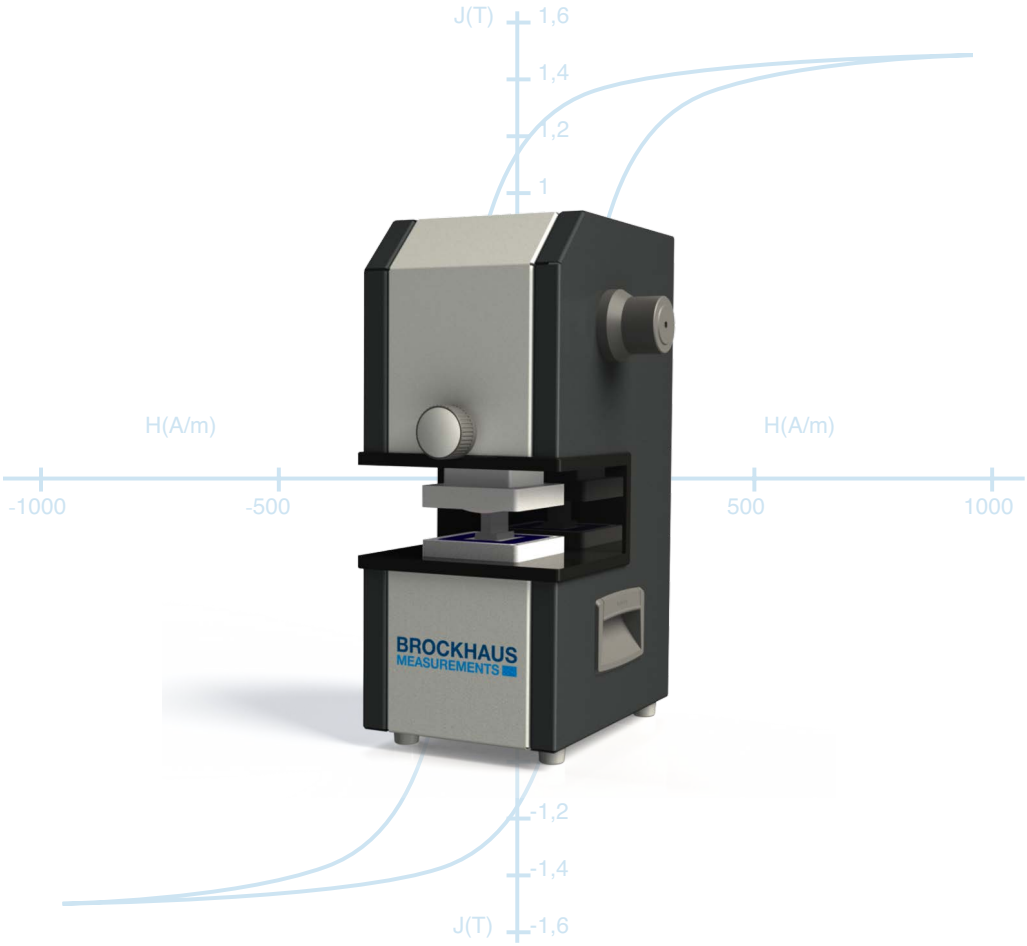
BROCKHAUS
MEASUREMENTS



- Determination of magnetic properties of individual stator teeth segments
- Adjustable distance between pole caps for testing tooth segments of different height
- Easy positioning of tooth segment for testing
- Customized design of exchangeable pole caps
- Compatible with the MPG200 magnetization unit

Measurement results

Power loss P (W)
Flux density B in the tooth leg (T)
Magnetic field strength H (A/m)
Relative remanence Br (T)
Relative coercivity Hc (A/m)
Relative permeability μr
BH loops
BH curves

Stator Tester BST-T

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Operating principle

The BST-T system is connected to the MPG200 magnetization unit. The stator single tooth segment is positioned in the closed magnetic circuit between electromagnet pole caps. There are two available testing methods that involve indirect or direct measurements of flux density and magnetic field strength in the tooth segment leg. In the indirect method the magnetic field strength in the circuit is calculated based on the current amplitude and parameters of the primary coil wound on the electromagnet core, whereas the magnetic flux in the circuit is sensed with an adjacent secondary coil and normalized by tooth leg cross-sectional area to evaluate the corresponding flux density. In the direct method the magnetic field strength and flux density in the tooth leg are measured with additional probe comprising sensing coils surrounding the tested specimen. In both methods the magnetic properties of tooth segment, such as power loss and permeability, are determined for comparative analysis.

Technical Data

Dimensions of the stator teeth segments that can be tested with BST-T

Maximum tooth height	60mm
Maximum tooth stack length	70mm
Maximum tooth width	70mm

Measurement ranges

Measurement flux density range	from 20 mT up to 2 T (depending on tooth size and magnetizing frequency)
Measuring frequency range	DC to 20kHz
Maximum magnetization current	52A
Maximum magnetization voltage	100V

Dimensions

300mm x 200mm x 500mm (length x width x height)	
Weight	15kg

BROCKHAUS MEASUREMENTS

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