



NEXT.assembly

x-DASalign truck

Setting of driver assistance systems on commercial vehicles

In the field of commercial vehicle testing (CVT), the number of driver assistance systems and sensor technology is steadily increasing. For example, side radar systems will be a legal requirement for new vehicle registrations. The high vehicle and option variants of the vehicles require a flexible and modular possibility to calibrate all these systems.

In the latest ADAS test stands, collaborative robots are used for safe, precise and flexible positioning of calibration equipment for camera and radar systems.

Depending on requirements, the robot systems can be integrated in a modular and scalable way into existing or new wheel alignment stands x-wheel truck *d* or set up as separate ADAS calibration stations.

CUSTOMER BENEFITS



Equalisation of the End of Line structure

Reduction in the cycle time by splitting the processes between wheel alignment stand, headlamp setting and driver assistance systems

Optimization of the production processes

Integration in x-wheel truck *d* wheel alignment stands

Process-safe adjustment of driver assistance systems

x-DASalign truck

Driver assistance systems at a glance

SIDE RADAR SYSTEMS (SRR, BSD)

EU regulations require all trucks manufactured from July 2024 onward to be equipped with a side radar system that initiates emergency braking in the case of an imminent collision during a turning manoeuvre.

For calibration purposes, this system needs certain items of calibration equipment (such as a Doppler simulator or aluminum plate), whose positioning must be carried out by, for example, cobots in a highly flexible manner in order to cover the installation positions on the sides of all kinds of commercial vehicles.

SIDE MIRROR CAMERA SYSTEMS (MIRRORCAM SYSTEM, DVS)

Nowadays, the latest generation of commercial vehicles is equipped with cameras instead of side mirrors.

This system needs special calibration patterns in order to set the image shown on the driver's cab monitors in line with requirements.

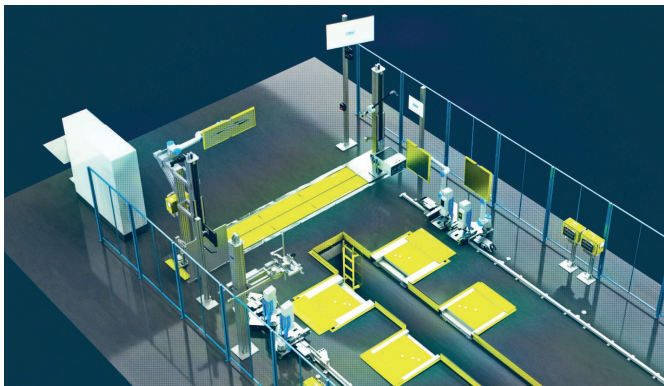
FRONT RADAR SYSTEM (SRR, MRR, LRR, ACC, AEB)

Modern radar systems are improving all the time, delivering higher resolution and more accurate identification of objects.

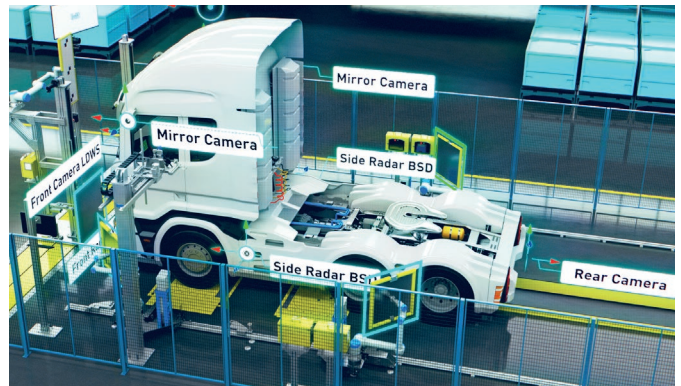
This is also increasing calibration requirements in the end-of-line area. Only through highly accurate and reliable wheel alignment as well as precise positioning of the calibration equipment is it possible to implement all the requirements of the sensor manufacturer and guarantee flawless functioning of the systems.

FRONT CAMERA SYSTEMS (LDW, LKA)

Front camera systems cover an increasing variety of functions, be it Traffic Sign Recognition (TSR), Lane Departure Warning (LDW) or Active Lane Keep Assist (LKA). The range of object recognition and thus the necessary system precision are growing in step with the further development of the individual systems. The demands placed on the testing equipment are therefore also increasing.



Layout x-DASalign truck with robots



x-DASalign truck with driver assistance systems

TECHNICAL DATA

Positioning system vehicle	Measuring of vehicle position incl. symmetry and driving axis angle via x-3Dsurface
Positioning system front targets	Heavy duty floor guidance
Positioning lateral targets	With collaborative robots on the guidance system for measurement technology
Positioning of targets	Automatically
Axle load	< 10 t
Clearance height	Not limited
Clearance width	3,900 mm

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