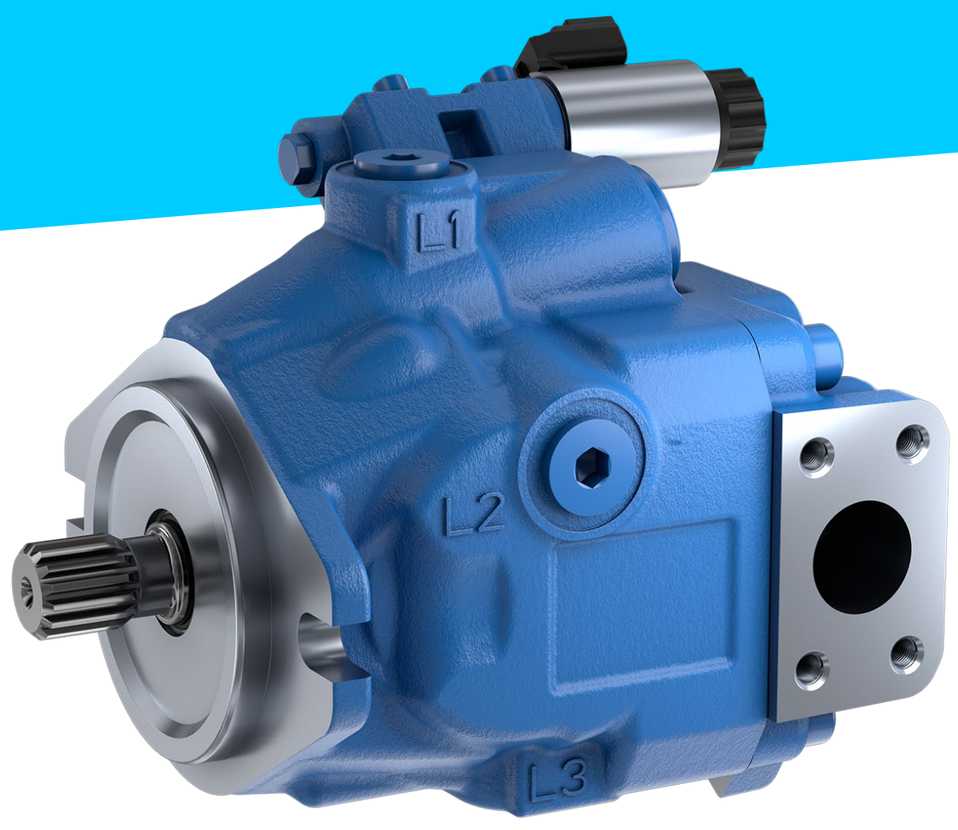
Axial piston variable pump A10VO series 60

Medium pressure unit for mobile working machines

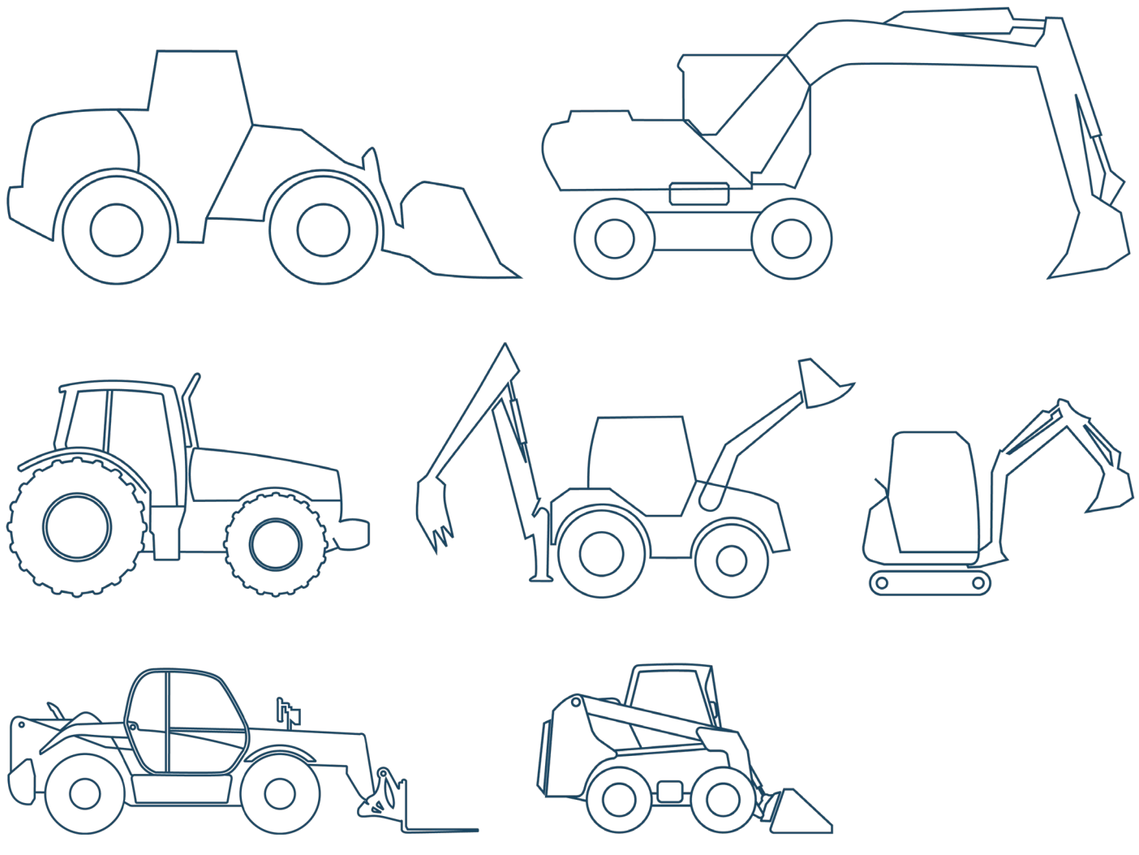


With each new vehicle generation, the installed hydraulic power increases while the installation space remains unchanged. Without accompanying measures, the increasing pressure pulsation can lead to higher vibrations and noise in the vehicle. At the same time, the proportion of noise emissions (airborne, structure-borne and fluid noise) influenced by the hydraulics increases. This is because, in order to reduce exhaust and noise emissions, the speed of the combustion engine is often reduced, and with it its noise. The NVH behavior ("Noise, Vibration, Harshness") as a whole, and especially that of the hydraulics, is thus coming into focus. The new Rexroth A10VO Series 60 axial piston variable displacement pump reduces hydraulic noise directly at the source.

CUSTOMER BENEFITS

- Increased comfort due to reduced pressure pulsation
- Optimized sensor concept
- Higher productivity due to adjustable pump dynamics
- Cost savings due to improved efficiency
- Reduced installation space due to higher power density
- Less pump variance and lower service costs

APPLICATIONS



FUNCTION AND BENEFITS

Increased comfort due to reduced pressure pulsation
The new A10VO series 60 is the first axial piston variable displacement pump from Bosch Rexroth that can be equipped as standard with a pre-compression volume integrated in the axial piston unit. This optimization reduces pressure pulsation by up to 50% and thus the noise level in the operator's cab. The increase in comfort for the operator can be achieved without additional, cost-intensive noise reduction measures such as engine compartment insulation, system damping and cab insulation.

Optimized sensor concept
The Rexroth A10VO series 60 axial piston variable displacement pump is characterized by an adapted and expanded sensor concept. Bosch Rexroth uses a new generation of swivel angle sensor that provides an analog and a digital output signal in parallel. This redundancy has a positive effect on fail-safety. As an option, the variable displacement pump can be equipped with a pressure sensor at the dedicated port.

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TECHNICAL DATA

Axial piston variable pump A10VO series 60	
Size:	45 cm^3
Nominal pressure:	280 bar
Maximum pressure:	320 bar
Working ports:	ISO 3019-1 (SAE J744)
Drive shaft:	Splined shaft according to ISO 3019-1 Spline according to ANSI B92.1a
Optional features:	• Swivel angle sensor • Precompression volume (PCV) • Working ports at the rear and laterally opposite • Prepared measuring port for pressure sensor PR4 - alternatively pressure sensor PR4 mounted
Control devices:	Pressure controller DR0, pressure flow controller DRx, electrohydraulic control system EC4
Combination option:	Drive through up to pump of same nominal size
Data sheet:	92706

Higher productivity due to adjustable pump dynamics
The sensor concept, together with the control software eOC BODAS pump control, is the basis for the electronically controlled open circuit pump from Bosch Rexroth (eOC = electronic open circuit pump control). The adjustable pump dynamics enable the hydraulic power to be continuously and dynamically adapted to the available engine torque. Highly dynamic and very precise working functions increase the overall productivity of the mobile working machine.

Cost savings due to improved efficiency
The Rexroth A10VO series 60 has a revised rotary group that enables very high efficiencies in the partial and full load range. For this, the proven A10 rotary groups have been completely revised and optimized for high efficiency. This means that more hydraulic power is available with the same diesel engine output at reduced operating costs.

Reduced installation space due to higher power density
Bosch Rexroth has increased the power density of the A10VO series 60 by up to 49%. While simultaneously increasing the pressure to 280 bar, and in combination with an optimized pump design, this results in an up to 10% shorter installation length. The required installation space is significantly smaller than for other comparable medium-pressure pumps.

Less pump variance and lower service costs
The Rexroth A10VO series 60 axial piston variable pump is available with hydraulic mechanical pressure and flow controllers or as an eOC version. Using the eOC BODAS pump control software from Bosch Rexroth, the different controller types and mechanical settings can be transferred to the software. The reduced pump variance reduces inventory at the OEM and the effort for managing spare parts and aftermarket components. In case of service and feature updates, the software can be managed via the BODAS service interface.

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