

# x-light truck

## HEADLAMP AIMING FOR COMMERCIAL VEHICLES

### Product

With the experience of more than 590 installed manual, semi-automatic as well as fully automatic headlamp aiming systems in the end-of-line area in vehicle manufacturing plants, Dürr Assembly Products develops and sells systems which are tailored to the requirements of headlamp aiming on commercial vehicles. In addition to gantry systems for transporters and small buses, Dürr also offers floor-guided systems especially for trucks and buses with an axle load up to 10 tons. Due to the increasing use of driver assistance systems in commercial vehicles, the image processing with headlamp aiming systems becomes more and more important. The setting and check of driver assistance systems based on infrared distance sensors as well as the setting and check of radar systems with auxiliary mirror can also be performed with the headlamp aiming system.



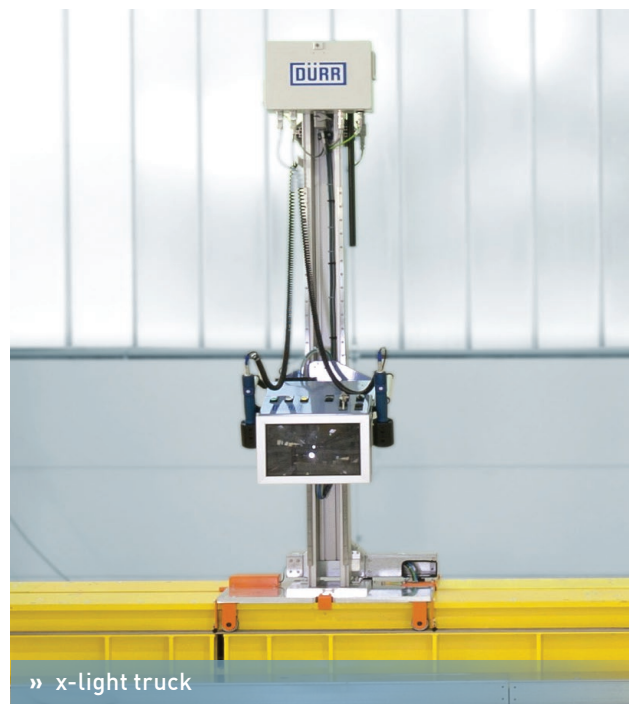
» floor-guided headlamp aiming system

### Flexibility

Due to the modular design and the high flexibility the setting systems make sure that future requirements can be met without any problems. The powerful automation reduces the production costs and provides highly precise and reproducible test and setting results at an ergonomic workplace.

With the chassis geometry measuring system x-3Dprofile the necessary vehicle parameters, such as the precise vehicle position and the driving direction, are determined and transmitted to the setting system. Combined with the highly precise automatic positioning system all conditions for a precise headlamp aiming are provided.

By means of the calibration with a point laser installed on the calibration gauge of the x-wheel truck a reference between the vehicle and the headlamp aiming system is established.



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X-LIGHT TRUCK

## headlamp aiming with heavy-load floor-guided system

### Setting tools

The new setting tool generation Smart Ergo Drive sets new standards with regard to ergonomics and weight.

The semi-automatic setting tools, which are available as an option, were developed by Dürr according to torque and engine speed characteristics, particularly for the headlamp and sensor adjustment.

In addition to a rubber-coated gripping area for perfect handling as well as an LED lighting for illumination of the bolting point, the tool is equipped with a rotary encoder which, on request, enables highly precise adjustments via rotation angle setting.

Unique feature on the market: by means of integrated sensors it can be checked whether forces are exerted on the alignment bolt during the setting process.

Thus, a process-safe alignment quality is guaranteed.

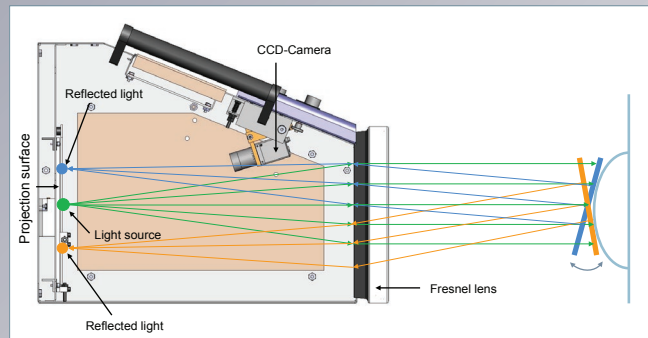
After the tools have been applied, the headlamps are automatically set to nominal value by means of a decentralized control unit.



» Smart Ergo Drive

### Camera technique, ground-glass screen, Fresnel lens

- » GigE camera system with automated exposure control
- » Storage of headlamp setting sequences for "off-line" analysis
- » Camera with progressive-scan procedure
- » Analysis surface in the light collecting box, surface coated with nanoparticles, optimized for optics
- » Fresnel light collecting lens, specially manufactured for headlamp setting systems:
  - f = 500 mm, 367 mm x 247 mm x 1,9 mm
- » Option: LED for ACC setting via auxiliary mirror



» ACC setting via auxiliary mirror

- » Option: Monochrome camera for Near Infrared (NIR) application

### Technical data x-light truck

Measurement accuracy	< 0.1 % (3.43') Boundary condition: light exit point at the headlamp is positioned in front of the centre of the lens
maximum overhead clearance gantry system	2.20 m
maximum axle load for floor-guided system	10 t

\* The photos resp. images of the assembly and test systems in our flyer do not show the complete system. The requirements of the machine regulations (2006/42/EG) are only fulfilled through additional scopes of supply resp. have to be fulfilled by the manufacturer of (complete) machines on delivery of uncomplete machines.. Flyer x-light with heavy-load floor-guided system, Version C

