Press Release

Quiet Powerhouse
A15VSO high-pressure axial piston hydraulic unit from Rexroth with improved efficiency

New benchmark for ultra-low noise emissions: The A15VSO operates up to 3 dB(A) quieter than previously available high-pressure axial piston hydraulic pumps.

Rexroth combines significantly lower noise emissions with further improved efficiency in the A15VSO axial piston hydraulic pump for stationary applications in open circuit operation. It can meet pressure requirements to 420 bar and recover potential energy during pump/motor operation almost completely. This enables innovative regeneration concepts that can improve the efficiency of machines and systems. Equipped with a universal through drive, the A15VSO seamlessly integrates into the Rexroth line of products and simplifies the process of combining different pumps.

Rexroth developers used state-of-the-art simulation tools in all design stages. The one-piece housing eliminates numerous sealed oil paths, allowing designers to move closer to the goal of a leak-free design. The housing structure, optimized for minimum sound emissions, reduces noise considerably. Subsequently, the airborne noise level has been reduced in average by up to 2 dB(A) at full flow operation and up to 3 dB(A) during pressure holding periods (high-pressure standby). In addition, the
development engineers shifted the operating noise to a frequency range that is perceived as sonorous and more agreeable to the human ear.

Further design improvements bring the overall efficiency of the axial piston pump up to 93 percent. The swivel range, for example, has been expanded to +/- 100 percent to enable complete over center operation for extremely fast and efficient decompression. In the pump/motor operating mode an almost complete regeneration of potential energy is possible, for instance during lowering of a load or braking of a moving mass. This opens up new opportunities for maximizing the energy efficiency of machines and systems, whereby the robust and stable swivel action ensures highly dynamic performance with reduced response times.

The A15VSO is available in sizes 110, 145, 175, 210 and 280 cubic centimeters (cc) at a nominal pressure of 350 bar, and a maximum pressure of 420 bar. The standard 280 cc pump can run at 1800 rpm with flooded suction.

The new compact housing, which features an optimized layout of flow channels and better use of installation space, simplifies the process of fitting the pump even in very tight spaces. A boosted version with impeller (model A15VLO) is also available for up to 20 percent higher operating speeds. The universal through drive increases flexibility for customized drive solutions and can easily be used to connect axial piston, gear, and other hydraulic pumps out of the comprehensive line of Rexroth pumps. Numerous hydraulic and electric controllers (also for remote control operation) enable efficient, highly precise control of power, pressure and flow as well as load-sensing functions.

Implementation of design-for-manufacturing principles resulted in a cost-competitive product that achieved all of the above improvements at better pricing.

About Bosch Rexroth
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, and Factory Automation to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 31,100 associates generated sales revenue of approximately $5.99 billion (5.4 billion euros) in 2015. To learn more, please visit www.boschrexroth.com
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About Bosch
Having established a regional presence in 1906 in North America, the Bosch Group employs some 28,700 associates in more than 100 locations, as of April 1, 2015. In 2014, Bosch generated consolidated sales of $11.3 billion in the U.S., Canada and Mexico. For more information, visit www.boschusa.com, www.bosch.com.mx and www.bosch.ca.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 375,000 associates worldwide (as of December 31, 2015). The company generated sales of $78.3 billion (70.6 billion euros) in 2015. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch’s global manufacturing and sales network covers some 150 countries. The basis for the company’s future growth is its innovative strength. Bosch employs 55,800 associates in research and development at 118 locations across the globe. The Bosch Group’s strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.”

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