

MPI Yoke Machine

Product Description:

The **MPI Yoke Machine** is a portable and efficient **Magnetic Particle Inspection (MPI) device** designed for detecting surface and near-surface cracks in ferromagnetic materials. It is widely used for **weld inspections, castings, forgings, and in-service component testing**.

This machine operates using an **electromagnetic yoke**, which induces a strong localized magnetic field in the test material. When **dry or wet magnetic particles** are applied, any defects will be revealed under proper lighting conditions.



Key Features:

- ✓ **Portable & Lightweight** – Ideal for on-site and in-service inspections.
- ✓ **AC / DC Magnetization** – AC mode for surface defect detection, DC mode for sub-surface defect detection.
- ✓ **Adjustable Pole Spacing** – Allows testing of different component sizes and shapes.
- ✓ **High Lifting Capacity** – Ensures strong magnetization for accurate defect detection.
- ✓ **Ergonomic Handle** – Comfortable grip for long-duration use.
- ✓ **Safety Features** – Overload protection and insulated cables.
- ✓ **Compliant with International Standards** – Meets **ASTM E1444, ASME Section V, ISO 9934-1**.

Technical Data Sheet:

Specification	Details
Model	MPI Yoke Machine
Magnetization Modes	AC / DC
Power Supply	230V, 50/60 Hz (AC Yoke) / Battery-operated (DC Yoke)
Yoke Type	Electromagnetic
Lifting Capacity	4.5 kg (AC) / 18 kg (DC)
Pole Spacing	0 – 300 mm (Adjustable)
Weight	2 – 5 kg (varies by model)
Cable Length	2m – 5m (customizable)
Particle Application	Dry / Wet Method
UV Light Compatibility	Yes (for fluorescent inspection)
Cooling System	Air-Cooled
Safety Features	Overload protection, insulated yoke
Compliance Standards	ASTM E1444, ASME Section V, ISO 9934-1
Customization	Available for specialized applications

Applications:

- ✓ **Weld Inspection** – Pipes, pressure vessels, structural steel
- ✓ **Automotive Industry** – Chassis, engine components

- ✓ **Aerospace Industry** – Landing gear, aircraft structures
- ✓ **Railway Industry** – Wheel sets, axles
- ✓ **Oil & Gas Industry** – Pipeline and tank inspections
- ✓ **Shipbuilding & Marine** – Hull and structural weld testing

Optional Accessories:

- ◆ **Battery Pack** – For enhanced portability in remote areas
- ◆ **Dry Powder Applicator** – Improves defect visibility
- ◆ **UV Light Kit** – For fluorescent MPI testing
- ◆ **Extension Cables** – For increased reach in large-scale applications

Why Choose Our MPI Yoke Machine?

- ✓ **Highly Portable & Easy to Use** – Perfect for field inspections
- ✓ **Reliable Defect Detection** – Strong magnetization for precise flaw identification
- ✓ **Industrial-Grade Durability** – Designed for heavy-duty use
- ✓ **Customizable Options** – Tailored for specific industries and applications