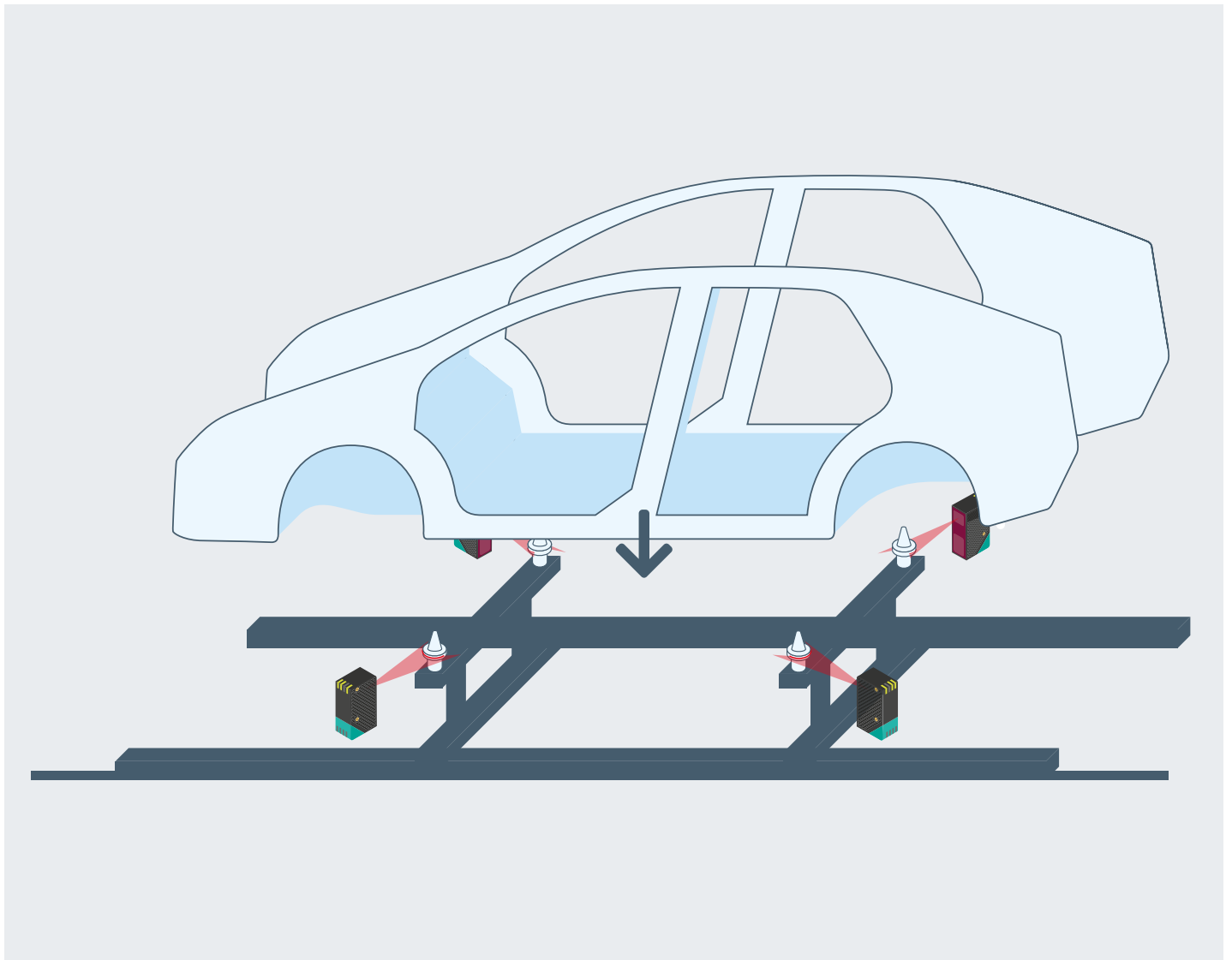
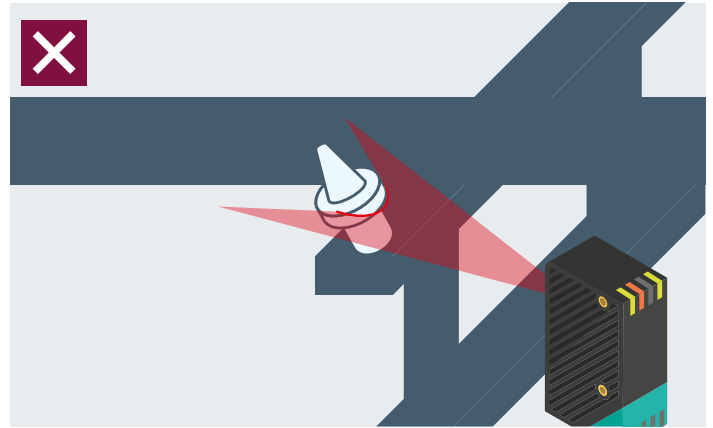
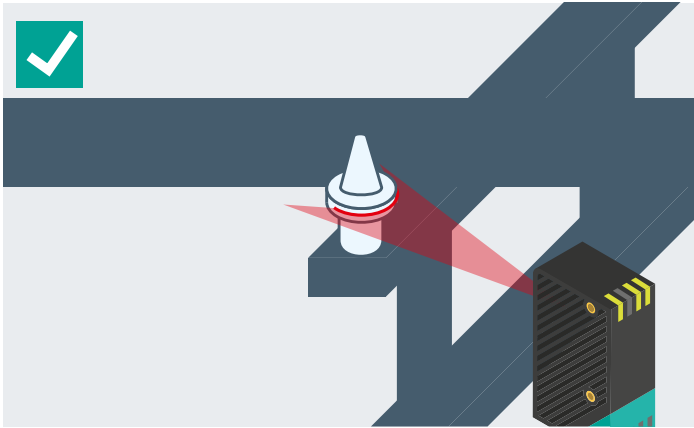


# Reliable Profile Comparison on Skids

Light Section Sensors Verify  
Skid Bolt Position





## The Application

In automotive production, car bodies are transported through various stations on skids. Specially designed anchoring holes on the bodies enable them to be secured on skid bolts. If the bolts do not sit properly in the anchoring holes, a body could fall from the skid. To prevent this, the position and alignment of the bolts are verified before a body is placed on a skid.

## The Goal

Skid bolts must be positioned and aligned within a specified tolerance range so that the anchoring holes can accommodate them when the body is lowered. To ensure this, the alignment and position of the skid bolts must be verified by sensor technology.

## The Solution

SmartRunner Matcher light section sensors are the perfect solution. They are optimized for profile comparison and verify bolt position with a highly precise laser beam. One SmartRunner Matcher is mounted along the conveyor line for each bolt. The SmartRunner's laser beams are aligned with the respective bolt, and a reference profile of the correct position and alignment are taught in. Before a body is placed on a skid, the sensors scan the bolts and compare the bolt's profile to the reference profile. If a bolt is out of position, the SmartRunner sends a "bad" signal. Acceptable X- and Z-axis position tolerances can also be specified. If a skid bolt is outside of these tolerances, the SmartRunner sends a "bad" signal and also provides precise X and Z offset data. SmartRunners can be connected to a control system via digital inputs/outputs or via gateways for all common fieldbus protocols.

## The Benefits

SmartRunner Matchers use light section technology to enable precise, reliable detection. They detect targets regardless of surface texture and color and do not require external lighting. In addition, they do not rely on visual contrast. Complete detection of the bolts' position and alignment is possible, because the sensors deliver reliable X- and Z-axis position data. Simple configuration makes the SmartRunner easy to set up and use. The sensor can also store up to 32 profiles, allowing multiple objects to be detected by one device.

### At a Glance

- Optimized solution for profile comparison
- Simple integration into any control system via easy-to-process digital signals and gateways for all common fieldbuses
- Reliable detection regardless of surface, color, or contrast
- Cost-effective with no external lighting required
- Easy configuration and commissioning via Data Matrix control codes or teach-in
- Up to 32 profiles can be stored and selected on the sensor
- X and Z position output