



# Vacuum Potting System

## GLT VPE-220



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## Medium Batches Vacuum Potting System



Vacuum Potting System GLT VPE-220 is a budget-friendly vacuum dispenser with advantages in bubble-free potting of small workpieces. This system is also designed in small and area-saving sizes which is just 1000 x 850 mm. GLT VPE-220 is also integrated a 3D desktop robot which helps customers easily and automatically control the precision of dispensing area.

### FEATURES

- > *Small size*
- > *High speed*
- > *High precision*
- > *Simple and easy to operate*
- > *Higher component reliability and life-span due to improved impregnation*
- > *Low investment cost*

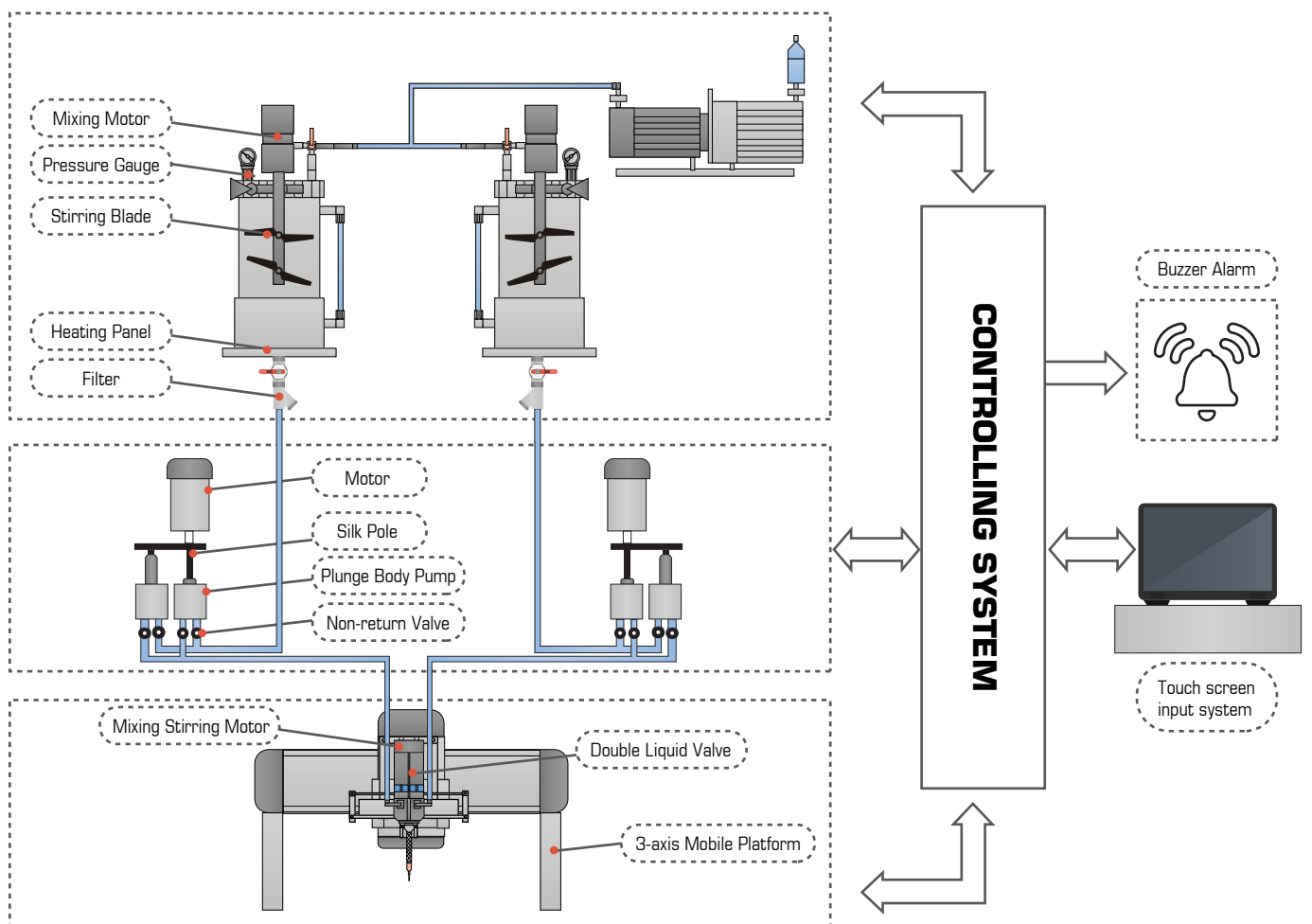
### SPECIFICATION

Material Mixing Ratio	100:100 - 100:10 (optional)
Material Viscosity @25oC	300 cps ~ 50,000 cps
Mixing Method	Dynamic mixing (including self-cleaning function)
Precision	±0.03mm (repeatability) ±2% (potting) ±2% (mixing)
Input Pressure	0.5 ~ 0.7 MPa
Operation Mode	Manual/ Automatic/ Third party single
Ratio Control	PLC/ Double cylinder plunger pump
Flow Control	Digital Input
System Control	Touch Screen/ Hand switch
Program	Teaching Program

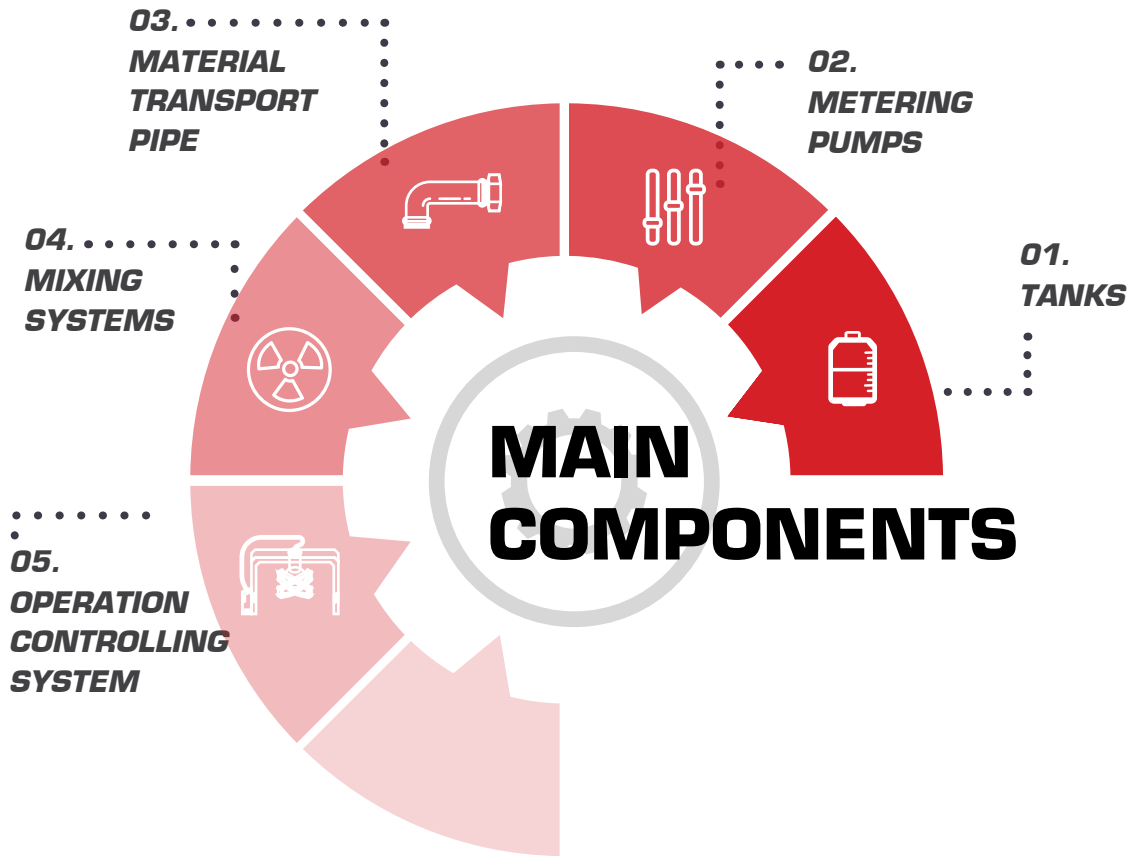
Storage Tank	Stainless tank 40L, 25L, 10L (optional)
	Liquid level sensor (low liquid level/ high liquid level and limiting liquid level)
	Tank stirring
	Constant temperature heating (A tank, A pump and A pipes)
	Glue filter
Power Supply	220V/ 50Hz/ 3500W
Appearance material	Cold-roll steel plate/ Industrial aluminium/ stainless/ metal plate
Working area	480 x 480 x 100 mm
Dimension	1500 x 1200 x 1500 mm

## **EQUIPMENT SCHEMATIC DIAGRAM**

Controlling system control machine working path and mixing time , mix ratio and gluing amount . Mixing system mix glue and convey glue to dispensing head according to the instructions of machine controlling system. Three axis platform the working path base on instruction of machine controlling system.



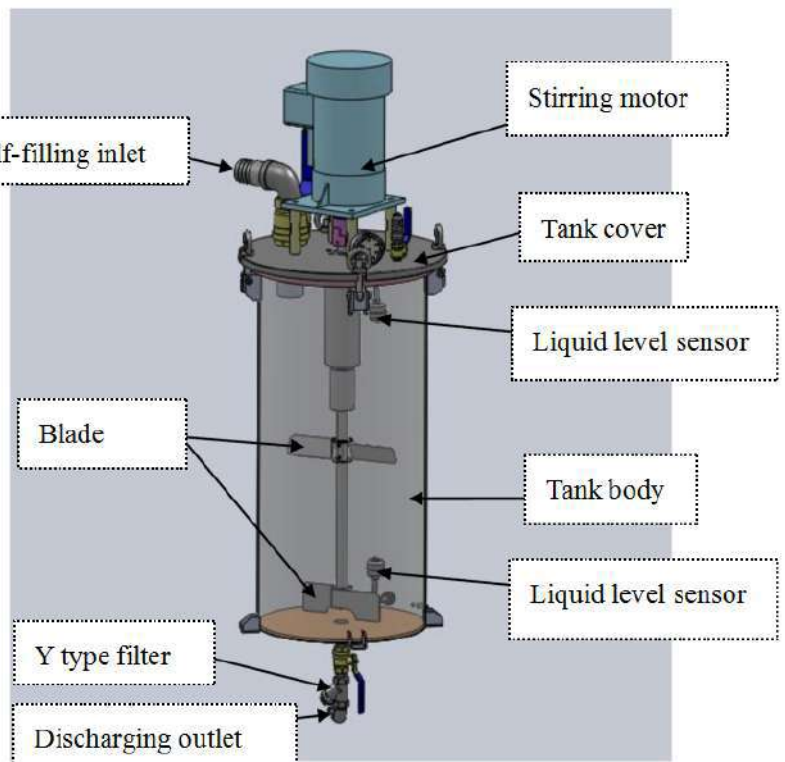
# MACHINE STRUCTURE AND MAIN COMPONENTS



## 1. TANKS

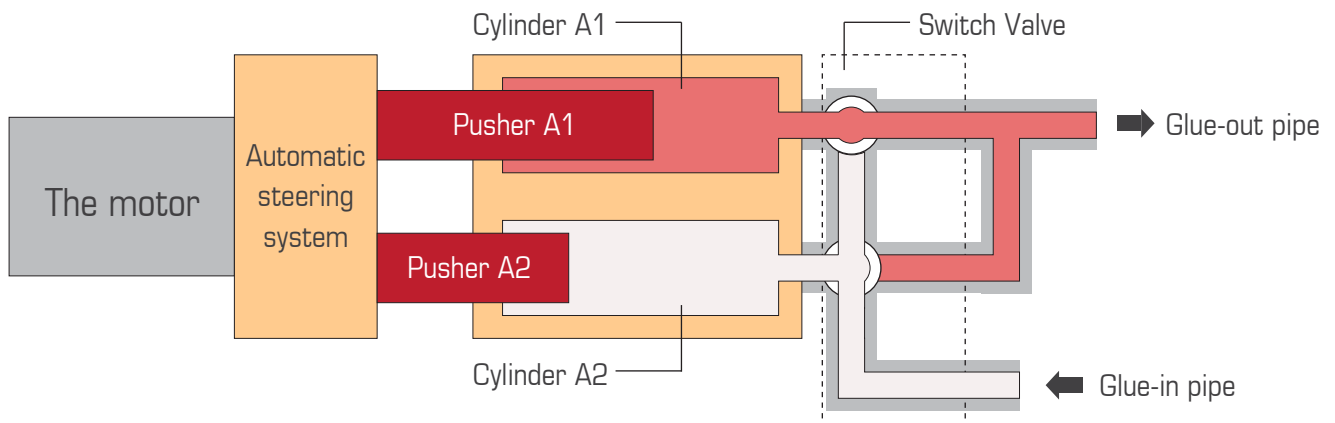
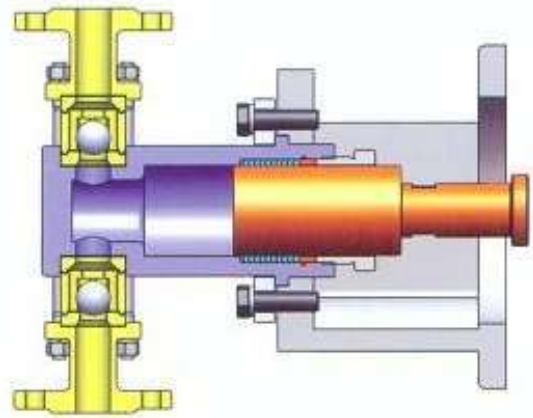
As per customer's glue feature and product process to select corresponding functions. Such as stirring function ,vacuum defoamation; self-refilling function ; And you can add the high/low liquid level sensor and bottom ball valve of tank .

- > We adoptive stainless panel vacuum pressure tank which can bear negative pressure of inner glue tank.
- > Tank with motor stirrer that prevent the glue from sediment and keep the glue in constant temperature.
- > Tank with high /low liquid sensor that ensure alarm warning when liquid higher or lower the setting level.
- > Tank with vacuum defoamation (defoamation time can be set through touch screen), so the material can be re-filled through vacuum negative pressure.
- > Tank with pressure releasing ball valve ; the bottom of tank reserved back flow connector and river closure ball valve.
- > Tank with artificial feeding mouth that can be added glue appropriately.
- > Tank with dry-filter can prevent glue from crystallization.



## 2. METERING PUMPS

- Quantify metering system with high precision ( $\pm 2\%$ ), suitable for middle to low viscosity two component material ratio.
- Adaptive foreign technology that further improved sealing position and glue supply accuracy.
- Graphite sealing components; stainless pump; stainless connector ensure the pump with long lifespan and anti corruption.
- Metering pump have Daheng high pressure and high precision double liquid valve, with vary sealing methods and adjustable retract function, that is convenient for glue valve cleaning and precision glue dispensing.
- Glue controlling system can program glue dispensing in high precision and reserved many glue dispensing programs.
- Inset self-check controlling system module makes fault detection rapidly.
- Through different collections of metering pumps realize the changeable ratio from 1:1 to 10:1.
- Keep steady gluing, the glue amount can be adjusted from 1g/s~15g/s.
- Double cylinder plunger pump's structure especially suitable for high additive, high density glue. The lifespan is designed for 10 years.

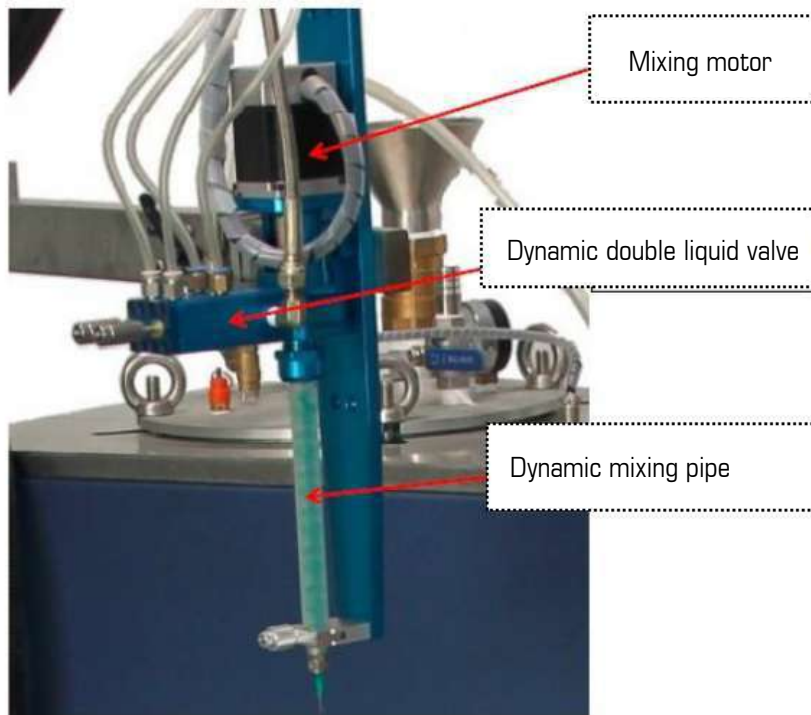


## 3. MATERIAL TRANSPORT PIPE

- Strong toughness, not easy breakage, anti aging maturing, no abrasion and no color changed.
- Teflon with stable chemical performance and anti corruption, temperature range can be  $-200\sim+260^\circ$ , High insulativity and good fire resistance.
- No adhesion and easy clean; good separating effect and wear-resisting coefficient as low as 0.05.
- Glue pipe with heating tape ensure constantly temperature.
- Glue pipe pressure sensor.
- The length can be customized base on requirement.

## 4. MATERIAL AUTOMATIC MIXING SYSTEM (DYNAMIC MIXING)

The three-coordinate linear mechanical arm is driven by servo motor, which can realize the precise position control of rubber head. Because of the teaching and programming method, the movement track of rubber head can be easily adjusted.



- Dynamic mixing with stirring detecting function that ensure glue mixing evenly.
- Stainless design of the glue touch surface to capture more higher material compatibility.
- Glue valve with flow-back prevent function that can prevent glue from dropping when stop gluing.
- Sealing parts of rod shaft adopt imported parts to keep more higher durability.
- The self-cleaning function make machine cleaning more easier that you needn't dis-assembly the parts to wash. Cleaning time and cleaning times could be set in the touch screen.

## 5. OPERATION CONTROLLING SYSTEM

- Gluing amount is controlled by the speed of servo motor; glue speed adjustable within the speed range.
- Machine with detecting function that detect the speed and running time of pumps to ensure the ratio reliability.
- Gluing-out could be adjusted that make sure glue A/B dispense out at the same time from glue valve to get better glue mixing effect .
- Machine with gel resistance calculator , which prevent the mixture curing inside.
- You can set single gluing-out and steady gluing-out function to meet up with your different process requirement.
- Whole machine system and function is controlled by Panasonic PLC and PROFACE touch screen.
- Reserved PLC communication interface,which easy connecting with outside device.
- Equipped with a safety lock to prevent staff from wrong operation.


**CONFIGURATION LIST**

Category	Fully Automatic Potting System		
	Configuration	Quantity	Unit
Main Frame	Foundation frame - Steel welded structure	01	set
	Metal plate	01	set
	Castor	04	set
Controlling system	PLC	01	set
	Software system	01	set
	Industrial human-computer interface touch screen	01	pcs
	Metering pump motor/ Driver	02	set
	Photoelectric proximity switch	08	set
	Metering pump bearing	04	set
	Motion control card	01	set
	Pneumatic component (solenoid/pressure regulating valve/Pneumatic duplex)	01	pcs
	Electronic component (relay/ cocontactor/ power supply/ leakage switch)	01	pcs
Three axis system	Synchronous belt	02	set
	Motor/driver	02	set
	Z axis	01	set
Glue supplying system	Stainless tank A	01	group
	Stainless tank B	01	group
	Pipe and tank heater (adjustable temperature)	02	set
	Temperature control instrument	02	set
	AB tank stirring motor	02	pcs
	Double cylinder plunger pump A (200ml)	01	set
	Double cylinder plunger pump B (200ml)	01	set
	Dynamic double liquid valve sealing components	03	set
	High quality teflon tube	02	pcs
Self-cleaning	01	set	

## **ACCESSORIES**

<b>Item</b>	<b>Accessories name and model number</b>	<b>Quantity</b>	<b>Remark</b>
1	Double liquid valve sealing components	4 sets	Double liquid valve wearing parts with NRB/Four fluorine graphite material that is anti-corrosion and wear resistance ;which normally replaced as per glue feature.
2	Dynamic mixer pipe MR13-12	10 pcs	Consumable
3	Tool	1 set	Standard
4	Fixtures	1 set	Workable for 4 kinds of products base on customer's samples
5	User manual	1 pcs	Standard

## **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.