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New series 40 of the A11VO high pressure axial piston unit for especially demanding applications
Forestry machines: up to 10 percent faster control behavior of implement hydraulics

▶ Fast control behavior for more dynamic implement hydraulics
▶ Efficiency increased to up to 93 percent
▶ Optimized housing structure reduces noise emissions

Developed from scratch, the series 40 A11VO axial piston pump from Bosch Rexroth increases the productivity of the implement hydraulics in heavy-duty applications through faster control behavior and higher stability in load-sensing systems.

Forestry machines place extremely high demands on the dynamics and stability of the implement hydraulics in order to achieve maximum productivity. In the first heavy-duty series applications, the new A11VO axial piston variable pump of series 40 from Rexroth demonstrates an up to ten percent faster control behavior with an efficiency increased to up to 93 percent.

The fast control behavior of the A11VO series 40 increases the dynamics of the implement hydraulics and simultaneously stabilizes load-sensing systems. As a result, forestry machines spontaneously respond to operating commands even under high loads or with fast load changes, including cases...
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where multiple consumers need to be supplied at once. This increases the working speed and efficiency, e.g., for harvester heads.

Within the scope of the fundamental redesign of the pump, the Rexroth developers have increased the efficiency to up to 93 percent and thereby achieve a value greater than other comparable pumps. Through the compact dimensions, manufacturers of forestry machines can integrate more power in tight installation spaces. A likewise newly developed sealing system reliably prevents leakage through a significant reduction in the high-pressure sealing points. Rexroth achieves the higher control dynamics through an optimized adjustment system based on the proven plain bearing support of the swashplate. Numerous hydraulic and electric controllers, some of which can be controlled remotely, facilitate highly efficient power and pressure controls as well as stroke limiting and load-sensing functions.

An optimized housing structure of the high-pressure pump also reduces noise emissions considerably: in pressuring-holding operation, the operating noise is up to 3 dB(A) lower than is typical for other comparable pumps. This reduces the work associated with reducing noise to the legal emission limits for the manufacturers of forestry machinery.

The A11VO series 40 supplies the open circuits typical for forestry machines as needed at a nominal pressure of up to 350 bar and a maximum pressure of up to 420 bar. The universal through drive simplifies custom combinations with axial piston pumps, gear pumps and other hydraulic pumps. The A11VO is available in sizes 110, 145, 175, 210 and 280; for sizes 145 and larger, optionally with integrated charge pump (impeller) as A11VLO.

Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, Factory Automation, and Renewable Energies to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, pneumatics, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 37,500 associates generated sales revenue of approximately 6.5 billion euros in 2012.
To learn more, please visit www.boschrexroth.com

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