

THE SOLUTION TO INTELLIGENT FERTILISER SPREADING

As a manufacturer of agricultural and ground care machinery, Amazonen-Werke H. Dreyer recently introduced the ZA-TS, a high output spreader that enables farmers to realise new levels of efficiency and optimum usage of fertiliser when spreading. The machine offers the capability to achieve high speed spreading with maximum precision, minimising both the time taken to cover an area and the amount of fertiliser required. It is therefore said to enable farmers to achieve more for less.

To meet the environmental demands, the components selected for the machine needed to be tough and reliable, so the company selected the Max Jac electric linear actuator from Thomson.

The actuators, which are used to move the spreader shutter slides and for the rotation of the whole delivery system around the centre of the spreading disks, meet the precision and short reaction times required by the ZA-TS to move at speed.

The machine provides a working width of up to 54m and offers high accuracy with its fast-reacting boundary spreading system. It also fulfils the requirements not to spread beyond the boundary of a field without the need to reduce velocity. As the machine approaches a border the actuator quickly slides the shutter closed, enabling the tractor to maintain speeds of up to 30km/h and optimising fertiliser use.

The Max Jac actuator can handle the dust and dirt associated with agricultural machinery applications with an ingress protecting rating of IP66. It has also undergone additional testing to IP69K, making it suitable for high pressure, high temperature washdown; and is a fully encapsulated, permanently lubricated solution.

With agricultural machinery, the access to components for servicing and the space required to accommodate them can lead to compromises in design. However, the actuator is compact with a short total length compared with the stroke, so is suitable for where space is tight. It also has built-in position feedback, which is contact-free to ensure no wear or



re-calibration is necessary. Furthermore, there is no need for additional supporting systems or components as required by the hydraulic system, and the system requires virtually no maintenance throughout its lifetime.

According to the company, the actuator requires only electrical power for operation. It is tolerant of dust, dirt, mud and water as well as more aggressive substances such as fertilisers, oil and cleaning agents; and it can withstand humid environments and high levels of vibration.

The Max Jac actuator is available with worm or ball screw technology to best suit application needs in terms of duty and load. The worm screw version is self-locking and will not back drive on power-off, while the ball screw offers faster operation, will take higher loads and can operate at higher duty cycles.

As for its design, it is manufactured from stainless steel components and a hard coat anodised aluminium cover tube. It can also be customised to meet the demands of all types of off-road vehicle.

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Enter 201