King Shang Yuan Machinery

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Smart Hydraulic Presses Leading a New Era of Automation

King Shang Yuan Machinery has leveraged the strengths and dropped the shortcomings of hydraulic machines and mechanical presses to develop a new series of hydraulic presses. The company has addressed common issues with hydraulic machines such as slow speed, high power consumption, temperature rise, oil leakage, and frequent hydraulic oil replacement. It has also solved problems typical of mechanical presses, including unadjustable stroke length, inability to vary speed in multiple stages, excessive speed, high rigidity, short dies life, weakened stamping force from low speeds, and high vibration and noise during operation.

The new series of hydraulic presses owns the following strengths — stable force output, adjustable height, variable stroke and pressure, multi-stage speed selection, adjustable pressure holding time, compatibility to diverse processing needs, reduced impact on dies from pressure and speed changes, longer dies life, low operation noise. The whole series developed by the company now features a special hydraulic system and cylinder that overcome the drawback of slow speed of conventional hydraulic machines, making the motors more energy-efficient and delivering greater pressure output. All models are equipped with pressure and stroke controls, offering flexible process options. An oil temperature cooling device effectively controls temperature rise and reduces oil leakage. Oil consumption is now only one-third that of conventional hydraulic machines, contributing to carbon reduction.

Based on its hydraulic presses, the company has developed a rotary-type multi-station hydraulic press, ideal for assembling fasteners and able to simultaneously feed, assemble, and press workpieces automatically, and eject finished products. The anti-loosening nut indentation press features a precision temperature control system that maintains hydraulic oil temperature between 33 and 36 degrees Celsius, preventing environmental factors from affecting oil temperature, pressure output, and product yield, thus stabilizing the pressure in the pressing process.

With the range of nut's deformation pressure configured, the patented quality sorting device — an optional purchase and is installed in the pressing area — detects and separates nuts which bear excessive or insufficient pressure in real time during pressing. Setting the number limit of defective products is possible to prevent excessive loss. The special hydraulic system offers 2 to 4 stages of pressure range adjustment to ensure stable pressure.

Hydraulic Press

Designed specifically for processing anti-loosening nuts, the press performs fixed-point pressing on nuts already with internal threads to make them anti-loosening. It employs a smart power and air pressure management system that automatically switches to energy-saving mode and flashes a warning light when idle or abnormal, reducing energy consumption. A built-in precision nut orientation and feeding system automatically identifies and corrects nut orientation to avoid pressing defects, improving yield. Users can add a storage module to support long periods of unmanned automatic production, saving labor costs and reducing material waste. For safety, the press includes protective devices such as a pressure zone safety shield and electronic safety switches. The press immediately stops if the shield is opened during operation and cannot restart until the shield is properly closed, ensuring operator safety.

When using mechanical presses to perform indentation pressing on anti-loosening nuts, thicker nuts would be pressed deeper, and vice versa, affecting the tightness of anti-loosening threads. King Shang Yuan's special hydraulic press is unaffected by thickness tolerances, delivering stable pressure output and consistent deformation, thereby increasing anti-loosening quality. The company continues to leverage its professional expertise in hydraulic presses and automated equipment to provide efficient, stable, and safe forming solutions, helping clients improve production line competitiveness and efficiency. ■