

# A joint project for agriculture

**Three German companies have started a joint project: STW and Framo-Morat deliver the servo actuator for the transmission unit EQ200. This unit will appear in Claas' tractor Arion 500/600 Cmatic.**

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The servo actuator by STW

AS A PARTNER OF CLAAS, STW DELIVERS THE SERVO ACTUATOR, which is a core electro-mechanical component of the continuously variable split powerline transmission EQ200. It will appear in the tractor Arion 500/600 Cmatic in the 104 kW to 137 kW range from early 2014. This servomechanism controls the hydraulic components of the EQ200, and positions them on STW's specified and developed control algorithms. To be mounted as part of the transmission, the adjustable unit includes the DSP control electronics with a CAN interface, a motor, an encoder and a gearbox. In cooperation between STW and Framo-Morat, the elementary components of the actuator were specified, developed, tested and commercialized. This actuator was shown at the Agritechnica 2013 in Hanover.

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The servo actuator by STW

At Agritechnica 2013 Claas relaunched the medium-sized Arion 500/600 tractors, which are now also available with a continuously variable transmission. The efficiency of the transmission is high and almost constant at all speeds. When the drive ratio changes automatically, it is not only the ratio that changes - the power transfer through the transmission also changes completely. As the tractor accelerates, the rotational speeds of the two clutch shafts become closer and closer until they are the same. At this synchronization point, the multi-disc clutches shift automatically. Therefore, even under load, the drive ratio changes without sudden jumps in rotational speed or torque, giving uniform acceleration all the way from 0 km/h to 50 km/h. Even the driver does not notice this change in ratio. And what's more, the top speed of 50 km/h can be achieved at a fuel-saving engine speed of just 1500 rpm.