

Zoomlion's 350-HP Hybrid Tractor breaks into global awards race

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DV3504 becomes the first Chinese high-horsepower tractor shortlisted for Tractor of the Year, putting China's push into premium agricultural machinery on the global stage



China's agricultural machinery industry has cleared a new international hurdle. Zoomlion's DV3504 hybrid tractor has been shortlisted in two categories of the Tractor of the Year 2027 (TOTY 2027) awards—HighPower and Sustainable—making it the first Chinese high-horsepower tractor to reach the shortlist since the awards were established.

The recognition is more than an awards milestone. It signals the growing ambition of Chinese machinery manufacturers to move beyond cost-competitive equipment and compete internationally on power, electrification, intelligent control and sustainability.

The 2027 TOTY competition features 23 tractors from 18 global brands, evaluated by an independent jury of 26 agricultural machinery journalists from 25 countries.

For Zoomlion, the nomination puts its high-horsepower agricultural technology directly into a field traditionally dominated by established European and North American machinery manufacturers.

A 350-hp bet on hybrid power

The DV3504 is built for large-scale farming and delivers 350 hp, placing it firmly in the high-horsepower segment. At the heart of the tractor is Zoomlion's proprietary MiDD (Meshed intelligent Direct Drive) distributed intelligent electric drive system.

Rather than relying entirely on a conventional mechanical transmission architecture, the system uses multiple motors to independently drive the tractor's travel, PTO and hydraulic functions. Zoomlion says the architecture enables a modular continuously variable transmission while reducing mechanical transmission components by approximately 70 per cent.

That design is central to the company's pitch: electrification does not necessarily mean abandoning high-power diesel-based agricultural machinery, but can instead be used to make heavy-duty tractors more efficient, intelligent and flexible.

Why hybrid matters at 350 hp

The high-horsepower agricultural machinery market presents a more difficult electrification challenge than passenger vehicles or smaller agricultural equipment. Large tractors operate for extended periods under heavy loads, making battery-only solutions difficult where long endurance, rapid refuelling and continuous power are required.

Hybrid systems offer a potential middle ground. The DV3504 combines conventional power with electric drive technology to target long operating range, high power output and improved energy efficiency.

For large farms, where machinery utilisation and operating time directly affect productivity, that balance could be more important than electrification for its own sake. The broader significance is that Chinese manufacturers are increasingly developing powertrain technologies specifically for the operating realities of agricultural machinery rather than simply adapting technologies developed for other vehicle categories.

From construction equipment to agriculture

Zoomlion is also leveraging capabilities developed through its construction machinery business. The company has accumulated expertise in new-energy systems, intelligent control and advanced manufacturing through its broader machinery operations.

It is now transferring those capabilities into agricultural equipment as the global farm machinery market moves towards greater automation, electrification and connectivity. The DV3504 therefore represents more than a new tractor model. It is part of Zoomlion's strategy to use its industrial technology base to establish a stronger position in premium agricultural machinery.

That strategy is particularly significant as Chinese agricultural machinery manufacturers look to expand internationally.

From AGRITECHNICA to the TOTY shortlist

The timing is notable. Zoomlion introduced the DV3504 internationally at AGRITECHNICA 2025 in Hanover, Germany. Less than a year later, the tractor has reached the shortlist of one of the industry's most recognised awards. That progression—from international exhibition to global award contender—signals a more aggressive phase of internationalisation for Zoomlion's agricultural machinery business.

For Chinese manufacturers, global recognition is becoming an increasingly important part of competing in premium equipment markets. Price remains a competitive advantage, but winning acceptance from international machinery experts requires demonstrating engineering capability, reliability, operator value and technology differentiation. The DV3504's dual nomination puts those capabilities under international scrutiny.

A bigger test for Chinese farm machinery

The more important question is what happens after the shortlist. TOTY recognition could strengthen Zoomlion's credibility as it seeks to establish itself in international agricultural machinery markets. But competing successfully against established global manufacturers will require more than technology demonstrations and awards.

After-sales service, dealer networks, spare-parts availability, financing, local adaptation and long-term machine reliability will ultimately determine whether Chinese high-horsepower tractors can build meaningful market share overseas. The DV3504 nevertheless represents an important shift.

China is no longer competing only in the lower and mid-horsepower segments of agricultural machinery. Its manufacturers are increasingly targeting the high-power, intelligent and lower-carbon end of the market. The final winners of TOTY 2027 will be announced at EIMA International in Bologna in November 2026. For Zoomlion, the award result will be closely watched. But reaching the shortlist has already delivered a larger message: China's agricultural machinery industry is moving from manufacturing scale to technology-led global competition—and high-horsepower tractors are becoming one of the proving grounds.