HY92-500 Single-end Wheel Press (500T)

This machine is suitable for the disassembly and assembly of large wheel and axle components in industries such as railways, mines, chemicals, and steel production.

Main specification

Max. force	500T
Maximum hydraulic system pressure	25 MPa
Slide stroke	700 mm
Maximum embedded wheel diameter	1350 mm
Maximum embedded shaft diameter	450 mm
Maximum embedded shaft length	2500 mm

Motor power	11+11 Kw
Pressing speed	0-4.7 (adjustable) mm/s
Fast forward speed	17 mm/s
Return speed	43 mm/s

This machine is mainly composed of fixed beams, movable beams, rear brackets, pillars, chassis, clamping devices, small cars, and hydraulic components.

1. The mechanical part is mainly the main engine

1.1 The fixed beam and the movable beam are connected by two pillars to withstand the main pressure installation force.

1.2. The movable crossbeam can be moved on the track through electric drive and fixed in a suitable position using a clamping device to meet the pressing and dismantling of workpieces of different lengths. The limit position of the movable crossbeam is equipped with a travel switch and limit stop iron, and an indicator light is displayed on the main control cabinet.

1.3. Welding components such as fixed beams and movable beams must have sufficient strength and stiffness to meet the requirements of strength, deformation, and fatigue strength during long-term full load operation. Strictly follow the standard design and development of processing technology, and strictly implement it throughout the production process. The main welds and butt welds of the crossbeam should be fully welded. After the welding of the press machine crossbeam is completed, the overall annealing treatment should be carried out first to eliminate stress before machining.

1.4. There is a long metal drag chain in the channel steel of the chassis, which is wrapped with cables and other materials. When the movable beam travels, the drag chain rolls in the channel steel in the middle of the chassis, preventing wear and tear from the wrapping.

The working and return limit positions of the piston rod are controlled by two travel switches. The distance the piston moves is indicated by the pointer on the guide shaft. Two sets of guiding devices are required, with both front and rear ends capable of guiding, reliable guidance, and low sinking force of the pressure head. The cylinder body is made of 45 # forged steel as a whole. The piston rod is made of 35 # forged steel, with a hard chromium plating layer thickness of 0.05mm on the surface and a surface hardness of HRc50-55, which should have sufficient hardness.

1.5. The load bearing of the trolley is designed as 2T, used for pressing and installing suspended or semi suspended wheel axle pairs. Between the front fixed beam and the movable beam, or between the movable beam and the rear bracket, the movable trolley moves along the outer guide rail of the chassis. The movable trolley can be lifted and moved back and forth, suitable for pressing the wheels at both ends of suspended or semi suspended wheelsets. There is a pair of "V" shaped blocks on the car, which are used for supporting and positioning the axle of the press mounted suspension or semi suspension wheel set.

2. Hydraulic requirements: composed of oil tank, oil pump, motor, integrated block, hydraulic valve, pressure sensor, pressure gauge, filter, pipeline, instrument rack, chassis, etc.
The hydraulic system requires a motor produced by a large national manufacturer, which drives an axial piston pump, gear pump, or vane pump as the power source to achieve the functions of work advance, fast advance, fast retreat, and wheel retreat of the press assembly machine. Hydraulic components should be selected from domestic and foreign high-quality products, and pressure sensors should be selected from Italian Jeffron products

The hydraulic valve adopts products from Shandong Jining Taifeng and other brands.

3. Electrical system requirements: (optional configuration in parentheses)

Consisting of hardware and software systems, with a dedicated operating console. Operate with a remote control.

The electrical system includes a control system, which is mainly controlled by a PLC and consists of an electrical cabinet. It mainly consists of displacement sensors, pressure sensors, and curve recording systems, which can automatically detect displacement and pressure data and form pressure fitting curves. Pull wire displacement sensors, pressure sensors, and other electrical appliances

4. Safety protection device:

4.1 When the system is overpressure, it has pressure relay shutdown protection and overflow protection.

4.2 Fixed beam and control console with an emergency stop button.

4.3 The mechanical and electrical equipment and control safety system comply with Chinese national standards or corresponding standards, and the safety interlocking system is reliable.

4.4 Set up standardized and reliable mechanical and electrical safety protection and eye-catching warning signs in hazardous areas such as mechanical, electrical, and hydraulic systems.