# Manufacturing Of NDT Products & Accessories





# **LED UV Lamps**

We manufacture highest quality of LED UV Products in accordance with international standards ASTM E1444 and ASTM E3022. The AUB-150 LED UV Bulb, AUL Series of LED UV Lamps and AUF Series of LED UV Flood Lamps are considered to be the benchmark in the NDT Industry. They are light weight, rugged and cost effective which makes them a perfect combination to be used for Fluorescent Inspection.

# **AUL Series - LED UV Handheld Lamps**

The AUL Series of LED UV Lamps are considered to be the benchmark in the NDT Industry. These Lamps are light weight, rugged and cost effective which makes them a perfect combination to be used for Fluorescent Inspection. The most unique feature of AUL Series of LED UV Lamps is that depending on the application, operator can choose the model from AC to Battery Operated. We also offer External Batteries (in EB model) where you can operate the lamp for 8-10 hours (with two batteries) in remote locations.



#### **Salient Features**

- Ergonomically Designed Robust Aluminium Housing
- Switchable between UV & White Light
- Instant ON/OFF, No Warm-Up Time For Full Intensity
- Long Lasting LED's (40,000 Hrs) Life
- Mechanical Passive Cooling System
- Even Beam Profile Without Hotspots
- UV-A Pass Filter
- Rechargeable Li-Ion Battery Pack

#### **Kit Contains**

- LED UV Lamp
- Neck Strap
- Battery Charger with Power Cord (in Battery Models)
- External Batteries in EB Model
- Operation Manual & Certificate of Conformity
- Soft Carry Case

Order	Part	No ·
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	2 UV-A LED	2 UV-A LED + 1 White LED	4 UV-A LED
Internal Battery	AUL-100	AUL-100D	AUL-150
External Battery	AUL-100 EB	AUL-100D EB	AUL-150 EB
AC Mains	AUL-100 AC	AUL-100D AC	AUL-150 AC

## AUT 90 - LED UV Torch

The Torch is light weight, rugged and cost effective which makes them a perfect combination to be used for Fluorescent Inspection. The most unique features of AUT- 90 LED UV Torch is we can use it from the lowest possible distance, Because of its uniform intensity with no hotspot.



#### **Salient Features**

- Ergonomically Designed Robust Aluminium Housing
- Instant ON/OFF, No Warm-Up Time For Full Intensity
- Long Lasting LED's (40,000 Hrs.) Life
- Even Beam Profile Without Hotspots
- UV-A Pass Filter
- Rechargeable Li-Ion Battery

#### **Kit Contains**

- LED UV Torch
- Neck Strap
- Battery Charger
- Operation Manual & Certificate of Conformity
- Soft Case

### AUB 150 - LED UV Bulb

The AUB-150 LED UV Bulb perfectly replaces the conventional mercury vapor bulb. It is light weight, rugged and cost effective which makes it a perfect combination to be used for Fluorescent Inspection. The most unique feature of AUB-150 LED UV Bulb is that it comes with standard E27 holder where the operator just needs to unplug the conventional mercury vapor bulb and plug in the AUB-150 LED UV Bulb and he/she is ready for inspection.

#### **Salient Features**

- Replaces Conventional Mercury Vapor Bulb
- Long Lasting LED's (40,000 Hrs) Life
- Less Fragile than Conventional Mercury Vapor HID Bulb
- Instant ON/OFF, No Warm-Up Time For Full Intensity
- Cooler Than Mercury Vapor HID Bulb With Active Cooling
- UV-A Pass Filter

#### **Kit Contains**

- LED UV Bulb
- Operation Manual & Certificate of Conformity

### **AUF Series** - LED UV Flood Lamps



The AUF Series of LED UV Flood Lamps are considered to be the benchmark in the NDT Industry. These Lamps are light weight, rugged and cost effective which makes them a perfect combination to be used for Fluorescent Inspection. The most unique feature of AUF Series of LED UV Flood Lamps as that they all can be connected with each other on either side which means you can extend the length of coverage area to any extend depending on the requirement.



#### **Salient Features**

- Robust Aluminium Housing
- Inter Connected with Each Other
- Switchable between UV & White Light
- Electronic Intensity Control
- Long Lasting LED's (40,000 Hrs) Life
- Mechanical Active Cooling System with Fans
- Even Beam Profile Without Hotspots
- UV-A Pass Filter

#### **Kit Contains**

- LED UV Flood Lamp
- Power Cord Cable & Chains with Hooks
- Operation Manual & Certificate of Conformity

# Yokes

# AC Magnetic Yoke AY-7A

The AY-7A yoke is available in two variant 230-volt 50-Hz or 110-volt 60-Hz. It provides powerful AC magnetic field for detection of crack on surface during magnetic particle inspection. It is widely used with either dry or wet method, fluorescent or nonfluorescent magnetic powder, in the inspection of welds, forging, casting and in service applications.



### **Salient Features**

- Accessible grip, angled body for better position
- Powerful AC Magnetic Field
- Exceed ASTM E709 & ASTM E1444 lifting Specifications
- Durable rugged construction
- Adjustable leg spacing
- Detachable power cord

## Permanent Magnetic Yoke Fixed/Wire Type AY-M5-F/AY-M5-W

Permanent Magnetic Yoke Fixed/Wire type are ideal for MPI since they are completely portable & are used where access to AC power is impractical or impossible. It is easy to use, simple & highly economical.



### **Salient Features**

- Light Weight & Compact
- Completely Portable
- No power required
- Suitable for both dry & wet inspection
- Strong Magnet with no requirement of remagnetization

# AC DC Magnetic Yoke AY-7D

The AY-7D is most versatile magnetic yoke which offers AC and DC single phase supply for magnetizing ferromagnetic material. The two outputs (AC or DC) are independently adjustable to balance the magnetic field intensity. The AY provides either constant AC or Pulsed DC field for finding surface and subsurface defects.



### **Salient Features**

- Accessible Grip for Better Position
- Powerful AC and DC Magnetic Field
- Durable Rugged Construction
- Articulated Adjustable Leg
- Demagnetizing Capability
- Exceed ASTM E709 & ASTM E1444 lifting Specifications

# **Battery Operated Yoke AY-7B**

Battery operated yoke is designed to stand up to the most rugged applications. True portability for magnetic particle inspection in the field and remote locations is achieved through a battery pack.



- Portable with battery pack
- Effectively useful in remote Areas and in Yards
- Exceeds ASTM lifting specifications
- Perfect for subsurface defects & demanding environment

# **APP Series Magnetic Power Pack**

The APP Series has movable wagon type mobile power pack. These Magnetic Power Packs are available in seven configuration that offers 1000 Amps to 6000 Amps range of Alternating Current and Half Wave Direct Current. The APP Series is an 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. The precise amount of desired current is delivered to the output circuit when the magnetizing shot is initiated. The thyristor based step-less control is provided to control the output current. The APP Series have switch selectable AC demagnetization which is achieved through current decay system.



### **Salient Features**

- AC and HWDC Mag facility
- Automatic AC Demagnetization
- True Calibrated Digital Ammeter
- Low-voltage Output for Operator Safety
- Overload and Short Circuit Protected Switching
- Emergency Cut Off
- 5-meter Long Low Resistance Prod Cable
- Powder Coated Rust Proof MS Housing with Matt Finish
- Lockable Caster Wheels for Controlled Movement of the Machine
- Tray on the Top for Storage of Cable and other MPI Accessories
- Locate defects in any direction using Prods, Central Conductor, or Coil

#### **Kit Contains**

- Power Pack
- 5 meter long Prode Cable (1 Pair)
- Operational Manual
- Certificate of Conformance

# 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 Six configuration, three sizes (Small/Medium/Large) and two categories (ECO & PRO) that offers 1500 Amps to 6000 Amps range of Alternating Current and Half Wave Direct Current. 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 (Optional) both offer AC and HWDC magnetization and are independently adjustable to set each magnetic field i.e. circular or longitudinal magnetization.



#### **Salient Features of ABM ECO Series**

- AC and HWDC 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 ammeters confirms amperage sent through the part
- Low-voltage output with overload & short circuit protected switching
- Powder coated rust proof MS housing with matt finish
- Antivibration mount
- Storage place for MPI Accessories
- Pneumatic headstock makes it faster & easier to position & remove longer parts
- Foot Switch for ease of operation
- Emergency Cut Off

- Dark room with black curtain & ventilation fan to facilitate inspection under UV/Black light
- 20 Litre SS Sliding tank for water/oil based magnetic powder bath
- External pump system for particle bath agitation, circulation and application

### Salient Features of ABM PRO Series

- PLC provides reliable control & precise operation
- Automatic combined mag shot
- Mag-shot-activating with 1-touch control to enable/disable this feature through HMI
- Reduce testing time with operators
- User-controlled security systems with password protection, supervisor locks & customizable operator access profiles
- Tank level detector alarm with visual & audible alert's
- User friendly operator interface for control parameter in-feed and operation mode selection and display





#### **Salient Features**

- High Sensitivity
- Superior Flaw Resolution
- Low in Sulphur & Halogen Content
- Temperature Range 0 to 48°C
- Conforms to ASTM E-1444, ASTM E-709, ASME BPVC Sec V, EN ISO 9934-2

Part No.	Description	
WCP 104	White Contrast Paint (420 ml Aerosol Can)	
BMI 106	Black Magnetic Ink (420 ml Aerosol Can)	
FMI 800	Fluorescent Magnetic Ink (420 ml Aerosol Can)	
ARDP 07	Red Dry Powder	
ABDP 01	Black Dry Powder	
AGDP 08	Grey Dry Powder	

# **MPT Chemicals**

# **Magnetic Particle Testing Chemicals**

Magnetic Particle testing is suitable for the surface/sub-surface testing of ferro-magnetic materials. This method is based on the principle that iron sand shall be attracted by magnet. In this method the material or part to be tested is magnetized, then apply the magnetic particles to the objective surface. The magnetic particle shall be attracted by the leakage flux formed at the detect and forms an indication. The formed indication is as 10 or more times large as the defect in its width. So, we can detect the defect easily.

There are two types of magnetic particle, one is non fluorescent for the observation under white light, the other is fluorescent for the observation under UV light. The other categorization is based on the application; those are Dry method and Wet method, magnetic particle shall be applied to the surfaces at it stands. In Wet method, magnetic particle shall be dispersed in oil or water.

In magnetic particle testing, the key role of flaw detection is performed by the testing chemicals. Hence, the quality of testing chemicals being used greatly influences the quality of the test performed. FlawGlo series includes all types of magnetic particles testing chemicals for different applications (i.e. oil based, water based & dry application) in both visible as well as fluorescent forms.

Part No.	Description	Dilution
FlawGlo WF 834	Water Fluorescent Powder ( 2-5 micron, average particle size is 3 micron)	5gm/ltr
FlawGlo WF 418	Water Fluorescent Powder ( 2-18 micron, average particle size is 7.5 micron)	6gm/ltr
FlawGlo CF 778	Water Fluorescent Concentrate	25ml/ltr
FlawGlo OF 800	Oil Fluorescent Powder	1gm/ltr
FlawGlo OV 106	Oil Visible Powder	9.5gm/ltr
FlawGlo CF	Carrier Fluid	20 ltr

# **MPT Accessories**

# TesMX 200 - Digital Gauss Meter

TesMx 200 is designed to detect residual magnetic fields present in the metallic part surfaces. These are low intensity static fields remaining in the part after the application of a strong magnetic force on that part. It is very important to inspect these residual fields remaining in metal parts to maintain quality and safety standards. TesMx 200 provides the solution for this problem by detecting the magnetic density present in the metal accurately & precisely.

#### **Salient Features**

- Compact and handheld
- Compatible with axial & transverse probe
- Clear 7 segment display for less battery consumption
- Comes with optional reference magnets for verification

# Acumen<sup>365</sup> UVA Meter

The Acumen 365 is a battery powered handheld UV-A meter/photometer used to measured ultraviolet -A light, used for fluorescent inspection (non-destructive testing). The Acumen includes dual wavelength sensor detector used to measure both Ultraviolet and Visible light. The compact size, shape and its lightweight make this device ideal to use for applications in industrial plant or in the research labs, where the intensity measurement of UV-A and visible lights is required.

- Big and colorful LCD screen Display
- · Compact & light weight
- Rechargeable Li-Ion Battery
- Continues 8 hours of battery back up in single charge
- Able to measure both UV-A and visible illuminance
- Visible light measurement in LUX as well as in foot-Candle



Ketos Ring



Pie Gauge



Burmah Castrol Strips



Lifting Blocks



Rubber Blower



MTU Test Block







Centrifugal Tube with Stand



Copper Pads





#### Salient Features of FlawGlo make LPT products

- Vivid, high contrast color.
- Low in Sulphur and halogens.
- Good in Wettability, Viscosity & capillarity.
- Superior flaw resolution.
- Water washable and solvent type penetrant.
- Excellent reliability.
- High flash point
- Compatible with any metals & many synthetic materials.

# LPT Chemicals & Accessories

### Liquid Penetrant Testing Chemicals

Liquid Penetrant Testing is commonly known as LPT/PT or DPT. This is suitable for open to surface cracks for almost every product & materials regardless of their properties. It utilizes natural accumulation of fluid around a discontinuity to create a recognizable indication of crack or other surface opening defects. Usually, LPT materials are composed of Penetrant, Developer & Remover. Penetrant inspection depends mainly on the ability of liquid (Penetrant SWP-139, SWFP-8702) to wet the surface of the solid workpiece and flow over the surface to form a continuous uniform coating.

Capillary action attracts the fluid (penetrant) to the discontinuity as compared to its surroundings. To locate the defects, developer (SD-175) is applied to draw the penetrant out of the crack which can be seen in visible or UV light.

Cleaner (SC-190) also plays most important role in pre and postcleaning of Liquid penetrant testing.



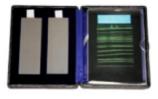
Model	Description	Approval & Specifications	Standard Packaging
SC-190	Solvent Cleaner	ASTM E 165-12, ASTM 0129-13 & ASTM D 808 Article 24 ASME BPVC - Sec V,IS 3658 & IS 12889,	420 ml Aerosol Can 1 Box (10 Cans)/ 1L/5L
SWP-139	Solvent Removable Red Dye Penetrant	ASTM E 165-12, ASTM 0129-13 & ASTM D 808 Article 24 ASME BPVC - Sec V,IS 3658 & IS 12889,	420 ml Aerosol Can 1 Box (10 Cans)/ 1L/5L
SWFP-8702	Water Washable / Solvent Removable Fluorescent Penetrant	ASTM E 165, ASTM E 1417, ASME BPVC - Sec V, IS 3658, EN ISO 3452-6, EN ISO 3452-2 & EN 571-1	420 ml Aerosol Can 1 Box (10 Cans)
SD-175	Solvent Suspendable Developer	ASTM E 165-12, ASTM 0129-13 & ASTM D 808 Article 24 ASME BPVC - Sec V,IS 3658 & IS 12889,	420 ml Aerosol Can 1 Box (10 Cans)/ 1L/5L



TAM/KDS Twin Test Panel



Aluminium Comparator Block



Ni-Cr Test Block



Reference Block Type 2

# **RT Accessories**

We offer full range of high quality radiography accessories. These accessories are manufactured from the highest material, workmanship and quality control after every operation.

# FV Series LED Film Viewers

We manufacture highest quality Film Viewers over a decade now. The FV Series Film Viewers are considered to be the benchmark in the Indian fabrication industry. All big companies have been using this series since long. Over the period of time these Film Viewers have become the preferred choice for overseas customers too.



#### **Salient Features**

- High Power SMD LED's
- Built-in Writing Lamp(PCS & PXL models)
- Viewing Screen Adjustable Shutters
- Electronic Brightness Control
- Foot Switch Control
- Corrosion Resistant AL Body
- As per ASTM E1390

# **Warning Blinkers**

We manufacture two types of blinkers which are used to cordon off the area where source is placed/active. The DBS I is a simple battery operated blinker with flashing light and siren. The DBS II has an installed GM Counter which is used to detect and measure ionizing radiation. It has two flash lights i.e. the red and green, the green light keep on flashing when the source is not active. The moment source is active it will start flashing red light and siren. On request we can also installed a display to measure the ionizing radiation



#### **Salient Features**

- Portable radiation alert unit with audio & visual alarms
- Dual operation (Mains with adapter & Battery operated)
- Works for the X ray & Gamma ray detection
- Green flash when radiation detected
- Red flash when no radiation
- In-built Rechargeable battery
- Low battery indication

# Rhythm 5D - Digital Densitometer

The Rhythm 5D is a battery powered handheld densitometer for measuring the transmission density of x-ray film combining ease of use with high accuracy and repeatability. The unit has been designed to calibrate with an extremely wide light range of between 30000 cd/m<sup>2</sup> to 100000 cd/m<sup>2</sup>, to achieve optimum accuracy and stability for reading density. The unique size and shape make this device ideal to hold for applications such as industrial plant or in the research labs.



#### **Salient Features**

- Graphic LED display
- Compact & light weight
- Drift free sensing over a long period
- Rechargeable Li-Ion Battery
- Auto shut down for power saving mode
- Complies with ASTM E1079-16

# Lead Intensifying Screens & Rolls

RADAC Lead Intensifying screens are available in all standard imperial & metric sizes and are cut according to ISO 5655-2000 & BS3490:1985. Depending on the quantity non-standard size screens can be manufactured to order. All screens feature rounded corners to prevent damage to both films and cassettes and are sold in 5,10 & 25 pair packs. A pack of 5 pairs will contain 10 individual screens, 10 pairs 20 individual screens, and 25 pairs 50 individual screens.



- Flexible to ensures that optimal film-to-screen contact can be achieved. Durable of being bent over and over again to a small radius without cracking.
- A peel-off plastic film cover protects the surface of the lead screen ensuring they are received in perfect condition. The high quality un-coated lead used in screens results in higher intensification and an absence of problems associated with lacquer coatings. It also increases sensitivity and reduces exposure times and better contrast time after time.

### **General Purpose Probes**

Ultrasonic probe/transducer is the heart of any ultrasonic test. Inappropriate transducer selection or a poorly manufactured or malfunctioning transducer can severely affect test results regardless of instrumentation capability. We manufacture full range of general purpose straight beam, angle beam and TR probes. These probes are available in 2 or 4 MHz and the customers can choose from either Lemo or BNC female connectors on the probe side.



# **UT Accessories**

### **Test Blocks**

We manufacture a wide range of Ultrasonic Test blocks which are precisely machined, and quality tested as per specified ASTM, ASME and ISO standards. Standard Test Blocks are available in steel, stainless steel, and aluminium. Test Blocks in alloys are also available, like alloy steel, Inconel, titanium, copper-nickel, Duplex steel and others. All Test Blocks are permanently engraved with the part no and serial number. All test blocks are offered with wooden case and test certificate which include dimensional report and positive material identification report. Carbon steel blocks are Nickel coated forrust protection.



# Cables

We offer full range of ultrasonic testing cables. These cables are manufactured with reinforced junctions between the cable & the connector. Cables are available in single, dual with Lemo, Mini Lemo, BNC, Microdot or Subvis connector. We can also offer customized cable depending upon your needs or application



## Couplant

We offer FlawGel series of general purpose ultrasonic Couplant which is offered in 500ml dispenser or in powder form. We also offer specialized couplants like higher temperature, shear wave, low sulphur etc.





# **ECT Bobbin Probes & Calibration Tubes**

We offer full range of ECT Bobbin Probes which are light weight, durable and used to inspect non-ferromagnetic tubes. Suitable for detection and sizing of metal discontinuities, such as corrosion, erosion, wear, pitting, baffle cuts, wall loss, and cracks. Apart from ECT Bobbin probes we also offer calibration tubes in almost materials as per ASMESec. V Article 8.

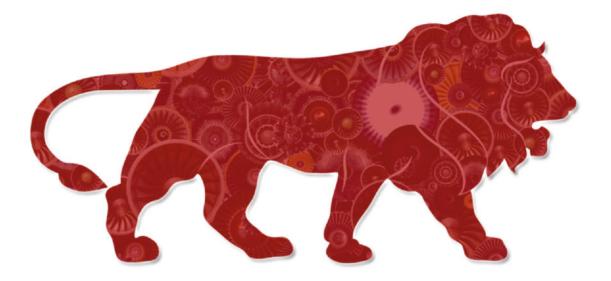
- Coils are potted by a wear resistant material
- Stainless steel wear guides at front & rear ends
- Light weight advance polymer kink-resistant cable
- 4-pin Amphenol connector
- Probes available from 12.6 to 47.6 mm
- Cable length available in 15, 20 & 30 metres



# About Us

Keeping the vision of "Make in India", M/s. Arora Technologies (P) Limited is focusing on Manufacturing and Distribution of NDT Products & Accessories.

Our vision is to Innovate, design and manufacture NDT Products, Systems and Accessories for global markets by incorporating Quality & Excellence in our DNA. We are committed to build long-term relationships with our customers and pursue our business through innovation, latest technology & unrelenting quest for excellence.



# Arora Technologies (P) Limited

Plot No. D-183/8, MIDC, TTC Nerul, Navi Mumbai, Maharashtra 400706, India T: +91-22-6138 0600, 2770 3913, 2770 3923 E: info@arorandt.com | W: www.arorandt.com