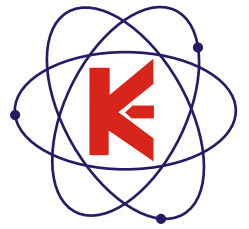


K-ELECTRONICS

MAGNETIC PARTICLE INSPECTION MPI BENCH UNIT



The KE MPI Bench Unit is engineered for reliable and efficient Magnetic Particle Inspection (MPI) of metallic components. Designed for heavy-duty performance with operator-friendly controls, it ensures accurate flaw detection while complying with international Non-Destructive Testing (NDT) standards. Its robust construction, advanced electronics, and integrated safety features make it ideal for continuous operation in production and quality control environments.

KEY FEATURES

- **High-Amperage Output** – Delivers continuous and surge currents for effective inspection.
- **Durable Construction** – Heavy-duty frame with powder-coated finish for long service life.
- **User-Friendly Operation** – Intuitive control panel with digital current monitoring.
- **Versatile Inspection Modes** – Supports wet and dry MPI methods with multiple magnetization techniques.
- **Integrated Safety** – Equipped with overload protection and emergency stop.
- **Standards Compliance** – Conforms to international MPI standards.



APPLICATIONS

- Automotive components: crankshafts, camshafts, gears, axles
- Aerospace fasteners and structural components
- Oil & gas pipe and bar inspection
- Forgings and castings in manufacturing plants
- General engineering and fabrication industries

AVAILABLE MODELS

- **Model HBU** – Ideal for general industries, automotive component manufacturers, turbine blade manufacturers, and casting/forging industries.
- **Model UNMT** – Designed for railway components, axles, wheels, bars, and heavy forging/casting components.

CUSTOMIZATION OPTIONS

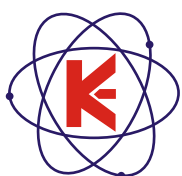
- Tailored coil sizes, headstocks, and accessories to meet specific requirements.
- Clamping distance: 300 – 3500 mm (customizable)
- Cooling: Air-cooled standard for high-duty cycles
- Integration with PLC & HMI systems
- Vertical bench units available based on component requirements
- VFD-driven rotation and tailstocks movement
- Latest electronics and HMI with higher amperage capabilities up to 20,000 A
- Headshot, Coil, Combined Shot

SPECIFICATION

	UNIT	UBT: 6000 - 10000A	UNMT: 6000 - 15000A
Input Supply	Volts	415VAC + - 5%	415VAC + - 5%
Frequency	Hz	50Hz	50Hz
Phase	Ph	3Ph, N & E	3Ph, N & E
Class of Insulation	Class	F	F
Duty Cycle	%	50	50
Output Current	Amps	6000 to 10000Amps + - 10%, Depending on the selected model	6000 to 15000Amps + - 10%, Depending on the selected model
Shot Time	Sec	Digitally Adjustable 0.5 Sec to 5 Sec + - 0.1Sec	Digitally Adjustable 0.5 Sec to 5 Sec + - 0.1Sec
Coil Diameter	mm/inch	305 to 450mm / 12" to 18", Depending on the selected mode	305 to 450mm / 12" to 18", Depending on the selected mode
Magnetizing Current	Amps	AC & HWDC/FWDCart digital controller	AC & HWDC/FWDCart digital controller
Current control system		Thyristorised Step-less Solid state current control using a smart digital controller	Thyristorised Step-less Solid state current control using a smart digital controller
PLC & HMI		KE Digital Controller	KE Digital Controller/PLC & HMI
Display		4 digit Digital LED Display	4 digit Digital LED Display/7" Display
Safety Features		Over Heating Protection	Over Heating Protection
Air Supply	Kg/sq.cm	6 – 7	6 – 7
Fluid Tank	litres	40	40/60
Standards		ASTM E709, ASTM E1444/E1444M	ASTM E709, ASTM E1444/E1444M

RANGE COVERAGE:

KE offers a complete range of MPI Bench Units to meet diverse industrial inspection needs.



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