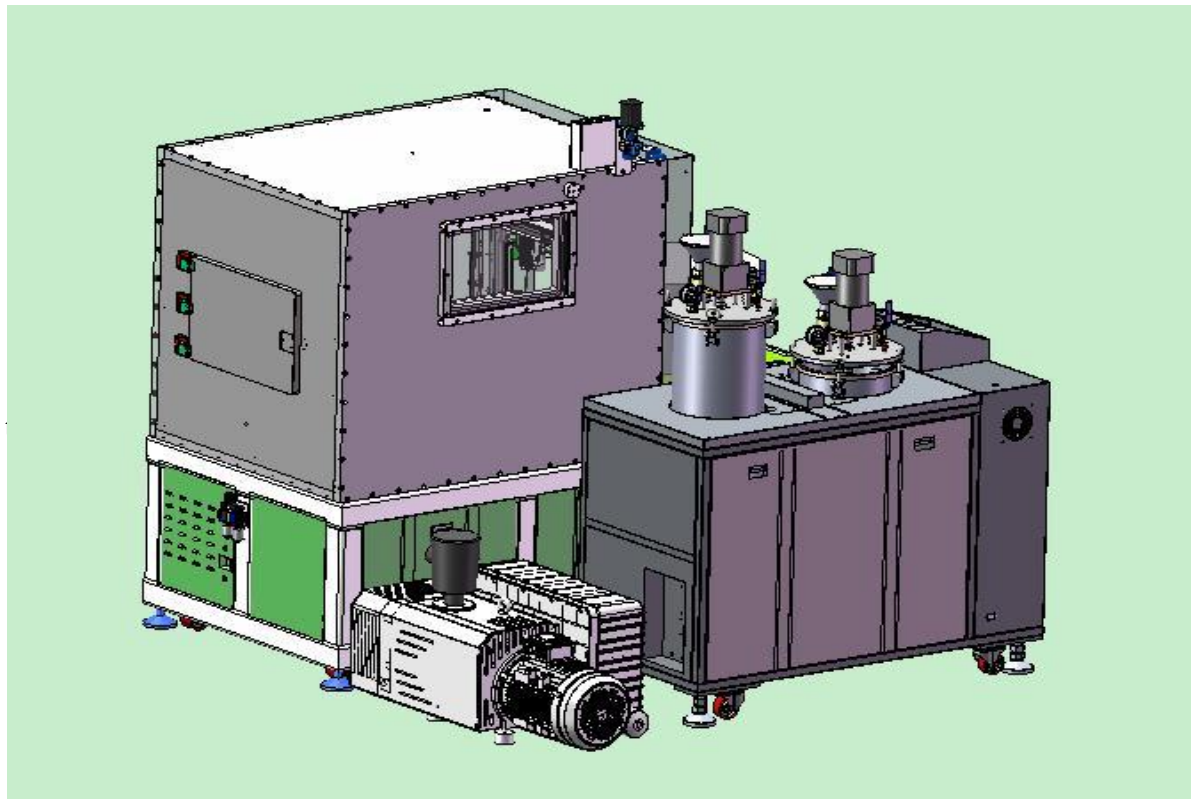
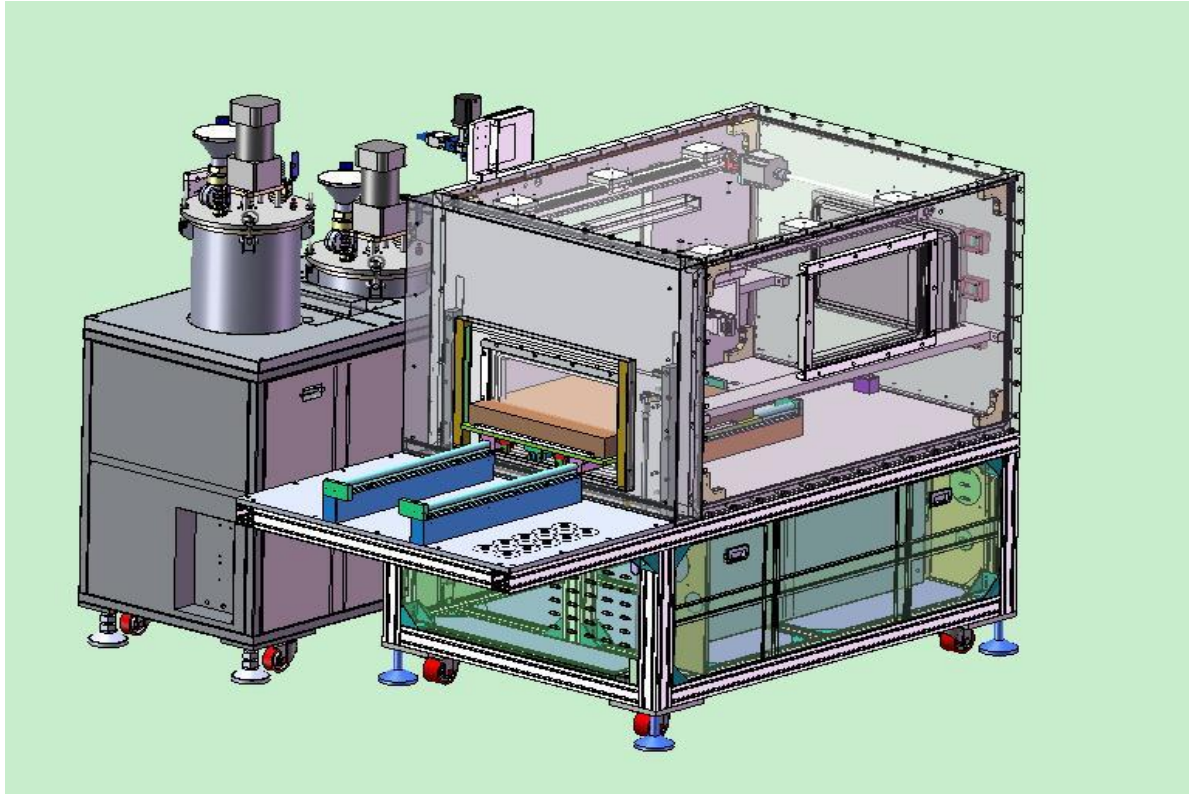
headed in Guangzhou, and branched in Zhongshan, Shenzhen, Shanghai, and exported into Russia, Turkey, Netherland, Singapore, Indonesia and so on. We provide the on-going train-up for customers, 24 hours x 7 days service, and keep ourselves being improved on and on.

The current and great development of Daheng depends on your support and trust. We will keep ourselves making long effort in the industry and products. We will keep improved in the cylinder pump and precision valve, and keep the leading among our competitors.

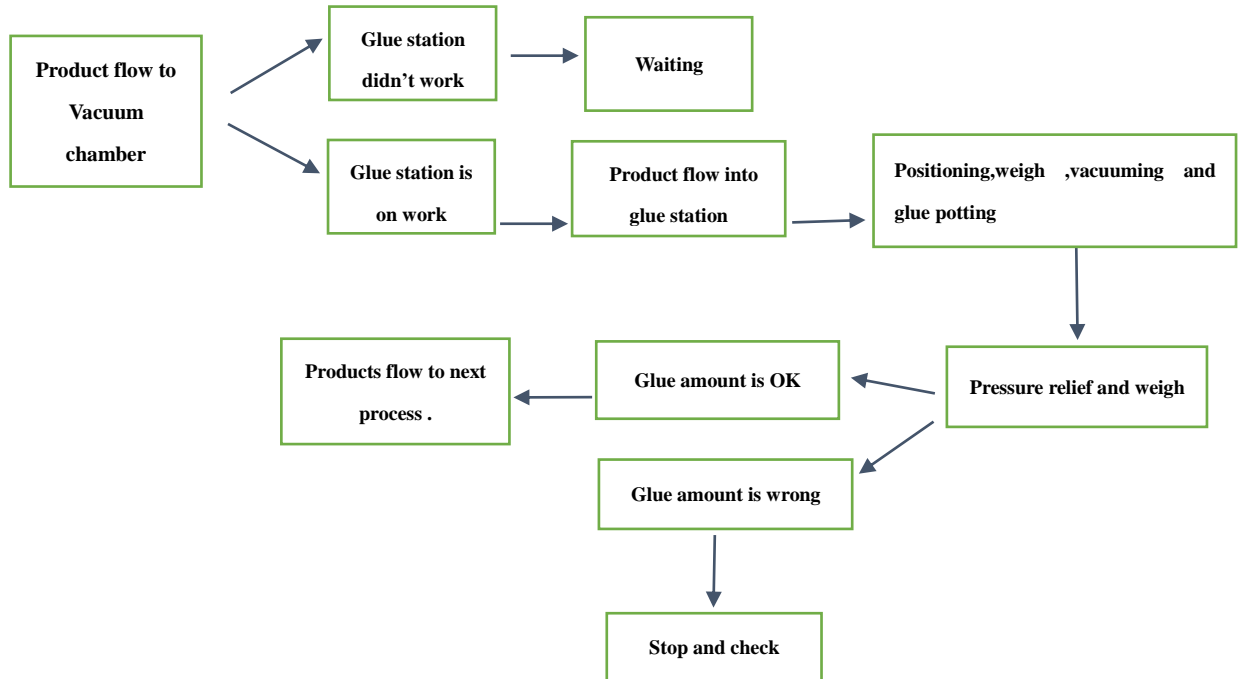
### **Second: Function introduction**

Fully automatic Vacuum glue potting machine integrated with material feeding , glue potting and finished product conveying functions to one equipment , the machine made up with fully automatic mixing machine , vacuum three axis glue dispenser,Chain conveyor line and so on .This equipment can be used independ or be connected with digital data and apply glue potting under negative pressure and normal pressure . It is widely apply for silicone , epoxy , EAW2777,Crystal glue , PU(poluyrethane) two component glue , which is suitable for different glue potting process requirements.

- 1.1 Product feed in and out automatically
- 1.2 Glue processing (tank stir , tank bubble degas , heating , filter , vacuum degas)
- 1.3 Glue ratio and quantify mixture .
- 1.4 Glue mixing evenly .
- 1.5 Through programming to realize glue potting for different products sizes .



### 1.10 Equipment working process



### 1.11 Basic Parameter of the equipment .

Power: mixing machine-8KW vacuum machine-2KW

Three axis: X\*Y\*Z(mm):400x400x70

Weight: 650kg

Input pressure: AC220V 10,50 HZ

Input air pressure : 0.5MPa—0.65MPa (5—6.5kgf/cm<sup>2</sup>)

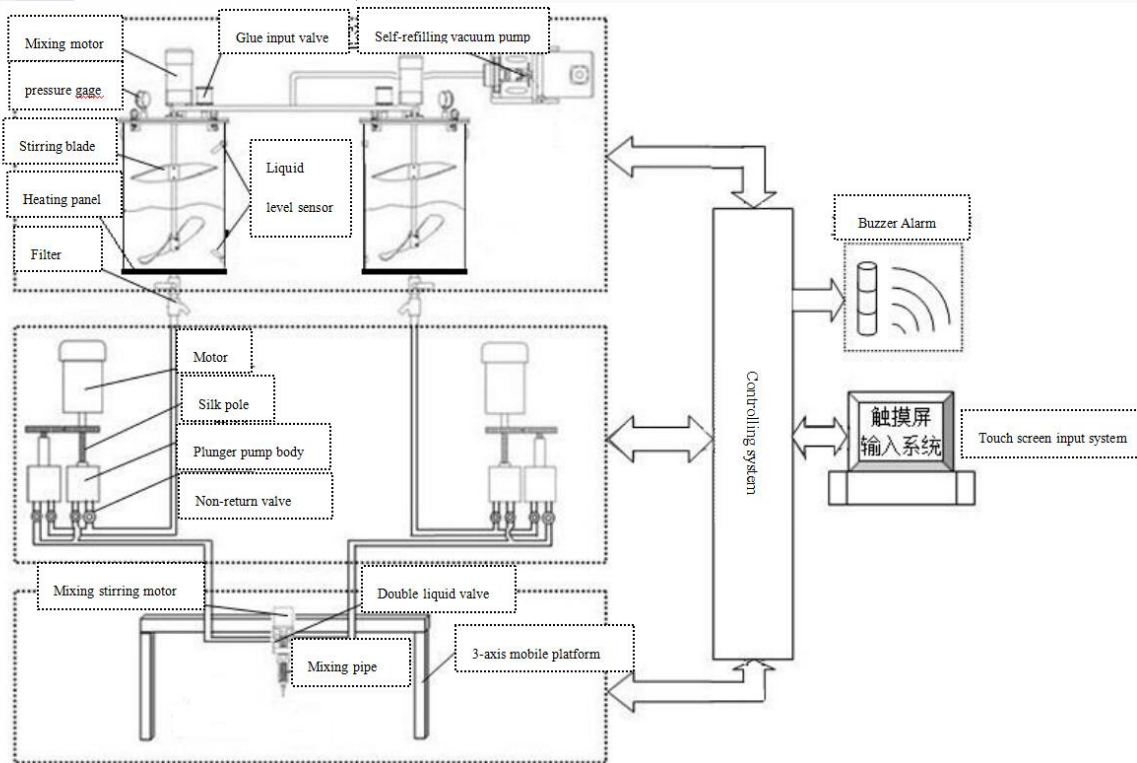
Repeat accuracy: equipment movement 0.2mm;Glue output: 0.2g

displacement velocity (Max) : X 250mm /s, Y 250mm /s, Z 100mm /s

Dimensions: about 1750mm x 1700mm x 1650mm

### Third : Automatic Glue Mixing Machine

#### 1、Schematic diagram



#### 2、Parameter

Glue ratio	1 : 1 ---10: 1
Ratio accuracy	±2%
Glue-out speed	1g/s --10g/s
Glue-out accuracy	±2%
Program memory	99pcs
Glue viscosity	300cps~10000cps (Reference number)
Operation Mode	Manual mode /Automatic mode
Ratio Control	PLC/ Screw pump (Can change different type of metering pumps)
Flow Control	Digital input
Parameter display	Pointer / digital display
Automatic control system	Touch screen / button switch/ third party signal
Mixing Method	dynamic mixing / Automatic cleaning
Storage Tank	Stainless steel A (25L) and B (25L)
	Vacuum degas (-0.1MPa) , 8L/s
	Liquid level sensor (Low liquid level/high liquid level)
	A/B Tank stirring
	AB glue constant temperature heating (Room Temperature—80 °)
	Glue filter
Power	220V/50Hz/3500W

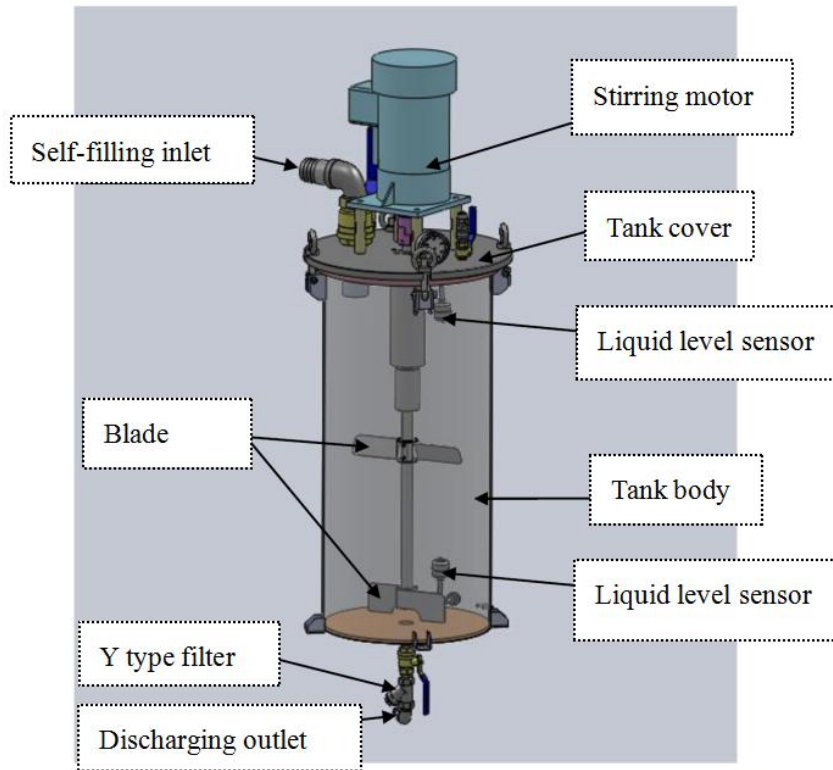
Input air pressure	0.4MPa—0.8MPa
Outer dimension	Glue Potting Machine: 1300mm×600mm X1600mm
Frame Materials	Cold rolled steel/industrial aluminum/stainless steel/sheet metal

### 3、 Main part introduction

The main part of Vacuum Chamber Potting machine comprize with glue tank , mixing system (screw pump),mixing /clean system , control system and so on .

#### 3.1 Glue storage tank

As per glue feature and customer's process , glue should be preprocessing before metering .



3.1.1 We use stainless panel vacuum pressure tank which can bear negative pressure of inner glue tank .

3.1.2 The bottom of glue tank with heating system.

3.1.3 Tank with motor stirrer that prevent the glue from sediment and keep the glue in constant temperature.

3.1.4. Tank with high /low liquid sensor that ensure alarm warning when liquid higher or lower the setting level .

3.1.5. Tank with vacuum defoamation (defoamation time can be set through touch screen), so the material can be re-filled through vacuum negative pressure .

3.1.6.Tank with pressure releasing ball valve ; the bottom of tank reserved back flow connector and river closure ball valve.

3.1.7 Tank with artificial feeding mouth that can be added glue appropriately .

3.1.8. Tank with dry-filter can prevent glue from crystallization .

### 3.3 Fully automatic material mixing system (dynamic mixing)

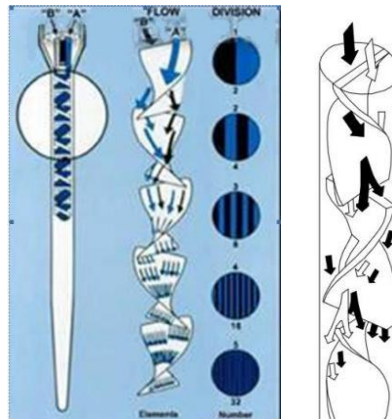
3.3.1 dynamic glue mixing to assure glue mix evenly.

3.3.2 Glue touched parts with stainless design to aquired high material compatibility.

3.3.3 Glue valve with suck back function to prevent glue from dropping after cut off .

3.3.4 Rod shaft use original imported parts to maintain high durability.

3.3.5 Don't need to disassembly the mixing system to clean and save cleaning time .



AB component glue through suck back valve and come into mixing tube , like picture. The mixture finally be potting to products . When finished glue potting , the sucking valve can provent glue from dropping immediately to provent glue from dropping to other place.

### 3.4 Operation Controlling System .

3.4.1 Glue-out amount is pushed out by motor pushing rod metered by controlling the speed of pushing motor.

3.4.2 Adjustable glue-out synchronization , make sure A/B glue flow out of the valve at the same time gel resistance timmer to provent glue from curring .

3.4.3 The machine with gel preventer timmer,when time is arrived setting , the glue will discharge automatically and provent glue cure inside the mixing tube .

3.4.4 Can select signal glue-out quantity function and continuous gluing function to meet up with different processes requirement .

3.4.5 The whole controlling mode use Panasonic PLC control ,MGCS touch sreen devices.

3.4.6 Mornitoring the times of double liquid valve , vacuum pump , metering pumps and display on touch sreen .

3.4.7 E-Stop display the motor , dirver , pressure and with the warning system.

3.4.8 Configure secure interlock mechanism to prevent labor's wrong operation. The equipment grounding and likely to accumulate static charge of metal device , metal conductive objects are connected to ground , accord with GB50169-2006 <Electric device installation and acceptance specification for construction of grounding device> .

3.4.9 Can be communicatied with MES system .

## **Fourth : Vacuum Chamber three axis glue potting machine**

### **1、 Vacuum Chamber**

1.1 Configure security grating toughened glass , observation window, inlet and outlet with safety protection device , to ensure the safety of operators.

1.2 Digital display vacuum degree with time setting function , PLC communicate with glue mixing machine; can work automatically.

### **2、 Vacuum glue dispensing valve**

2.1 Vacuum special glue valve used for glue potting and prevent glue from dropping .

2.2 Stainless steel design for glue touched parts , rod shaft sealing parts are use original import parts to keep high durability .

2.3 Vacuum valve can be washed via self-cleaning , to prevent remained glue inside and caused blocking .

### **3、 Three axis working platform**

3.1 Three axis chamber installed on the top , which is curtail the chamber volume effecially and accelerate vacuum speed .

3.2 Touch screen operation , English & Chinese operation version , can record and display different parameter .

3.3 Program dot , line , arc , circle and some irregularity products . Glue potting files can be edit on programming or import from CAD. The program memory 99pcs . The touch sreen programming support the whole column , graphical browsing , group editing and other functions.

3.4 Z axis fixed board can be adjusted up and down to adopt different workpieces on different heights , you don't re-edit the working path , but only adjust the working path when replace the nozzles .

### **4. Parameter**

Runing path	Dot / line / curve/arc
Working range	XYZ: 400mm×400mm×70mm
Speed	XY: 250mm/s Z: 100mm/s
Accuracy	±0.01mm
Vacuum degree	2000Pa
Vacuum time	60s
Power Supply	AC380V 50Hz
Air supply	0.4MPa--0.8MPa
Dimension	1750mm x 1700mm x 1650mm

## **Sixth : Maintenance Service**

1.Seller provide one year warranty period and support free maintenance service during



warranty . Software upgrade service is provided for a long life time.

2. In case parts of the machine become broken within the warranty because of non-artificial factors, we send you part replacement free, buyer pay for the shipment. Double-liquid valve should be bought at its cost price.
- 3.If the parts of the machine become broken past warranty , the parts replacement should be shouldered by buyer.

### **Seventh : Installation & Train-up:**

You can install and operate the machines yourself. If you like you can send the engineer to come to our factory for train-up; or we can also supply train-up videos, pictures, drawing and so on. If demanded, our engineer will be sent to your company, buyer will pay Labor cost , and the travel cost, hotel (accommodation & food).