

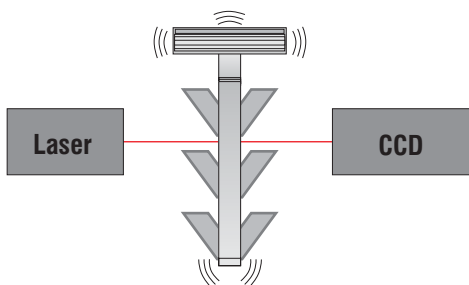
Functional testing of cordless wet shavers

Cordless wet shavers represent a new generation of men's shavers and therefore form the technological bridge between conventional wet shaving and electrical dry shaving.

In the manufacturing process of this new type of shaver completely new criteria are now being followed in the quality assurance which were not relevant with conventional shavers.

At the end of the production line the assembled shaving appliances are passed to an inspection station and brought switched on into a V-holder which is positioned in the beam path. The Laser Micrometer optoCONTROL measures the shavers for vibration amplitude and vibration frequency. The frequency is measured via the voltage output and a following frequency counter.

Due to the ThruBeam measurement technique, exact alignment and orientation of the test object is not necessary. A further advantage is the independence of the measurement technique from the material: The shavers are produced in various case materials from transparent to matt black. Since the measurement technique applied is based on optical shadow effects, no material effects on the measurement result are recorded.



Ambient conditions

- Temperature: up to 30°C
- Medium: Air

Measurement system requirements

- Measurement range 400 μm
- Accuracy $\pm 20 \mu\text{m}$
- Resolution $\pm 10 \mu\text{m}$
- Frequency 150 Hz

Reasons for the system selection

- Measurement independent of material in comparison with other measurement techniques.
- Easy positioning.
- No measurement errors with a misaligned target object.

System structure optoCONTROL

optoCONTROL 2500-35

Operation mode: position/edge

V-holder for shavers

