



Ground-breaking & Innovative

Masterpiece Hardware Industrial Embodies Smart Industry 4.0

Innovative Thinking Breaks Conventional Industry Bounds

Masterpiece Hardware Industrial (also known as JCY) is an iconic quality fastener supplier in Lukang, Changhua City in Taiwan, producing screws, nuts, plastic, and zinc alloy fasteners for the global market. Aware of manpower shortage in the fastener industry and the trend towards low-volume, diverse and customized production, JCY invested in and introduced an automated intelligent factory in 2017 which has enhanced production efficiency and product quality, breaking away from messy environmental impression of traditional industries and attracting people from the new generation. Digital transformation has positioned JCY as a preferred supplier for European and Americans clients. President Rick Wang stated that this smart factory transformation is not about reducing manpower but rather about placing people where they can provide real value and productivity.

Accelerate Product R&D + Expansive High-Value Patent Products

JCY boasts a strong team of specialized engineers without having to rely on veteran craftsmen's experience in die manufacturing. By combining equipment, sensors and software to analyze big data, they can calculate optimal parameter settings to shorten product development timelines and enhance design precision. JCY is devoted to developing high-value patent products by modularizing and parameterizing dies to reduce tooling setup time by 65%, allowing employees more time to focus on such products. They are also set to obtain IATF 16949 certification and expand high-value products into various industries.

Lean Production, Shorter Lead Time

They integrate automated equipment with systems to gain optimal and the most stable production parameters and automatically generate traceable production histories, reducing quality anomalies and downtime. The sensors on the equipment effectively monitor tooling status in use, predicting wear and enabling preemptive maintenance to extend tooling's life by 40%, significantly lowering waste and production costs. An online reporting system allows real-time monitoring and optimizes production

processes, quickly catering to client inquiries about production progress and lead time while flexibly adjusting production schedules based on client needs.

Around-the-Clock Auto-inspection Comes Up Next

They adopt a fully automated inspection system that replaces conventional machines which require manual dimension input. They have also developed an automatic optical inspection machine with 100% measurement accuracy that can determine product compliance in 3 seconds and generate visual data to eliminate human error in inspection and data transcription. They will even introduce auto-sampling equipment for 24-hour auto-inspection!

Masterpiece Hardware Industrial Pioneers Green Manufacturing

Set for trial production in 2026, their new plant in Zhangbin Industrial Park covers 40,000m² and will utilize wastewater recycling, oil filtration, thermal energy recovery and storage systems to achieve energy savings and carbon reduction. While incorporating the aforementioned smart manufacturing system to become one-stop production operating around the clock. Once completed, production capacity will more than double with a product yield rate of 99%. Further, from 2023, they have been able to use software to auto input carbon emission data and generate CBAM compliance reports for clients. Following the whole plant reform, JCY aims to shorten lead time, accelerate development, lower production cost and increase added value to be your strongest low-carbon procurement partner! ■

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Article by Dean Tseng*

Masterpiece Hardware Industrial's contact: Carina Chen, Sales Assistant Manager
Email : carinachen@jcy-hardware.com

