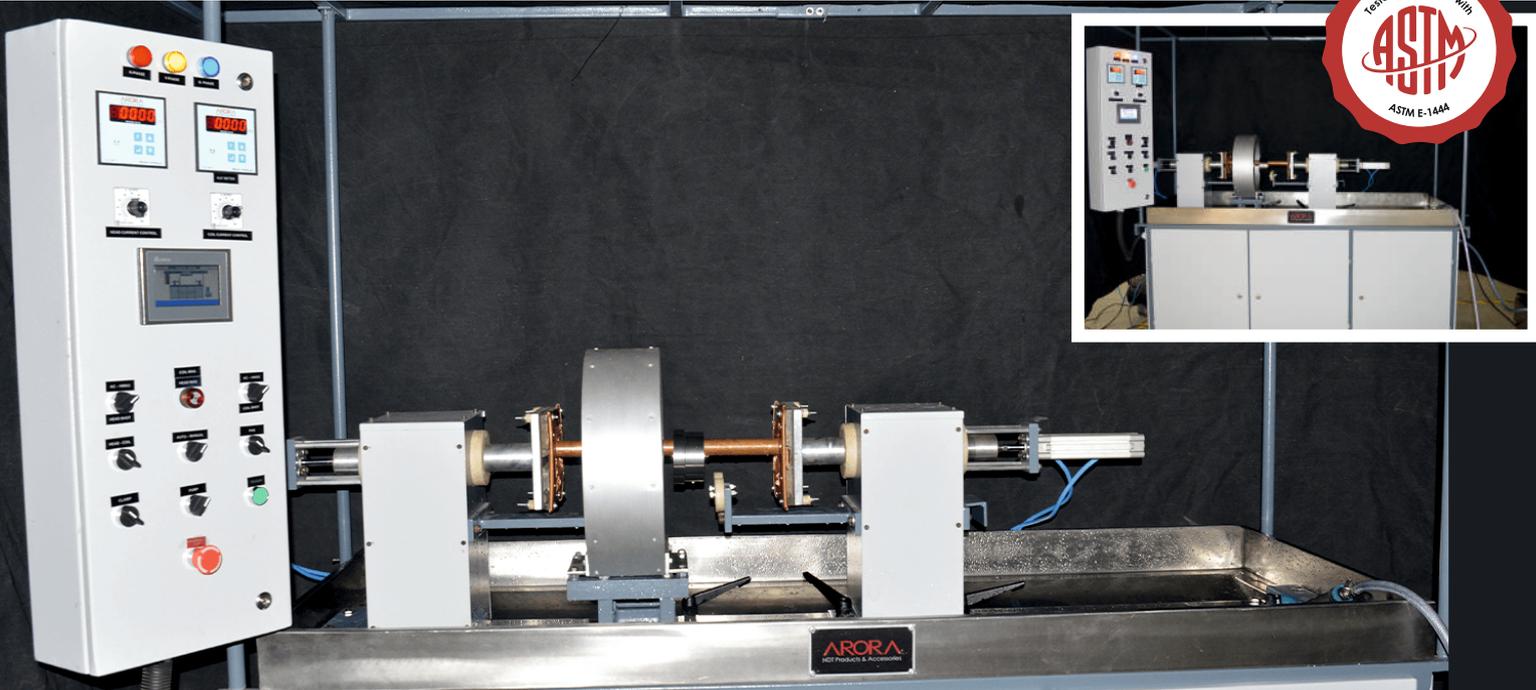


# ABM Series Magnetic Bench Machine



The ABM Series are heavy duty bench machine designed for MPI inspection. The ABM Series magnetic benches are available in seven configuration and three sizes (Small/Medium/Large) that offers 2000 Amps to 10,000 Amps range of Alternating Current (AC), Half Wave Direct Current (HWDC) or Full Wave Direct Current (FWDC).

The ABM Series magnetic benches are industrial magnetic particle inspection machine, which can rapidly and easily magnetise the job which can further be inspected for surface and subsurface defects in ferromagnetic material without any destruction. The machine can be widely used in any field that need defect inspection, quality control, safety inspection and in-service inspection e.g. manufacturing industry, iron & steel metallurgical industries, metalworking, aerospace, and railway transportation etc.

The Head and coil shots both offer AC, HWDC or FWDC magnetization and are independently adjustable to set each magnetic field i.e. circular or longitudinal magnetization.

## Salient Features:

- AC, HWDC or FWDC Mag facility
- Auto AC Demagnetization facility with coil only
- Current assurance indication & audible alerts
- Thyristor based stepless current control
- Two large, easy-to-read digital meters confirms amperage sent through the part
- Low-voltage output with overload & short circuit protected switching
- Powder coated rust proof MS housing with matt finish
- Anti vibration mount
- Pneumatic headstock makes it faster & easier to position & remove longer parts
- Foot Switch & push button (at control panel) for ease of operation
- Emergency Cut Off
- Dark room with black curtain & ventilation fan to facilitate inspection under UV/Black light
- Provision for sliding flood lamp (flood lamp to be purchased separately)

- Auto Cut-Off with temperature sensor
- Linear guide for easy & precise movement of tail stock & coil
- Conveniently placed amperage meters for coil & head shot
- 30 liters SS tank for water/oil based magnetic powder bath
- External pump system for particle bath agitation, circulation and application
- PLC based reliable control & precise operation
- Automatic sequential mag shot
- Mag-shot-activation with 1-touch control to enable/disable this feature through HMI & foot switch
- User-controlled security systems with password protection, supervisor locks & customizable operator access profiles
- User friendly operator interface for control parameter in-feed and operation mode selection and display

## Optionals:

- Combined Magnetization (with two transformers)
  - 1500 Amps for 7.5 KAT
  - 3000 Amps for 15 KAT

### General Specifications:

Particulars	Specification
Input Voltage	415 Volt, 50 Hz AC
Phase	3-Phase, 1-Neutral
Operating Temperature	55° C
Humidity	95 %
Current Control	SCR stepless control
Pneumatic	5 Bar
Coil Diameter	305 mm / 12 inch Standard other diameter are available on request
Bath Tank	30 Litre

### Technical Specifications:

Specification	ABM-2000S	ABM-3000S
Current Range (Circular Contact Magnetization)	2000 Amps AC / HWDC / FWDC	3000 Amps AC / HWDC / FWDC
Current Range (Longitudinal Non Contact Magnetization)	2000 Amps AC / HWDC / FWDC	3000 Amps AC / HWDC / FWDC
Duty Cycle	2 Sec ON, 6 Sec OFF	2 Sec ON, 6 Sec OFF
Maximum Part Length	500 mm/ 20.0 inch	500 mm / 20.0 inch
Part Diameter / Thickness	64 mm/ 2.5 inch	95 mm/ 3.75 inch
Overall Bench Dimension (LxWxH)	1300 mm ×600 mm × 2100mm	1300 mm ×600 mm × 2100mm

Specification	ABM-4000M	ABM-5000M	ABM-6000M
Current Range (Circular Contact Magnetization)	4000 Amps AC/HWDC/FWDC	5000 Amps AC/HWDC/FWDC	6000 Amps AC / HWDC / FWDC
Current Range (Longitudinal Non Contact Magnetization)	3000 Amps AC/HWDC/FWDC	3000 Amps AC/HWDC/FWDC	3000 Amps AC / HWDC / FWDC
Duty Cycle	2 Sec ON, 8 Sec OFF	2 Sec ON, 8 Sec OFF	2 Sec ON, 8 Sec OFF
Maximum Part Length	1000 mm/ 39.5 inch	1000 mm/ 39.5 inch	1000 mm/ 39.5 inch
Part Diameter / Thickness	127 mm/ 5.0 inch	159 mm/ 6.2 inch	190.5 mm/ 7.5 inch
Overall Bench Dimension (LxWxH)	1800 mm ×600 mm × 2100mm	1800 mm ×600 mm × 2100mm	1800 mm ×600 mm × 2100mm

Specification	ABM-8000L	ABM-10000L
Current Range (Circular Magnetization)	8000 Amps AC / HWDC / FWDC	10000 Amps AC / HWDC / FWDC
Current Range (Longitudinal magnetization)	3000 Amps AC / HWDC / FWDC	3000 Amps AC / HWDC / FWDC
Duty Cycle	2 Sec ON, 10 Sec OFF	2 Sec ON, 10 Sec OFF
Maximum Part Length	1500 mm/59 inch	1500 mm/59 inch
Part Diameter / Thickness	254 mm/10.0 inch	280 mm/ 11 inch
Overall Bench Dimension (LxWxH)	2300 mm ×700 mm ×2100 mm	2300 mm ×700 mm ×2100 mm

### Kit Contains:

- Magnetic Particle Bench Machine
- Operational Manual
- Certificate of Conformance

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