

PRESS RELEASE

Dürr unveils innovative testing technology for autonomous and semiautonomous vehicles

Bietigheim-Bissingen, September 27, 2018 – Some years ago it may have seemed like science fiction, but there's no doubting its reality now: Driverless cars are on the way. They are already playing a central role in the automotive industry's planning decisions. Dürr, too, is intensively addressing this megatrend. The company has now unveiled two pioneering innovations in the field of vehicle testing technology: The modular x-road curve and x-around test stands will rigorously test autonomous and semiautonomous vehicles before they take to the road, ensuring maximum safety. These two innovations, which can also be used for conventional vehicles, will give the automotive industry the capability now to handle the testing tasks of tomorrow.

Autonomous or semiautonomous vehicles have to cope with traffic scenarios such as overtaking or the need for evasive action with absolute reliability. That involves the vehicle working as a total system. This undergoes end-of-line testing – i.e. after the assembly process – in just the same way as the individual components required for autonomous driving, such as sensors and cameras. Dürr has developed its new generation of test stands to handle these extensive tests.

"Automakers are expanding the production of semiautonomous and autonomous vehicles. In Dürr's patented technologies, we ensure precise, reproducible processes in end-of-line testing. In doing so, we are supporting our customers on the road to a new mobility age," declares Ralf W. Dieter, Dürr AG's CEO.

Dürr Aktiengesellschaft
Corporate Communica-
tions & Investor Relations
Carl-Benz-Str. 34
74321 Bietigheim-Bissingen

Phone +49 7142 78-1785
Fax +49 7142 78-1716

corpcom@durr.com
www.durr-group.com

x-around is a flexible test stand for setting and calibrating cameras and radar, laser and other sensors. These are required in ever greater numbers to enable the vehicle to identify traffic situations and react to them. Typical traffic scenes can be played on monitors in x-around, for example a pedestrian crossing the street. The vehicle's systems must be able to respond appropriately to such scenes. A lightproof booth enclosing the entire test stand ensures constant, reproducible test conditions.

The multi-function x-road curve test stand performs classic tasks such as testing brakes, transmissions and ABS systems. Modifying the front axle of a classic roll test stand enabled driverless tests to be performed for the first time. Using laser measurement technology, x-road curve now determines the steering angle and adjusts this by means of tiltable roll units. As a result, the vehicle remains centrally positioned on the test stand even at high speeds, without a driver having to correct the steering.

In the next phase, x-road curve can be connected to a virtual-reality environment. In this, the vehicle is subjected to typical traffic scenarios requiring steering movements. This enables the manufacturer to dynamically test whether the car and its component systems detect, for instance, an obstacle or a vehicle in front and brake or take evasive action in timely fashion.

Pictures can be found [here](#).

The Dürr Group is one of the world's leading mechanical and plant engineering firms with outstanding expertise in automation and digitization/Industry 4.0. Products, systems and services offered by the Group enable highly efficient manufacturing processes in different industries. Dürr supplies not only the automotive industry but also other sectors such as the mechanical engineering, chemical and pharmaceutical industries, and the woodworking industry. Dürr has 92 business locations in 31 countries. In 2017 the Group generated sales revenues of € 3.71 billion. The Group has around 15,000 employees and operates in the market via five divisions:

Dürr Aktiengesellschaft
Corporate Communica-
tions & Investor Relations
Carl-Benz-Str. 34
74321 Bietigheim-Bissingen

Phone +49 7142 78-1785
Fax +49 7142 78-1716

corpcom@durr.com
www.durr-group.com

- **Paint and Final Assembly Systems:** Paintshops and final assembly systems for the automotive industry
- **Application Technology:** Robot technology for the automated application of paint, sealants and adhesives
- **Clean Technology Systems:** Exhaust-air purification systems and energy efficiency technology
- **Measuring and Process Systems:** Balancing as well as assembly, testing and filling technology
- **Woodworking Machinery and Systems:** Machinery and equipment for the woodworking industry

Contact:

Dürr AG

Günter Dielmann / Mathias Christen

Corporate Communications & Investor Relations

Phone +49 7142 78-1785 / -1381

Fax +49 7142 78-1716

Email corpcom@durr.com

This publication has been prepared independently by Dürr AG/Dürr group ("Dürr"). It may contain statements which address such key issues as strategy, future financial results, events, competitive positions and product developments. Such forward-looking statements are subject to a number of risks, uncertainties and other factors, including, but not limited to, those described in Dürr's disclosures, in particular in the chapter "Risks" in Dürr's annual report. Should one or more of these risks, uncertainties and other factors materialize, or should underlying expectations not occur or assumptions prove incorrect, actual results, performances or achievements of Dürr may vary materially from those described in the relevant forward-looking statements. These statements may be identified by words such as "expect," "want," "anticipate," "intend," "plan," "believe," "seek," "estimate," "will," "project" or words of similar meaning. Dürr neither intends, nor assumes any obligation, to update or revise its forward-looking statements regularly in light of developments which differ from those anticipated. Stated competitive positions are based on management estimates supported by information provided by specialized external agencies.

Our financial reports, presentations, press releases and ad-hoc releases may include alternative financial metrics. These metrics are not defined in the IFRS

Dürr Aktiengesellschaft
Corporate Communica-
tions & Investor Relations
Carl-Benz-Str. 34
74321 Bietigheim-Bissingen

Phone +49 7142 78-1785
Fax +49 7142 78-1716

corpcom@durr.com
www.durr-group.com

(International Financial Reporting Standards). Dürr's net assets, financial position and results of operations should not be assessed solely on the basis of these alternative financial metrics. Under no circumstances do they replace the performance indicators presented in the consolidated financial statements and calculated in accordance with the IFRS. The calculation of alternative financial metrics may vary from company to company despite the use of the same terminology. Further information regarding the alternative financial metrics used at Dürr can be found in our financial glossary (<https://www.durr-group.com/de/investoren/glossar/>).

Dürr Aktiengesellschaft
Corporate Communica-
tions & Investor Relations
Carl-Benz-Str. 34
74321 Bietigheim-Bissingen

Phone +49 7142 78-1785
Fax +49 7142 78-1716

corpcom@durr.com
www.durr-group.com