

## New Planetary Screw Assemblies: Stronger but Quieter and More Compact

Rexroth pushes into the upper performance classes of screw assemblies

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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.

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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.

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# Press Release

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