Press Release

New electromechanical motion system for driving simulation by Bosch Rexroth
Featuring standardization, performance (including high payload) and design

Bosch Rexroth's successful motion platform range is extended with a brand new electromechanical variant. Because this design is built from standard components, the end user benefits from a driving and flight simulation application platform that combines reliability with a low cost of ownership. Additionally, performance in the areas of excursions, velocities, accelerations and noise is significantly improved.

Even before the first systems were actually built, Bosch Rexroth in the Netherlands had already taken multiple orders for their new electromechanical motion systems, which have been specially designed for driving simulation applications. The development of these motion platforms is a logical sequel to the successful first generation hydraulic systems (1986), and their successors, the fully electrically-driven systems (1996) for flight and driving simulators and cabin crew trainers.

Making maximum use of standard components

The new electromechanical variant was designed virtually from the ground up, making maximum possible use of components from Bosch Rexroth’s own product line-up, such as spindles, motors, amplifiers, sheet metal parts and
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electronic control systems. With proven technologies and optimum service, the user has perfect peace of mind. The existing components, which are both stable and standardized, are also financially more attractive than components that need to be specially designed and manufactured for a specific application. Moreover, they offer all the necessary functionality and features to fulfil all of the system requirements.

New design generates savings

During the design process, the engineers made full use of the opportunity to optimize the performance of the new motion systems. For example: the noise level is lower compared to the previous generation of systems, the maximum payload is higher (systems with a payload of 1500 kg and 2700 kg are available standard), the space demands are smaller, and less maintenance is required.

The many improved features are largely due to the mechanical engineering, which incorporates lifelong lubrication and fully-integrated compensation for the necessary static load. Furthermore, space has been saved by placing the control technology below the system, rather than in a separate control cabinet adjacent to the platform.

Attractive and functional design

While the technical performance is impressive, it’s the product design that catches the eye. Apart from the aesthetic added value, this superb styling also protects the cabling and enables the essential electronics and computer to be fully integrated into the design. Thanks to a smart mechanism, the ‘nose’ of the electronics cabinet can easily be opened, so that the user has ready access to the connections. Terminals for power supply and motion computer are provided standard, and optionally also for I/O and USB, or the connection of thermo-elements.

Safety and energy

The use of certified safety components means that the new electromechanical motion system is suitable for integration with safety-related applications. Typical applications are those that work with specific constraints, for example, position, speed and torque. At Bosch Rexroth, these standard possibilities for incorporating safety functions fall under the ‘Safety on Board’ program.
addition, the platform has been developed under Bosch Rexroth’s 4EE (Rexroth for Energy Efficiency) philosophy, in which smart solutions significantly reduce the energy used by these systems, contributing in turn to a marked reduction in the Total Cost of Ownership.

Applications

The new motion platforms can be used for every imaginable vehicle simulation that mimics the characteristics of not just passenger vehicles, but also trucks, trains, heavy equipment, and of course - aircraft.

For more information: [http://www.boschrexroth.com/motion](http://www.boschrexroth.com/motion)

About Bosch Rexroth:
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