

New Planetary Screw Assemblies: Stronger but Quieter and More Compact

Rexroth pushes into the upper performance classes of screw assemblies

PI 026/11
04/04/2011



The new planetary screw assemblies move heavy loads quickly.

With newly developed planetary screw assemblies, Rexroth is expanding the range of applications for electro-mechanical solutions by a solution that allows for heavy loads to be moved quickly. The drive elements are available in five sizes. They reach a static load capacity of up to 475kN, while at the same time requiring less installation space than ball screw assemblies having the same capacity. The high-performance drive elements are especially well-suited for intermediate and heavy engineering applications, such as pressing, machine tools and plastic injection-molding machines.

The design principle of planetary screw assemblies with large contact areas improves the load bearing capacity significantly without increasing the dimensions. Planetary gears with a defined contact profile rotate inside a nut parallel to the axis around a bolt. The numerous contact areas lead to a high axial rigidity and load bearing capacity, thereby allowing for a long service life. The new screw assemblies achieve a high level of positioning and reproduction precision even with minimal movement.

Contrary to ball screw assemblies, where the balls are continuously fed back through the return passage into the load bearing area, the planetary bolts rotate inside the nut. This makes them run very smoothly, with noise emissions remaining clearly below those of ball screw assemblies.

Rexroth's sealing technology in the planetary screw assemblies allows for long lubrication intervals. As a result, lubricant consumption is reduced, which in turn means lower maintenance costs and less pollution.

PI 026/11
04/04/2011

The product range initially includes screw diameters of 20, 30 and 48 mm and leads of 5 and 10 mm. Compact cylindrical single nuts and flange single nuts grant a high degree of freedom for designers. With the new planetary screw assemblies, Rexroth covers dynamic load capacities of up to 231kN and static load capacities of up to 475kN. In addition, a split flange single nut allows for the assembly to be preloaded for zero clearance.

In manufacturing the screws, Rexroth benefits from its experience in the economical 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.

Bosch Rexroth AG is one of the world's leading specialists in the field of drive and control technologies. Under the brand name of Rexroth the company supplies more than 500,000 customers with tailored solutions for driving, controlling and moving. Bosch Rexroth is a partner for industrial applications and factory automation, mobile applications and using renewable energies. As The Drive & Control Company, Bosch Rexroth develops, produces and sells components and systems in more than 80 countries. In 2009 Bosch Rexroth part of the Bosch Group, achieved sales of around 4.1 billion Euro with 34,200 employees.

For more information please visit: www.boschrexroth.com/press

The Bosch Group is a leading global supplier of technology and services. According to preliminary figures, some 283,500 associates generated sales of 47.3 billion euros in the areas of automotive and industrial technology, consumer goods, and building technology in fiscal 2010. The Bosch Group comprises Robert Bosch GmbH and its more than 300 subsidiaries and regional companies in over 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Bosch spent some four billion euros for research and development in 2010, and applied for over 3,800 patents worldwide. With all its products and services, Bosch enhances the quality of life by providing solutions which are both innovative and beneficial.

Contact für Journalists:
Bosch Rexroth AG
Susanne Herzlieb
97816 Lohr a. Main
Tel.: +49 9352 18-1573
Fax: +49 9352 18-1812
susanne.herzlieb@boschrexroth.de

Press Release

Additional information can be accessed at: www.bosch.com, www.bosch-press.com

PI 026/11
04/04/2011