

## International WorkBoat Show : Bosch Rexroth will feature innovative drive and control technology to improve productivity in marine applications

A comprehensive range of products and technology demonstrates Rexroth's expertise in workboat and marine applications

*Right : Bosch Rexroth Active Heave Compensation (AHC) system*

**Bosch Rexroth offers a comprehensive array of components and system solutions for marine support vessels, dredging, supply and salvage boats, oil exploration operations and deep sea applications. Many of these technologies will be on display at the International WorkBoat show, December 1-3, 2015, in New Orleans in booth #3301.**

### **Active heave compensation improves safety offshore**

Bosch Rexroth has dozens of years of experience in developing, commissioning and maintaining Active Heave Compensation (AHC) systems, which compensate for ship movements caused by wave action and improve the safety of marine activities.



Each system measures ship movement and relays the data to a main controller. The controller then uses that information to control other components, which in turn power the winch so that the load hangs idle relative to the fixed world (i.e., the drilling rig or the seabed). So when the ship moves upwards, the winch pays out; when it comes down again, the winch hauls in. This makes it possible to position loads accurately and safely, even in rough weather.

Bosch Rexroth has developed three AHC variants, which differ in their components and how they are controlled.

### **Large electric drives**

With its large electric drives like the IndraDrive CL/ML, Bosch Rexroth offers a fine-scaled product range of very strong drive solutions from 110 kW to 4 MW for applications such as winches and hoist drives for cranes. These applications often call for a high degree of force, so more drive power is required. With the large electric drives from Rexroth, machine operators can reduce energy consumption even in the multi-megawatt range without sacrificing productivity.

## **Hägglunds CBM direct drive hydraulic motors**

In ship technology, increasingly higher demands are being placed on power. The Hägglunds CBM packs 50 percent more torque at 6000Nm/bar into a direct drive hydraulic motor that is smaller and up to 50 percent lighter than its predecessor. This makes it the most powerful direct drive in the world. The Hägglunds CBM not only handles heavier workloads, but it also takes up less space and places less weight on the drive shaft. This means that customer machines, and in some cases the facilities that house them, can be smaller, lighter and simpler. The CBM also offers unique operating advantages for a hydraulic direct drive: full torque from zero speed, protection from shock loads and four-quadrant operation.

## **Additional products and systems**

Bosch Rexroth's booth display at WorkBoat will showcase additional products, including:

IndraMotion MLC-H motion logic control with integrated fluid technology for hydraulic and electric drives on the same controller, featuring scalable decentralized intelligent motion control based on IEC61131-3 standard programming languages

- Rineer high-torque hydraulic motors manufactured to the tightest tolerances for maximum volumetric efficiencies
- DS2R electrohydraulic controller with proportional valve, for Rexroth hydraulic axial piston units that function as secondary control devices for offshore winch applications in the Rexroth Active Heave Compensation system; proportional valve technology provides more reliability, easier maintenance and lower cost
- A15VSO hydraulic axial-piston pump: Combines significantly lower noise emissions with energy savings, improving the overall operation of machines and systems
- Variable A6VM hydraulic motor: Features an axial nine-piston arrangement which reduces pressure ripple and provides better start-up response, making it ideal for winches when high torque and smooth performance is required

The extensive product range from Bosch Rexroth can help make any marine vessel safer, easier and more economical to operate. Learn more by visiting booth #3301 at the International WorkBoat show on December 1-3, 2015.

### *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, 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, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 33,700 associates generated sales revenue of approximately \$7.4 billion (5.6 billion euros) in 2014. To learn more, please visit [www.boschrexroth-us.com](http://www.boschrexroth-us.com)*

### *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](http://www.boschusa.com), [www.bosch.com.mx](http://www.bosch.com.mx) and [www.bosch.ca](http://www.bosch.ca).*

*The Bosch Group is a leading global supplier of technology and services. It employs roughly 360,000 associates worldwide (as per April 1, 2015). The company generated sales of \$65 billion (49 billion euros) in 2014.\* 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 subsidiary and regional companies in some 60 countries. Including its sales and service partners, Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. In 2014, Bosch applied for some 4,600 patents worldwide. The Bosch Group's strategic objective is to create solutions 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." Additional information is available online at [www.bosch.com](http://www.bosch.com) and [www.bosch-press.com](http://www.bosch-press.com), <http://twitter.com/BoschPresse>.*

*\*The sales figure disclosed for 2014 does not include the former joint ventures BSH Bosch und Siemens Hausgeräte GmbH (now BSH Hausgeräte GmbH) and ZF Lenksysteme GmbH (now Robert Bosch Automotive Steering GmbH), which have since been fully acquired. # # #*