Agritechnica 2011: Solutions for tomorrow’s smarter, more efficient field work

- Variable pump for energy-efficient load sensing systems, even on smaller tractors
- New modules for valve control and for the extension of electro-hydraulic hitch control
- More efficient and hydrostatic compact unit for modern power-split gearboxes

Secure long-term earnings potential and increased efficiency with low-impact use of resources are the key criteria in modern agriculture. Rexroth supports these objectives with the numerous innovations the company will present at Agritechnica 2011. All products are configured for better energy efficiency and enhanced performance. Users also benefit from the seamless compatibility of components and subsystems.

Intelligent new modules for hitch control

Rexroth will exhibit the latest engineering upgrades to its tried and tested electro-hydraulic hitch control (EHR) at this year’s Agritechnica show in the form of three new, optional modules that offer greater comfort and efficiency:

Automatic Hitch Control (AHC) enhances productivity by making it possible to achieve optimum results in ground cultivation, regardless of the implement used. AHC operates automatically to dynamically regulate the relationship between position and draft force. The operator must only select the required cultivation depth, simplifying his work and making it easier to achieve the desired outcome.

Hydraulic Pressure Relief Control (PRC) also offers greater comfort. While the implement’s relief previously required mechanical adjustment via springs, drivers can now make all adjustments comfortably from inside the cab using the hydraulic system. With PRC, the implement always follows the contours of the ground and guarantees cultivation with little impact on the ground or on materials, regardless of whether this is with a mower or a snow plow. Moreover, PRC also saves space and lowers costs, as the control system does away with the accumulator and pressure sensors.
Press Release

Hitch Lowering Support (HLS) also makes work easier by making it possible to lower the hitch gear with pressure support, rapidly lowering the hitch gear when the oil is cold, with or without load. The defined pressure enables implements to be decoupled more easily, especially when arrestor hooks are jammed. The entire EHR function is retained, with HLS providing an expedient complementary addition.

Saving fuel on tractors in lower power classes

Saving fuel is the principal objective of the newly developed A1VO axial piston variable pump. The concept is specially configured for smaller tractors and makes it possible to use low-consumption and thus, low-emission, load-sensing systems in an economical way. Such systems are already commonplace on larger tractors. Simulations based on a conventional 90-HP diesel engine verify fuel consumption savings of between ten and 15 percent per operating hour in mixed operation. Projected over the usual service life of 6,000 operating hours with a typical load cycle distribution, users can expect savings of approximately 10,000 liters of diesel. [⇒ PI_097_11_A1VO]

Unrivaled hydrostatic compact unit

As the key component of a modern power-split gearbox, Rexroth’s new hydrostatic compact unit A41CT puts greater efficiency and user-friendliness on the road and in the field. The substantially improved efficiency, greater power density and more compact design are the results of the first-ever combination of a swashplate variable rotary group and a bent-axis fixed rotary group in a single housing. Various gearbox manufacturers have already posted successes with the A41CT in series production. In practice, their jerk-free, comfortable travel behavior, high hydraulic-mechanical efficiency and reduced cooling requirements have impressed users of the technology. [⇒ PI_099_11_A41CT]

Ready-to-use tractor valve control

High efficiency is essential on modern tractors, including in the implement hydraulics. With Tractor Valve Control (TVC) Rexroth presents software for controlling electro-hydraulic auxiliary directional valves. This makes it easier, in particular for smaller tractor manufacturers, to enter the world of electro-hydraulics, and to exploit the related benefits of added efficiency and convenience. Instead of having to engage in the costly exercise of developing
valve control software independently, TVC now provides a ready-to-use package. [PI_100_11_TVC]  

Rexroth at the AGRITECHNICA 2011: Hall 09 – Stand E17  

photo_PI_097_11_A1VO.jpg: Systematically tailored to the needs of the market: Rexroth’s A1VO variable pump permits the economical use of energy-saving load sensing systems, even on tractors of the lower power classes.  

photo_PI_098_11_AHC.jpg: The innovative AHC software makes optimal ground cultivation easy and is quickly switched on when needed.  

photo_PI_099_11_A41CT.jpg: The first ever combination of swash plate variable rotary group and bent-axis fixed rotary group provides for greater efficiency, higher power density and more compact construction for Rexroth’s new A41CT hydrostatic compact unit for modern power-split gearboxes.
Rexroth’s Tractor Valve Control (TVC) is a package solution that is immediately ready for use. Tractor manufacturers thus save time and money developing their own expensive software solution.

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