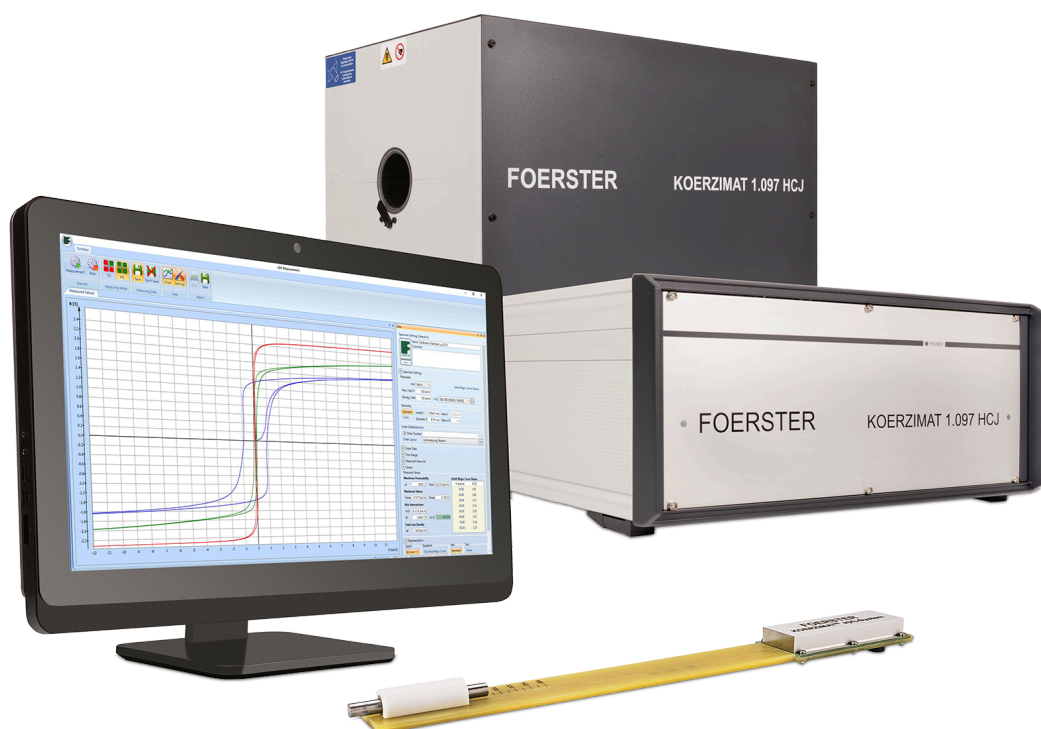




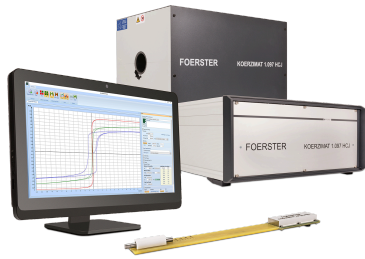
KOERZIMAT 1.097 J-H

System for measuring magnetic properties of soft magnetic materials



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Precisely determine the complete magnetic hysteresis.

KOERZIMAT 1.097 J-H extends the KOERZIMAT 1.097 HCJ with precise measurement of the complete J-H hysteresis loop, including the initial magnetization curve of soft magnetic materials in an open magnetic circuit. It enables the determination of key magnetic properties such as coercive field strength HCJ, remanence Jr, relative permeability $\mu_r(H)$ and hysteresis loss W. Results can be displayed as J(H) or B(H) hysteresis curves.

The measuring system consists of a magnetizing coil, J-sensor, measuring module and KOERZIMAT J-H software. The J-sensor uses a fluxmeter to measure the magnetic induction B of the sample, while the measuring module handles the power supply, measurement and control functions. The controller serves as the central operating and display unit. Influences caused by sample geometry and permeability are compensated by the software's automatic demagnetization correction.

KOERZIMAT J-H is particularly suitable for qualifying soft magnetic raw materials in material production and incoming goods inspection. The complete hysteresis curve provides valuable information on magnetic properties and hysteresis losses, supporting material selection and quality control for electromagnetic components, actuators and sensors.

Measurements can be performed on round bar samples with diameters from 8 to 14 mm as well as sheet samples. Round bar samples do not require precision grinding and are not subjected to mechanical stress during measurement. Custom sample dimensions are available on request.

YOUR ADVANTAGES AT A GLANCE

Complete hysteresis measurement: Fast and precise determination of J(H) and B(H) DC hysteresis loops, including the initial magnetization curve

Comprehensive material characterization: Determination of key magnetic properties such as HCJ, Jr, $\mu_r(H)$ and hysteresis loss W

Automatic demagnetization correction: Software-based compensation for influences caused by sample geometry and permeability

Open magnetic circuit: Determination of the magnetic DC hysteresis without a closed magnetic circuit

Minimal sample preparation: No precision grinding of round bar samples required

No mechanical stress: Samples are not mechanically loaded during measurement

Flexible sample geometries: Measurement of round bar and sheet samples

Magnetically shielded: Reduced influence of external static and dynamic magnetic interference

TECHNICAL INFORMATION

MEASURED QUANTITIES:	J(H) / B(H) hysteresis incl. initial magnetization curve, Hmax, Jmax, Jr, HCJ, $\mu_r(H)$, W
RELATIVE PERMEABILITY MR(H):	100 – 4,000
MAGNETIZING FIELD STRENGTH:	up to 100 kA/m
MEASUREMENT TIME:	approx. 2 min for complete hysteresis incl. initial magnetization curve
ROUND BAR SAMPLES:	Ø 8 – 14 mm, length-to-diameter ratio ≥ 10
SHEET SAMPLES:	10 mm width, 1.6 / 2.0 mm thickness, length < 150 mm
COIL INNER DIAMETER:	40 mm / 60 mm
MEASURING ELEMENT:	J-sensor with integrated fluxmeter
CONTROLLER / SOFTWARE:	Hysteresis visualization, demagnetization correction, measurement data management, reporting and data export
AMBIENT TEMPERATURE:	0 to +40 °C
DEGREE OF PROTECTION:	IP32

NORMS

ASTM B887: Describes the method for determining the coercivity of sintered hard metals.

EN IEC 60404-7:2020: Describes the determination of the Coercivity in the open magnetic circuit. Method B described above is advantageous as it provides the option to perform measurements regardless of the geometry of the sample. It is not required to manufacture special measuring samples.



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