

Global
Pioneers in

NDT
MPI | LPI PRODUCTS



MPI & FPI System



Member of

The American
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Nondestructive
Testing





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SAE-AMS2644	ZCHEM SPECIALITIES PRIVATE LIMITED	QPL-AMS2644	Inspection Material, Penetrant

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About Us

- Established in the year 2005, **ZChem** Specialities came a long way to become a full Range NDT company in the areas of Liquid Penetrant Inspection (LPI) and Magnetic Particle Inspection (MPI). Promoted by two experienced Technocrats turned Entrepreneurs, it is one of the few companies in the world offering complete range of products in consumables and equipment. With manufacturing facility at Bangalore, India, **ZChem** currently operates **Pan India, Middle East ASEAN and African countries.**



MPI Equipment Magnetic Benches | Electro Magnetic Yokes | Power
Packs | Demag & Dark Room | | UV Led lamp

FPI Equipment - Pre Cleaning & Post Cleaning System | FPI Dip Tank
System | FPI Booth System | Waste Water Treatment

Factory

NDT
MPI | LPI PRODUCTS





INDIA

Corporate Office

ZChem Specialities Pvt.Ltd.

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Bengaluru , INDIA



UAE

Overseas Office

ZChem Specialities BFC

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Ajman , United Arab Emirates

Partners Office



USA

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Noblesville, IN 46062, United States of America



RUSSIA

117105, Municipal District of Nagatino -Sadovniki

Moscow, Russia

What do we manufacture



- Pre-Cleaning & Post Cleaning System
- FPI & MPI Consumables / Materials
- FPI Booth System
- FPI Dip Tank system
- MPI Bench Equipment / Power Packs/ Yokes & FWDC – 3 Phase Equipment
- UV Lamps & Accessories
- Waster Water Treatment Equipment

MAGNETIC PARTICLE INSPECTION SYSTEM



Model – **ZM3-100**

Stationary MPI Power Pack

10,000 AMPS 3 Phase rectified FWDC output



ASTM INTERNATIONAL



Administered by PRI

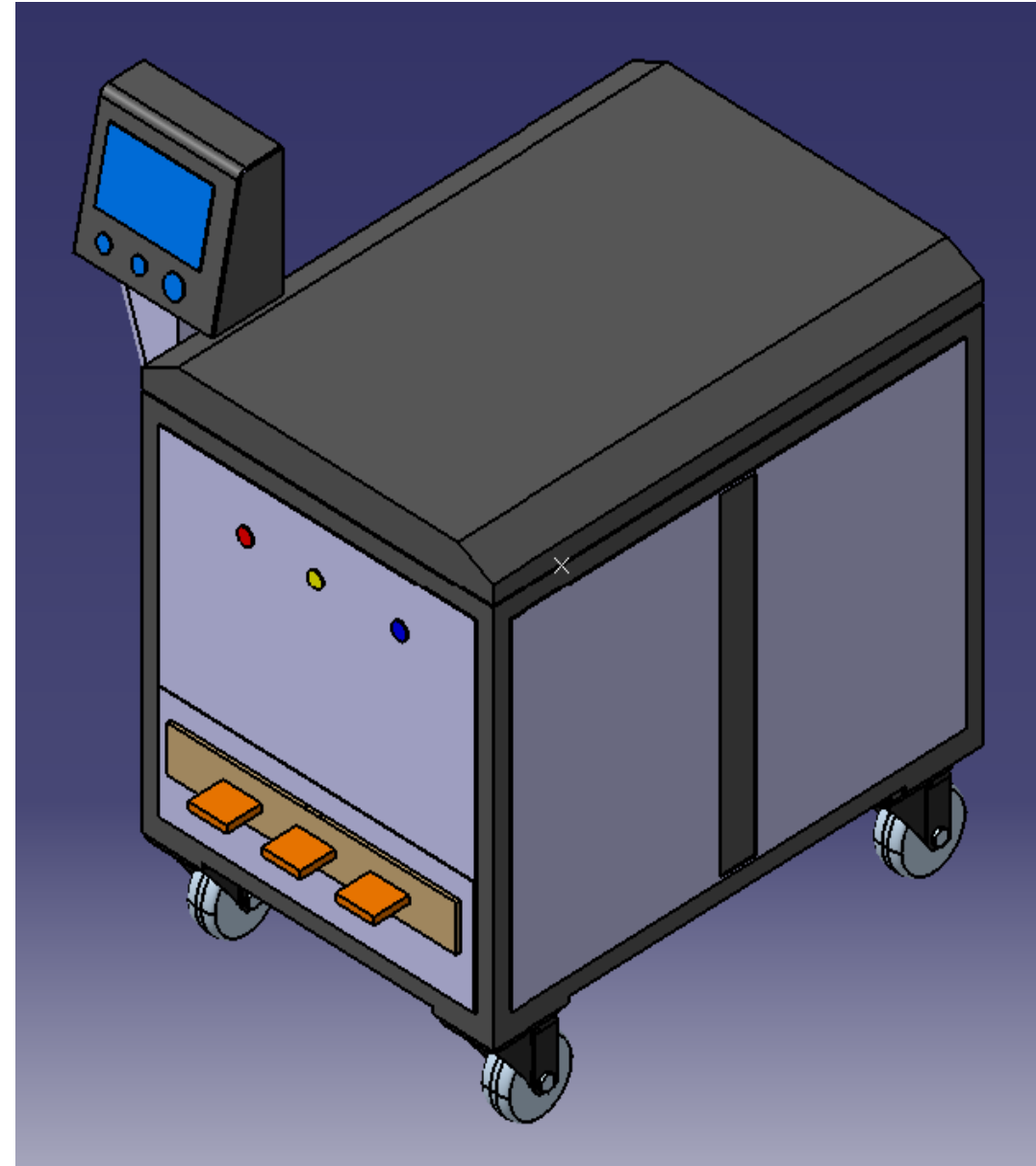
MAGNETIC PARTICLE INSPECTION SYSTEM

Model – ZM3-100

Machine Specification

ZChem® recognizes that certain parts may not be suitable for standard ZM series mobile units. Some of these parts are oversized, require special handling, or are best processed in a dry state.

The ZChem Stationary Power Pack ZM3 Series provides an effective solution for parts that exceed the capacity of typical systems. With three independent outputs to accelerate processing and a pulse feature designed to cover larger areas, these units are equipped with **3-phase rectified to FWDC output.**



Machine Description	Magnetic Particle Inspection Equipment Model-ZM3-100 3 Phase – 10,000 AMPS FWDC
Direction Of Cracks/Defect	Longitudinal and Transverse defects can be Detected. (Circumferential & Axial)
Component	Aerospace Component
Recommended Wet Magnetic Fluorescent Bath	ZChek- F18 MPI Fluorescent Powder to be mixed with Zchek- Z801 Cart/Carrier Oil Recommended concentration – 1.25 grams/ Litre of OIL
Floor Space Required for MPI	
Number of Operators Required	NA
Power Requirement	380-415V, 3Phase (Input Current 400 Amps) 50-60 Hz
Air Requirement	5 Kg/sq.cm Pressure, Filtered Dry Air

SYSTEM INCLUDES THE FOLLOWING Specs

ZM3-100

Machine Description



10,000 AMPS FWDC MPI

Model	ZM3-100
Equipment	MPI MACHINE
Voltage	380-415V ± 10%
Current	520 AMPS Max
Frequency	50-60 Hz
Wiring required	3 Core 25 Sq.MM Copper + Neutral (6 Sq.MM) + Earth (6 Sq.MM)
Air Pressure	Min 6 Bar

Specification Compliance

ASTM E1444, ASTM E3024, ASTM E3024M, ASTM E709

SYSTEM INCLUDES THE FOLLOWING Specs

Machine Description

ZM3-100

10,000 AMPS FWDC MPI

Product Features

- Designed to meet the requirements of ASTM – E 1444, ASTM E 3024, ASTM E3024 M, ASTM E 709 and NADCAP
- **3 Phase 10,000 AMPS FWDC**
- 3 Independent current control
- Current reading on a large 19 Inch HMI screen for SOURCE 1, SOURCE 2, SOURCE 3
- Audio Visual indication for +/- 10% current assurance as per ASTM E1444
- Large Easy display of Ammeter readings on HMI (19 inch)
- Advanced PLC control technology enhances reliability.
- Independently controlled magnetizing circuits for current through HMI with programmable recipes.
- Quick break circuit
- Current capability rated using 30 feet/10M of 4 Nos of 120 Sq.MM cable connected in parallel

SYSTEM INCLUDES THE FOLLOWING Specs

Machine Description

ZM3-100

10,000 AMPS FWDC MPI

Product Features

- Superior Transformer designed with F Class insulation.
- Duty cycle 0.5 seconds on, 20 seconds off (2.5% with maximum of 2 seconds)
- Thyristorized current control – stepless control with Feedback
- HMI Controls for all operations, Current setting through the HMI keypad entry
- Manual potentiometer also provided for better operating
- Remote Pendant Operation for magnetization & Option of Double shot magnetization
- USB Port to connect Computer
- Connection port to connect UV Lamp
- Three independent Bus Bar output
- Auto report generation on the HMI screen with out put current

SYSTEM INCLUDES THE FOLLOWING Specs

Machine Description

ZM3-100

10,000 AMPS FWDC MPI

Product Features

- Transformer Overload Protection & alarm
- Interlocking for set current assurance
- Data recording logging and recall with optional connectivity to internet
- PLC & HMI controls
- 230 V accessory outlet with switch

Demagnetisation

Reversing DC demagnetisation with ultra-low frequency on all three outputs

Unique Features

Machine Description

ZM3-100

10,000 AMPS FWDC MPI

Product Features

- Machine can generate 300+ shots per hour at maximum out current
- Printing of Report Automatically
- Daily remainder for UV Light & Visible Light intensity check
- Daily remainder for Bath Concentration check
- 100 Programmable recipiees
- Password Protection
- Auto Double Mag shot with one touch
- +/- 10% Alarm as per ASTM E1444
- Separate Shot Duration Timer- 0.5 – 4 seconds

Visit Our Website For
Further Information

www.zchem.in

