

Global  
Pioneers in

**NDT**  
MPI | LPI PRODUCTS



**MPI & FPI System**



Member of



The American  
Society for  
Nondestructive  
Testing





**QPL APPROVED**

# Qualified Products Database

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Search for:

ZCHEM

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▼▲ Governing Spec	▼▲ Source Name	▼▲ QPL Number	▼▲ Title
<a href="#">SAE-AMS2644</a>	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

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**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.**

Sy. No 11/2 /6, Puradapalya Village  
Tavaerkere, Off, Magadi Road 562130,  
Bengaluru , INDIA



**UAE**

## Overseas Office

**ZChem Specialities BFC**

Address – Ajman Free Zone  
Ajman , United Arab Emirates

## Partners Office

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**USA**

5751 Bruce Blvd.

Noblesville, IN 46062, United States of America



**RUSSIA**

117105, Municipal District of Nagatino -Sadovbiki

Moscow, Russia



# What do we manufacture

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- 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





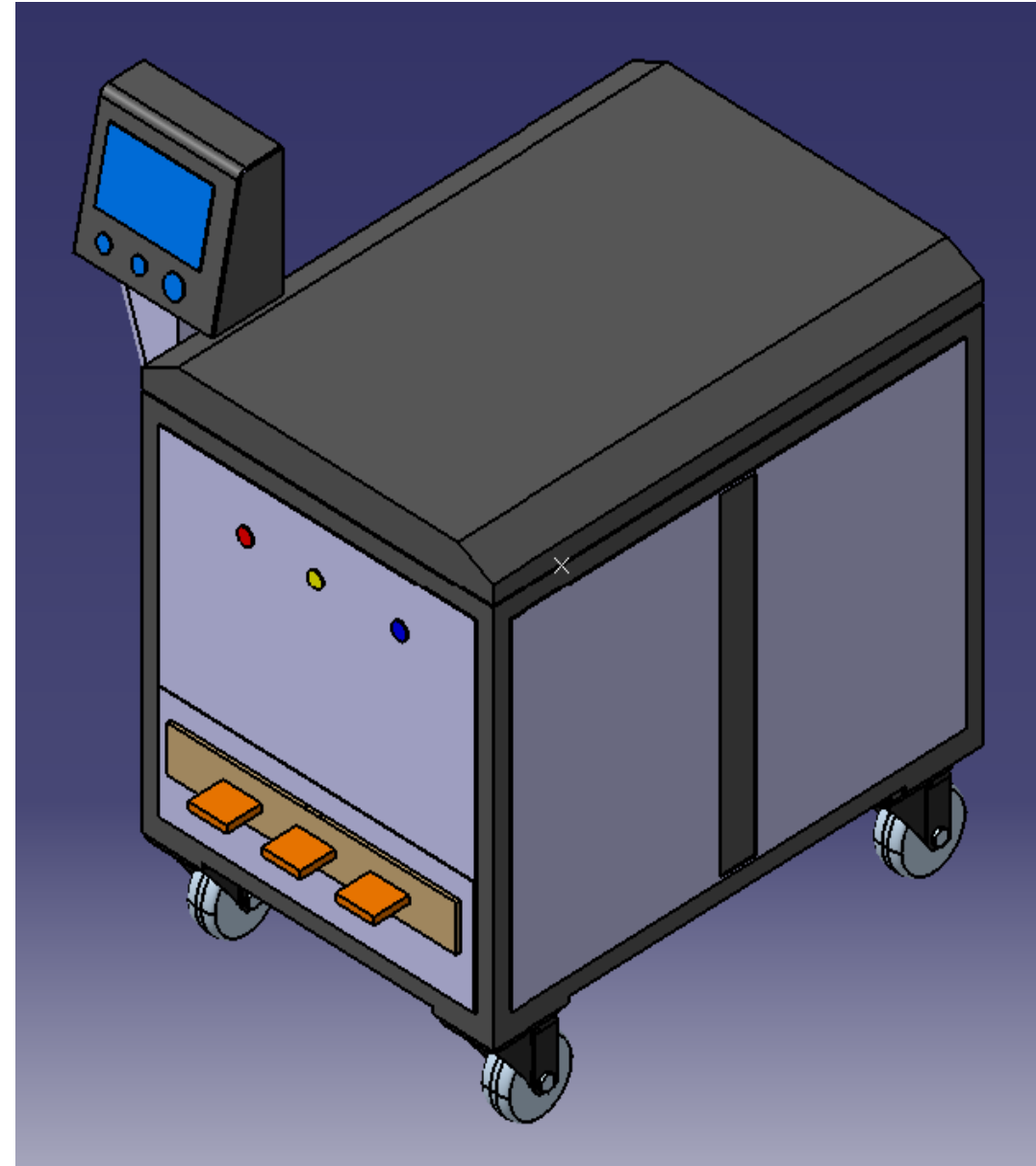
# MAGNETIC PARTICLE INSPECTION SYSTEM

## 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.**



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

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Machine Description

## ZM3-100

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## 10,000 AMPS FWDC MPI

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## 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

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Machine Description

## ZM3-100

10,000 AMPS FWDC MPI

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## 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

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Machine Description

**ZM3-100**

10,000 AMPS FWDC MPI

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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 3 outputs



# Unique Features

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Machine Description

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**ZM3-100**

**10,000 AMPS FWDC MPI**

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## 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](http://www.zchem.in)

