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Smart system for positioning applications

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High speed meets high precision

In rotary table applications, maximum precision counts when it comes to workpiece positioning. The exact mounting of the target wheel has a considerable influence on the achievable positioning accuracy, especially if the wheel has a small diameter. Thanks to the new i³SAAC-Precision-System from Lenord + Bauer, this can now be significantly improved.

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If the position of an axle is to be measured exactly, measuring scales must be fitted with enormous precision. Supporting sensor solutions have so far been difficult to integrate and were frequently very expensive. The easy to mount i³SAAC-Precision-System now solves this problem. It consists of two tried-and-tested standard MiniCODERs and the i³SAAC-Precision-Box for direct spindle mounting.

An advantage for the user is that identical encoder kits from Lenord + Bauer can be used in the motor spindle as a single solution for revolution counting and as a double-head version for high-precision positioning applications. This reduces the range of versions, and any MiniCODER high-speed solutions already present are retained.

The i³SAAC-Precision-Box is connected by means of a compact connector solution using two encoder kits mounted offset at an angle of 180° on the target wheel. The analogue signals they produce are processed and prepared in the box. This dynamically minimises the eccentricity error - also known as the long-wave error - even at high rotational speeds up to well over 50,000 rpm. Temperature signals from the spindle can likewise

be connected in the box and looped through in a cable for further processing.

There is usually no need for design changes: the i³SAAC-Precision-Box replaces the M23 connector on the spindle. The bearing flange just needs to be slightly adapted with the identical, 180° offset boring and milling sketch of the MiniCODER.

The encoder kits can be configured using the GEL 211C testing and programming unit. In the installed state, the two sensor signals are finely adjusted once under menu guidance using the commissioning wizard.

The achievable precision can be evaluated by assessing the precision of mounting and the quality of the target wheel. This allows defective measuring scales to be identified at a very early stage and excessive deviations from concentricity or the MiniCODER mounting position to be corrected.

The user profits from a precise, flexible and overall cost-optimised positioning solution with high reliability.

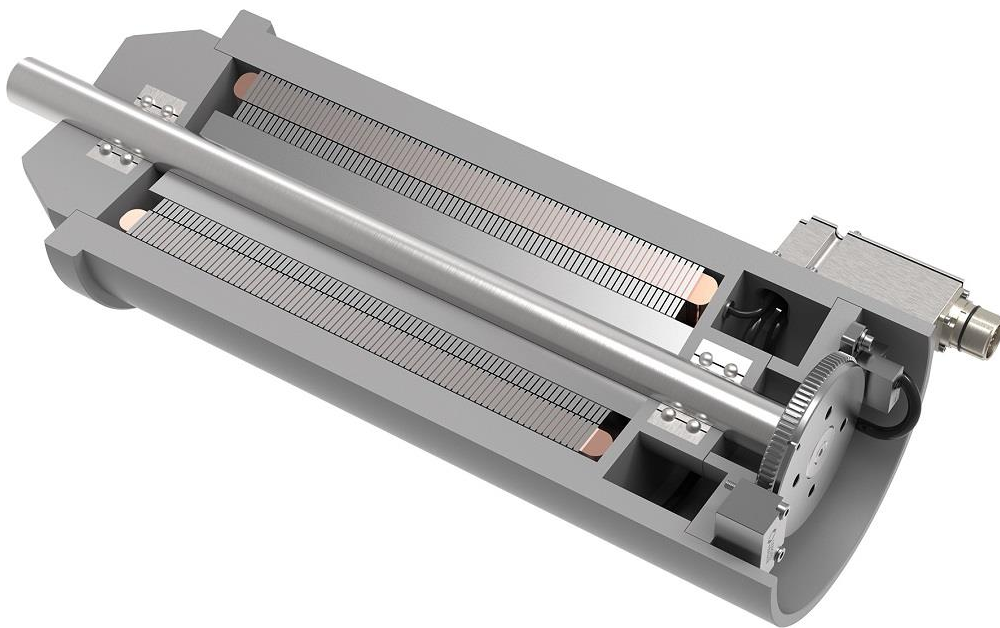


Figure 1: The i³SAAC-Precision-System mounted on a spindle

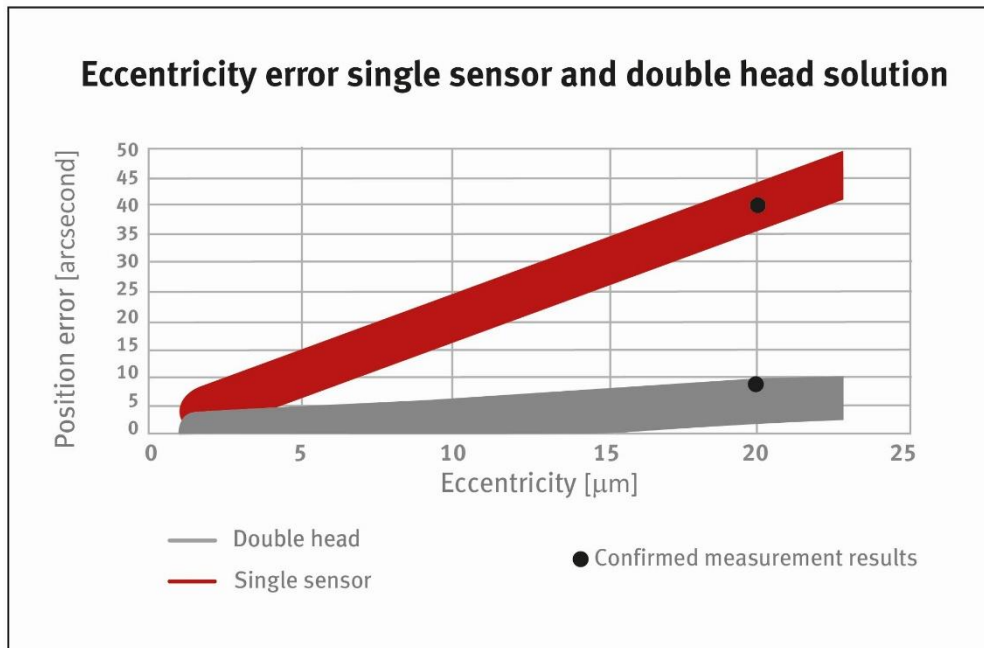


Figure 2: Minimised long-wave error

About Lenord, Bauer & Co. GmbH:

We are an international specialist in the field of motion sensors and integrated drive technology. We develop, produce and distribute technology-leading solutions for the mobility and machinery sectors. Our activities are focused on railway rolling stock, machine tools and packaging machines. Our customers have been benefiting from our considerable technical consultancy skills and expertise in customer applications for more than 50 years.

Lenord + Bauer is certified according to DIN EN ISO 9001 and 14001, as well as IRIS.