



Distinction of brake discs

When processing car brake discs, the correct brake disc must be chosen before each stage of production in order to assign them to the manufacturer's different models. Laser scanners are used to recognise and classify the brake discs. The challenge of brake disc distinction is that the test objects are the same with regard to form, height and diameter.

The gapCONTROL laser scanners are used for 100 % recognition and subsequent sorting. The only distinctive feature is a gap between two ventilation blades that signifies the respective models of the manufacturer.

Using the gapCONTROL 2611-100 from Micro-Epsilon, gap measurement for sorting the discs is very simple. The laser profile scanners are ideally suited to gap measurement and automatically detect the width between the blades. The discs are moved alongside the laser scanner on a conveyor belt and the blade width of the different types is detected as they pass by. The distance of the blades varies here between 15mm and 35mm. Subsequently, the measuring values are transferred in real time to PLC via the scanner's Ethernet interface. The discs are sorted according to type and put into the correct processing line.

Advantages

- Simple and reliable distinction
- Easy to integrate in existing production environments
- Fully automatic process reduces cycle times

Requirements for the measurement system

- Reliable distinction of different types
- Independent from disc rotation

Ambient conditions

- Temperature: 20 - 45°C
- No dust or dirt

System design

- gapCONTROL 2611-100
- gapCONTROL Setup Software
- PLC control system: Siemens S7