



## PRESS RELEASE

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### Silver Medal for ESV – the new Electrical Stop Valve from Lechler

**The ability of the ESV to control individual nozzles in a field spray boom electronically is an important step towards smart farming and enables even greater precision. This saves on plant protection products and liquid fertilizers, increases efficiency and protects the environment. What's more, the automatic control of individual nozzles relieves operators on long working hours and on night shifts.**

The various features briefly summarized:

- ESV comprises a single unit incl. cables
- Simple cabling allows easy upgrade
- Low power consumption thanks to patented charge control system; therefore even large working widths can be supplied without the need for an additional intermediate power supply
- Energy storage device (supercap) enables emergency stop function
- Automatic self-configuration of all valves (via CAN bus) at commissioning
- Thanks to energy from supercapacitors even older tractors can supply the needed power
- Encapsulated electronics and ventilation of the valves ensure that the valves remain in good working order
- Boom sections widths of up to 0.25 m reduce overlapping
- Boom sections can be freely determined, e.g. for treating vegetable beds
- Short switch cycles, e.g. of just 300 ms for opening, ensure a high level of precision, including in relation to smart farming applications
- Ability to communicate with ISOBUS enables the valve to be integrated into existing GPS systems

The ESV valves can be fitted to all single and multiple nozzle holders available on the market. It can be attached extremely easily and quickly to field spray booms simply by connecting the cables using a plug and socket. No complex cable

harnesses or intermediate supply of power are required. After installation, each time the sprayer is started up and when a valve is changed, the ESV valves are configured completely automatically via the CAN bus. All options can be selected via the sprayer terminal, from the control of individual nozzles to the individual determination of boom sections.

The continuous monitoring of the ESV valves during operation prevents errors caused by faulty valves. If, for example, a technical defect occurs in the valve or there is a power cut, the valve's emergency stop function kicks in. The valve closes and information is relayed via the terminal. The nozzles do not drip, providing effective protection against point source pollution. The ESV valves even work reliably in adverse operating conditions. The plug connectors are dustproof and waterproof in accordance with the IP68 protection class and the valve electronics are encapsulated. Vibrations do not stop the valve from operating and the electronics are not susceptible to corrosion. The power consumption of each individual valve is limited by a charge controller. Even large working widths can be supplied with just one cable harness without the need for an additional intermediate power supply. Furthermore, during operation the valves are supported with energy from supercapacitors during switching. This ensures that even older tractors can supply the needed power during use.

The practicality of the ESV was verified in lab tests and during multi-year field tests on more than 1,000 hectares of farmland and was investigated for the application of both plant production products and liquid fertilizers.

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