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Winners announced: Systems & Components Trophy – Engineers‘ Choice

Development engineers from the agricultural machinery sector have selected three winners – Award ceremony on 9 November, 2025, 5 p.m. at the Systems & Components Expert Stage, Hall 17, stand H02 – Systems & Components is the B2B marketplace at the leading international agricultural machinery trade fair Agritechnica – Key theme – Touch Smart Efficiency
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(DLG). The DLG (German Agricultural Society) has today announced the winners of its 2025 "Systems & Components Trophy - Engineers' Choice" award. Part of Agritechnica’s Systems & Components trade fair, the award highlights the key role and innovative strength of the supplier industry in agricultural engineering. The three winners will be announced at an awards ceremony on November 9, held at the Systems & Components Expert Stage of Systems & Components in Hall 17, Booth H02, starting at 5 p.m.

Systems & Components is the B2B marketplace for the international supplier industry in agricultural machinery and the entire off-highway sector. At the trade fair taking place alongside Agritechnica 2025, more than 850 exhibitors showcase their expertise and innovation in the fields of vehicle electronics and electrics; drivetrains; hydraulics; engines; cabins and power lifts; and spare and wear parts.

With the "Systems & Components Trophy - Engineers' Choice", DLG honors components or systems featuring novel or significantly improved concepts that contribute significantly to the development and production of agricultural machinery and other off-highway machinery. In September this year, a panel of experts led by Prof. Till Meinel, TH Köln – University of Applied Sciences; DLG Vice President; and Chair of the DLG Test Center for Technology and Farm Inputs, selected a shortlist of 16 nominated innovations from a total of 41 high-quality submissions.

Systems & Components Trophy – Engineers‘ Choice: Winners 2025

Manufacturer: igus GmbH
Product: ReBeL cobot
Hall 16 Stand E11

High-precision and repetitive tasks such as weeding or harvesting are often physically demanding and are still frequently carried out manually, requiring a large workforce.

With the ReBeL Cobot, igus has now introduced an articulated arm robot weighing only 8 kg, which, thanks to its particularly simple operation and low price, makes entry into automation in agriculture easier and more accessible than ever before. Equipped with sensors and grippers, it is ideal for tasks such as fruit harvesting, sowing, or indoor farming. Depending on the application, the robot arm can be equipped with various sensors such as cameras or work tools. In addition, it offers simple, user-friendly, and practical programming options. Using a free, license-free software test environment, users can test any kinematics and thus find out before purchasing whether the planned application can be realized with the ReBeL.

Mounted on a suitable autonomous chassis, the igus ReBeL cobot can, for example, reduce the use of labor during harvesting and at the same time enable a higher number of harvest passes, which leads to greater efficiency and less strain on harvesting personnel.

Short text:

With the ReBeL Cobot, igus has miniaturized the familiar industrial robots to such an extent that they can be used in agriculture and fruit and vegetable cultivation, where they can reduce the need for labor while enabling more frequent work cycles.

Manufacturer: Mach, Inc.
Product: RadX

As technology advances, more and more sensors are being used in agricultural machinery and tractors to improve their control. The raw data from these sensors usually is processed centrally, which places high demands on computing power and data analysis. OEMs repeatedly struggle with difficulties in evaluating sensor data and programming efficient evaluation algorithms.

Mach's RadX radar device is the first system of its kind to not only bring true phased array technology to agriculture, construction, mining, and land management, but also to process the captured signals internally and make them available in the OEM's system architecture. The system uses electronically controlled beams and adaptive beamforming for high-resolution 3D detection in real time, eliminating the need for moving parts.

RadX is able to distinguish between soil, crop residues, and vegetation while simultaneously mapping the terrain surface, making the sensor particularly interesting for use in depth control of tillage, planting, and seed drills, as well as in terrain guidance for combine harvester headers. An evaluation of the quality of work behind the machine is also conceivable.

Mach's RadX system thus represents an important innovation for the future of 3D image-based environment detection and control of mobile machines in agriculture.

Short text:

Mach's RadX system uses radar radiation to capture a 3D image of the surroundings of mobile machines and control attachments, without the need for moving parts. Internal signal processing makes integration into the OEM's system architecture particularly easy.

Manufacturer: ZF Friedrichshafen AG
Product: ZF eTD
Hall 15 Stand C06

In current electric tractors, the combustion engine has generally been replaced by an electric motor with a reduction gear, without affecting the familiar and proven hydrostatic power-split CVT drivetrain.

The electric TerraDrive (eTD) from ZF Friedrichshafen takes a different, completely new approach: The modular, highly integrated electric axle system combines traction, PTO, and hydraulics in a compact design for tractors up to 100 kW. This not only enables emission-free operation without any loss of power, but also means that central transmissions, hydrostatic units, clutches, and hydraulic systems can be partially eliminated or replaced by a dual electric powertrain with energy recovery and an optimized design for maximum efficiency and flexibility during installation. At the heart of the eTD is a highly integrated electric drive unit with two oil-cooled electric motors – one for the drive, the other for auxiliary drives. The change in the basic design concept creates space for batteries or hydrogen tanks, which can significantly increase

range and operating time. The S&C Trophy commission points out that this not only applies to classic tractor applications, but can also be transferred to other machines.

The eTD thus represents a scalable, future-proof solution for emission-free agriculture without compromising on performance or functionality.

Short text:

With the electric TerraDrive eTD, ZF has rethought the design of electric tractors and other self-driving machines from scratch, based on two oil-cooled electric motors with up to 100 kW of power. Unnecessary elements have been eliminated to make room for batteries or hydrogen tanks, resulting in a scalable, sustainable solution for an emission-free agriculture.

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About DLG

With more than 31,000 members, DLG is a politically independent and non-profit organisation. DLG draws on an international network of some 3,000 food and agricultural experts. DLG operates with subsidiaries in 10 countries and also organizes over 30 regional agricultural and livestock exhibitions worldwide. DLG’s leading international exhibitions, EuroTier for livestock farming and Agritechnica for agricultural machinery, which are held every two years in Hanover, Germany, provide international impetus for the local trade fairs. Headquartered in Frankfurt, Germany, DLG conducts practical trials and tests to keep its members informed of the latest developments. DLG’s sites include DLG's International Crop Production Centre, a 600-hectare test site in Bernburg-Strenzfeld, Germany and the DLG Test Centre, Europe's largest agricultural machinery test centre for Technology and Farm Inputs, located in Gross-Umstadt, Germany. DLG bridges the gap between theory and practice, as evidenced by more than 40 working groups of farmers, academics, agricultural equipment companies and organisations that continually compare advances in knowledge in specific areas such as irrigation and precision farming.
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