



NEXT.assembly

## x-3Dbalancer

The measurement of the steering wheel angle in a new dimension

Conventional steering wheel balancers, which are used to take the steering wheel position into account when adjusting the wheel alignment of vehicles, require manual handling. It is necessary to manually insert the steering wheel balancer into the steering wheel of each vehicle and manually remove it after adjustment. This type of measurement requires physical contact and is therefore susceptible to errors and damage due to incorrect positioning, accidental bumping or dropping.

For precise and reliable measurement of the steering wheel position, Dürr offers the new x-3Dbalancer, which enables non-contact measurement of the steering wheel position. This provides ideal conditions for automated testing processes without manual operation and handling errors.

### CUSTOMER BENEFITS



Non-contact, automated 3D measurement without operator guidance

Approaching the ideal measuring position in relation to the geometry/height of the body and the position of the steering wheel

Highest flexibility in terms of vehicle variance

No need to handle a separate device

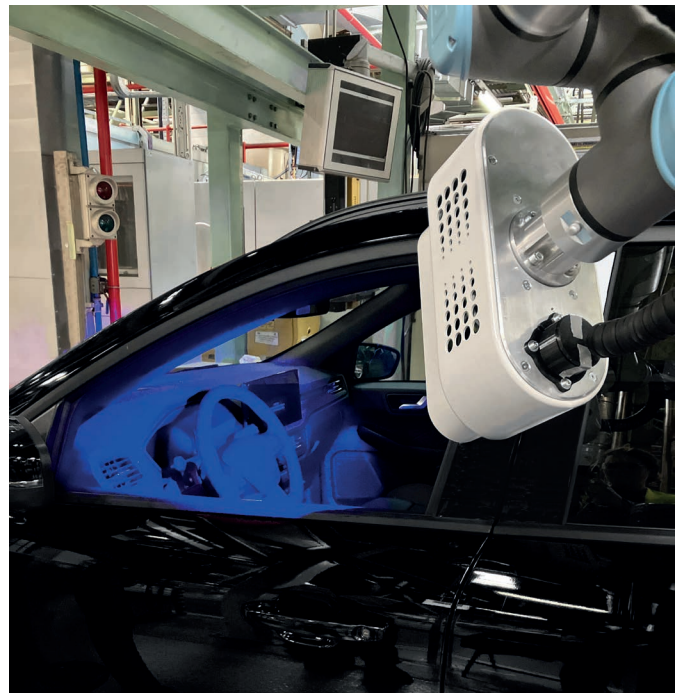
High variability with regard to the shape and geometry of the steering wheel

# Technical data

## x-3Dbalancer



x-3Dbalancer on site with the customer



Measurement with x-3Dbalancer

### THE SOLUTION - CONTACTLESS MEASUREMENT

3D position detection of the steering wheel is performed during wheel measurement and alignment by means of a 3D camera as well as software specially developed for this application.

The system combines the accuracy of a mechanical steering wheel balancer with the advantages of a non-contact and force-free measurement.

The measurement is largely independent of the shape and geometry of the steering wheel.

Using a collaborative robot, the 3D sensor is positioned in the ideal measurement position at the opened side window of the vehicle. For left- or right-hand drive, separate systems are required.

### TECHNICAL DATA

Features	x-3Dbalancer
Measuring range	+/- 30° at inclination 30° to 60°
Resolution	0,1°
Total tolerance steering wheel angle measuring system	0,2° for steering wheel angle +/- 10° at inclination 30° to 60°
Light source	LED
Resolution of the camera	5 megapixel
Light sensitivity	2,500 lux (permissible homogeneous ambient light)
Sensor feed	Collaborative robot