

# CUSTOMIZED

Industry: Household appliances / electric motors

## Test system for electric motors



### Task

Motors for household appliances must be tested for function and safety before installation. In order to be able to test the high volumes, a system that is as robust, efficient and fast as possible is required.

### Solution

A system was developed as a belt superstructure to ensure integration into the production process. The test technology is housed in a mobile 19"-ESD-test cabinet. The contacting is fully automatic via specially developed interfaces and adaptations.

By scanning an RFID code on the workpiece carrier of the DUT, the correct test program is automatically selected from the database and started.

- Measurement of ambient temperature and winding temperature
- Resistance measurement of the windings including temperature compensation
- Ground bond measurement between housing and ground bond connection
- Insulation resistance test against housing
- High voltage test AC/DC between windings and housing; ramp freely adjustable
- Freewheel test with current consumption, voltage, power and speed measurement
- Start-up test with a load machine with current consumption, voltage, power and speed measurement
- Load simulation during nominal speed with current consumption, voltage, power and speed measurement

### Advantages

- + Fully automatic test system
- + The DUT are automatically moved into the system, after which the test sequence takes place
- + Parameters and settings can be changed at any time via the software
- + Workplace safety according to EN 50191
- + Complete integration into the production line as well as data connection to a superordinate system

### Specifications

- Insulation resistance test DC 100 – 6,000 V
- High voltage test AC 100 – 5,500 V
- High voltage test DC 100 – 6,000 V
- Ground bond test 0 – 30 A
- Resistance measurement 0 – 20 kOhm
- Sensors for temperature compensation