



## Electric Insulation Of Dry-type Transformer Vacuum Epoxy Resin Casting Plant

Our Product Introduction

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### Basic Information

- Place of Origin: China
- Brand Name: JC
- Certification: SGS CE, UL
- Model Number: KCY-500-3000
- Minimum Order Quantity: 1 pcs
- Price: consult
- Packaging Details: Export standard packaging
- Delivery Time: 5 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 100pcs/month



### Product Specification

- Name: Vacuum Pressure Casting Equipment
- Item No.: KCY-500-3000
- Suitable For: Vacuum Casting Of Two-component Premixed Filler Epoxy Resin.
- Process: Casting
- Specification: Pressure Increasing
- Color: Green
- Highlight: Vacuum resin casting plant, Transformer Vacuum Epoxy Resin Casting Plant, Dry-type Epoxy Resin Casting Plant



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### Product Description

Pressure Increasing Drying plant is suitable for vacuum casting of two-component premixed filler epoxy resin.

According to the user's production needs, **WUXI JIACHEN POWER ELECTRONICS EQUIPMENT CO., Ltd.** has determined the following technical solutions based on the company's many years of accumulated pouring equipment manufacturing experience and design specifications for further discussion and negotiation between the two parties. The equipment of this solution is suitable for vacuum casting of two-component premixed filler epoxy resin.

Our Product Introduction



7. The supplier guarantees to provide applicable, mature and proven technology for pouring equipment.
8. Provide spare parts and spare parts for normal operation within one year. These spare parts and spare parts are given free of charge.

The design of this set of equipment adopts the following relevant standards, relevant manuals and standards.

- 1) This technical specification "KCY-500-3000 Vacuum Pressure Casting Equipment Technical Specification"
- 2) GB9115.1-2000 "Vacuum Flange"
- 3) JB/T6533-97 "Rotary vane vacuum pump"
- 4) JB/T7674-95 "Roots Vacuum Pump"
- 5) GB/T6709-96 "Vacuum pipelines and accessories"
- 6) JB1090-1092 "Rubber seal types and dimensions for vacuum"
- 7) GB191 "Packaging, Storage and Transportation Pictorial Marks"
- 8) Lanzhou Institute of Physics "Vacuum Design Manual"
- 9) Northeastern University "Vacuum System Design Manual"
- 10) GB/T5226.1-1996 "Industrial Machinery and Electrical Equipment Part 1: General Technical Conditions";

#### Equipment characteristics

1. The vacuum pressure casting equipment in this plan is suitable for vacuum casting of cast-type transformers and reactors of 35kV and below.
2. This solution reflects the requirements of energy saving and environmental protection. The specially manufactured electric heating plate has a service life more than three times that of the heating plate imported from Germany, and the heating power is 75% of that of the heating plate imported from Germany. It is a truly energy-saving and environmentally friendly product.
3. Unique filtering system can effectively prevent resin vapor from entering the vacuum pump.

#### Technical solutions:

##### Equipment composition

NO.	Description	QTY(set)	Remark
1.1	500L Vacuum mixing degassing tank system	1	
1.2	Vacuum pressure pouring tank system	1	
1.3	Heating system	2	
1.4	Vacuum system	2	
1.5	Automatic cleaning system	1	
1.6	Cooling water piping system	1	
1.7	Pneumatic and pressurized piping systems	1	

1.8	Control System	1	touchscreen
1.9	steel frame platform	1	

## 2. Equipment technical indicators and parameters

- 2.1,Pressure pouring tank size  $\Phi 3000 \times L3500$
- 2.2,Vacuum system main pump pumping speed 600L/S
- 2.3,Pouring tank operating temperature 70 85
- 2.4.Ultimate vacuum degree of pouring tank (cold state, no load)  $\leq 50\text{Pa}$
- 2.5,Pouring tank leakage rate  $\leq 50\text{Pa.L/S}$
- 2.6,Working vacuum degree of pouring tank 50 100Pa
- 2.7,work pressure 0 0.4Mpa
- 2.8,Maximum design pressure 0.75Mpa
- 2.9.The biggest pressure on famous brands 0.6Mpa
- 2.10,This equipment adopts manual measurement and dynamic mixing of materials.
- 2.11,This equipment adopts vacuum positive pressure pouring process.
- 2.12,The mixing tanks are all electrically heated, with thermal oil as the heat transfer medium and automatic temperature control. The pouring tank is directly heated by electric heating elements. Each heating part is insulated with thermal insulation materials, the pouring tank is armored with stainless steel plates (SUS430), and the mixing tank is armored with thin steel plates and surface-coated. The outer surface temperature of the insulation layer shall not be higher than room temperature by  $20^{\circ}\text{C}$ .

## 3. Equipment power, water, air source and basic condition requirements (user equipment: power supply, air compressor)

- 3.1,Rated power: 100kw, 380V, 50Hz, three-phase five-wire special distribution cabinet, the power supply is connected to the electric control cabinet.
- 3.2,Water source: pressure  $\geq 0.2\text{Mpa}$ , maximum consumption 3 m<sup>3</sup>/h, water temperature  $\leq 25^{\circ}\text{C}$ .
- 3.3,Compressed air: 0.4 0.6Mpa, maximum consumption 0.3m<sup>3</sup>/min
- 3.4,Make the foundation, steel frame and embedded tank outer track according to our company's design drawings.

## 4. Technical conditions of each system

### 4.1,A set of 500L vacuum mixing degassing tank

#### Tank technical indicators and uses

Effective volume 500L  
Thermal oil heating 10KW  
Ultimate vacuum degree: 50Pa(空 ,冷 )  
No-load leakage rate: 50Pa.L/S  
Operating temperature: 60 80  
Tank outer surface temperature Ambient temperature 20  
Equipped with a frequency conversion speed regulating device, the mixing and lifting speed can be adjusted according to the viscosity of the material; Rock wool insulation, stainless steel plate (SUS430, 1.5mm thick) armor, surface coating  
This tank is used for mixing and vacuum degassing of epoxy resin and curing agent mixtures.  
The mixing tank is installed above the pouring main pipe of the vacuum pressure pouring tank to increase production.

#### Tank accessories:

NO	Description	QTY(SET)	FACTORY
1	Stainless steel liner body	1	瑞
2	Stainless steel conical stamping head bottom	1	瑞
3	Reducer base	1	瑞
4	Bearings, dynamic seals, etc.	1	国 名牌
5	Stainless Steel Anchor Mixer	1	瑞
6	Built-in membrane degassing device	1	瑞
7	Manual vacuum suction valve DN25	2	瑞
8	lighting observation device	1	瑞
9	Temperature control sensor	1	广州 力
10	Can lid seal	1	沈 橡 研究所
11	Pneumatic discharge valve (stainless steel DN50)	1	波
12	Mixing reducer	1	杭州
13	Frequency conversion speed regulating device	1	深 浮瑞肯
14	Heating medium level display device	1	国
15	Heating element	2	无 康能
16	Bimetallic thermometer	1	厂
17	Spare feeding port(DN100)	1	瑞
18	Accelerator feeding port and valve	1	瑞

500L mixing tank (750kg material)



### 4.2,A set of vacuum pressure pouring tank system

#### Pressure tank technical indicators and uses

Horizontal tank inner wall dimensions:  $\Phi 3000\text{mm} \times 3500\text{mm}$   
Ultimate vacuum degree: 30Pa(No load, cold state)  
No-load leakage rate: 100Pa.L/S  
Operating temperature: 70 85  
Tank outer surface temperature: Ambient temperature +20  
work pressure 0 0.4Mpa  
Maximum design pressure 0.75Mpa  
nameplate maximum pressure 0.6Mpa  
Field test pressure 0.8Mpa(水 )  
The pouring pipe is cut by a manual ball valve, and the actual required vacuum pouring valve can be adjusted according to the quantity of products. The flange interface of the pouring pipe is reserved for future upgrades. The pouring tank is horizontal, with a side swing door. The tank body is a vacuum pouring tank structure. After the tank door is closed in place, it is locked with flange staggered teeth.  
The use of vacuum casting technology can optimize the casting process, increase the permeability of the material, and ultimately reduce the product's .The effect of partial discharge indicators.  
After the tank door is closed in place, it is manually rotated and locked.  
The tank is installed on the ground, and the tank is equipped with a light rail (national standard 15kg) and a work trolley

(1700X2800mm).  
 The outer surface of the tank is heated by an electric hot plate;  
 The height of the track inside the tank is flush with the track of the transfer trolley outside the tank (the transfer trolley outside the tank is user-made) for convenience.  
 Trolley entry and exit;  
 Rock wool insulation and stainless steel sheet (SUS430) armoring treatment. The tank is equipped with other interfaces that meet process requirements.

Tank accessories		
NO.	DESCRIPTION	QTY(SET)
1	lighting observation device	6
2	One row of flange-connected vacuum pouring ports(DN16)	12
3	Temperature Sensor	2
4	Tank door two-way lip seal	1
5	Tank door manual rotating opening and closing mechanism	1
6	Tank load-bearing trolley (6 tons)	1
7	Bimetallic thermometer	1
8	Vacuum casting main pipe (DN50 with 12 sets of DN16 branch pipes)	1

**4.3.Two heating systems**  
 temperature control system, which facilitates the temperature adjustment of each unit. The mixing tank adopts thermal oil heat transfer method. The pouring tank is directly heated by Wuxi electric heating plate, with automatic temperature control and over-temperature alarm. The power is 54KW and the maximum heating temperature is 130 .  
 The heating temperature of all mixing tank heating systems is adjustable from normal temperature to 80°C.

**System Configuration:**

Heating system for 500L final mixing tank			
NO.	DESCRIPTION	QTY(SET)	FACTORY
1	Tubular electric heating element(5KW)	2	无康能
2	Digital temperature controller	1	厦宇
3	Temperature Sensor	1	广州力
4	Wires and cables, etc.	1	广

Heating system of vacuum pressure pouring tank			
NO.	DESCRIPTION	QTY(SET)	厂家
1	Heating plate(0.5KW)	108 sets	无康能
2	High temperature wire	600m	国
3	thermal control	6pcs	国
4	Digital thermostat	1set	厦宇
5	Pressure plate	108 sets	瑞
6	Resistance welding fixing studs	216sets	瑞

**4.4 ,Two sets of vacuum systems (3 vacuum pumps in total)**  
 4.4.1,A set of rotary blade Roots unit has a maximum pumping speed of 300L/S for the pouring tank vacuum pumping unit. The working vacuum of the system can be controlled between 50-200Pa; Reduce the possibility of materials being pumped into the vacuum system due to high vacuum degree; The system is equipped with two sets of dedicated filters to maximally block impurities in the extracted gas and capture condensable gases to protect the vacuum pump.

Configure attachments			
NO.	名称	QTY	FACTORY
1	VSV-300旋片真空	2 SET	越
2	ZJY-600 ROOTS VACUUM PUMP	1SET	上海声
3	Pneumatic vacuum main valve ( DN150 )	1SET	国
4	Electromagnetic inflation valve	1SET	国
5	Manual inflation valve	1SET	国
6	corrugated pipe	1SET	佛山
7	Condensate filter	1SET	瑞( 国技 )
8	vacuum filter	1SET	瑞
9	Disk vacuum gauge(Z-100)	1SET	国
10	Seamless tube vacuum pipeline(DN150)	1SET	瑞

4.4.2,A VSV-100 vacuum unit is used to vacuum the vacuum mixing and degassing tank, with a pumping speed of 25L/S.  
**Configuration attachments for the system:**

NO.	DESCRIPTION	QTY	factory
1	vacuum pump VSV-200	1SET	越
1	Pneumatic vacuum main valve(DN 50)	1SET	国
2	Manual suction valve	1SET	国
3	Pneumatic solvent feeding valve	1SET	国
4	Manual solvent feeding valve	1SET	国
5	corrugated pipe	1SET	佛山
6	vacuum filter	2SET	瑞
7	Disk vacuum gauge	2SETS	国
8	Seamless tube vacuum pipeline	2SETS	瑞

**4.5,One set of automatic cleaning system**  
 4.5.1,This system includes: diaphragm transfer pump, solvent tank, water tank, pipeline, valve, vacuum gauge, etc;  
 4.5.2,The system transports the solvent to the mixing tank through a diaphragm pump;  
 4.5.3,The automatic cleaning process is completed by pouring the pipeline and valve back to the solvent tank through the flow tank, valve, and pipeline;  
 4.5.4,The solvent tank is equipped with a discharge valve to regularly discharge sediment.

**4.6,One set of cooling water pipeline system**  
 This system includes cooling water pipes, valves, pressure gauges, etc. at each water consuming point within the equipment scope. Users need to connect the water supply and return points to the equipment site within a range of 5 meters.  
 Provided by the supplier:

NO.	DESCRIPTION	QTY	FACTORY
1	Galvanized water pipe	1SET	国
2	Copper ball valve	SOME	国
3	Electric Contact Pressure Gauge	1SET	国
4	Switching shut-off valve	2SETS	国

**4.7,One set of pneumatic pipeline system**  
 4.7.1,Used to provide power to various pneumatic valves and cylinders. The user provides an air source within 5 meters of the equipment site.

Provided by the supplier:			
NO.	DECRPTION	QTY	FACTORY
1	三件FESTO	1 SET	国



2	Two position five way valve	8 SETS	国
3	Pipeline accessories, etc	1 SET	国

**4.8,One set of electronic control system (touch screen)**

**function:**

This control system is suitable for ambient temperatures ranging from 0 to 40 , and the wiring, wiring, and bridge layout are carried out in accordance with international standards.

- Detection and digital display of temperature and vacuum degree of pouring tank.
- The touch screen controls the process flow and displays the working status of each device unit.
- Realize mixing motor control, pneumatic valve and electromagnetic valve control.
- Realize interlocking and interlocking between pumps and valves of the vacuum unit.
- Implement an alarm device for insufficient air pressure and water pressure.
- The feeding of the mixing tank is manually prepared and input into the mixing tank.
- Capable of both manual knob control and touch screen control

**configuration:**

Electric control cabinet 1 SET  
Touch Screen 1 SET  
Digital vacuum gauge 1 SET  
Digital temperature controller 3 SETS  
Solid-state relay 2 SETS  
frequency converter 1 SET  
temperature sensor 4 SETS  
Button, knob 1 SET  
relay 1 SET  
Air Switch 1 SET  
Motor protection switch, etc 1 SET  
Wire and cable 1 SET  
Bridge 1 SET

**4.9 Other technical requirements**

- 4.9.1, Surface rust removal, rust prevention, and painting treatment of system components.  
4.9.2 The outer surfaces of all components of the heating system (except for armored parts and purchased components) are all warm red.  
4.9.3 The outer surface of the electric control cabinet is sky blue  
4.9.4 The outer surfaces of the remaining components (except armored components and purchased parts) and the equipment working platform are all industrial gray.

**4.10,A set of equipment installation steel frame platform (including materials)**

This steel frame platform is used to install this set of equipment. The steel frame is a 2-layer structure. The mixing tank is placed on the second-story steel platform.

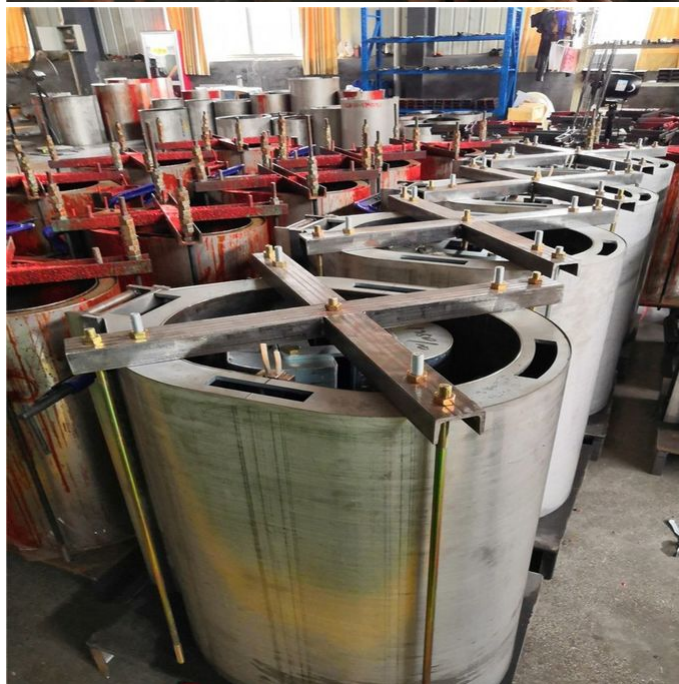
We provide the drawings and materials of the steel frame.

**五,Random accessories and spare parts list**

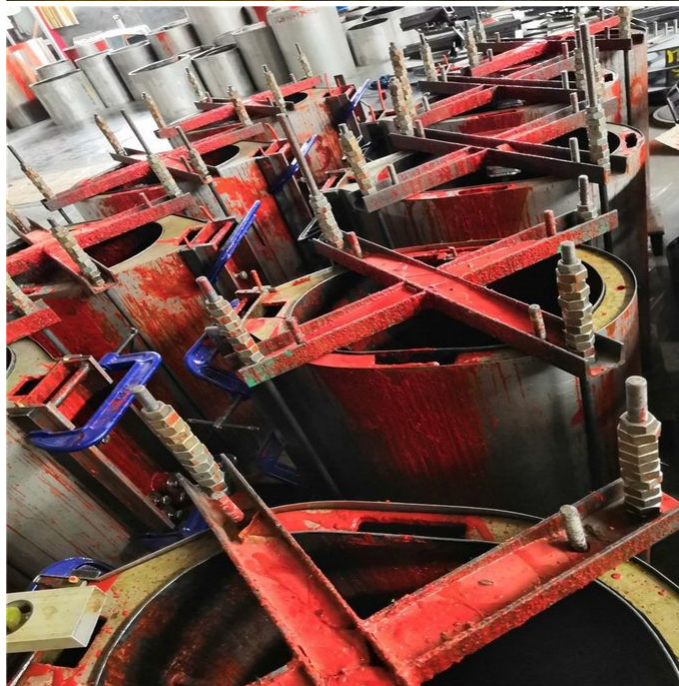
NO.	DESCRIPTION	Specification	QTY	FACTORY
1	Vacuum pump random accessories	VSV-300	2 SETS	越
		VSV-200	1套	越
		ZJY-600	1套	上海声
2	Tank door's sealing ring	Φ2400(1年 提供)	1 PCS	北方橡
3	Seals for vacuum and material pipelines	EACH ITEMS	1SET	瑞
4	Mixing tank lid seal	400L(600KGS)	1PCS	瑞
5	electric heating element	Heating tube for mixing tank	2PCS	无 康能
6	Thermometer	0 200	2PCS	广州 力
7	lighting observation lamp		3PCS	中山古
8	Observation window glass		3PCS	上海光芒

**Application:**

















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