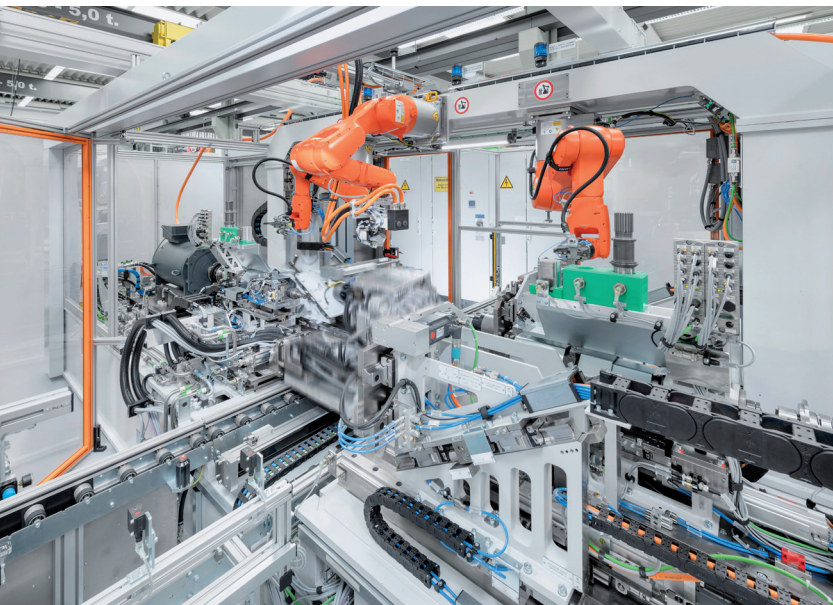


EOL function test stand for electric drive units

Complete, fully automated system from a single source:
precise and with high-resolution measurement technology



Ambitious automation project

JW Froehlich has designed and implemented EOL test stands for testing the function of electric drive units (EDUs) on behalf of a German car manufacturer. As it was one of their first e-drive projects, the client was looking for a reliable and competent partner for developing a tailor-made test design. The client's expectations based on positive experience with past automated test engineering projects was exceeded. The project resulted in a test stand for handling complex, diverse test parts and integrating high-resolution measurement technology – with an optimum output.

JW Froehlich is where decades of experience with the development of highly complex test stands meet extensive e-mobility expertise. Our test systems are developed and customised in close consultation with our clients to meet their exact requirements. The combined technological know-how of our in-house experts and cooperation partners enables the development of complete, user-oriented testing solutions. The result is a one-stop-shop for the total design, simulation, implementation and on-site commissioning.

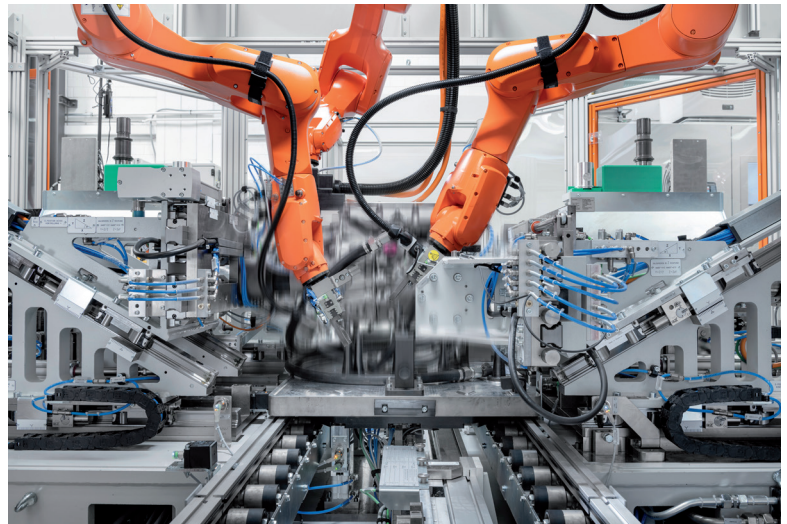
EOL function test stand for electric drive units



Fully automated and precise

The test solution comprises five test stands designed for an effective testing process. The unit is fully automated and has optimized cycle times – from transport to clamping and contacting the test part. This enables the functional test of up to 2,000 EDUs per day. JW Froehlich's test and analysis software provides precise measurements and analyses of both electric characteristics and mechanical components.

The flexible robotic design enables testing different NVH contact points for each test part. Following setup control and plausibility check, a fast infeed element positions the EDU for the subsequent functional test. The device clamps and adapts the interfaces and starts restbus simulation. The data read out from the EDU's control unit are compared with the client's requirements. If no significant deviations are found, the test part is labelled "OK" and prepared for transport.



Test scope

[Parking break test](#)

[Bidirectional load test](#)

[Differential test](#)

[Initialisation and ECU readout \(control unit\)](#)

[NVH testing](#)

With a test time of 107 seconds and simultaneous insertion of a second test part, cycle times are kept to a minimum: It only takes 130 seconds for the test part to leave the test stand.

Have we piqued your interest?

For questions about the project and its technical details, please refer to your direct contact:

JW Froehlich Maschinenfabrik GmbH

Sales Team

Phone +49 711 797 66-0

sales@jwf.com

JWFROEHLICH

Test and Assembly
Solutions for Powertrain

Germany | UK | USA | China
www.jwf.com