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KX-901M Visual Glue Filling Machine



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I.Specification：Main technical parameters：

Storage Bucket	Applicable viscosity	300 CPS ~ 50000 CPS (reference value)
	Rubber barrel volume	A (25L) 、B (10L)
	Vacuum Defoaming	Vacuum defoaming (-0.1MPa), 8L/s
	Liquid level sensing	Upper level, lower level
	The glue barrel is stirred	Mixing in glue bucket A and B
	Constant temperature heating	Room temperature -100 °
	Filtration	Glue filtration
Metering Pump	Glue proportioning	1 :1 -—10:1
	Proportioning accuracy	≤±2%
	Gum output speed	0.5g/s—12g/s
Static mixing	Mixed mode	Dynamic Mixing (MS13-32)
	Other	Anti-curing function
		Automatic cleaning
Three-axis motion platform	Effective travel	Bigger than 450mm×500mm×100mm

	Displacement velocity	XY axis: 250mm/s Z-axis 100mm/s
	Displacement accuracy	+/=0.1mm
CCD	The way of taking pictures	Industrial Camera
	Resolution	0.05mm
	Illumination source	LED
	Automatic cleaning	Industrial control computer
Control System	Program inventory	99
	Proportional control	Digital input
	Flow control	Digital input
	Parameter display	Pointer/digital display
	Mode of operation	Touch screen/push button switch/third party signal
Other	Power supply power	380V/50Hz/6500W
	Input air pressure	0.4MPa — O.8MPa
	Overall dimensions	Less than 1500mm × 1550mm × 2000mm (including PC peripheral dimensions)
	Appearance material	Cold-rolled steel plate/industrial aluminum profile/stainless steel/sheet metal

II.FEATURES:

This equipment is an all-in-one machine for vacuum pumping, glue preparation, mixing and automatic filling and sealing, which is suitable for the filling and sealing process requirements of two-component glue such as silica gel, epoxy, EAW2777, crystal glue, PU (polyurethane), etc.

1.1. Pretreatment of glue (automatic feeding, stirring, filtering, heating, vacuum defoaming, etc.);

1.2. Proportioning and quantification of glue;

1.3. Fully mix the glue;

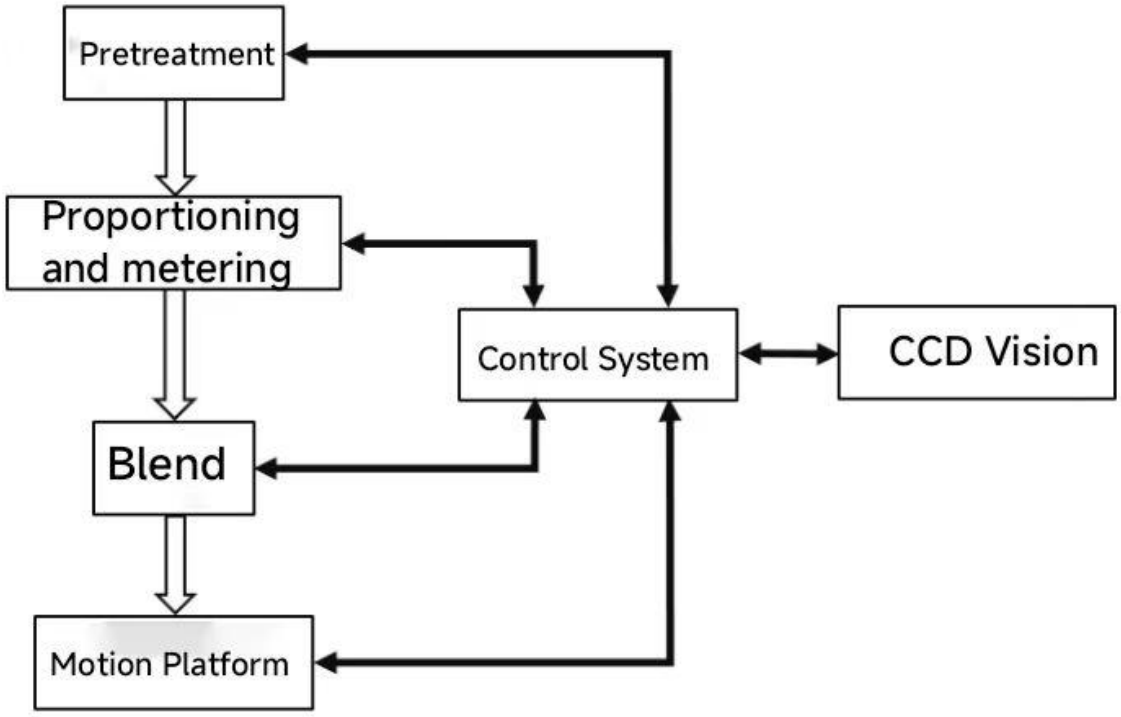
1.4. The dispensing position can be automatically corrected through the CCD vision system;

1.5. It can be automatically filled with glue within the travel range of the platform through program editing;

1.6. Set the time for automatic glue dispensing to prevent the glue from curing in the pipe;

1.7. Automatically clean glue contact part after mixing.

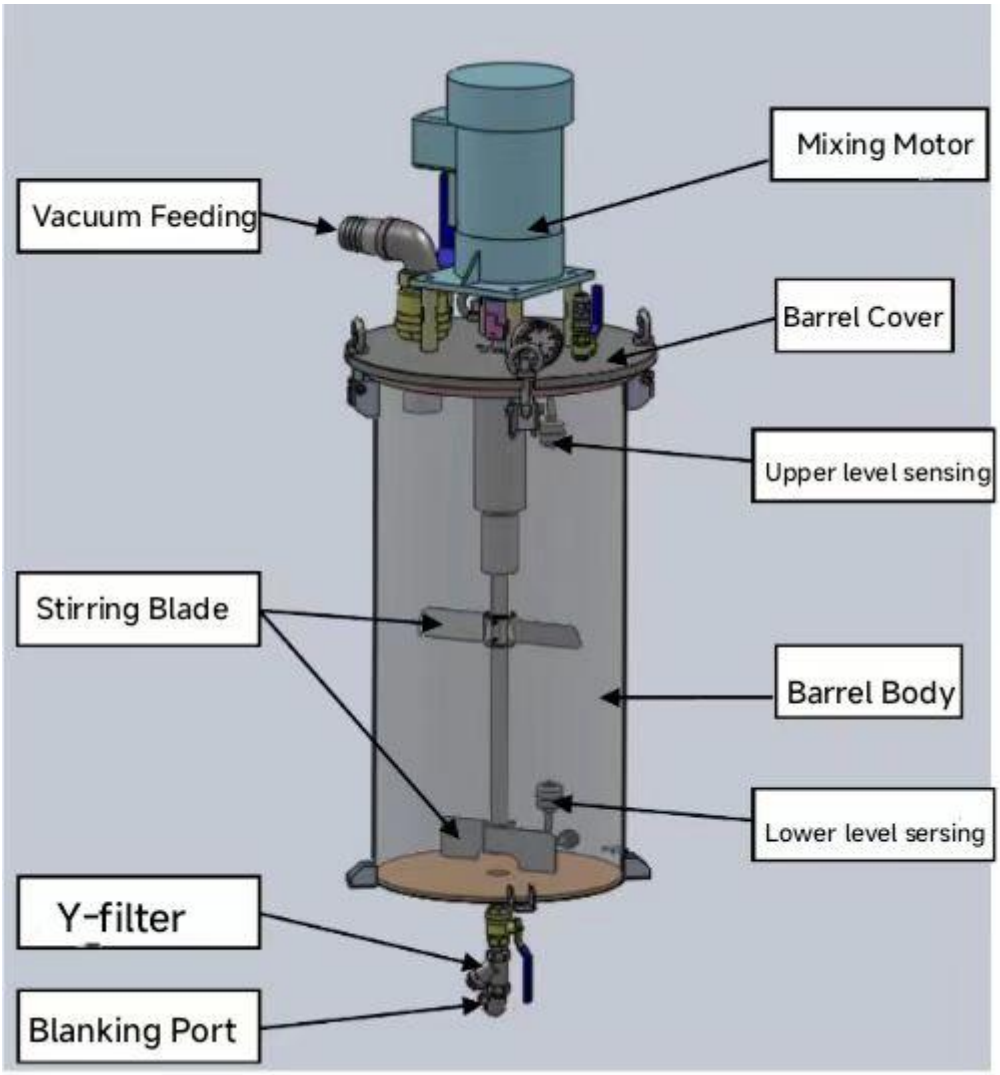
III. Schematic Diagram



IV. Glue Pretreatment

AB glue is stored separately in the equipment. The glue needs to be pretreated in the early stage of use to meet the sizing process. It can be carried out in the AB glue barrel. It is made of stainless steel and has a

volume of 10 L/25 L/40 L/60 L.



1. Vacuum suction

The glue pumping tube is inserted into the incoming material bucket, the AB glue is automatically sucked into the AB glue bucket through the negative pressure, and after the glue storage in the AB glue bucket reaches the upper limit set by the liquid level sensor, the relevant valves are automatically closed to stop the glue pumping.

2. Vacuum defoaming

Air bubble generated in that proces of absorbing glue and stirring are removed, the air dissolve in the glue is reduced, and the vacuum degree and the vacuumizing time can be set.

3. Constant-temperature heating of AB rubber barrel and AB rubber hose

For the glue which is sensitive to temperature, its viscosity changes with the change of temperature. The AB hose is heated at constant temperature, which can keep the viscosity of the glue consistent.

4. Mixing in rubber barrel

If the glue is allowed to stand for a long time, delamination will occur. After the glue is heated, the viscosity becomes low, the filler in the glue will precipitate, and the glue barrel can be stirred to make the glue composition consistent. The AB glue barrel is heated by the heating plate of the barrel wall, the stirring can make the temperature of the glue in the barrel more uniform, and the stirring speed can be adjusted according to the needs of the site.

5. Liquid level sensing switch.

Upper liquid level sensing switch: when the glue liquid level reaches the upper liquid level sensing switch during manual feeding or automatic glue pumping, the upper liquid level sensing switch will alarm and close the

relevant valves.

Lower liquid level sensing switch, in the production process, when the glue liquid level reaches the lower liquid level sensing switch, alarm and take corresponding measures.

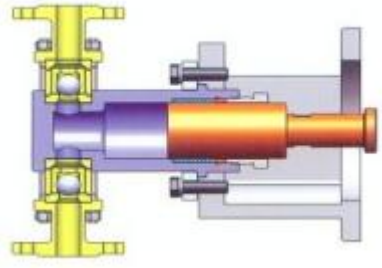
6. Filtration

The filter at the bottom of the barrel prevents the possible sundries in the barrel from stopping the pipeline and the pump body

V.Proportioning, Quantification and Delivery of Glue

1. Metering pump (double-cylinder plunger pump)

In order to reduce the cost or achieve the physical properties, fillers are added in the glue, the glue pump is the most important part of the whole machine as the core part of the glue pouring machine, so a more wear-resistant plunger pump is adopted to supply glue to the machine, the parts of the plunger pump forming the sealing volume are a cylindrical plunger and a cylinder hole, and the flow can be changed only by changing the working stroke of the plunger, The plunger pump is more wear-resistant than gear pump, the glue output is more accurate, the service life of the machine is longer as a new glue supply mode,The update time is long.



Plunger diameter: D

Plunger stroke per second: L/S

The glue yield is: V = Π (D/2) L/S

1.1 quantitative cylinder metering system, with high proportioning accuracy (± 2%), suitable for proportioning of two-component materials with medium and low viscosity;

1.2. Imported propulsion equipment further improves the sealing alignment and glue supply accuracy, and there is no leakage during operation;

1.Graphite sealing components, and will not corrode, to ensure a longer life of the pump;

1.4. Equipped with large constant high pressure precision double-liquid glue valve, multiple sealing modes and suction function, convenient for glue valve cleaning and precise glue dispensing;

1.5. Advanced system control, which can accurately program the glue dispensing and pre-store a variety of glue pouring programs;

1.6. Control system module with built-in self-diagnosis function can realize rapid fault detection;

1.7 Through the selection and combination of different metering cylinders, it can be realized Variable ratio demand;

1 :1~10 :1

1.The double cylinder plunger pump is a patented product of Daheng, which has a very good performance for high filling and high density glue with its structure;

1.9 The size of the pump body shall be customized according to the flow requirements and the application requirements of individual products.

2. Rubber hose

By configuring the glue circulating pipeline, the glue circulates in the glue barrel, the pump body and the pipeline, so as to prevent the glue from precipitating in the pump body of the pipeline and prevent the Duplug pipeline.



2.1. Strong toughness, not easy to break, no aging, no splitting, no color change after long-term use;

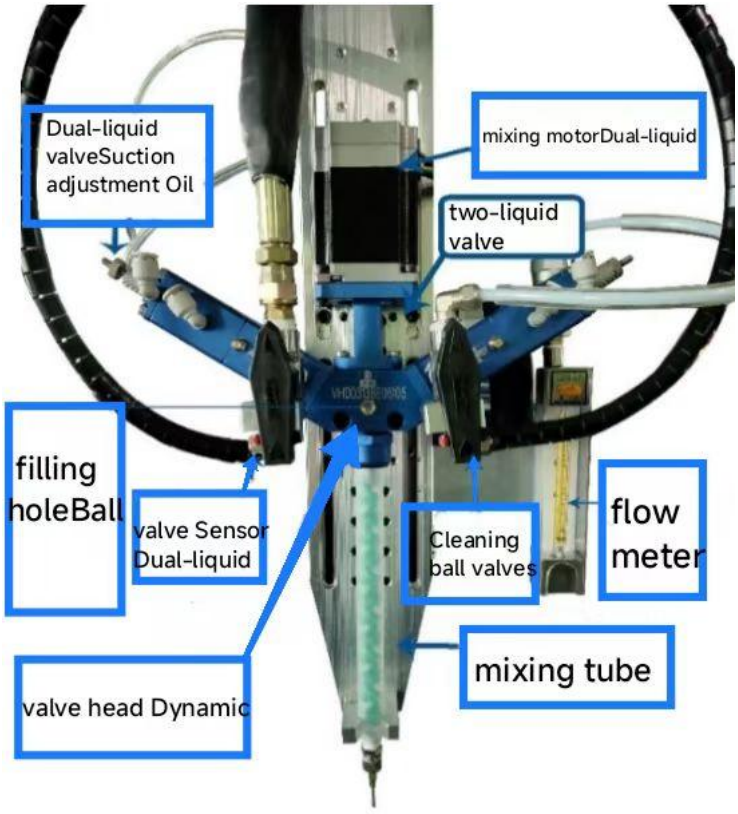
2.2. Teflon has stable chemical properties, corrosion resistance, high and low temperature resistance, high insulation and flame retardancy;

2.3. No adhesion, any dust can be simply removed, the release effect is good, the wear resistance coefficient is as low as 0.05;

2.4. The length of the hose can be customized according to the customer's needs.

VI.Mixing, anti-curing and cleaning

1. Hybrid system (dynamic hybrid)



1.1. The dynamic mixing motor drives the mixing rod to rotate at a high speed (2000RPM), so that the AB glue is fully mixed, with motor mixing detection and alarm functions;

1.2. Flow detection: detect the flow of glue B and observe the glue discharge

of glue B at any time;

1.3 Separated AB glue valve reduces the maintenance cost in the later period (because A glue contains a high content of filler, generally A glue valve is more worn than B glue valve. If it is damaged, only A glue valve needs to be replaced. Compared with the integrated double-liquid valve, the replacement cost is lower.)

1.4. The cavities of the moving parts of the valve body and the valve head shall be sealed with grease. The grease shall be injected regularly to discharge the glue filled inside, so as to prevent the glue from reacting into particles and wearing the seals.

2. Anti-curing function

Automatic glue dispensing can be set according to the reaction time of the glue when the machine is stopped for a short time. The glue dispensing time and the glue dispensing amount can be set to prevent the glue from being solidified in the mixing tube after being mixed.

3. Automatic cleaning

Long time shutdown can automatically clean contact part of the mixed glue without manual disassembly, so as to prevent the glue from solidifying and blocking the pipeline. The double cleaning mode can prevent the glue from blocking the pipeline.

VII. Three-axis motion platform and CCD vision system

1. The cantilever structure is convenient for employees to take and place products.

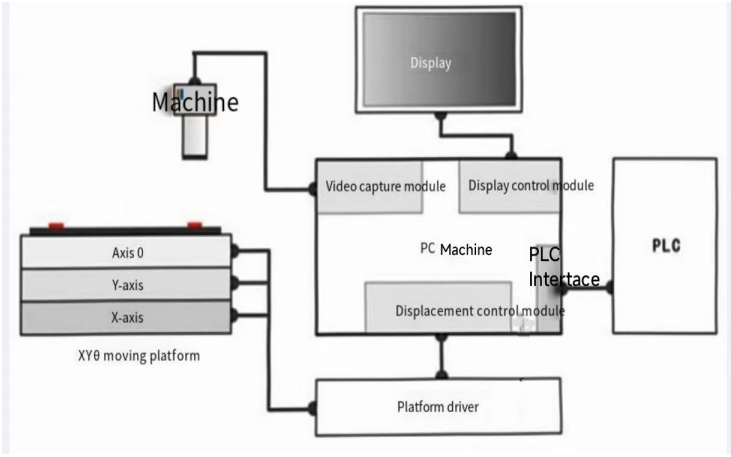
2. High-quality spare parts are selected to ensure its accuracy and stability. Touch screen display operation, full Chinese interface, operation/display/record of various parameter settings, point, line, arc, circle or various irregular graphic glue pouring, glue pouring program can be taught and edited or imported by CAD, touch screen programmer supports the whole column, graphical browsing, group editing and other functions.

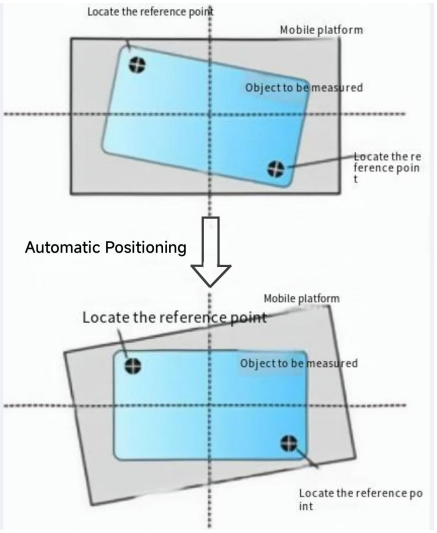
3. Visual system

The automatic detection of dispensing position by machine vision is mainly divided into three parts: image acquisition, image processing and extraction and output of position coordinates. After the specific chip is clamped correctly, the camera collects the image in blocks according to the division of the dispensing area, and stores the collected image in the memory. When the complete chip image is acquired, the acquired image is processed to fit the geometric characteristics of the contour of the dispensing area. And finally, extracting the coordinate value of the glue point center according to the position characteristics of the glue point center and the contour of the glue

dispensing area,And transmits to the electromechanical actuator to drive the motion platform to move to the correct dispensing position.

Three-axis control	Motion Controller	Three-axis correspondence
	Mobile platform	X/Y/Z axis
	Platform motor	Stepper motor
	Positioning accuracy	≤0.1mm
Vision system	Cameras	CCD resolution: 0.05 mm
	Camera Lens	Customize according to the product
	View	Customize according to the product
	Lighting	LED White/Blue Lighting





The offset of the dispensing needle in the XY direction is calculated through the identification of the positioning reference point, and the mobile platform is automatically controlled to move reversely by the corresponding movement amount, so as to correct the measured dispensing position and realize accurate automatic positioning.

VIII. Operating system

1. The amount of glue is controlled by the speed of the motor to reach the required amount of glue, which can be adjusted at will within the range of the speed of glue;

2, adjustable synchronous glue adjustment, so that the glue flows out from the glue valve at the same time, to obtain a better mixing effect;

3, can set the single glue out and continuous glue out function, to meet the needs of different processes;

4. PLC communication interface is reserved to facilitate connection with external equipment;

6. Touch screen safety interlock mechanism to prevent misoperation by employees

IX.Configuration List

Category	Configuration	Quantity	Brand
Machine Body	Foundation frame-square steel pipe welding structure	1 set	\
	Sheet metal	1 set	\
Control System	PLC programmable controller	1 set	Panasonic, Japan
	Industrial control computer	1 set	Advantech
	Display	1 set	DELL
	Software system	1 set	Daheng
	Industrial HMI touch screen	1 pcs	Kunlun Tongtai
	Industrial Camera	1 set	Hikvision

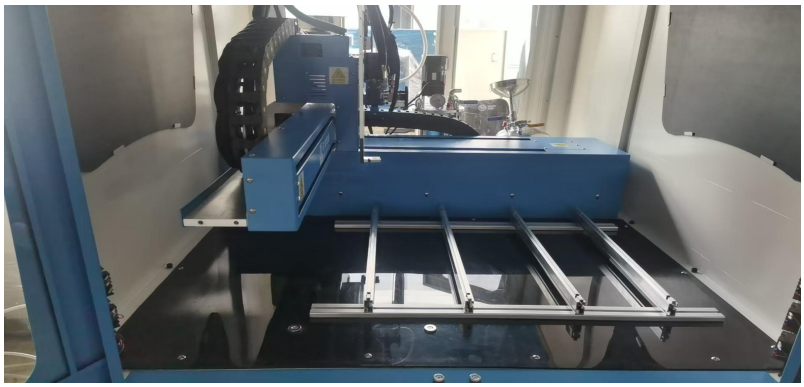
	Pneumatic components (battery valve/pressure regulating valve/filter/pneumatic duplex, etc.)	Several	Yadke
	Electrical components (relay/contactor/power supply/leakage switch, etc.)	Several	Zhengtai et al
Triaxial part	XY-axis synchronous belt and linear guide rail	2 sets	TBI
	Z-axis lead screw	1 set	TBI
	Stepper motor	3 sets	Leisai Technology
	Drive	3 sets	Leisai Technology
Glue supply part	Stainless steel A/B rubber barrel	Group 2	\
	Vacuum pump	1 set	Feiyue
	Constant temperature heating	4 sets	Yudian
	A/B drum mixing motor	2 pcs	Han Chuang
	Screw pump	2 sets	Daheng
	Metering pump motor	2 sets	Leisai Technology
	Drive	2 sets	Leisai Technology
	Static double liquid valve	1 set	Daheng
	High quality Teflon pipes	4 pcs	\
	Automatic cleaning	1 set	\

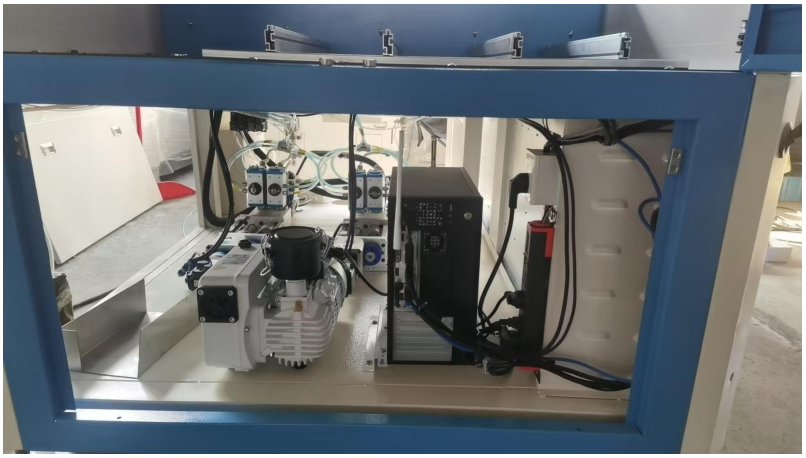
X.List of Spare Parts (Random Spare Parts)

Serial number	Name and model of accessories	Quantity	Remark
1	Static Mixing Tube MS 10-32 (Inlet)	10pcs	Consumables, standards
2	Dispensing needle G14/G15	20pcs	Consumables, standards
3	Valve body seal assembly	2 set	
4	Simple tool	1 set	Common tools

More Picture







PACKAGING:

Packaging Material: Carton/Wooden case with foam inside.

General package(Paper carton or plastic bag): For small euipped parts for T oroidal

TransformerWindingMachine , Package it with form and pack paper to guara ntee unbroken during the transport.

2.Wooden case package: For larger scale Toroidal Winding

machine ,we have special skilled

carpenter, who would make the proper wooden case with exact thickness,de nsity,length. The up arrow ↑marked on the outer wooden case. Buffer materi al would be put in the wooden case to prevent crack and shock.



Below is the name of all listed accessories for the machine and construction diagram.
(Note:Different machines have different equiped parts)

FACTORY：

KIOXIA LIGHT RING EQUIPMENT GROUP CO.,LTD.

Founded in 1993, KIOXIA LIGHT RING EUIPMENT CO.,LTD. has been a well-known manufacturing excellent performance winding machines together with associated production and technology. KIOXIA LIGHT RING provide highly cost effective manufacturing solutions for the production of the wound components of all types such as transformers,chokes etc.

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