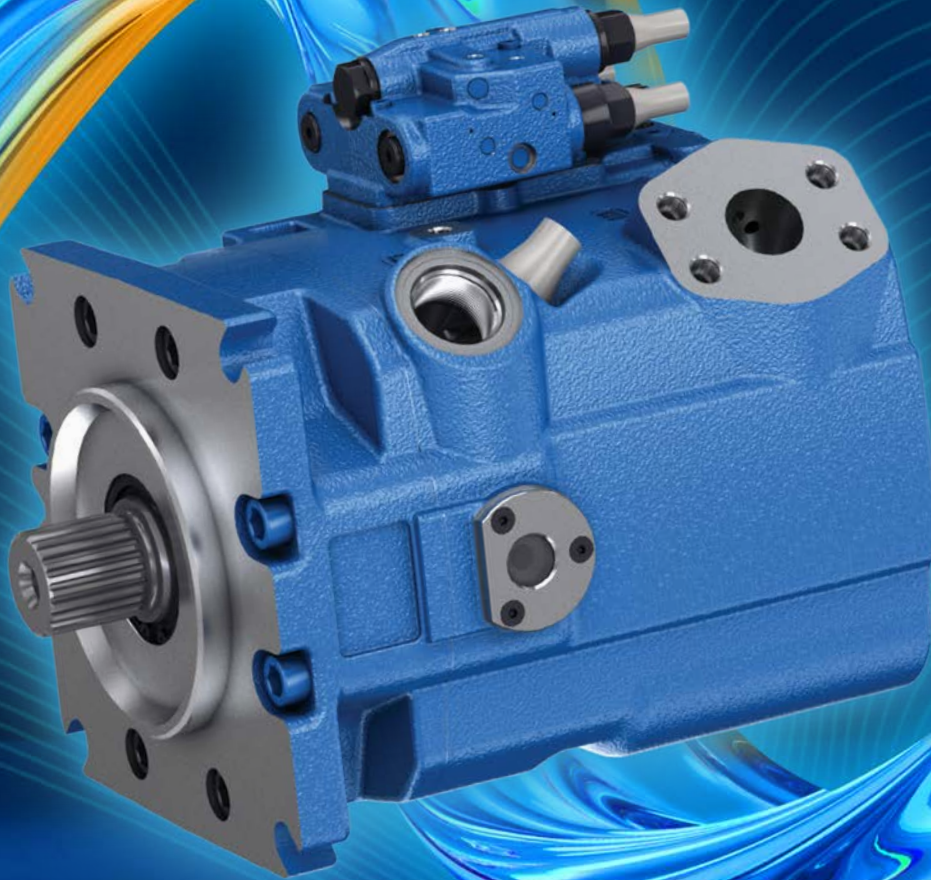


# Power That Adapts to Your Needs



## How Variable Displacement Pumps Maximize Efficiency in Industrial Hydraulics

**In today's competitive industrial landscape, energy efficiency and precise control aren't luxuries—they're necessities. This whitepaper explores how variable displacement axial piston pumps deliver the power you need, exactly when you need it, while reducing energy waste and operating costs.**

### THE VARIABLE DISPLACEMENT ADVANTAGE

The A15VSO Series 12 represents the evolution of industrial hydraulic pumps. Unlike fixed displacement designs that operate at full capacity regardless of system demand, variable displacement technology adjusts output to match actual requirements in real-time.

### THIS INTELLIGENT APPROACH DELIVERS:

- Dramatic energy savings: Only produce the flow you need, reducing wasted horsepower.
- Reduced heat generation: Lower energy waste means cooler operation and extended component life.
- Precise control: Match flow to load requirements with exceptional accuracy.
- System flexibility: One pump handles multiple operating conditions without compromise.

### PROVEN TECHNOLOGY, MODERN PERFORMANCE

The A15VSO builds on decades of swashplate design expertise, combining proven mechanical reliability with advanced control capabilities. Available in five sizes (110 to 280 cc displacement), the series delivers flow rates from 70 to 159 gpm at rated speeds, with continuous operating pressures up to 5,100PSI.

#### The robust design features:

**High-Quality Construction:** Cast housing (GGG40) engineered for millions of cycles in demanding industrial environments, handling the sustained pressures and shock loads common in heavy machinery.

**Flexible Control Options:** From simple fixed power limiters to advanced load-sensing systems and electronic proportional controls, the A15VSO adapts to your specific application requirements. Need basic pressure control? Done. Require sophisticated electronic control? Available.

### THE CONTROL OPTIONS THAT MATTER

**Different applications demand different control strategies. The A15VSO Series 12 offers comprehensive options:**

**Power Controllers:** Limit drive power consumption regardless of pressure, protecting your motor investment and preventing overload conditions during pressure spikes.

**Pressure Controllers:** Automatically reduce flow as system pressure increases, providing smooth, predictable performance while maximizing efficiency.

**Load-Sensing Controllers:** The most sophisticated option—continuously adjusts pump output to precisely match actuator demand, delivering maximum efficiency across all operating conditions.

**Electronic Control:** Proportional solenoids and electro-hydraulic systems enable remote adjustment, programmable sequences, and can be combined with various hydraulic controllers to create a combination of control.

Hydraulic power doesn't have to mean wasted energy. Variable displacement technology has matured into a reliable, cost-effective solution that delivers the performance industrial applications demand while dramatically reducing operating costs. The A15VSO Series 12 makes this technology accessible across a wide range of applications, from plastics machinery and metal forming to heavy-duty presses and general industrial equipment.

Ready to reduce energy costs while improving performance? Contact a Bosch Rexroth specialist to discuss how the A15VSO can transform your hydraulic system efficiency.

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