Datasheet
LF AC Hyster™

DC MAGNETOMETRY

# LF AC Hyster™ Series

## Automate magnetometer for quasi-static magnetization measurements of magnetic suspensions at room temperature


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# LF Series

**Low Frequency (LF) AC Hyster™** series perform calibrated magnetization measurements of magnetic nanoparticles dispersed in any liquid media, or inside biological matrices under low frequency alternating magnetic fields. AC Hyster™ is benchtop, and can be directly plugged into the mains to operate.

The **LF AC Hyster™ system** is an automate magnetometer that allows to select single or several field conditions for programming individual or multiple magnetization measurements in short times (~5 minutes). The system generates alternating magnetic fields at single frequency (≈1kHz) and field intensities up to 150 kA/m.

The **LF AC Hyster™ magnetometer** measures magnetization loops at room temperature with a outstanding accuracy and reliability (>95%). The latest is essential for quality control and/or characterising magnetic properties in the industrial or academic production of magnetic nanoparticles, and also for understanding magnetic phenomena under low frequency alternating magnetic fields.

**AC Hyster™ series** are run by **Manyetic™**, an user-friendly interface adapted to GMP regulation, providing three measurement modes suitable for distinct user needs. Manyetic™ determines the average and standard deviation values of several magnetic parameters (coercivity, remanence, area, SAR,...) out of three repetitions of magnetization cycles. Also, magnetization harmonics (amplitude and phase) are analysed. Raw and/or analysed magnetic data are recorded into txt files.

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## INSTALLATION REQUIREMENTS

Surface of 120x60 cm onto a flat and solid non-metallic table to avoid vibrations.

Two electrical sockets 220/230V -50Hz connected to a continuous supply secured by differential protection.

Avoid direct exposure to sunlight.

Room should be at constant temperature, ideally around 25°C.

## TECHNICAL SPECIFICATIONS

**Magnetic field conditions**
single frequency
1 kHz

**Intensity values**
up to 150 kA/m, varying in steps every 10,25 or 50 kA/m (to be defined by customer)

**Weight and dimensions**
5 kg, 53x40x19 cm

**Electrical power consumption**
Up to 150 W

**Magnetization units**
$Am^2$

**External magnetic field units**
kA/m

**Calibrated SI magnetic units**

**Supplied with cooling unit, PC and user-friendly interface (Manyetic™, Calibration and maGraphics)**