

# External gear pump SILENCE PLUS AZPJ

Quiet, efficient and durable



The demands for lower noise levels are increasing, both from machine operators and their surroundings. The trend towards electrification has also reached mobile machinery. In electrically driven machines, previous hydraulic pumps are no longer up to date due to the high noise level with high frequency. With the external gear pump SILENCE PLUS, Bosch Rexroth has achieved a quantum leap in noise reduction. Electrified mobile machinery is now not only locally emission-free but also almost noise-free.

## CUSTOMER BENEFITS

- Reduced noise pollution
- Savings of noise-reducing secondary measures
- High quality and long service life
- Helps to meet legally prescribed noise limits
- Easy replaceability with the Rexroth SILENCE PLUS

## FUNCTION AND BENEFITS

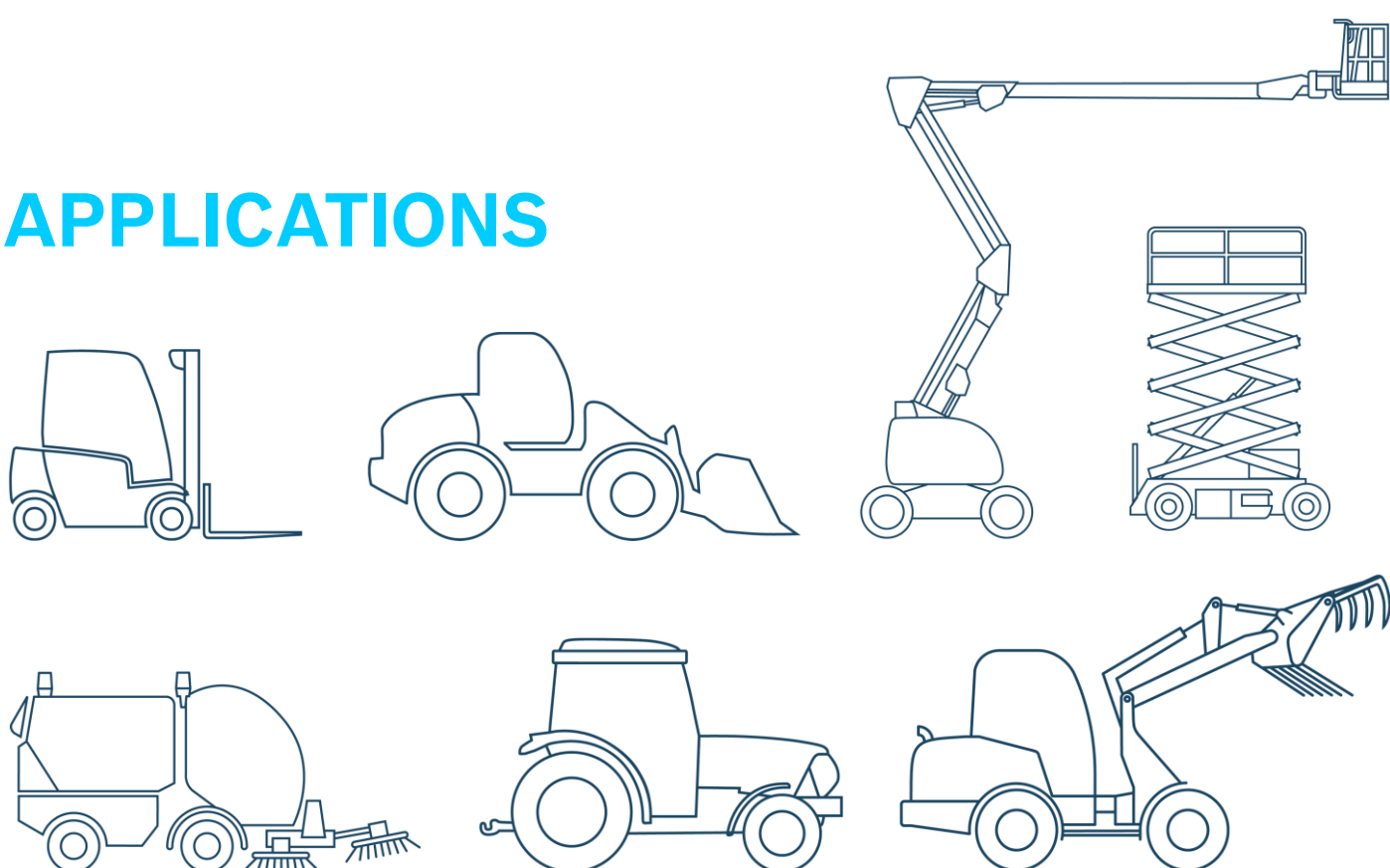
### Reduced noise pollution

A non-involute round tooth profile combined with helical gearing forms the heart of the Rexroth SILENCE PLUS. Thanks to the permanent tooth contact, the fluid is conveyed almost continuously and silently. No noise is generated by squeezing oil on the tooth flanks. With the SILENCE PLUS the noise level has been reduced by an average of 15 dB(A) compared to conventional external gear pumps. The flow pulsation reduced by approx. 75 % reduces vibrations in the machine and an approx. 35 % lower frequency results in a more pleasant sound. The significantly lower inherent noise is perceived in all pressure and speed ranges.

### Savings of noise-reducing secondary measures

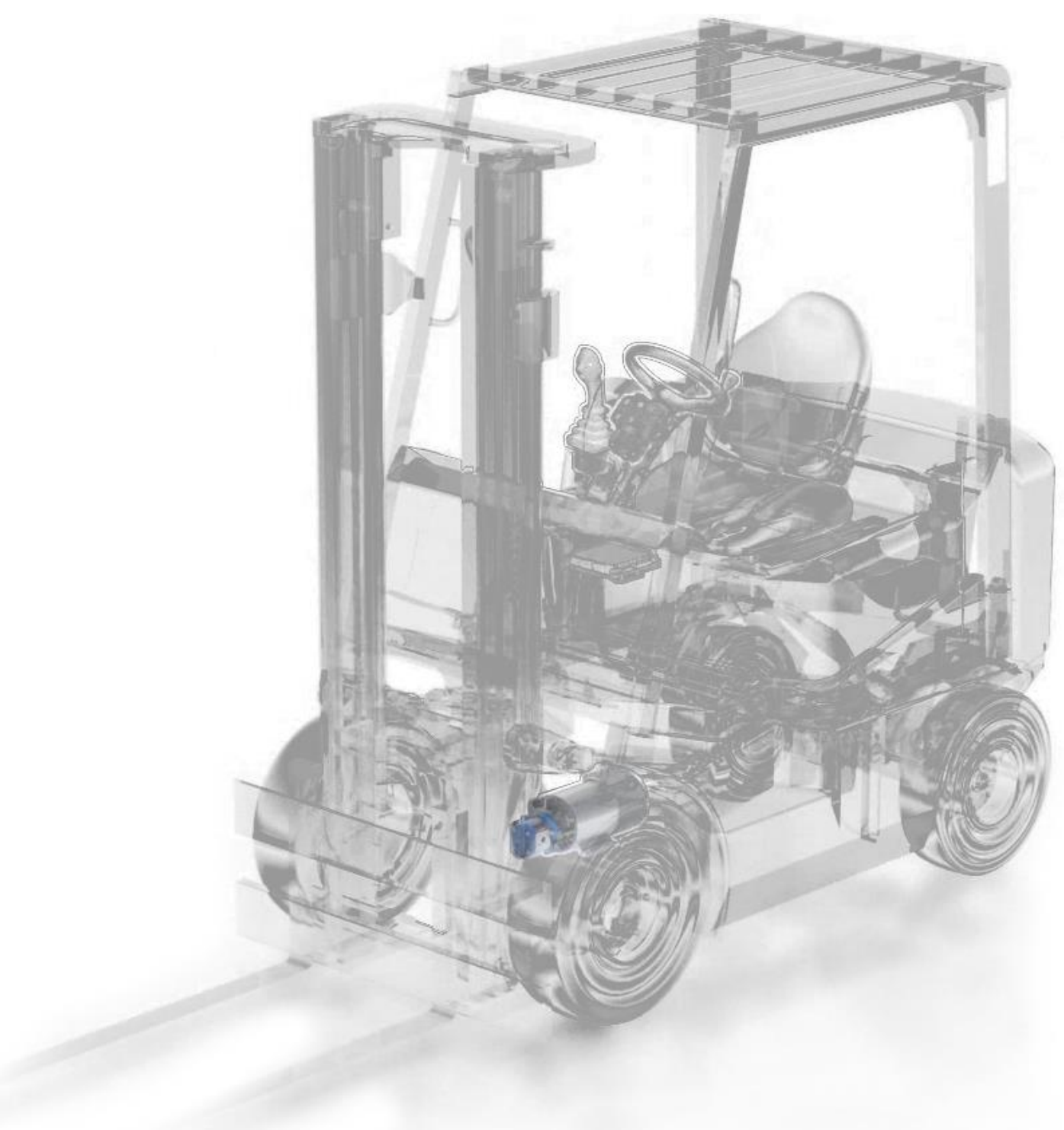
Manufacturers of mobile and stationary machines have taken a variety of measures to reduce the noise level of the hydraulic system. Insulation, damping and even entire enclosures are common. When using the Rexroth SILENCE PLUS, noise-reducing, costly secondary measures can be saved.

## APPLICATIONS



TECHNICAL DATA

External gear pump SILENCE PLUS AZPJ-2x			
Sizes:		12-28	
Displacement geometrical:	$V_g$	12-28 cm³/U	
Maximum continuous pressure:	$p_1$	130-250 bar	
Maximum intermittent pressure:	$p_2$	160-280 bar	
Maximum pressure peak:	$p_3$	180-300 bar	
Maximum rotational speed at $p_2$ :	$n_{max}$	2600-3500 min⁻¹	
Data sheet:		10094	



The Rexroth SILENCE PLUS AZPJ is suitable for use in noise-sensitive applications.

EXPLORE MORE



SILENCE PLUS AZPJ

High quality and long service life

A solution patented by Bosch Rexroth is responsible for the high running performance and long service life of the SILENCE PLUS: Hydrostatic grooves compensate the internal axial forces generated in the helical gearing without wear - even at pressures of up to 280 bar. In addition to 3D CAD and strength analyses with FEM, Rexroth external gear machines use other modern optimization methods such as complex gear calculations and vibration simulations. A core competence of Bosch Rexroth is the manufacture of high-precision pump drives. The tolerance requirements for all components lie reliably in the micrometer range. Bosch Rexroth's quality management system enables consistently high quality and is the industry benchmark.

Helps to meet legally prescribed noise limits

The Rexroth SILENCE PLUS AZPJ is characterized by low noise emissions. Intensive product development, verified by measurements in the anechoic chamber, led to the very low noise levels. This supports compliance with legal limits set by machine manufacturers.

Easy replaceability with the Rexroth SILENCE PLUS

The AZPJ-2x series of the SILENCE PLUS family comprises the nominal sizes 12-28 cm³/U. Thanks to its identical dimensions to other series of Rexroth external gear pumps, the noise-reduced SILENCE PLUS can be easily integrated into existing systems. This means: By simply exchanging the hydraulic pump, mobile and stationary machines become quieter while maintaining the same quality and efficiency.