

HENSEN AGV: China Leading Heavy-Duty Automated Guided Vehicle Manufacturer Redefining Industrial Logistics

HANGZHOU, ZHEJIANG, CHINA, July 6, 2026 /EINPresswire.com/ -- The global industrial landscape currently undergoes a significant transformation as automation moves from light-assembly lines to the challenging environments of heavy industry. During the recent HUB EXPO 2025 in Turkey, international industry leaders observed a shift toward high-capacity autonomous systems designed for extreme conditions. Within this rapidly evolving sector, HENSEN AGV has established itself as a [China Leading Heavy-Duty Automated Guided Vehicle Manufacturer](#) by consistently delivering robust engineering solutions that address complex logistical hurdles. This progress highlights a broader trend where precision and power converge to replace traditional manual transport methods in sectors like wind power, metallurgy, and large-scale manufacturing. Hangzhou Hensen Technology Co., Ltd. continues to drive this change by integrating advanced navigation and mechanical design into the core of modern factory operations.



The Tonnage Leap from High Speed Agility to Super Heavy Capacities

The evolution of heavy-duty transport technology requires a deep understanding of structural dynamics and load distribution. Historically, industrial facilities relied on fixed cranes or heavy

forklifts which often limited operational flexibility. To solve these limitations, [HENSEN AGV \(Hangzhou Hensen Technology Co., Ltd.\)](#) focused on expanding the weight-bearing capabilities of autonomous mobile robots. The technical journey began with the successful development of a 25-ton outdoor high-speed AGV capable of reaching speeds of 10 kilometers per hour. This milestone demonstrated that heavy loads could move efficiently across uneven outdoor terrains while maintaining strict safety standards. Consequently, the engineering team pushed these boundaries further to create super heavy-duty models with capacities reaching 600 tons. These massive vehicles maintain structural integrity through specialized chassis designs and modular drive systems. Such engineering ensures stability during the transport of massive components like wind turbine blades or steel coils.



Precision Navigation through Hybrid 3D SLAM and RTK Systems

Technological advancement in the heavy-duty sector extends beyond mere physical strength. Navigation remains a critical challenge especially when vehicles must operate in vast open industrial parks or narrow factory aisles. Traditional magnetic tape or QR code systems often fail in harsh environments due to physical wear or poor visibility. In response, Hangzhou Hensen Technology Co., Ltd. adopted a more sophisticated approach by refining second-generation 3D SLAM and RTK hybrid navigation technologies. This combination allows a vehicle to create a detailed three-dimensional map of its surroundings while utilizing satellite-based Real-Time Kinematic positioning for outdoor accuracy. By integrating these systems, the vehicles achieve a positioning accuracy of approximately 10 millimeters. Such precision proves essential when an AGV must dock with automated production lines or place a 100-ton load onto a specific assembly jig. Furthermore, the walking adaptive system allows the vehicle to adjust its movement patterns based on floor conditions.

Fleet Intelligence through Proprietary Scheduling and Software Integration

Beyond individual vehicle hardware, the intelligence of a modern logistics fleet resides in its coordination capabilities. Managing multiple heavy-duty units within a single facility requires a sophisticated brain to prevent congestion and optimize flow. HENSEN AGV developed [a proprietary scheduling system](#) that manages the complex interactions between different vehicle types. This software platform supports various navigation methods and integrates seamlessly with factory-level Enterprise Resource Planning and Manufacturing Execution Systems. Through wireless communication, the system monitors the real-time status of every unit including battery health, current load, and precise location. This centralized control ensures that the fleet operates

at maximum efficiency. It reduces idle time and streamlines the movement of goods between different production stages. Moreover, the inclusion of multi-sensor safety layers like 360-degree laser obstacle detection ensures that these massive machines operate safely alongside human workers.

Engineering Excellence through Non Standard Customization and Versatility

Specialization represents another pillar of the service model at HENSEN AGV (Hangzhou Hensen Technology Co., Ltd.). Heavy industry rarely follows a one-size-fits-all approach as every facility possesses unique spatial constraints and load requirements. The company addresses this reality through non-standard customization where engineers design vehicles specifically for niche applications. Notable examples include the delivery of a 135-ton smart painting line RGV system for the wind power industry and fully automated production lines for tunnel segments. These projects require more than just a standard vehicle. They demand a comprehensive understanding of the specific industrial process. For instance, in metallurgy, a vehicle must withstand high temperatures and dust. Meanwhile, in prefabricated building construction, the ability to move in all directions becomes a priority. The ability to provide omnidirectional movement allows facilities to maximize their available floor space by navigating through tight corners.

Sustaining Global Growth through Reliable and Intelligent Handling

Global demand for intelligent handling solutions continues to rise as companies seek to improve safety and reduce operational costs. The transition to heavy-duty automation offers a clear path toward these goals by eliminating human error associated with manual transport of oversized materials. Meanwhile, the commitment to sustainable energy has influenced the design of these systems. Many units now utilize high-capacity lithium battery technology for long-endurance operations. This shift not only reduces the carbon footprint of the facility but also lowers maintenance requirements compared to internal combustion alternatives. As Hangzhou Hensen Technology Co., Ltd. expands its presence in international markets, the focus remains on providing reliable and high-performance equipment. The combination of technical innovation and robust software support positions the company as a key partner for enterprises looking to modernize their logistics infrastructure.

The future of industrial logistics will undoubtedly rely on the seamless integration of power and intelligence. As seen in the successful deployment of diverse projects across various sectors, the capacity to move hundreds of tons with millimeter precision is now a current reality. HENSEN AGV continues to refine its technology by exploring new frontiers in autonomous driving and data analytics to further enhance the efficiency of industrial operations. By focusing on the specific needs of the metallurgy, energy, and construction sectors, the company ensures that its solutions remain relevant in a competitive global market. Ultimately, the success of heavy-duty automation depends on the reliability of the hardware and the sophistication of the software. Both elements remain central to the mission of Hangzhou Hensen Technology Co., Ltd. in its pursuit of redefining industrial mobility.

For more information regarding heavy-duty autonomous solutions and technical specifications, please visit the official website: <https://hensenagv.com/>.

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