

Press Release

Planetary Screw Assemblies: New sizes extend application spectrum with increased capacity range

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For Immediate Use



Planetary screw assemblies from Rexroth offer high load capacities while featuring small installation dimensions for compact machine designs

Rexroth opens up new fields of applications with planetary screw assemblies with new sizes. The drive elements with screw diameters up to 75 mm and leads up to 20 mm achieve static load capacities up to 1,496 kN while featuring a compact design. They are ideal for use in medium sized and heavy-duty machinery such as presses, plastic injection molding machines and machine tools.

All electric presses and injection molding machines are reaching increasingly higher performance classes. This places more exacting demands on mechanical axis systems, which have to transmit exponentially higher forces. Rexroth now meets these requirements with planetary screw assemblies that feature diameters of 60 and 75 mm as well as leads of 10 and 20 mm each. Moreover, screw diameters of 20, 30, 39 and 48 mm with leads of 5 and 10 mm are available. The new sizes cover dynamic load capacities up to 544 kN and static load capacities up to 1,496 kN within a minimum of installation space. The drive units represent robust drive solutions for use in high force applications, such as process or plastic injection molding machines. The design principle of planetary screw assemblies allows a high load capacity in relation to the installation dimensions. The planets rotate with a defined contact profile in a

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nut around a screw in parallel to the axis. This ensures very smooth running and reduces noise emission. Numerous contact faces result in high axial stiffness and load capacities, thus allowing for a long service life. These screw assemblies feature a high positioning accuracy and repeatability, also with minimal travel movements. Planetary screw assemblies can reach travel speeds of up to 1.5 m/s (90 m/min), thereby meeting increased dynamic requirements for shorter machine cycles. When combined with a servomotor and drive controller, the user gets a mechatronic unit from a single source, which moves large forces within a minimum of installation space.

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Compact cylindrical single nuts, flange single nuts and split flange single nuts for all tolerance classes offer the designer a high degree of freedom. For applications with more demanding precision requirements, all nut types are available preloaded. This allows backlash-free operation in tolerance classes T7 and T5.

Rexroth's innovative sealing technology in planetary screw assemblies results in long lubrication intervals. This reduces maintenance costs and spares the environment due to a lower consumption of lubricants. In manufacturing the screws, Rexroth benefits from its experience in the efficient roll-forming process. This technology, which has proven successful in large series production, achieves the same accuracy levels as the more expensive grinding process. Rexroth supplies the planetary screw assemblies ready-to-install with machined ends.

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.ca

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.

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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 and 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.*

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