

ZKRZ-RHJ6.0

Fiber Coil Winding Machine Specification



General Introduction

1. Name and model

Name : Fiber Coil Winding Machine

Model : ZKRZ-RHJ6.0

2. Usage

Fiber Coil Winding Machine is mainly suitable for winding low, medium and high-precision fiber coils, fiber coils for hydrophones, fiber coils for optical delay, etc., and can realize various winding methods such as Singlepole, quadrupole, and multipole.

It can support the diameter of optical fiber of $\Phi 0.06$ mm~ $\Phi 0.40$ mm. Default usable fiber diameter is 0.12mm-0.16mm. For other fiber diameters, customized accessories is needed when ordering).

3. Main Functions

- A variety of winding methods for fiber coils can be operated;
- The tension control system can carry out precise control of optical fiber tension, and support the display, saving and reading of tension data.
- Real-time meter counting and turn counting functions, support the saving and reading of fiber length and number of turns.
- Visual image observation system has its own lighting system, which supports manual adjustment of brightness and darkness, and can observe the fiber laying status in real time during the winding process.

- The equipment structure is ergonomic, easy to operate and maintain.

4. Software and control systems

- Touch screen control, the operation interface can be set and operated by forward winding, backward winding, left moving, right moving, start, stop and so on.
- Real-time recording of the processing data of the winding method of the ring winding machine, and support the return check of the processing record.
- The touch screen can set the relevant processing parameters of the product, including skeleton diameter, coil height, optical fiber diameter, total number of layers, number of turns per layer, fiber discharging shaft parameters, auxiliary wheel parameters, limit alarm, fiber winding speed, tension, spindle rotation direction, fiber laying direction/start/stop coordinate position, spindle rotation angular speed, etc.
- There is tension control function, tension over-limit stopping, alarm function; The tension range is adjustable.
- The machine can be automatically or manually wound and reverse of winding while it can be paused and resumed at any position. It also can be wound to any position when stopping and reversing by jogging. The machine has multi-layer continuous backward winding function.
- After the single layer winding, it can be automatically stopped and remind the operator to make relevant adjustments if necessary.

Specifications

Item		Description
Model		ZKRZ - RHJ6.0
Installation form		Floor Standing
Noise value		≤60dB
Winding method		Single pole, Quadrupole, Octapole and 16 th Pole
Size of wound fiber Coil	Inner diameter	16-200mm
	Height	1-100mm
Spindle	Diameter	5-30mm, Can be customized
	Rotating Speed	0~100rpm ,Continuously adjustable
	Radial runout	≤0.02mm
Shaft of Fiber Laying	Maximum Stroke	200mm
	Repeatable positioning accuracy	≤0.01mm
	Fiber guide wheels	The position supports 360° adjustment of the plane, and supports free hover after adjustment.
	Guide wheel set	It supports quick adjustment of the guide wheel set height. Height adjustable stroke is ±35mm.
Shaft of Fiber Discharging	Diameter	15mm
	Length	180mm, Can be customized
	Maximum Load weight	≤25 KG
Optical Fiber diameter		≤400um
Turns counting accuracy		≤0.02%
Meters counting tolerance		≤0.3%
Tension control	Control range	2~30g
	Precision	≤0.5g
	Resolution	0.1g
Vision system	Display range	No less than 15 fibers can be displayed
	Magnification	Not less than 40 times

Main spare parts

The list of main equipment accessories is as follows:

No.	Part name	Unit	Qty	Comment
1	Eelectronic scale for Tension measurement	Pcs	1	
2	Backlight	Pcs	1	
3	Curtain remote control	Pcs	1	
4	Equipment Instruction Manual	Pcs	1	
5	Main Spindle	Set	1	Customized
6	Quality Warranty Card	Pcs	1	
7	Certificate of Conformity	Pcs	1	

Installation related

This equipment is precision equipment, and the site where the equipment is placed must meet the requirements of a clean and dust-free environment.

Item	Specification	Comment
Power supply	Main power supply single phase AC220V 50HZ , 16A	Variation $\pm 5\%$
Air source	Dew point temperature below 40° C, pressure 0.7MP	Oil-free, dust-free, non-hazardous gas
Ground load-bearing	$> 500\text{kg}/\text{m}^2$	
Vibration	$< 0.002\text{G}@15\text{ Hz}$	No obvious vibration
Machine Dimension	1300mm*800mm*1900mm	
Net weight	$\leq 1000\text{kg}$	
Ambient temperature	$23 \pm 3^{\circ}$ C	No sharp changes in temperature, no condensation in humidity
Ambient humidity	RH 50~65%	
Dust-free rating	Class 1000	
Total power consumption	$\leq 2\text{kW}$	