



Fully Automatic Vacuum Chamber Glue Potting Solution

Model: VGB-600





Guangzhou Zhengqi Technology Co.Ltd & Guangzhou Daheng Automation Co.Ltd

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.

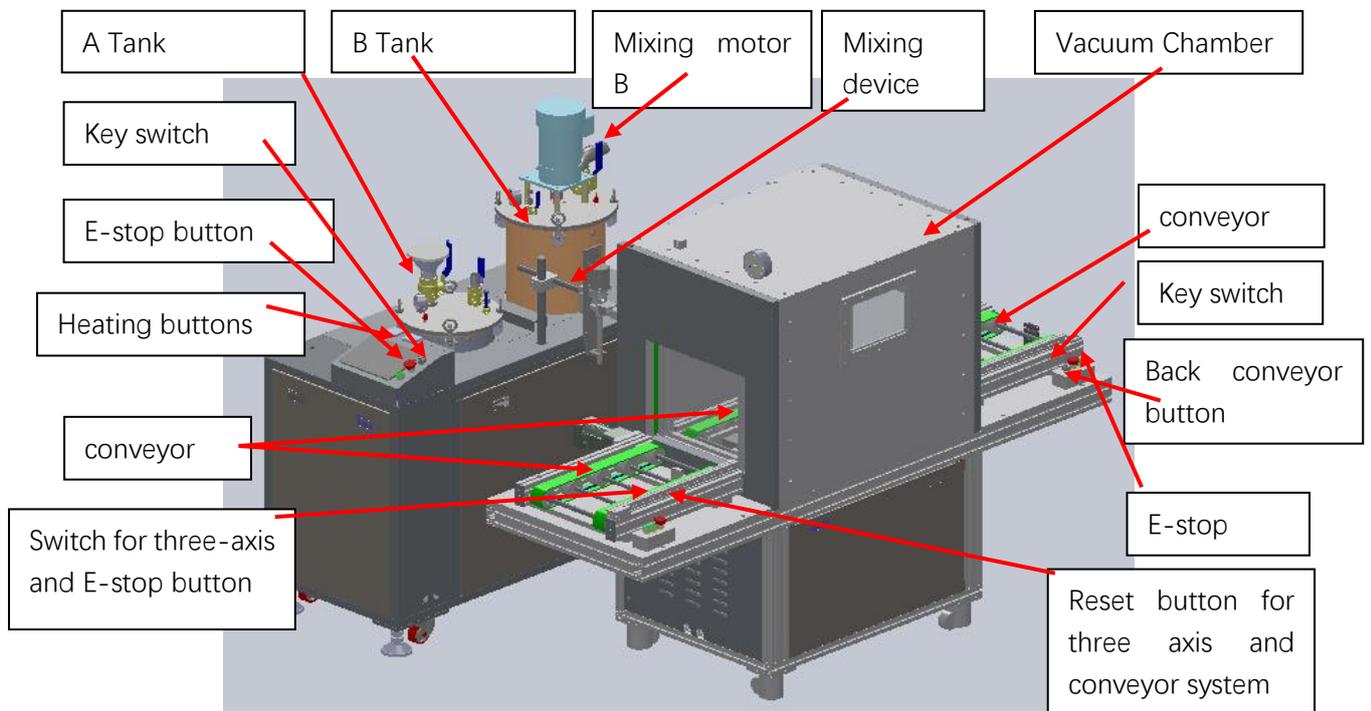
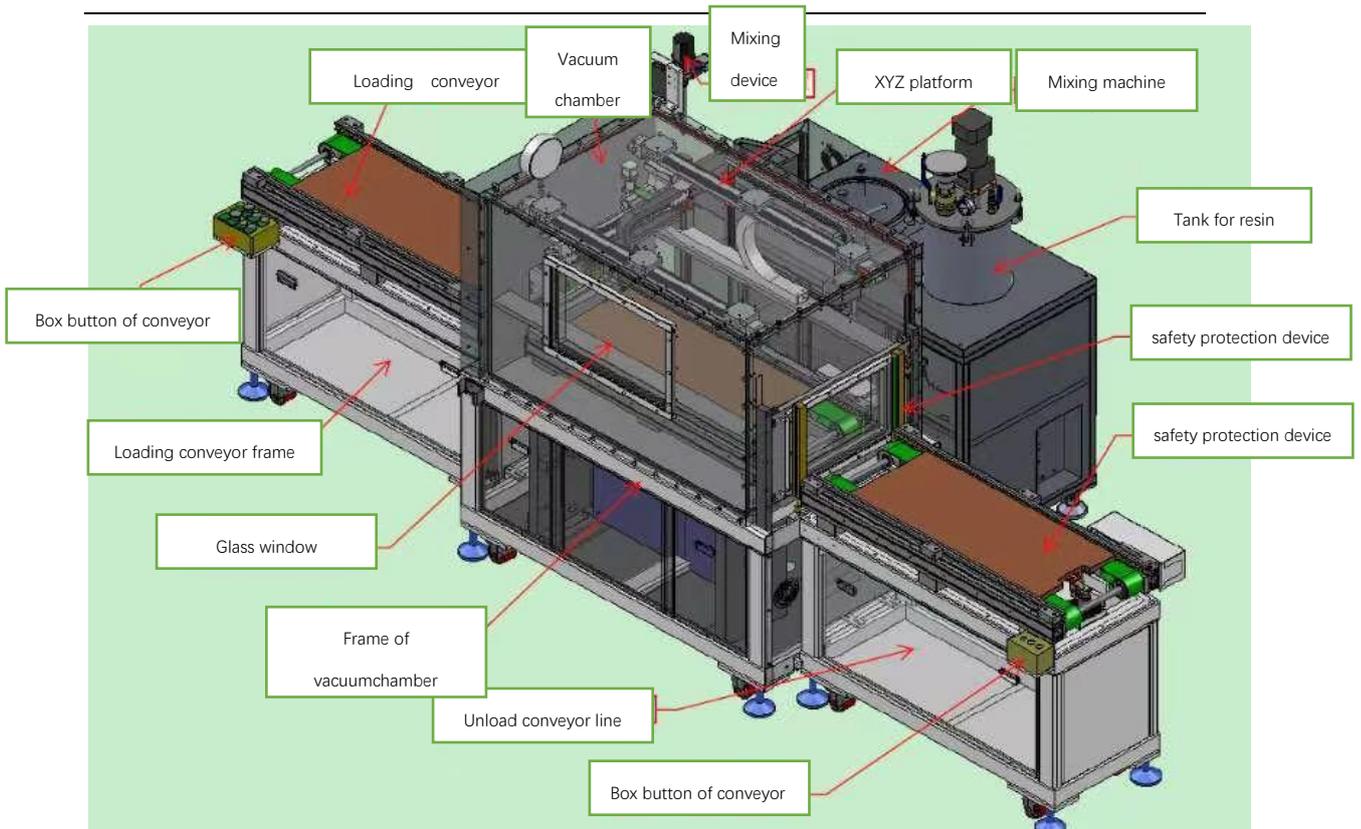
Including the standard machines we already have, we also accept customized services. We, headed in Guangzhou, and branched in Zhongshan, Shenzhen, Shanghai, and exported into Russia, Turkey, Netherland, Singapore, Indonesia and so on. We provide the on-going train-up for customers, 24 hours x 7 days 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

Fully automatic Vacuum glue potting machine integrated with material feeding , glue potting and finished product conveying functions to one equipment , machine made up with fully automatic mixing machine , vacuum three axis glue dispenser, Chain conveyor line and so on .This equipment can be used independent or be connected with digital data and apply glue potting under negative pressure and normal pressure . It is widely apply for silicones, epoxies, PU(polyurethanes), which is suitable for different potting materials.

- 1.1 Product feed in and out automatically
- 1.2 Glue preprocessing (tank stir, tank bubble degas , heating , filter , vacuum degas)
- 1.3 Glue ratio and quantify mixture.
- 1.4 Glue mix evenly .
- 1.5 Through programming to realize glue potting for different products sizes .
- 1.6 Fully automatic weigh system to re-inspect the glue amount for each product .
- 1.7 Set fixed time to let glue discharge and prevent glue mixture curing inside the tube .
- 1.8 Autumatically clean the mixing part of the machine.



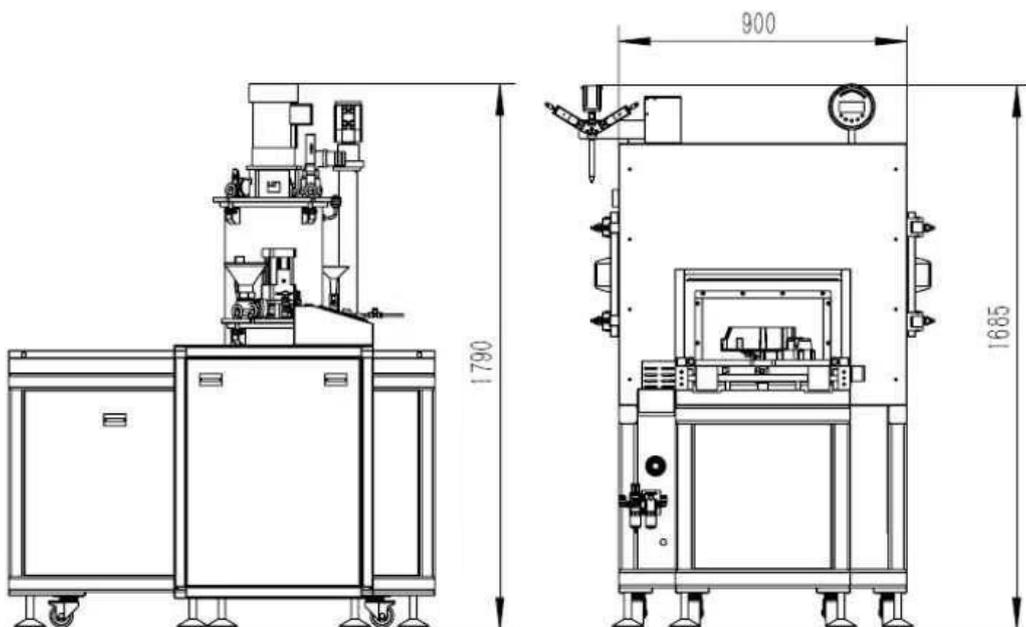


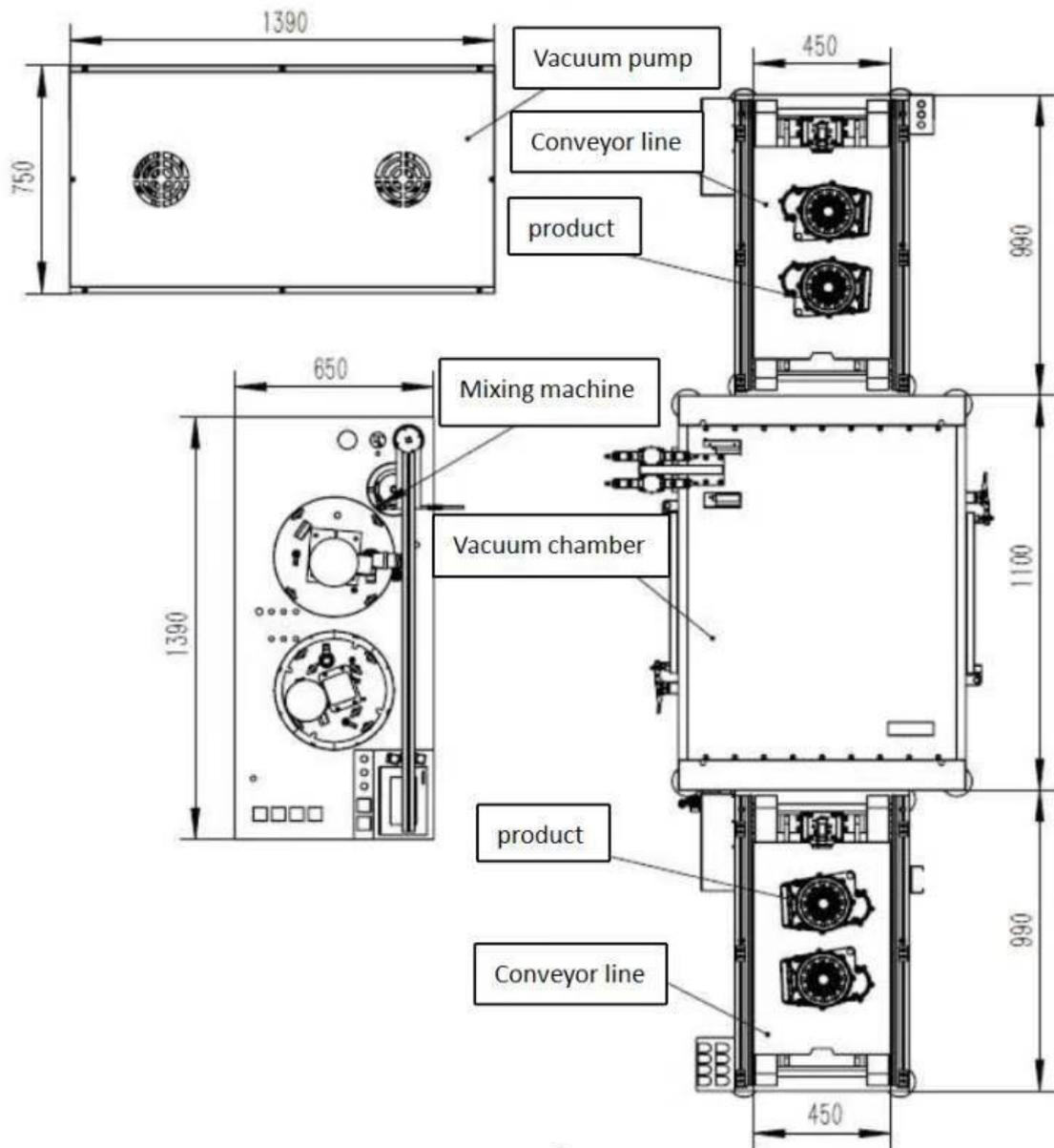
Three axis chamber installed on the top, which is curtail the chamber volume efficiently and accelerate vacuum speed .



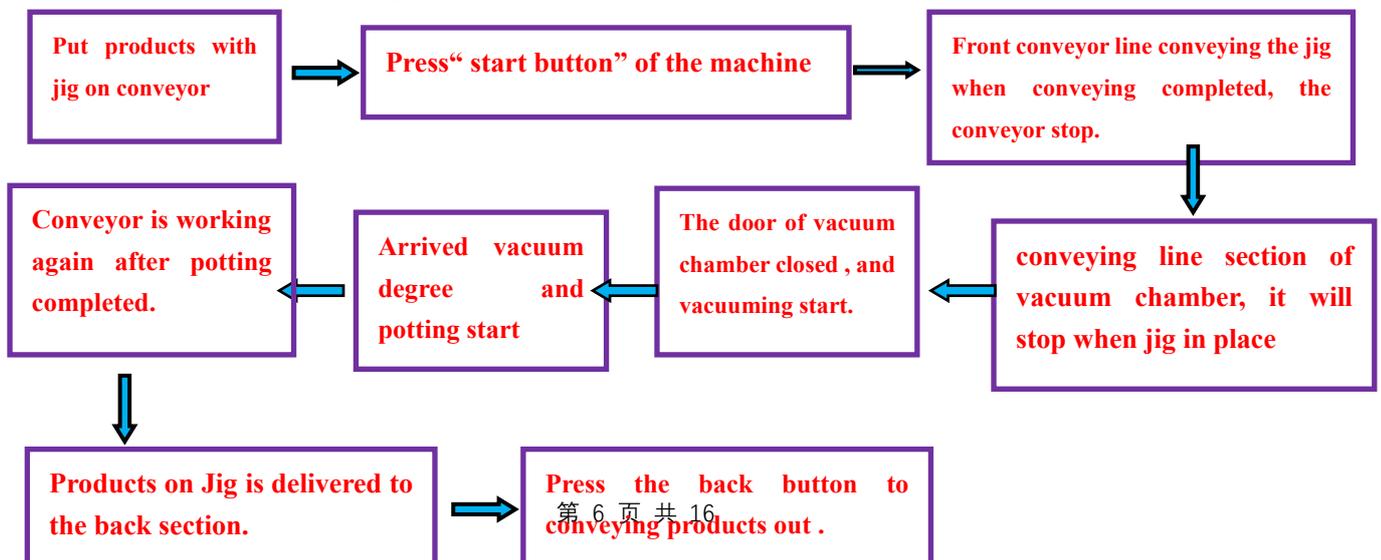
Intelligent Digital vacuum pressure gauge. The vacuum pump will stop automatically when vacuum pressure value of vacuum chamber reach the setting value

真空灌胶机
ZK8035





1.10 Equipment working process





1.11 Basic Parameter of the equipment

Power : 1.5KW (heaters are excluded)

Weight: 850kg

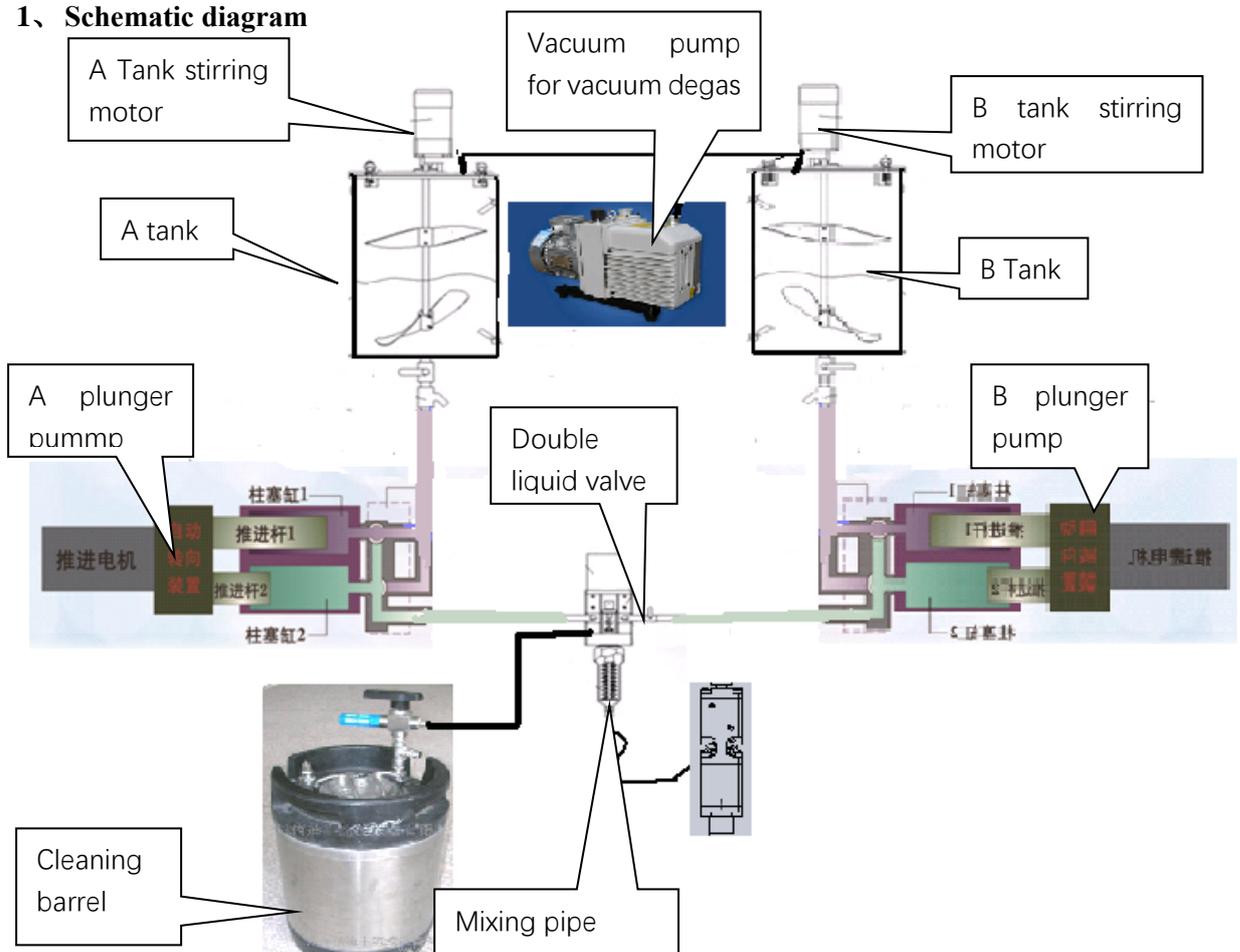
Input pressure: 380V/50Hz

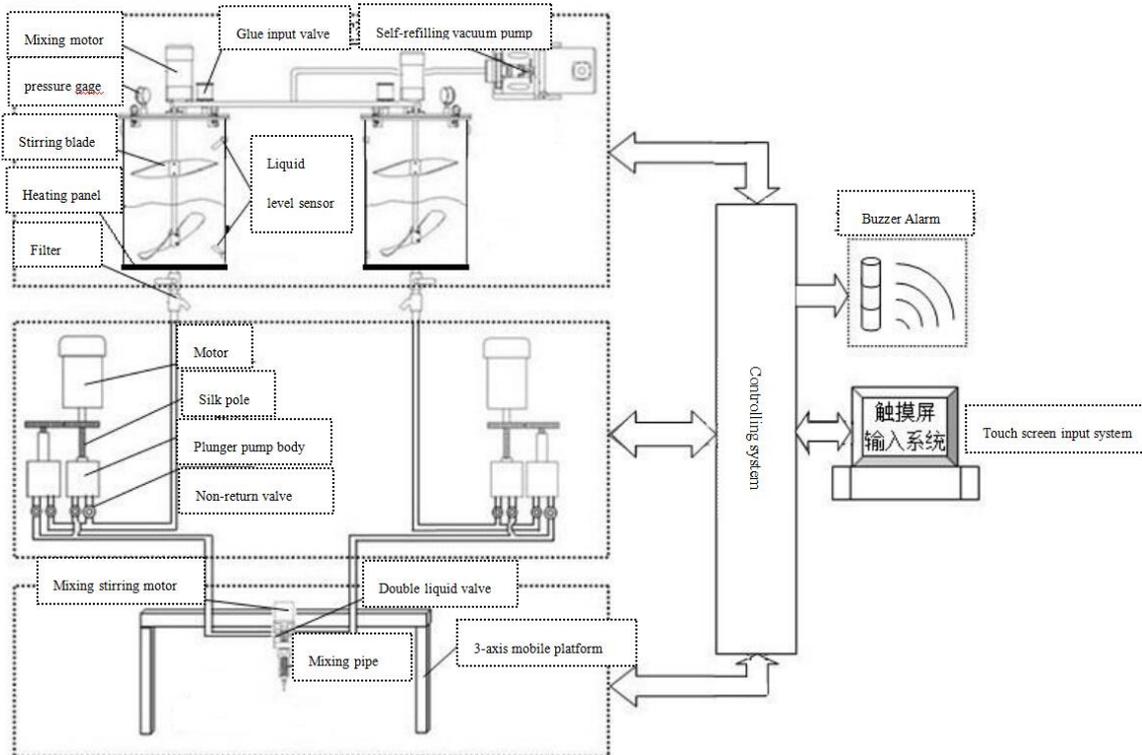
Air pressure : 0.4MPa—0.8MPa

Temperature: -10°C~50°C, humidity10~90%(noncondensing)

Third : Automatic Glue Mixing Machine

1、 Schematic diagram





2、Parameter

Glue ratio	1 : 1 ---10: 1
Ratio accuracy	±2%
Glue-out speed	1g/s --24g/s (Base on glue ratio)
Glue-out accuracy	±2%
Program memory	99 pcs
Glue viscosity	50cps~8000cps (Reference number)
Operation Mode	Manual mode /Automatic mode
Ratio Control	PLC/ Double plunger 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	Static mixing / Automatic cleaning
Storage Tank	Stainless steel A and B(10L,25L ,40L optional)
	Stainless steel cleaning barrel C (5L)
	Vacuum degas (-0.1MPa)
	Liquid level sensor (Low liquid level/high liquid level)
	A/B Tank stirring
	AB glue constant temperature heating(available)
	Glue filter



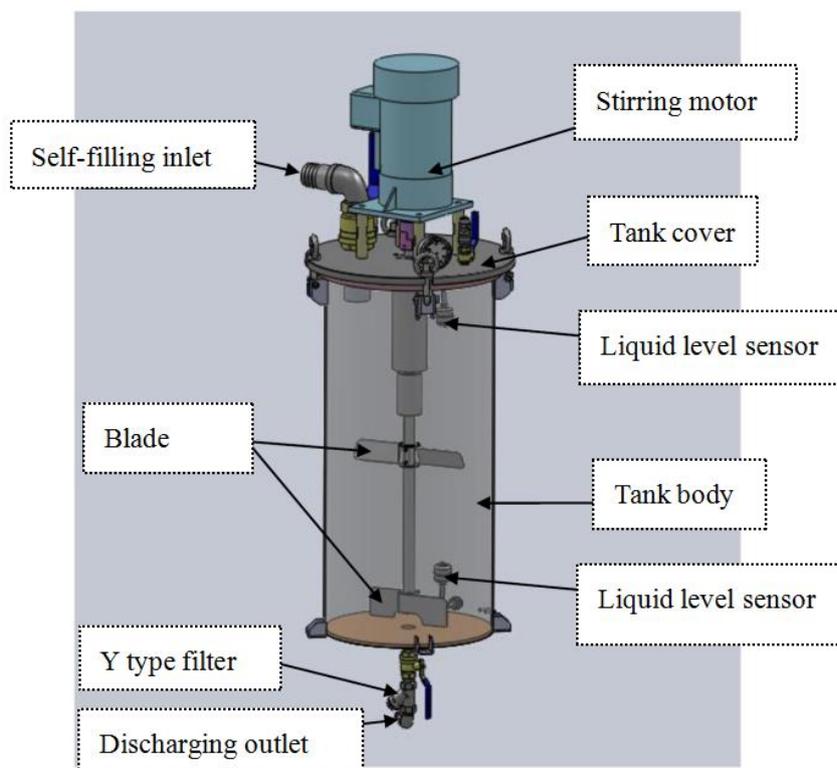
Power	220V/50Hz/5000W
Outer dimension	Glue Potting Machine: 995mm×600mm×1500mm
Frame Materials	Cold rolled steel/industrial aluminum/stainless steel/sheet metal

3.Main part introduction

The main part of Vacuum Chamber Potting machine comprize with glue tank , mixing system (double cylinder plunger 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 .

3.2、Metering pump (double cylinder plunger pump)

3.2.1 Quantify metering system with high precision ($\pm 2\%$) , suitable for middle to low viscosity two component material ratio .

3.2.2 Adaptive core technology that further improved sealing position and glue supply accuracy.

3.3 Graphite sealing components ; stainless pump ; stainless connector ensure the pump with long lifespan and anti-corruption ,anti-crystal device can well protect sensitive materials from crystallization inside pump especially for PU .

3.2.4 Metering pump have Daheng high pressure and high precision double liquid valves , with vary sealing methods and adjustable retract function, that is convenient for glue valve cleaning and precision glue dispensing .

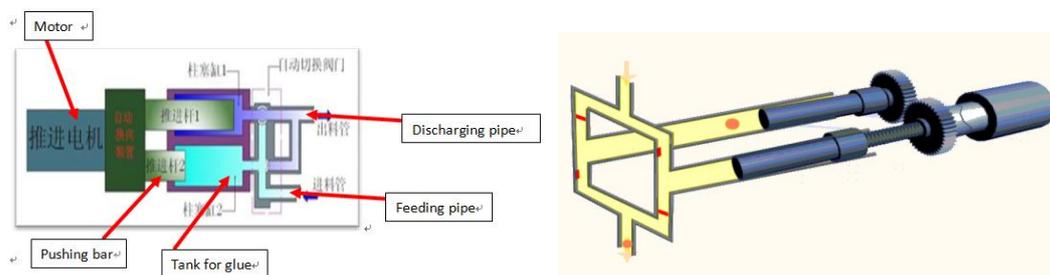
3.2.5 Glue controlling system can program glue dispensing in high precision and save many glue dispensing programs .

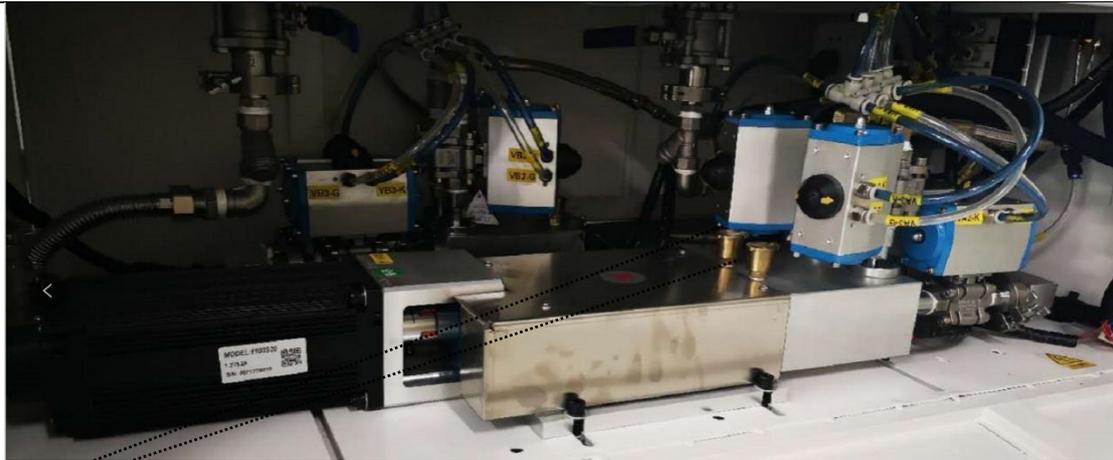
3.2.6 Inset self-check controlling system module makes fault detection rapidly .

3.2.7 Through different collections of metering pumps realize the changeable ratio from 1:1 to 10:1 .

3.2.8 Keep steady gluing , the glue volume can be adjusted from 0.5g/s~20g/s .

3.2.9 Double cylinder plunger pump's structure especially suitable for high fillers , high density glue . The lifespan is designed for 10 years .





Anti-crystal device , especially designed for sensitive material like PU.

3 . 3Material mixing system (With one component glue controlling system)

3.3.1 Strong toughness, not easy breakage, anti-aging maturing, no abrasion and no color changed.

3.3.2 Teflon with stable chemical performance and anti-corruption , temperature range can be - 200 ~ +260 ° , High insulativity and good fire resistance.

3.3.3 No adhesion and easy clean; good separating effect and wear-resisting coefficient as low as 0.05

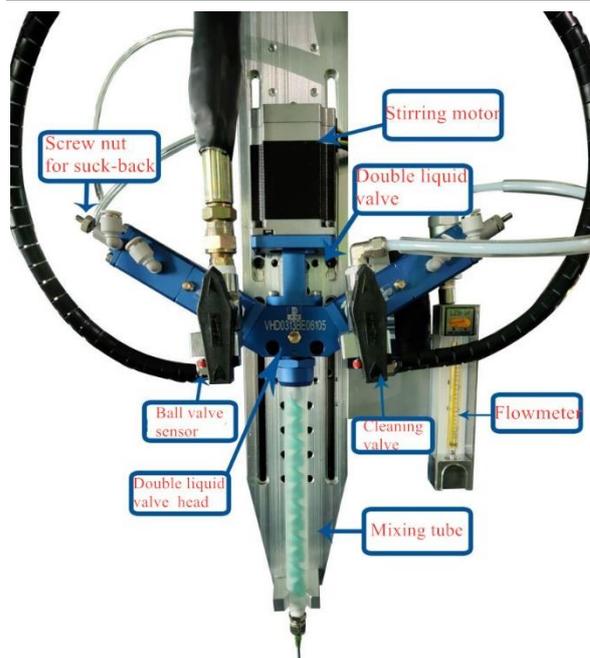
3.3.4 Glue pipe with heating tape ensure constantly temperature.

3.3.5 The length can be customized base on requirement.



Teflon tube can be wrapped with heating tape to ensure temperature in constantly.

3.4、 Material automatic mixing system (Dynamic or static)



The mixing mode drive the blade to stir mixture evenly , and mixing process totally in seal ,the double liquid valve and mixing pipe filled with resin or hardener to assure glue mixing without air bubble ; Double liquid valve with on-off air cylinder to keep glue from dripping .

The stirring motor speed is 2000r/m , which can fully stir mixture evenly . If need static mode , just close this motor and replace a static mixing pipe can switch to the static mode .

Mixing pipe is consumable should be cleaned or soaked in cleaning fluid in downtime . If the machine with self-cleaning mode , you can open the washing mode when off-work, this mode can clean the pipe thoroughly .

4.1 Dynamic mixing with stirring detecting function make sure mixture more evenly .

4.2 Glue valve with flow-back prevent function that can prevent glue from dripping .

4.3 Sealing parts of rod shaft adopt high quality material to keep high durability .

4.5 Self-cleaning function make cleaning more easier that you needn't dis-assembly the parts to wash it. Cleaning time and cleaning times are set in the touch screen easily.

5. Operation controlling system

5.1 Gluing volume is controlled by the speed of servo motors ; Glue speed adjustable within the speed range .

5.2 Machine with detecting function that detect the speed and running time of pumps to ensure the ratio reliability.



5.3 Adjustable gluing-out volume make sure glue A/B dispense out at the same time from glue valve to get better glue mixing effect .

5.4 Machine with gel resistance calculator , which prevent the mixture curing inside .

5.5 You can set single gluing-out and steady gluing-out function to meet up with your different process requirement .

5.6 Whole machine system and function is controlled by Panasonic PLC and MGCS touch screen .

5.7 Reserved PLC communication interface, which easy connecting with outside device .

5.8 Equipped with a safety lock to prevent staff from wrong operation .

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.

1.3 Vacuum inspect control system , 55L/s vacuum pump to assure vacuum efficiency.

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 efficiently 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 screen 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 .

3、Parameter

Category	Parameter	Category	参数
Mixing ratio	1:1—10:1	Speed	0-250mm/s (displacement speed)
Working area	Inner area:450x450x100mm, Dimension:900x790x760mm		
Program memory	99 pcs	Precision	±0.1mm (accuracy of displacement) ±2% (mixing accuracy)
Input air pressure	0.4MPa—0.8MPa		
Viscosity range	0cps~30000cps	Working path	Dot, line , arc , circle
Operation mode	JOG/AUTO		
Control system	PLC	Auto control system	Industrial touch screen program with programming modification, storage and so on
Flow control	Digital input		
Programming method	Teaching programming	Out-glue control system	AB glue suck-back valve /vacuum suck back skill.
Mixing mode	Dynamic		
Power	380V/50Hz/1200W	Storage system	Stainless steel tanks A Tank: 40L & B Tank: 25L (10L,25L ,40L optional)
Vacuum degree	-0.1MPa	Vacuum time	90S (as per different requirement)

Category	Configuration	Quantity	Brand
Frame	Thick aluminum sheet+ Square tube welding frame	1 Set	Daheng
Controlling system	3 axis motion control card	3 sets	JAC Technology
	Software system	1 set	Daheng
	Driver	3 pcs	Leisai technology
3 axis moving platform	Linear module	3 sets	CCM
	Stepper motor	3 pcs	Leisai technology



Vacuuming system	Vacuum pump	1 unit	Made in China
	Vacuum degree control device	1 set	Made in China
	Vacuum valve	1 set	Daheng
	High vacuum ball valve component	3 sets	Made in China
Belt conveyor	Conveyor belt	6 pcs	Made in China
	Speed motor	3 pcs	Made in China
	Frame of conveyor	2 sets	Made in China

Fifth : Chain conveyor line

The Chain conveyor line is made of conveying chain ,dispensing positioning unit, tooling plate.

1、 Conveying chain

Width of the line : 150-900mm, Can be customized;

Height of the line: 750mm, Range from 500-1000mm;

Conveying speed: 0-300mm/s, asynchronous motor gear rotation ;

Chain form: Chain and roller transfer constant speed - double pitch roller chain, with chain tension regulator;

Frame materials: Aluminum profiles, carbon steel

2、 Dispensing positioning unit

2.1 The order was output from PLC or micro-controller programs, the air source is switch by pneumatic electromagnetic directional valve and worked by air cylinder .

2.2 The cylinder jacking positioning unit realizes the positioning of the tooling

2.3 When the dispensing operation is not completed at the dispensing station , the blocker prevents the upstream tooling plates from continuing to flow in next stages.

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 95USD per day , and the travel cost, hotel (accommodation



广州大恒自动化设备有限公司

Guangzhou Daheng automation equipment Co., Ltd.

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