

AC/DC Electromagnetic Yoke - Y A/D



The Y-A/D is a durable, high-strength AC/DC magnetic yoke designed to detect surface and sub-surface indications in the most rugged applications. Featuring sealed chemical-resistant construction, articulating legs to contour to any part shape and robust strain-relieved twelve-foot cord for field use, the Y-A/D is ideal for inspection of welds and other remote testing.

Solid-state controls allow the operator to use AC magnetic fields for surface indications or DC magnetic fields for sub-surface indications to meet all inspection needs.

Meticulously designed, our dual magnetization yoke and portable MPI unit (AC / HWDC Yoke) and MPI Portable Unit are high in performance and are easy to operate. With strong and rugged construction, these are suitable for continuous operation.

Following are some of unique features of dual magnetization yoke:

- Delivers AC for surface
- HWDC for subsurface flaw detection
- Handy
- Light Weight
- Safe for operator
- Lifting capacity 22 kgs in DC, 5 kgs in AC mode. Portable MPI Units

The portable MPI units offered by us are intricately designed for continuous operation and efficiently yields accurate results. Based on latest technology, our units are available in various models.

Our immense industrial expertise and sophisticated machinery aid us in manufacturing and exporting an exclusive array of magnetic particle testing accessories. These are stringently checked by our team of quality controllers and are available in customized ranges.

AC/DC Electromagnetic Yoke - Y-7

The Y-7 is a durable, high-strength AC/DC magnetic yoke designed to detect surface and sub-surface indications in the most rugged applications.

Featuring sealed chemical-resistant construction, articulating legs to contour to any part shape and robust strain-relieved twelve-foot cord for field use, the Y-7 is ideal for inspection of welds and other remote testing.

Solid-state controls allow the operator to use AC magnetic fields for surface indications or DC magnetic fields for sub-surface indications to meet all inspection needs.



FEATURES :-

- Sealed, durable construction , Chemical and abrasion resistant
- AC and DC operation options for surface and sub-surface inspection
- Lifting capacity 22 kgs in DC, 5 kgs in AC mode. Portable MPI Units
- Exceeds ASTM lifting specifications , Individual serial number for each yoke

SPECIFICATION COMPLIANCE :-

- ASME BPVC , ASTM E709 , ASTM E1444 , ASTM E3024

APPLICATIONS :-

Defect location: Surface and subsurface

Ideal for:

- Field testing , Spot inspections , In-service inspections , Demanding environments , Weld inspection

Defect examples:

- Inclusions , Seams , Tears , Laps , Welding slag , Grinding cracks , Shrink - Quenching - Fatigue cracks

PRODUCT PROPERTIES :-

Leg Span : - 0–12 in / 0–30 cm

Cord Length : - 12 ft / 3.7 m

Duty Cycle 33%, max on time is 80 seconds

Electrical 230V - 50/60 Hz: 2.7 A

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PORTABLE POWER SOURCE – 1000/1500/2000 Amp

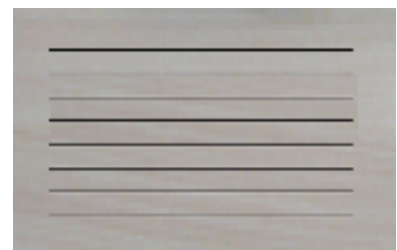
Salient Features :-

- Heavy-Duty Cycle : Continuous 9 Seconds Cut Off
- Ac And Hwdc Currents Output.
- Available In 1000, 1500 And 2000 Amps Rating Models.
- Thyristorised Step-Less Solid-State Control.
- Heavy Duty Bus Bars With Prod Connections.
- Rugged Constructions For Reliable Magnetic Inspection.
- Compact Lightweight And Portable.
- Can Detect Surface, As Well As Sub-Surface Defects.
- Equipment Is Built Standard For Continuous Inspection.
- Ac Decay Auto Demagnetization Facility In Built.
- Ac / Hwdc Can Measure In One Meter.
- Operation Voltages 230 1phase.
- Equipped With Thermal Overload Relay To Prevent Failures Of Components.



Technical Specifications

Specifications	Radent – 1000	Radent – 1500	Radent – 2000
Input Supply	230v , 50 Hz , 1 Phase	230v , 50 Hz , 1 Phase (Optional 2 Phase)	4400v , 50 Hz , 2 Phase
Max. Output Current	1000 Amps	1500 Amps	2000Amps
Current Drawn	25 Amps	40 Amps	40 Amps
Open Circuit Voltage In DC	5.0 V	8.0 V	8.0 V
Open Circuit Voltage In AC	4.8 V	7.5 V	7.5 V
Max.Kva Ratings	5 Kva	18 Kva	18 Kva
Duty Cycle	4 Sec On & 4 Sec Off	4 Sec On & 4 Sec Off	4 Sec On & 4 Sec Off
Class Of Insulation	' F ' Class	' H ' Class	' H ' Class
Current Control	Thyristorised Step	Thyristorised Step	Thyristorised Step
Dimension (L X W X H)	400 mm X 240mm X	559 Mm X 241 mm X	559 Mm X 241 mm X 241mm
Unit Weight	40 Kg	50 Kg	50 Kg



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UV LED LIGHT

Product Details:

We supply UV LED Torch from 1W to 5W. The LED life is over 20000 hours. This UV Flash Lights are used for Fluorescent Liquid Penetrant Testing and Magnetic Particle Testing , We provide UV Light with NABL Traceable Calibration Certificate.

			
Model	F2	UV F2	PT 10

Technical Specifications

Make	TANK007	TANK007	TANK007
LED	Imported UV LED + White	Imported UV LED	Imported UV LED
Battery	1 x AA	1 x AA	Li ON - Rechargeable
Wattage	1W + 3W White Light	1W	3W
Wavelength	365 nm	365 nm	365 nm
Mode	Zoom + UV + White	Zoom + UV	Zoom + UV
Switch	Tail Button Switch	Tail Button Switch	Tail Button Switch
Size	106 x 24 mm	106 x 24 mm	138 x 26 mm
UV intensity at 150 mm	≥ 2000 μw/cm ²	≥ 2000 μw/cm ²	≥ 3000 μw/cm ²
UV intensity at 300 mm	≥ 1000 μw/cm ²	≥ 1000 μw/cm ²	≥ 1500 μw/cm ²

UV BLACK LIGHT - UV-100F



Salient Features :-

1. Optimum Performance with Koop glass filter
2. Cool to touch, on heating housing & handle
3. Safety bezel prevents accidental damage to filter & bulb.
4. Touch aluminum housing for rugged use
5. Comfort grip with concealed cable connection
6. Optional, built in silent fan for forced cooling

Technical Specification :-

Input Supply	220V, 50Hz, 1 Phase
UV Intensity At 33cm	5000 μ w / cm ² nominal
Wave Length	365nm
Visible Light Intensity	Less than 10Lux / 1 foot candle
Bulb	100 Watts(Spot Bulb)
Bulb Life	2500 Hours Approximately
Weight	Lamp 1.3Kg + Cotrol Unit 2.5Kg.
Cable Length	5 Meter (Between Lamp & CU)
	3 Meter (Power supply Card)
Cooling Fan	Inbuilt

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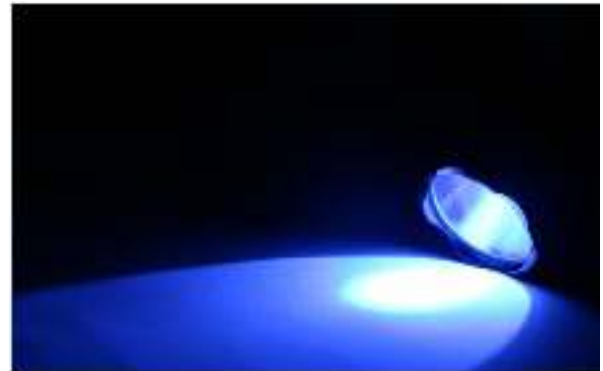
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UV – A LED Torch

Product Data Sheet : -

Magnaflux High powered rechargeable UV-A LED Torch for Fluorescent Penetrant and Magnetic particle inspection. UV-A LED torch offers a light compact, long life, high durability solution to UV inspection techniques. The high powered LED gives intensity greater than $10000\mu\text{w}/\text{cm}^2$ at 380mm. (15 inch)



Product Features : -

- Single high power UV-A 365 nm LED (Peak Wavelength).
- Wavelength Emission UV-A $365\pm 5\text{nm}$ (No UVB/UV C Emission)
- Construction - CNC machined High-grade aluminum casing, hard anodized finish prevents corrosion
- Replaceable Crystal white clear glass
- Recessed Tail cap switching mechanism is designed to prevent unintentional activation of the torch
- Weatherproof and light weight (weight approximately : 200 Grams)
- Conveniently located On/off Switch momentary (instant start up) for easy one handed operation
- Instant –ON operation; lamp reaches full intensity immediately.
- 60,000 Hour LED service life

Technical Specification :-

- LED Emitter: one UV A LED , LED Circuit : constant current control Led driver
- Reflector type: aluminum reflector , Wave length: $365\pm 5\text{nm}$
- Intensity : $> 5000\mu\text{w}/\text{cm}^2$ at 38 cm (15 inches)

Battery : -

- Battery Operating voltage: 3.7 VDC, 3000mAh Lithium-Ion
- Running time : Approx : 3 Hrs , Charging time : Approx : 2Hrs

Charger : -

- 110v-240v Charger for use from electrical outlet
- Capacity: Two 18650 batteries can be charged simultaneously.

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UV LIGHT METER - UV 340A

Product Details:

FEATURES
* Professional, high quality UV meter.
* Ultra-violet irradiation measurement for UVA & UVB.
* UV detector spectrum from 290 nm to 390 nm.
* Hi, Lo measurement range. 19990 and 1999 $\mu\text{W}/\text{cm}^2$.
* Exclusive UV sensor structure.
* Sensor with cosine correction filter.
* Build Zero button.
* Microprocessor circuit provides high reliability and durability.
* Separate probe allows user to measure at an optimum position.
* LCD display, easy readout.
* Heavy duty & compact housing case.



Specifications:

Make	Lutron
Model	UV 340A
Display	LCD size : 18 mm x 45 mm. , Maximum indication - 1999.
Measurement ranges & resolution	2 ranges : Hi & Lo range, Lo range : $1999 \mu\text{W}/\text{cm}^2 \times 1 \mu\text{W}/\text{cm}^2$ Hi range : $19990 \mu\text{W}/\text{cm}^2 \times 10 \mu\text{W}/\text{cm}^2$
UV sensor spectrum	Band pass 290 nm to 390 nm.
Accuracy	$\pm (4 \% \text{ FS} + 2 \text{ dgt})$ FS : full scale Calibration is executed under the UVA light and and compare with the standard UVA light meter.
Sensor Structure Buttons. Switch	The exclusive UV photo sensor with the cosine correction filter. Power button, Zero button, Range switch
Sample Time	Approx. 1 sec.
Sensor Structure	Microprocessor circuit. Over Range indication
Operating Humidity	Less than 85% R.H.
Power Supply	DC 9V battery
Size	Main instrument : 131 x 70 x 25 mm. Sensor probe head : 45 mm dia x 32 mm , Sensor probe handle : 125 x 24 mm dia.

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LUX METER



Technical Specifications:-

Make	LT
MODEL	LX-101A
Measuring Range	0 - 2,00,000 Lux , 0 - 18500 Fc
Accuracy	$\pm 3\%rdg \pm 0.5\% f.s.$ (<10,000 Lux) $\pm 4\%rdg \pm 10\% dgts.$ (>10,000 Lux)
Digital Update	2 times / Second
Photometric Sensor	Silicon diode
Silent Features	Automatic measurement function LUX/FC Unit Selection function Data rise and fall time is short After 5 minute Auto Power OFF MAX / MIN measurements Low Battery indication Backlight function Power Supply : - 6F22 9V battery

ANALOGUE GAUSSMETER



Introductions : -

Thanki Engineering Solutions offer best analog magnetic field strength indicator or Gaussmeter. Gaussmeter is a pocket size do not require battery. Gauss meter used to detect magnetism after demagnetizing. It has a scale of positive and negative polarity in small divisions reading in gauss, 10-0-10 or 20-0-20 or 30 -0-30 or 50-0-50. Gauss meter can be used to detect magnetic fields in steel and iron objects. Gauss meter is used to test a variety of metal objects around the home to see if they have been magnetised due to stray voltage in the air. Simply place the tester near to or against the object being tested and the needle will indicate any present magnetism and its polarity. Gauss meter is very popular in pipe mills, offshore and welding inspection of pipelines.

Models:

10 - 0 - 10 Gauss , 20 - 0 - 20 Gauss , 30 - 0 - 30 Gauss , 50 - 0 - 50 Gauss

Features:

- Calibrated in true gauss with high accuracy
- Available in numerous full scale readings with jewelled movement
- Large 2-1/2" face for easy reading
- High stability magnets ensuring long life
- Placed in a helmholtz standard the readings for accurate readings
- Optional padded cases available
- With NPL traceable Calibration certificate.

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DIGITAL GAUSSMETER - D 20B



Product Details:

Model D20-B Digital Gaussmeter is useful to measure DC magnetic field and it measures fields and operates on 9V battery as well as on external 9V Dc regulated supply , Model D-20B is a low cost digital instrument for measurement of d.c. magnetic fields using Hall probes. It has ranges, 2K and 20 K Gauss. A built in calibration facility ensures quick check of calibration. All the controls are mounted on the front panel and are clearly designated. An attractive plastic cabinet with carrying handle cum tilt bracket makes the instrument light in weight and portable LED display gives direct reading with 1 gauss resolution on the 2k range and 10 gauss resolution on the 20k range. The unit is supplied with a calibrate transverse hall probe of 50mmx 1.5mm with the actual sensing area of 1sq.mm from the tip.

SPECIFICATIONS :

Ranges Full-scale	:	0 to 2 and 0 to 20 Kilo Gauss
Accuracy	:	$\pm 1\%$ full scale + one digit on the 2 K. Gauss range.
	:	$\pm 2\%$ full scale + one digit on the 20 K. Gauss range.
Resolution	:	0.1% of full scale.
Visual Display	:	3½ Digit panel meter.
Power	:	240 V a.c. 50 Hz., 10 Watts.
Size & Weight	:	210 mm x 95 mm x 225 mm and 1 Kg approx.

OPTIONAL ACCESSORIES :

- Axial Hall probe for axial field measurements.
- Reference Magnet

APPLICATIONS :

General purpose instrument for accurate flux density measurement on magnetic and electromagnetic components such as relays, dc. motors, magnets, loud-speakers etc. Very useful for on line production.

DIGITAL GAUSSMETER - RM 200-D



Introduction :

Model **RM200-D** digital residual field meter is portable instrument which measures the residual magnetism in demagnetised iron and steel objects. The unit can be operated on 9V battery as well as on external 9V DC regulated source. It is internally calibrated and it measures fields from 0.1 gauss to 200 gauss full scale.

The Hall Probe : - The Hall probe is made up of a highly pure Gallium Arsenide crystal. It is mounted on a non-magnetic substrate of 50mm(l) x 5mm(b) x 1mm(t) and is located at the front edge. It is encased in a pen type aluminum holder. Do not use the probe for temperature above 600 C. When not in use, the probe is to be capped.

SPECIFICATIONS :

Measuring Ranges	0 to 199.9 Gauss
Indication	3 1/2 digit LCD display
Resolution	0.1 Gauss
Accuracy	$\pm 1.0 \%$
Power	9V battery type 6F22 or equivalent.
Battery life	18 hours continuous
Dimensions	180 x 100 x 50 mm

* **Calibration traceable to NPL, Delhi standard magnet**

General purpose instrument for accurate flux density measurement on magnetic and electromagnetic components such as relays, dc. motors, magnets, loud-speakers etc. Very useful for on line production.

DIGITAL GAUSSMETER - ACCUPLUS

Innovative Features:

Latest Technology With Use of Smart Microcontroller
Complete Digital Circuit.
Straight Direct Measurement.
Stable And Repeatable Readings.
Highest Accuracy And Resolution.
Calibration Function.

Probe Design:

Quality Probe For High Service Life.
Highly Flexible Probe Cable with Strain Relief.

Ergonomics:

Compact And Light Weight Instruments.
Full ABS High Impact Resistant Body.
Attractive Instrument Display And Visuals.
External Battery Compartment.

Display:

Large Display
Sun Readable
Energy Efficient



Technical Specification:

Instruments	Gauss Meter
Measurement Range	0-1999 Gauss / 20 Kilo Gauss(20000)
Accuracy	±2% of Total Range
Display	3 ½ Digital LCD
Battery	1 (9V)
Operating Time	40-50 Hours (With Alkaline Batteries)
Size	135 X 70 X 24mm
Weight	400 Gms.(Including Batteries)

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MPI Calibration Blocks

		
PIE FIELD INDICATOR	BURMAH CASTROL STRIP	BHEL TEST BLOCK
		
LIFTING BLOCK	ASTM TEST BLOCK	QQI SHIMS
		
KETO'S RING	MTU BLOCK	ANALOGUE GAUSSMETER
		
RUBBER BLOWER	ASTM CENTRIFUGAL TUBE	COPPER PAD

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CENTRIFUGE TUBE WITH STAND

GENERAL DESCRIPTION :-

Centrifuge Tubes are used to monitor the concentration of magnetic particles and the level of contamination in fluorescent and visible baths.

BATH STRENGTH :-

The amount of magnetic particles per gallon of fluid in the inspection bath is called its strength or concentration. If the bath concentration is below recommended strength, weak particle indications will be produced or possibly no indication will appear; therefore, defects will not be detected. If there are too many particles in the bath, indications may be masked by heavy background build up. The usable limits of bath strength are quite broad, but for consistent results the bath strength should be maintained constant at all times.

A light bath strength usually forms good indications on deep cracks, but a heavier particle concentration will show fine defects better. The bath concentration, which will best detect all defects, should be determined and held constant. Bath strength should be checked at least once each day.

After the entire bath has been thoroughly mixed and agitated, it is essential to check it for strength. The most widely used method is by gravity settling in a graduated ASTM pear shaped centrifuge tube.



TYPE OF MAGNETIC PARTICLE	MEASUREMENTS PRINTED ON TUBES
Visible	1.5 mil in .10 ml graduations
Fluorescent	1.0 ml in .05 ml graduations OR 0.2 ml in .01 ml graduations

DAILY INSTRUCTIONS (INCLUDING NEW BATH) :-

1. Let pump motor run for several minutes to agitate the suspension
2. Flow the bath mixture through hose and nozzle for a few moments to clear hose.
3. Fill the centrifuge tube to the 100 ml line.
4. Place the tube in the stand at a location free from vibration and let stand for 30 minutes for a water bath and 60 minutes for an oil bath to allow particles to settle out.

The gravity settling method applies to either oil or water suspension. In hot weather the water bath should be checked more often as is it more volatile than oil. Therefore, as water is lost by evaporation, it must be replaced.

The settled particles (measured in ml) in the bottom of the tube indicate the amount of magnetic particles in suspension. A UV light, must be used for fluorescent particles.

Do not include dirt particles in your centrifuge tube readings. They usually settle on the top of the magnetic particles. Dirt will not fluoresce under a black light.

In visible particles, the appearance of dirt is very different than that of the particles. Dirt will be coarser and irregular in shape. See illustrations on page 3 for recommended settling volume.

SPECIFICATIONS COMPLIANCE ASTM E709-08 (Sections 20.6.1 & X5) ASTM E1444/E1444M-12 (Section 7.2.1) BPVC (Section V, Article 7: T-765).

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MPI Equipments

		
Yoke (AC/HWDC)	Yoke (Battery Operated)	Permanent Magnet Yoke
		
MPI PROD	UV LED LIGHT	UV LIGHT

MPI Consumables

Sr No	Model	Description
1	7C BLACK	7C Black , Magnetic Powder (Dry+Wet) , Magnaflux Make , 1 Kg
2	8A RED	8A RED , Magnetic Powder (Dry) , Magnaflux Make , 1 Kg
3	1 GREY	1 GREY , Magnetic Powder (Dry) , Magnaflux Make , 1 Kg
4	7HF	7HF Magnavis Black , Magnetic Ink , Magnaflux Make , Premix Aerosol - 500ml
5	WCP-2	WCP-2 , White Contrast , Magnaflux Make , Aerosol - 500ml
6	MG 2410	MAGNAGLO MG 2410 , Magnetic Powder (Fluorescent) , Magnaflux Make , 1KG
7	MG 410	MAGNAGLO MG 410 , Magnetic Powder (Fluorescent) , Magnaflux Make , 1KG
8	WA-2B	WA-2B ,Water Conditioner , Magnaflux Make , 1 Kg+D148
9	MSL-61B	MSL-61B , White Contrast , P-Met Make , Aerosol - 400ml
10	ML-72B	ML-72B black , Magnetic Ink , P-Met Make , Aerosol - 400ml
11	MR 76 S	MR 76 S Magnetic Powder suspension , M R CHEMIE Make - Aerosol - 500ml
12	MR 72	MR 72 White Contrast Paint, M R CHEMIE Make - Aerosol - 500ml