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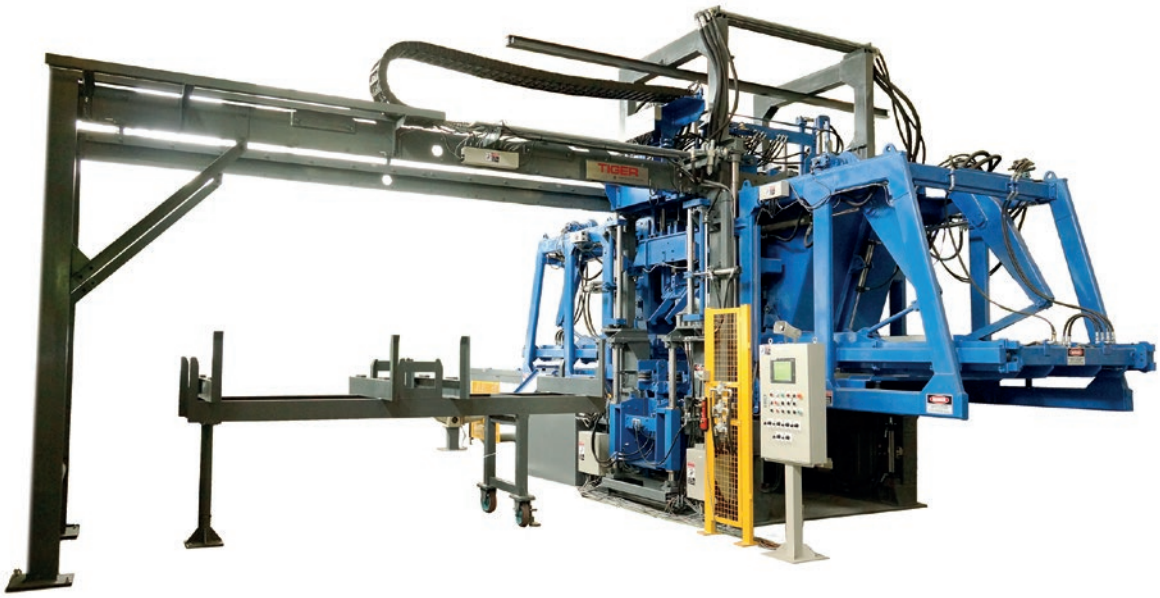
Leveraging Automation to Boost Sales & Productivity in Concrete Production Plants

In today's competitive business landscape, efficiency, quality, and responsiveness are key drivers of success for concrete production plants. With the increasing demand for construction materials and the pressure to meet tight deadlines, manufacturers are turning to automation as a strategic solution to enhance their operations and gain a competitive edge in the market.

Automation offers concrete production plants a multitude of benefits that directly contribute to boosted sales and productivity. Firstly, automation streamlines the production process by reducing manual labor and minimizing human error. Through automated batching, mixing, and material handling systems, plants can operate continuously and precisely, resulting in faster production cycles and consistent product quality. This increased efficiency enables plants to produce more concrete products in less time, meeting customer demand more effectively and increasing sales.

Automation ensures consistency, creating customer satisfaction and builds trust in the brand, ultimately driving repeat business and positive word of mouth referrals. In addition to improving efficiency and quality, automation helps reduce labor costs by automating repetitive and labor intensive tasks. By minimizing reliance on manual labor, plants can lower labor costs and reinvest savings in other areas of the business or pass savings to customers through competitive pricing strategies, making the products more attractive in the market.

The International Federation of Robotics reports that global sales of industrial robots reached a record high in 2023 with a 57 % increase from 2020. The surge in global sales of industrial robots represents a significant trend in the manufacturing industry with far reaching implications for productivity, efficiency, and competitiveness. The record-high sales figures and a substantial increase from 2020 underscore the growing adoption of automation technologies by manufacturers worldwide, including those in the concrete production sector. Advancements in robotic technology have led to the development of sophisticated and versatile robots capable of performing a wide range of tasks with speed, precision, and reliability. The increasing demand for automation is fueled by factors such as rising labor costs, workforce shortages, and the need for greater flexibility and agility in response to changing market dynamics. Where labor costs are high or where skilled workers are scarce, manufacturers are turning to automation as a cost-effective solution to remain competitive and meet growing customer demands. The COVID-19 pandemic accelerated the adoption of automation as manu-



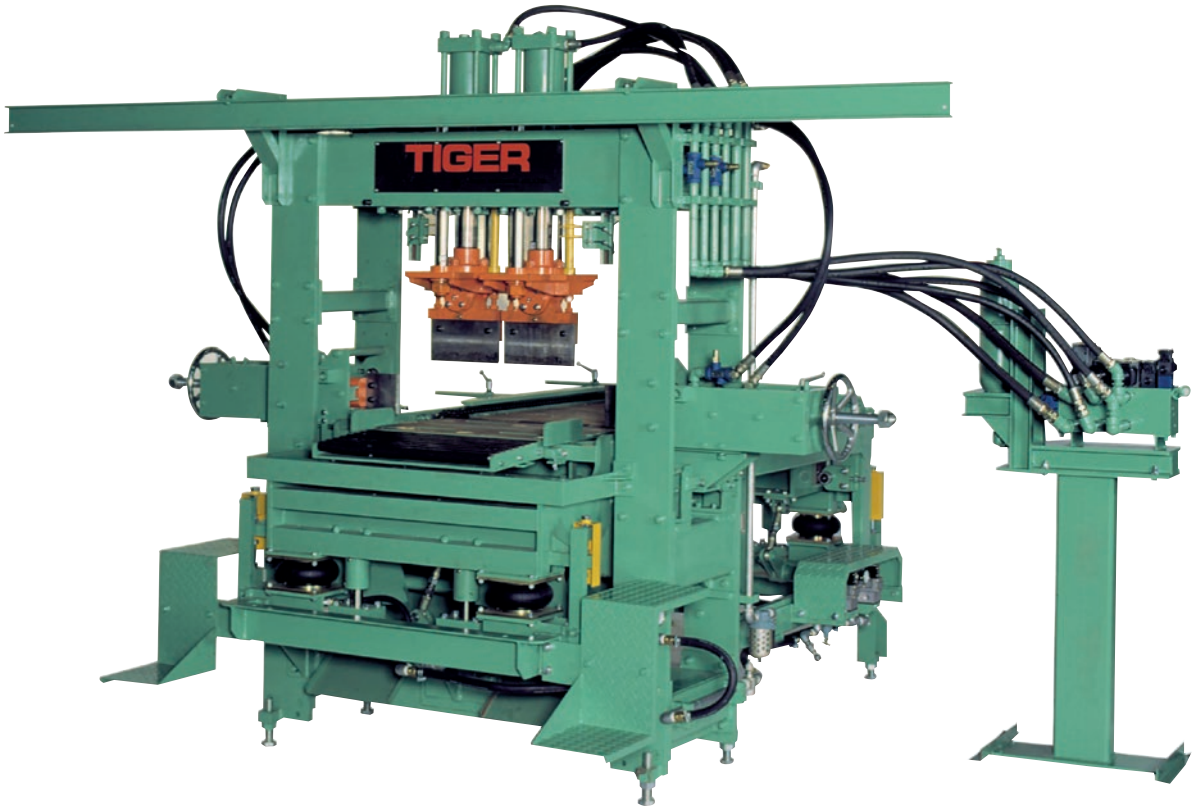
The Tiger PS-1000 is capable of making products ranging from 30mm to 300mm, has the ability to run existing molds and new products. It's engineered and built for heavy duty and continuous use.

Tiger CC Cuber-Cube two different products at the same time with a completely in-line system that's compatible with specialty lines.

facturers seek to mitigate disruptions to production caused by lockdowns and supply chain disruptions. Automation allows plants to maintain continuity in operations while reducing reliance on human labor.

Robots equipped with advanced sensors and control systems can perform tasks such as palletizing, packaging, cubing, with greater speed and accuracy than human workers, leading to increased productivity and efficiency. Automation enables

Tiger Model S- Built to last and compatible with many existing foundations, the Model S features fast mold and height changes, along with highly adjustable and user-friendly controls.



Tiger TSP-12-Series includes hand-fed splitters, automatic feed splitters, and very large capacity fully-automatic splitters.

concrete production plants to respond more effectively to fluctuations in demand, optimize resource utilization, and enhance overall competitiveness in the market. By leveraging automation technology, plants can achieve higher levels of throughput, minimize waste, and deliver products to customers more quickly and cost effectively, driving sales, growth and profitability.

To harness the benefits of automation effectively and boost sales and productivity, consider the following steps: assess operations, set objectives, develop a comprehensive implementation plan, provide training and support, iterate and optimize. Conduct a thorough assessment of current production processes, identifying areas where automation can be implemented to improve efficiency. This could include palletizing, cubing, packaging, and more. Defining clear objectives for automation implementation could be increasing production capacity, reducing labor costs, and lacking human labor. This will guide automation strategies and ensure alignment with priorities and performance targets.

In many regions, there is a noticeable decline in availability of skilled labor willing to work in manufacturing roles. This includes aging demographics or shifts in workforce preferences in the service based industries. As a result, automation offsets the challenges associated with labor shortages, ensuring consistent production output and reducing reliance on human labor. Modern consumers are increasingly demanding products that are not only high-quality, but also customizable, delivered quickly, and at competitive prices. Meeting these demands can be challenging within traditional manufacturing frameworks reliant solely on human labor.

The transition towards automation in manufacturing represents strategic response to the challenges posed by dwindling labor availability. Manufacturers worldwide are increasingly turning to automation technologies to mitigate the impact of labor shortages, enhance product efficiency, and meet the evolving demands of customers. By leveraging robotics and other advanced technologies, manufacturers can not only address immediate labor constraints but also achieve long-term sustainability and competitiveness in a rapidly evolving global marketplace. Successfully adopting automation requires careful planning, strategic investment, and a holistic approach that considers the opportunities of integrating automation systems into manufacturing operations. ■

FURTHER INFORMATION

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