



The **MAGMASTER 5000** is a high quality large capacity magnetic particle crack detector designed to provide the performance necessary to meet the exacting demands for quality control during production and maintenance in the automotive, railroad, marine and general engineering industries.

The **MAGMASTER 5000** is designed to accept parts crankshafts up to 2750mm long and 1000kg weight as used in heavy off road and stationary engines, as well as many types of locomotive and marine crankshafts and components.

The **MAGMASTER 5000** complies with ASTM-E1444-94a, BS6072, AS1171 and Electrical Safety Standard AS3100. In addition it meets major engine manufacturers specifications for crack testing by the magnetic particle method e.g. Caterpillar, Cummins, etc.

A wide range of optional facilities is available to extend the versatility of operation, including off bench testing of parts too large to be accommodated on the machine, e.g. engine blocks, marine propeller shafts, etc.

BRIEF SPECIFICATIONS

- Two axis magnetising.
Current through part to check for longitudinal or lengthwise cracks, and coil magnetising to check for radial or transverse cracks.
- 5000 AC + 5000 half wave DC peak magnetising currents. AC to locate surface defects and DC to locate subsurface defects.
- Accepts parts up to 2750mm long and 1000kg in weight.
- 450mm internal diameter 4 turn coil, producing 12,000 peak ampere turns.
Optional 525mm coil.
- Optional coil transverse system whereby the coil can be moved up to 120mm, lateral to the centre line, for increased magnetising influence.
- Digital ammeter accurately indicates peak AC + HWDC magnetising currents.
Holds current reading on display for 5 seconds and automatically resets.
- Continuously variable current control enabling setting of any desired magnetising current value up to the rated maximum.
- Electronic timer controls the period of the magnetising shots for consistent repeatability.
- Automatic push button electronic AC demagnetising.
- Electronic solid state switching for HEAD/COIL AC/DC mode selection.
- Cable takeoff points for special or off bench testing, e.g. engine blocks.
- Pneumatic end clamp system fitted to both heads for positive electrical contact.
- Easy running tailstock for fast traversing and fitted with pneumatic lock.
- Supplied with adjustable roller steadies to support cylindrical parts from 50 to 200mm diameter and up to 1000kg.
- 20 litre inspection fluid storage system with efficient jet agitation system suitable for oil or water based fluids.

Quality at an Affordable Price
by LECTROMAX AUSTRALIA

P.T.O.

BENEFITS

- Australian manufacture backed by over 30 years experience in magnetic particle inspection systems.
- High quality and ruggedly constructed. Stainless steel tanks.
- Reliable plug in electronic control system. 2 year warranty on electronic modules.
- 5 year warranty on the magnetising transformer.
- Digital ammeter and controls at eye level.
- Complies with International Standards for magnetic particle inspection - ASTM E1444-94a, AS1171, BS6072 and Electrical Safety Standard AS3100.
- Operator efficiency and work throughput enhanced by ease of operation.

OPTIONAL EQUIPMENT

OPTION 01 525mm (21") ID COIL

OPTION 02 COIL TRANSVERSE SYSTEM

Allows the coil to be moved up to 125mm transversely at 90° to the bed length, so that the inside of the coil, where the magnetising influence is at a maximum, can be positioned closer to the component under test.

OPTION 03 LIGHT RESTRICTING HOOD

Complete with sliding front curtain. The hood is designed to fold back for overhead loading of large/heavy parts.

OPTION 04 BLACKLIGHT LAMP

High intensity 125 watt blacklight (ultraviolet) lamp for use with fluorescent inspection fluid.

OPTION 05 BLACKLIGHT SUPPORT ASSEMBLY

Attaches to rear of right hand transversing head. Consists of a pair of adjustable swinging arms on to which the blacklight is mounted. The blacklight can be positioned for convenient hands free inspection.

OPTION 06 EXTENSION MAGNETISING CABLE KIT

For off bench testing of engine blocks, or parts too large to be accommodated on the machine.

Comprises: 2 x 2.5 metre cables with spring clamps to attach to part.
1 x 5 metre cable to encircle the part or form a coil.

OPTION 07 QUALITY CONTROL KIT

Essential to maintain a high standard of quality control over the system to ensure maximum performance.

Comprises:-

- * A magnetic flux test ring, c/w central conductor, to check the relative effectiveness of the magnetic system during head shots.
- * A test tube and stand to check fluid particle concentration.
- * A magnetic field indicator to check for residual magnetism after demagnetising.

OPTION 08 OVERHEAD COMBINED BLACK AND WHITELIGHT

For general illumination within the light restricting hood.

The whitelight is controlled by an illuminated switch on the assembly.

The assembly is mounted on cantilever arms allowing it to be swung clear during overhead loading of components.

OPTION 09 HOOD AIR VENTILATION EXHAUSTER

Provides an improved environment when working under arduous conditions. Fitted with a light exclusion cowl to eliminate ambient light entry.

OPTION 10 SMALL PARTS FIXTURE

Provides a convenient means of holding small parts between the contact heads.

OPTION 11 CYLINDER HEAD MAGNETISING AND ROTATING FIXTURE

Enables large diesel cylinder heads up to 1300mm long x 380mm wide x 176mm high, and 200kg weight to be circularly magnetised for the critical detection of lengthwise cracks.

Designed to allow the traversing coil to be positioned over the cylinder head for detection of transverse cracks. Cylinder heads can be easily and safely rotated and locked in position for overall inspection and fluid draining. Fixture is quickly removed when not required.

SHIPPING DIMENSIONS

395cm L x 123cm W x 190cm H

Weight Approx. 800kgs.

SUPPLY REQUIREMENTS

415V2PH 40KVA + 240V1PH 10A 50Hz

Other Voltages / Frequencies to order.

The MAGMASTER 5000 is one of a wide range of crack detectors manufactured by LECTROMAX.

For smaller capacity machines, request data on the MAGMASTER 4500 and the MAGMASTER 4000.

Manufactured by -

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