

Driving efficiency in AAC production: the strategic role of auxiliary equipment

As the global AAC market rapidly develops, manufacturers face unprecedented challenges: increasing capacity while maintaining consistent product quality and performance, reducing energy consumption amid rising costs, and controlling labour requirements in a tight workforce environment. The technology for core equipment – such as mixers, pouring systems, cutting machines, and autoclaves – is relatively mature, yet production lines still encounter issues like uneven green cake density, demoulding failures, reinforcement cage inaccuracies, and uncontrollable manual production steps.

It is precisely in these seemingly "minor" processes that auxiliary equipment proves its value. They may not be the stars of the production line, but they make operations more stable, environmentally friendly, and efficient. Keda leverages this innovative auxiliary machinery to turn operational details into real competitive advantages for its customers.

High-frequency slurry vibration: unlocking uniform foaming

Uniform foaming of the green cake directly determines compressive strength, cutting accuracy, and final yield. Traditional reliance on experience and manual adjustments often results in large air pores and uneven foam, wasting aluminium powder and compromising quality.

Keda's high-frequency vibration system operates at approximately 200 Hz and 12,000 rpm, using resonance to break down large air pores into evenly distributed micro-pores instead of simply expelling air. This optimizes foaming conditions and ensures uniform pore distribution and density.

Its modular design allows easy integration into new or retrofitted lines, while advanced cooling extends the lifespan of the controller and ensures long-term

stability. As a result, customers reduce aluminium powder usage and overall production costs, and achieve more consistent green cake quality and higher cutting accuracy.

Customer benefits of improved slurry vibration

Customer benefits include:

- Improved product consistency and stability
- Reduced aluminium powder consumption
- Enhanced cutting efficiency and yield

Mould oiling machine: efficiency meets sustainability

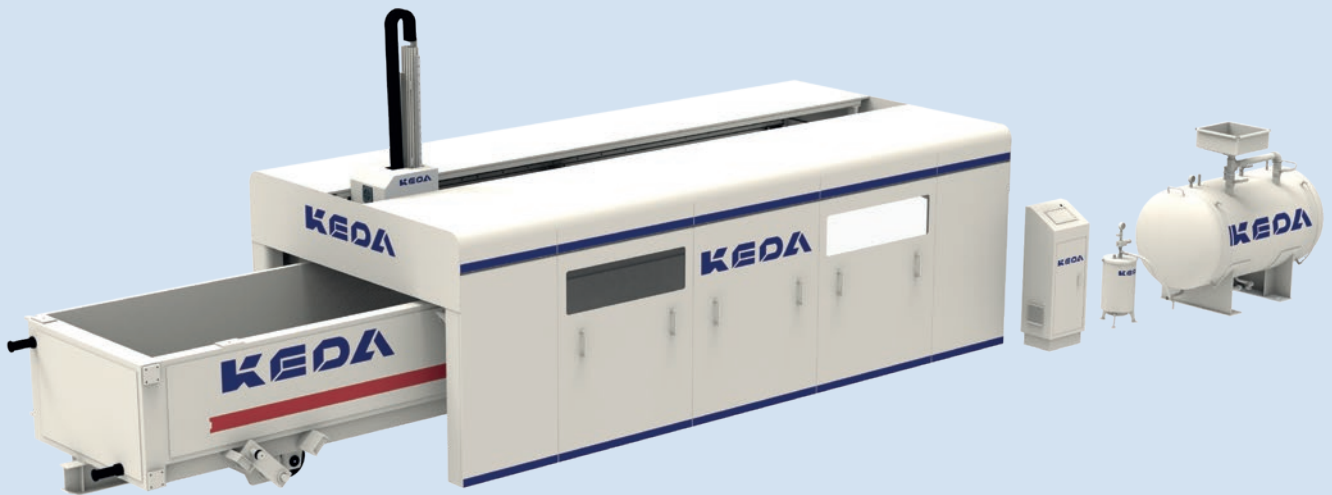
Demoulding is a critical step in AAC production, where even minor errors can damage or waste green cakes. Manual oiling is inefficient and inconsistent, which frequently leads to demoulding failures.

Keda's mould oiling machine employs servo-driven motion and closed-loop control for automatic travel, precise positioning, and spraying. With a cycle time of only 80 seconds per 6 m mould, rotating spray heads ensure full coverage with adjustable thickness for different green cake specifications.



Eliminating air pores in the slurry significantly improves the quality of AAC products.





Keda's mould oiling machine features a highly integrated design, enabling fast adaptation to existing production lines.

The enclosed spraying process prevents splashing and meets environmental standards. Dual oil tanks allow simultaneous refilling and production without affecting cycle time. This equipment improves demoulding success rates, efficiency, and green production.

Customer benefits of the improved mould oiling machine

Customer benefits include:

- Higher demoulding success rate
- Reduced labour dependency
- Continuous production with environmental compliance

Automatic reinforcement steel mesh cage assembly: enabling AAC panel production

In AAC panel production, reinforcement cages determine panel strength and durability. Manual assembly is slow and imprecise, unsuitable for high-capacity and high-cycle production lines.

Keda's automatic steel mesh cage assembly system consists of three core modules:

1. Saddle frame adjustment & steel needle exchange: Precise frame transfer with efficient steel needle regrouping.
2. Fixing clip sorting & installation: Vision-guided system with six collaborative robots for intelligent sorting and precise installation of plastic clips.

3. Mesh steel cage placement: Six robotic manipulators simultaneously handle single or multiple steel cages, completing assembly quickly while maintaining continuous operation.

Focusing on minimal labour input and streamlined workflow, the system ensures assembly precision and provides a stable production rhythm, significantly enhancing capacity and consistency. Customers can achieve scalable, high-value panel production, meeting market demands for strong and durable products.

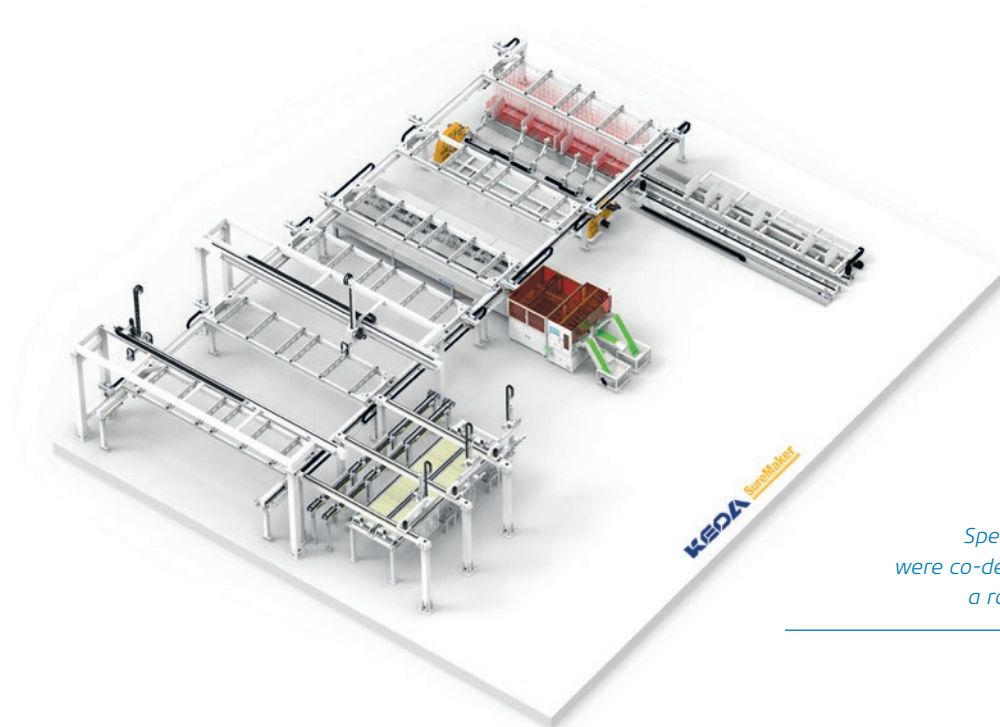
Customer benefits of automatic reinforcement cage assembly

Customer benefits include:

- High automation with minimal labour
- Stable rhythm and assembly accuracy
- Scalable, high-value panel production

As the AAC industry continues toward digitalization and sustainability, auxiliary automation systems are emerging as key drivers of production competitiveness. Slurry vibration, mould oiling and automatic cage assembly may not be considered core production equipment, but play decisive roles in ensuring quality, boosting efficiency, and supporting sustainable production.

Keda believes that true competitiveness is born in the details of process engineering. With innovation as its driving force, Keda will continue empowering customers with smarter, greener, and more efficient AAC plants, contributing to the high-quality development of the industry. ●



*Specialized robots, which
were co-developed by Keda and
a robotics manufacturer.*



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