

MI-AFD

ALTERNATING FIELD DEMAGNETISER

www.mag-instruments.com

Compact and easy to use

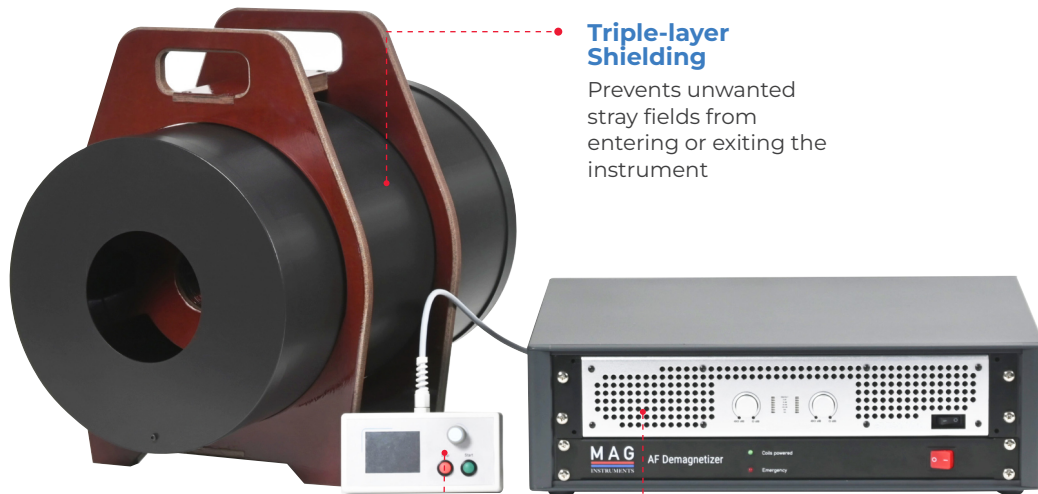
AF demagnetiser with automated sample handler

Standalone device to demagnetise discrete samples in alternating magnetic fields up to 150 mT.

Automated handler for tumbling of one specimen or manual handler to discretely demagnetise up to three specimens simultaneously.

PC control software, custom holders or higher peak fields available on request.

Designed to be simple, robust and long-lasting...



Triple-layer Shielding

Prevents unwanted stray fields from entering or exiting the instrument

Control Knob

Starts demagnetisation process and adjusts field settings on the LCD display

Control Electronics

The power amplifier and USB interface for PC connection

Key features

Up to three specimens

Allows discrete, manual demagnetisation of up to three specimens or automated tumbling demagnetisation of one specimen (1"×22 mm cylinder).

Precise field control

The AFD offers precise control over the peak field strength and ramp steps of the field in microtesla (μT), allowing users to set the desired demagnetization intensity and time for their specific application

Shielded specimen cavity

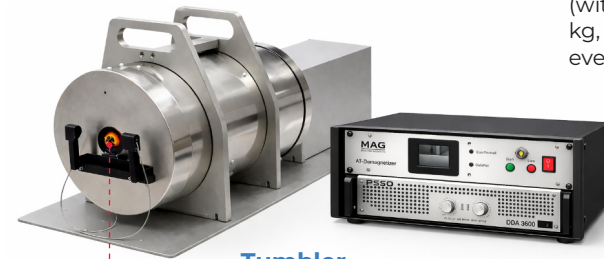
Three shielding layers ensure the most minimal external interference during the experiments while also preventing an outside radiation of the field.

Operable with or without a PC

The AFD can be operated remotely from a connected PC, allowing seamless control and monitoring of the demagnetization process through the ILS software interface. The field setting – peak field and ramp field – can also be adjusted with a knob next to the LCD user interface, providing flexibility and convenience for users.

Tabletop design

Measuring just 40 × 55 × 48 cm (without tumbler) and weighing ~ 60 kg, the Mag-Instruments AFD fits in every laboratory.



Tumbler

For automated tumbling demagnetisation of one specimen

Technical Specifications

Property	Manual	Tumbler
AF peak field	0.1 – 150 mT (higher upon request)	
Sample handling	3 specimens	one specimen
Sample size	1" cylinder & 22 mm cube	1" cylinder
Operation frequency	300 Hz	
Tumbling speed	-	120-240 RPM
Shielding layers	3	
Demagnetisation time	1 – 80 s	
Weight	≈ 60 kg	≈ 85
Dimensions (W×D×H)	55 × 40 × 40 cm	40 x 130 x 49 cm

Note: Image is for reference only. The actual design and presence of external remote control may change.

Areas of Application



Paleomagnetism

Demagnetization of oriented rock samples or burned archaeological artifacts to derive their characteristic magnetic remanence direction and intensity.



Material Sciences

Demagnetization of ferromagnetic materials to investigate their magnetic properties, such as coercivity, saturation magnetization, and grain interactions.



Rock Magnetism

Demagnetization of rocks, sediments, or soils to understand their magnetic properties and acquisition processes.



Archaeology

Demagnetization of soil and archaeological materials to refine the interpretation of magnetic anomalies captured by magnetograms.



Environmental Sciences

Demagnetization of soil and sediment samples to study environmental changes and their magnetic signatures.

About Mag-Instruments



Who we are

Based in Munich, Germany, Mag-Instruments was founded in 2014 by robotics engineer Dr. Przemyslaw Kryczka and a group of specialists in geophysics, mechatronics, and robotics to bring state-of-the-art technology into magnetic measurements.

In cooperation with Prof. Nikolai Petersen from the Ludwig Maximilian University of Munich, Mag-Instruments continues to manufacture and service all products originally developed by Petersen Instruments.



What we do

We design and manufacture robust scientific equipment for laboratory and field applications. Combining geophysical know-how with mechatronics and robotics engineering, our team prioritizes reliable data quality. Our product line includes state-of-the-art magnetometers and magnetic field generating instruments.

Our in-house development process facilitates flexibility and cost reduction, allowing us to provide affordable, custom solutions for your research endeavour.



We can customise our products to best suit your individual application needs!

Contact us for new solutions, including automated measurement systems.



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