



Global Source for Magnetizing & Measuring Systems



Established in Milan, Italy, in 1959, **Laboratorio Elettrofisico S.r.l., (LE)** is a Pioneer in the design, manufacture of high-tech magnetizing systems, measuring equipment, instrumentation and software.

Now **LE** an **ISO 9001** Company is a recognised leader in the magnetic technologies field, due to its consistent research and design activity, product flexibility, service quality, high-tech standards and above all, the know-how of a harmonized skilled team.

Structural Solutions Private Limited, specializing on Testing and Measuring Solutions is now pleased to inform the Exclusive Representation of **Laboratorio Elettrofisico Srl**, Italy to provide cost effective technology of Magnetizing systems and solutions to the Indian Industry.



Products: Magnetizers and De-magnetizers, Turnkey magnetizing systems, Hystergrafs, Magnetizing coils, Calibration Equipments, Coercimeters, Magnetic Scanners, Fluxmeters, Helmholtz coils, Potential & Search coils and Fixtures.

Magnetizing Systems: LE Systems are customised for individual Customer's requirement in Automotive, Loudspeaker, DC Motors, Appliance Industry or any other specialized Applications.

IMPULSE MAGNETIZERS

Applications : Magnets of small and large dimensions, alnico, ferrite, plasto-ferrite, neodymium-iron-boron, samarium-cobalt, plasto-neodymium.

Devices which can be Magnetised : Linear and Circular encoders, Step Motors, DC-AC motors, Brakes, Loudspeakers, linear Motors, Magnetic Couplings, Pumps.

Micro Mag: Suitable for multipole bonded Neodymium with very small pitch pole devices.

MAGNETIZER	MICRO-MAG1
power supply voltage	220 V single-phase 50-60Hz ± 10%
average consumption	1.5 KVA
installed energy	600 Joules (Ws)
working voltage	2,500 V
voltage regulation	200-2500 V
capacitors	metallic paper
maximum current	20,000 A
short circuit protection	included
magnetization cycle time	4 seconds
magnetization cycle sequence	From START : capacitor charge discharge
remote control	I/O 24 V DC

Midi Box: Robust and compact construction, magnetizing and demagnetizing suitable for mass production.

MAGNETIZER	MIDI-BOX 8-S	MIDI-BOX 4
power supply voltage	220 V single-phase 50-60 Hz ± 10%	220 V single-phase 50-60 Hz ± 10%
average consumption	3 KVA	1.5 KVA
installed energy	1200 Joules (Ws)	900 Joules (Ws)
working voltage	2,500 V	1,000 V
voltage regulation	50-2500 V	50-1000 V
capacitors	metallic paper	metallic paper
maximum current	20,000 A	20,000 A
short circuit protection	included	included
magnetization cycle time	2.8 seconds	3 seconds
magnetization cycle sequence	from START : capacitor charge discharge	from START : capacitor charge discharge
remote control	I/O 24 V DC	I/O 24 V DC

Midi Mag: Magnetization and demagnetization, solutions for any magnetic application performed by several magnetizing systems at high rate of impulses per minute with utmost flexibility.

MAGNETIZER	MIDI-MAG 3
power supply voltage	380 V three-phases ± 10% 50-60Hz
average consumption	3 KVA
installed energy	2,200 Joules (Ws)
working voltage	3,000 V
voltage regulation	50-3000 V
Capacitors	metallic paper
maximum current	20,000 A
short circuit protection	included
magnetization cycle time	3 seconds
magnetization cycle sequence	from START : capacitor charge-discharge
remote control	I/O 24 V DC
coil terminals	outside
Colour	RAL 7030
working area temperature	+15 to +40 °C
room temperature	0 to 45°C
relative humidity	0-90%
Weight	140 Kg
feeder dimensions	W=600, D=800, H=1.500 mm

Genius: This model responds to the increasing demand of saving the energy while increasing the productivity. Based on LE's actual experience, it is possible to recover typically from 40% to 80% of the energy dissipated in traditional short design magnetizers.

MAGNETIZERS GENIUS	GENIUS-GM1
power supply voltage	380 V three-phase ± 10% 50-60Hz
average consumption	8 KVA
installed energy	5-30.000 Joules (Ws)
working voltage	3000 V
voltage regulation	50-3000 V
Capacitors	metallic paper
mag. pulse wave shape	sinusoidal
maximum current	30,000 A
short circuit protection	included
magnetization cycle time	10 seconds-WITH ENERGY SAVING
magnetization cycle sequence	from START : capacitor charge-discharge
Demagnetization	not foreseen
remote control	I/O 24 V DC

ELECTRO MAGNETS

Applications: Magnets of large dimensions: alnico, ferrite, plasto-ferrite, neodymium-iron-boron, samarium-cobalt, Plasto-neodymium.

Devices which can be Magnetised: DC-AC motors, brakes, loudspeakers, linear motor, magnetic coupling, pumps.

AS: Bipolar magnetic field generator designed for the magnetization of single magnet or of magnet assemblies containing two-pole aligned magnets.

MAGNETIZER	As35	As70
Power supply	220 V 50 Hz	220 V 50 Hz
Magnetic strength	35000 AS	70000 AS
Magnetic cadence	500/hour	700/hour
Pole diameter	80 mm	100 mm
Gap	100 mm	150 mm
Poles opening	250 mm	320 mm
Consumption	1.5 Kva	2.5 Kva



MEASURING SYSTEMS

Hystergraf: Automatic hysteresis graph to characterise all types of hard and very hard magnetic materials (Ferrite, Alnico, NdFeB, SmCo) at different temperatures. Measurements confirming to the IEC 404-5 standards. Easy-to-use software, reliable and fast. Measurements in all 4 quadrant hysteresis loops of intrinsic parameters for laboratory tests and final quality inspection of samples in different configurations.



Permeameter: The equipment performs hysteresis and normal magnetization measurements on soft ferromagnetic materials in form of rectilinear bars and toroidal samples. The measurement, completely automatic, is in compliance with the International Standard IEC 404-4. The system is also arranged to be connected to a coercimeter solenoid to measure the coercivity of irregular shaped samples in open circuit conditions, in compliance with the International Standards IEC 404-7.



Coercimeter: The equipment performs an accurate automatic measurement of the coercive force of the soft ferro-magnetic materials, particularly suitable to measure those samples having an irregular shape.



Complete range of Magnetizing Systems, Measuring Systems and Instrumentation will be offered either in Foreign exchange or in rupees at competitive prices by **Structural Solutions Private Limited**

Magnetic Scanner: The Magnetic Measuring Scanner is a device suitable for the measurement of superficial magnetic induction on rotors and stators with axial and radial multipolar magnetization. The mechanical system is provided in two axes with manual and micrometrical moving control, and a precise rotating system, operated by a DC motor and controlled by an encoder obtaining an angular accuracy of 0.2°



MAGNETIZING & CALIBRATING EQUIPMENT

Precision Magnetiser and demagnetiser usually used for high accuracy and best tolerance magnetising applications This unit guarantees 1% voltage accuracy. The use of a Touch Screen allows an easy parameter setting and the developed software provides for efficient troubleshooting with alarm messages.



INSTRUMENTATION

Fluxmeters: The widest range of digital fluxmeters for measurement of magnetic materials and circuits, high accuracy, RS 232 interface, digital display.



Helmoltz Coils: The Measurement of J and residual induction is performed with Helmholtz coil



Tensiometers: The tensiometers are matching with the DIGITAL FLUXmeter. Custom measuring coils designed and built to measure magnetic flux with the Digital Flux instrument in any magnetic circuit.



Gaussmeters: The widest range of digital gaussmeters and Hall probes for measurements of magnetic material and circuits.



Fixtures: LE design and manufacture a range of standard magnetizing coils and fixtures for all magnetizers and demagnetizers. Various applications require specific fixtures in order to process magnets or magnet assemblies correctly. LE experience will lead you through the design process to provide the proper fixture and coil to meet your requirements.



➡ **For further product & application details please contact:**

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