

Our connection expert

A picture and its story: Maxim Ort gives us an insight into baier & michels' application laboratory. Ort's workplace is an important connection between customer requirements – and the solutions we provide as a partner to the industry.

Mr. Ort, what are you examining on this image?

The limits of a screw connection. On the torsion test rig, I am investigating the behavior of a thread-forming screw in a customer component, which is an aluminum housing for a gear motor. I am mainly focusing on the screw-in and failure torques of the screw, and also simultaneously measuring the preload force with the load cell.

Why are such comprehensive tests necessary?

First and foremost because there are no standardized formulas for thread-forming screws yet. This is therefore the reason why we, the application engineers, work with customer-specific requirements. It's a matter of preliminary designs that have to be validated. In other words, we take a close look at all the things that could go wrong in practice – and show ways in which the product can be most successful in terms of quality, costs and process capability.

How can the maximum results be achieved from a customer point of view?

Of course, it is beneficial for our customers if they can define the optimum values based on our recommendations, for individual aspects such as core hole diameter, screw-in depth or tightening torque. But manufacturers get the biggest benefit not only when we supply them with the fasteners and the related



**Safety in view:
Maxim Ort
in the b&m
application lab**

assembly parameters, but also accompany the entire life cycle of a fastener: From the theoretical design through installation to the operating condition.

To what extent can you intervene if even the customer is still deep in the design phase for an entire component?

If we cannot obtain original parts for the analysis of the connections, then we rebuild the components in

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our workshops, simulate the processes – and thus support the development.

What appeals to you most about your job?

That it is also a kind of detective work. First of all, we identify possible deficits and error sources. As a second step, we have to score as problem solvers and innovation drivers. And not just for everything that has a thread – or is supposed to have one. My colleagues and I also scrutinize products and processes related to press-in and embedding systems. For us, it's important to offer customers the best technical and economical solution. I enjoy these challenges.