

## ZDLT 350/9 Intermediate R.B.D. Wire Drawing Machine With Single Spool Take Up



**Note: Above photo is for reference, annealing equipment is not included.**

### 1. GENERAL DESCRIPTION

This machine is used to draw  $\Phi 1.0 - \Phi 2.76$ mm copper wires. The drawing blocks are mounted in one row.

### 2. TECHNICAL PARAMETER

- 2.1 Inlet wire:  $\Phi 3.0 / \Phi 3.5$  mm
- 2.2 Outlet wire:  $\Phi 1.0 - \Phi 2.76$  mm
- 2.3 Max speed of drawing: 1200 m/min
- 2.4 Drawing block size:  $\Phi 350$  mm
- 2.5 Max number of passes: 9
- 2.6 Die dimension:  $\Phi 25 \times 15$
- 2.7 Capacity of the accumulator: 3m
- 2.8 Take-up spooling bobbin size: PND500~PND630
- 2.9 Main motor power: 55kW (AC)
- 2.10 Power of motor take up: 11 KW X 2 (AC Motor)
- 2.11 Machine dimension: L11000 x W4200 x H5000mm

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### 3. MACHINE COMPONENTS

- 3.1 Main drawing machine 1 set
- 3.2 Accumulator 1 set
- 3.3  $\phi 500-\phi 630$  take-up 1 set
- 3.4 Water steamer 1 set
- 3.5 Electric control and operating desk 1 set

### 4. CONSTRUCTION OF MAIN COMPONENTS

#### 4.1 Main drawing machine

4.1.1 The main engine is mainly composed of drawing liquid cooling circulating tank, transmission gearbox and rotating lubrication system.

4.1.2 Two die piercing inching switches are used for die piercing points, and anti-reversal devices are set.

4.1.3 The distance between stay wire drum, die base and gear box shall be consistent, which is the most advanced structure in the world.

4.1.4 Drum rim adopts steel wheel and is sprayed with tungsten carbide to ensure the service life of drum rim.

4.1.5 The gearbox lubrication system uses a 2.2kW standby motor oil pump with heat exchanger to lubricate and cool all gears and bearings.

4.1.6 The drawing drum box is equipped with two stainless steel door covers to avoid the overflow of drawing liquid.

4.1.7 Immersion and spraying are adopted for wire drawing lubrication to ensure the cooling and lubrication of drum and wire drawing die. With drawing liquid supply station and heat exchange cooling system.

4.1.8 In order to avoid the equipment working without lubricating oil, the system is also equipped with oil cut-off alarm device and automatic shutdown.

4.1.9 The lubricating oil pipes inside the wire drawing host are made of copper or stainless steel.

#### 4.2 Storage line tension controller

4.2.1 Storage capacity: 3M

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4.2.2 Maximum tension: 138N

4.2.3 The tension control is a cylinder, and the air pressure of the cylinder is adjustable.

### 4.3 $\Phi$ 500- $\phi$ 630 Take-up

4.3.1 Take up reel size: PND500 ~ PND630

4.3.2 Maximum take-up speed: 25 m/s (PND630)

4.3.3 Take up motor: 11kw (2, AC)

4.3.4 The wire arrangement adopts synchronous belt drive and electromagnetic clutch to switch the direction, which solves the problem that the forward and reverse switching direction of traditional motor is easy to break. The wire arrangement speed is controlled by frequency conversion, and automatically tracks the wire take-up speed to adjust the wire arrangement speed, maintain the consistent wire arrangement spacing, and adjust the wire arrangement spacing according to the change of wire diameter. The wire arrangement produced is flat and does not press the wire.

4.3.5 The shaft less thimble hanging mode is adopted, and the clamping mode is pneumatic or hydraulic, which is safe and reliable, with low failure rate. The take-up power adopts AC variable frequency drive, and the brake adopts pneumatic disc brake. The speed of the brake can be adjusted by air pressure as required.

4.3.6 The take-up design has the function of meter to stop, and the equipment will stop automatically after the meter length reaches

## 5. Electric control system

5.1 The power supply of the machine is three-phase five wire system 415V ( $\pm$  10%), 50Hz.

5.2 Host, double reel take-up, variable frequency drive for speed regulation.

5.3 The operation of the whole machine adopts PLC unified and coordinated control, and the operation, start and stop are stable

5.4 With stable take-up tension control capability, there will be no disconnection when the whole machine stops tightly.

5.5 The electrical system adopts a full set of automatic protective devices.

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### 6. OTHERS

- 6.1 Machine direction: right hand operation
- 6.2 Machine color: according to the color plate offered by customers.
- 6.3 All the main bearings will be used NSK
- 6.4 Machine noise will be less than 80db
- 6.5 All the cables, wires, and pipes for installation will be prepared by the buyer
- 6.6 Air pressure: 0.6 MPa
- 6.7 Air volume: 1.0 M<sup>3</sup>/min
- 6.8 Compressed air shall be dry and clean without any dust and substance
- 6.9 The buyer shall provide the bobbin drawings for the dual take up

### 7. SUPPLIED THE FOLLOWING DOCUMENTS WITH THE MACHINE

- 7.1 Machine layout, foundation drawing
- 7.2 Electricity, piping drawings
- 7.3 User handbook
- 7.4 Transmission system drawing

### Free Charge Easy wearing parts

NO	Item	Unit	Quantity
1	Driving belt	set	1
2	Seal belt	kg	1
3	Brake plate	pc	4
4	Electrical valve	pc	1
5	Proximity switch	pc	2
6	Magnet switch	pc	4