

≡≡≡ Semi-automatic testsystems
for armatures and stators



GDG
≡≡≡ testsystems

Semi-automatic testsystems

for armatures and stators



AKG - rugged industrial solution
optional: good marking with needle/laser marker
dimension: 565 x 482 x 605 mm
weight: ca. 58 kg



AKL - scaleable for automation
optional: good marking with permanent marker
dimension: 310 x 475 x 525 mm
weight: ca. 25 kg

General

The compact testing devices of the types AKL/AKG are designed for fully automated testing of electromagnetic properties of armatures and stators. They are used in production, quality assurance, development or as laboratory test bench.

Process safety and traceability according to industry 4.0 can be ensured by integrating a marking system.

Applications so far range from truck starters to smallest armatures and stators in dentistry as well as in industry. The testable product range is constantly adapted and expanded to meet customer requirements.

Both armatures and stators can be tested with the same testsystem.

Setup

The heart of all testsystems is the measurement board developed by GDG. It is used for data acquisition and analysis and is designed for extremely high measurement precision at fast measuring times.

Test probes are specially designed to adapt the measurement electronic to the test sample. This ensures reliable mechanical fixation and electrical contacting.

The simple exchange of product specific test probes allows a quick changeover to another product.

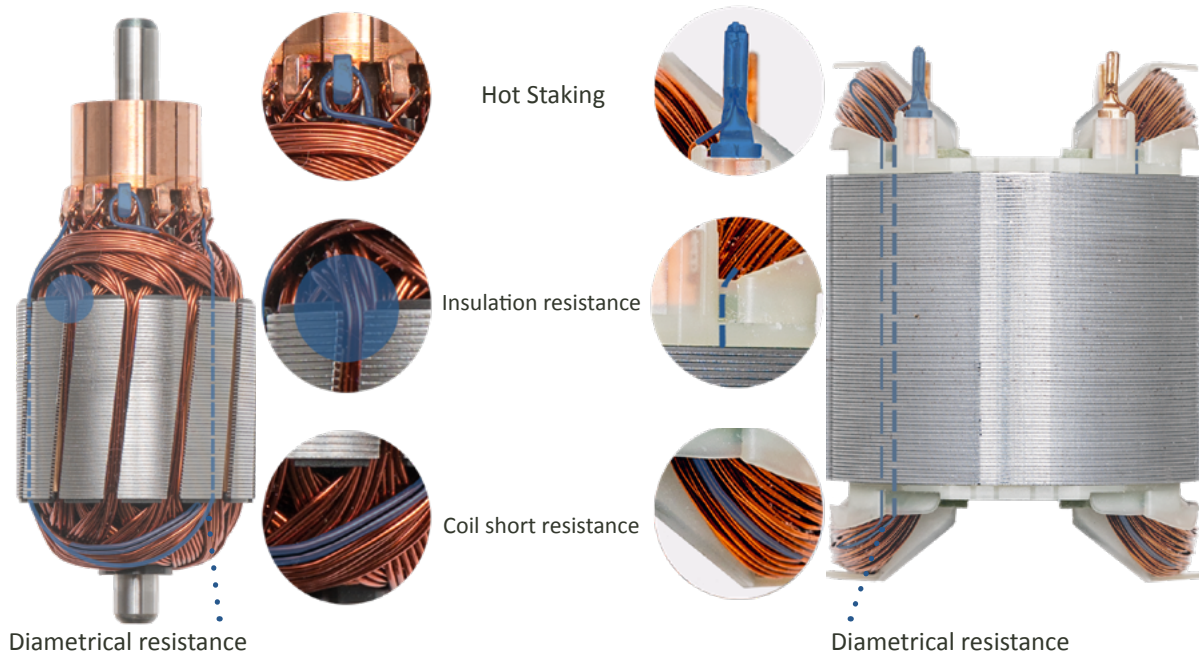
Software and sequence

A previously created type of a test sample is selected from a setup database. After the fully automated test has been started, the further handling is decided depending on the test result (PASS/FAIL).

On demand the following measurements can be executed:

- trial run
- diagnostical tests of specific measurements
- reference run for measurement precision

Depending on the test result, the test sample is either released by automatically opening of the protective flap or it must be acknowledged manually by the operator. The process reliability can be improved by integrating a marking system.



Insulation resistance

Test voltage DC:	100 - 1000 V
Test voltage AC:	500 - 5000 V; max. 2 channels synchronized
Current limit:	8 mA

Diametrical resistance / Coil resistance / Bar to bar

Measurement range:	50 $\mu\Omega$ - 500 Ω , extended ranges on request
Measurement precision:	$\pm 0,5\%$ or $\pm 5\ \mu\Omega$ from measured value

Welding resistance / Hot Staking

Welding resistance:	wire to collector / terminal
Test current range:	0,1 - 2,3 A
Resolution:	1 $\mu\Omega$
Measurement range:	1 $\mu\Omega$ - 100 m Ω
Measurement precision:	$\pm 0,5\%$ or $\pm 7\ \mu\Omega$ from measured value

Coil short circuit

Test voltage:	100 - 900 V bar / bar
Sensitivity:	one shorted winding

Optional measurement

Span width CR:	HT unsymmetry
Span width HT:	circuit test / rotating field test
Coil short circuit extended to > 1 coil	bridge resistance

AKL and AKG overview

General information

Operating system: Windows

Temperature compensation with room- or infrared temperature sensor

Contact monitoring

4-wire measuring technology

Automatic teach-in by performing trial run

Monitoring of measurement precision with reference samples

Storage of measurement data

Typical test samples parameter

Diameter of lamination stack: 10 - 160 mm

Height of lamination stack: > 8 mm

Number of bars: 3 - 36

Diameter of axis: 2 - 16 mm

Length of axis: < 230 mm

Diameter of commutator: 5 - 46 mm

Technical data

Power consumption: max. 150 W

Supply frequency: 50 / 60 Hz

Power supply: 100 - 120 V / 200 - 240 V \pm 10 %

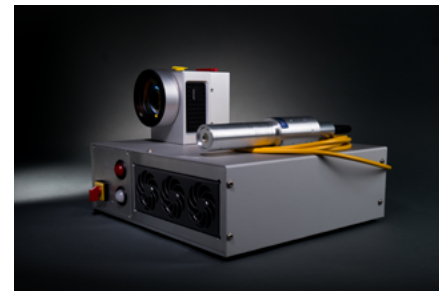
Air pressure: max. 6 bar oilfree

Additional options

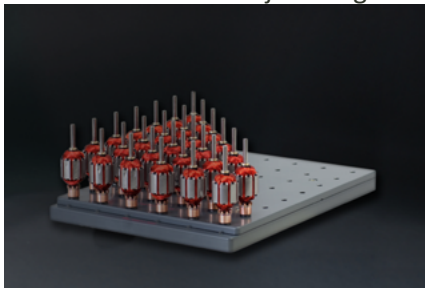
needle marker



fiber laser



reject magazine



traceability

