

HARD MAGNETIC MATERIALS

3 AXES HELMHOLTZ COIL

The 3-axes Helmholtz coils permits to determine the amplitude and direction of the magnetic moment of a magnetized specimen, all in a single measurement.

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DESCRIPTION

Measurement of magnetic moment with Helmholtz coil is a convenient way to test permanent magnet materials.

The Helmholtz coils can be single-axis (on coil pair) or 3-axes (three coil pairs at 90 degrees from each others). The triple-axes version allows to fully characterize the magnitude and the direction of magnetic moment with respect to the axes, regardless of how the magnet is placed. The complete measurement system consists of a 3-Axes Helmholtz coil set, a cabinet containing three fluxmeters and a PC. Detailed specs are listed in the following.

KEY BENEFITS

- Meets international standard IEC 60404-14
- Control of PM quality (Jd), magnetic polarization of the working point
- Feedback control for calibration and magnetization system
- Easy to use
- Precise and accurate
- Non-destructive method of testing

SET

- Service cabinet with 3 digital fluxmeters
- Helmholtz coil
- PC with software (Fluorine)

HOW IT WORKS

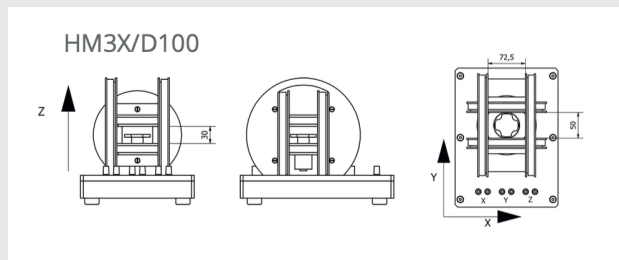
- Simply insert the magnet in the coil
- Dedicated software (Fluorine) will manage the flux values and calculate the magnetic moment and angular deviation
- Software provides a data base and allows statistic analysis of the measurements

MODELS AVAILABLE

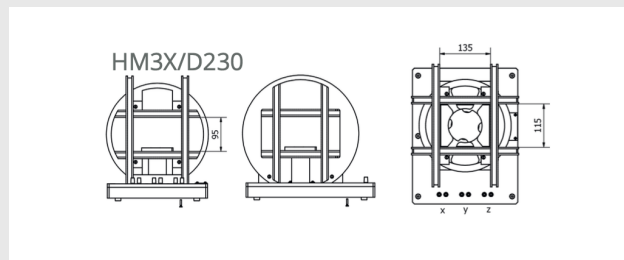
MODELS	DIAMETER	K_H (TYPICAL)	MEASUREMENT VOLUME
HM3X/D100	100 mm	$5 \cdot 10^{-5} \text{ m}$	$5 \text{ mm}^3 - 10 \text{ cm}^3$
HM3X/D230	230 mm	$1 \cdot 10^{-3} \text{ m}$	$500 \text{ mm}^3 - 125 \text{ cm}^3$

*Two standard models of coil available, but any custom solutions can be evaluated.

HM3X/D100



HM3X/D230



TECHNICAL SPECIFICATIONS

GENERAL

FLUXMETER'S ACCURACY

+/- 0.5 %

MEASURING RANGES

1, 2, 5, 10, 20, 50, 100 X 2000 μWb

RESOLUTION

from 1 μWb

COMMUNICATION PORT

Ethernet

POWER REQUIREMENT

220 VAC ± 10 ; 50/60 Hz, 16 A

CABINET DIMENSION

545 x 520 x 360 mm






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