Press Release

1308-e RS Water

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Uhing presents the first mechatronics study ever: linear drive nut RS with electronic drive under water

For the first time ever, Joachim Uhing GmbH & Co. KG has implemented a combination of classical drive and electronic controller in single a project. The internationally renowned specialist for mechanical linear drives will showcase the study on the Motek at Stuttgart in October 2013.

Until now, the engineering company based at Mielkendorf had maintained a strict separation between mechanical products and electronic components. The current study combines mechanics and electronics. "With this project, we aimed at improving our internal expertise in connecting mechanics and electronics," explains Wolfgang Weber, Uhing's Managing Marketing Director.

The Linear Drive Nut RS was chosen for the study. It is particularly resistant against sand, dust, humidity and splash water. Now it had to prove that it is also suited for underwater application. To do so, it was fitted on a plain shaft. Rolling rings translate the shaft rotation into linear transversal feed movements.

Combined with a position sensor system, an application with the drive nut being fully immersed in water was designed. The travel starts above the water surface. The drive nut then goes under water and assumes a handling function using a solenoid. "These are situations that benefit from the very precise positioning capabilities of the linear drive nut," says Jörg Wadehn, Uhing's Technical Director.

The linear drive nut can be sealed with rod seals to prevent water or dirt particles from reaching its interior. In this way, it can also be operated in dirt-laden water or other liquids such as oil, which makes it a very interesting solution for companies with special hygienic production requirements. The linear drive nut has absolutely no play even under water and operates trouble-free. With two coupled linear drive nuts, the thrust force can even be increased.

Based on the results of this study, Uhing will extend the product range by electronically controlled components and thus expand the capabilities of the products in the medium term. "The questions concerning our product range arising from the approach to mechatronics entirely depend on the environment in which the respective component is operated," says Jörg Wadehn.