

**2022**  
**Datasheet**  
**LF AC Hyster**

# LF AC Hyster Series

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

D C M A G N E T O M E T R Y

## Nanotech Solutions

### Headquarters:

C/Miguel Unamuno, 2 3ºB  
40150 Villacastín, Spain

### Commercial office:

C/Tomás Bretón, 50-52 4º  
Nave 7, 28045 Madrid, Spain  
+34 609 411 812  
+34 921 124 860  
+34 915 060 293



nanotech  
**SOLUTIONS**

# 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 quasi-static 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 ( $\approx 1$  kHz) and field intensities up to 150 kA/m.

The **LF AC Hyster magnetometer** acquires 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 quasi-static 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, odd magnetization harmonics (amplitude and phase) are analysed. Raw and/or analysed magnetic data are recorded into txt files.



## 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<sup>2</sup>

### External magnetic field units

kA/m

### Calibrated SI magnetic units

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