

ELECTROMAGNETS

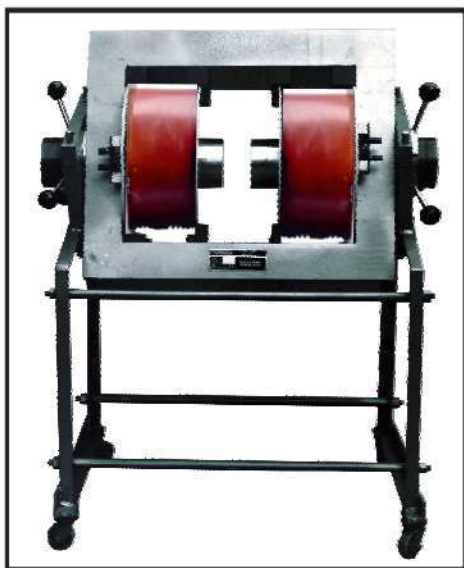
Since 1966, we are manufacturing Electromagnets for research and education. Our dedication to the series of Electromagnets has enabled us to develop Electromagnets with different capacities and sizes, in addition to magnetic field measuring instruments for analyzing magnetic fields and laboratory magnetic systems. These are available in five different models. Each magnet is precisely machined, and well finished made from soft iron blocks, specially selected for this purpose.

FEATURES:

- » Yoke construction for high inherent homogeneity over a wide field range
- » High efficiency copper wound coils for high magnetic field per K. W. inputs.
- » Air gap in continuously variable
- » Low residuals
- » Two way knobbed wheel screw system, for varying air gap
- » Superior homogeneity.
- » Tapered and flat pole caps are supplied with the magnet. To change poles, simply unscrew the cap and replace it with another cap as desired.

APPLICATIONS:

- » Magnetic hysteresis studies
- » Magnetic susceptibility measurement
- » Hall effect studies
- » Magneto optics experiments
- » N.M.R. (Nuclear Magnetic Resonance) studies
- » Quantum mechanics analysis
- » Biological Studies



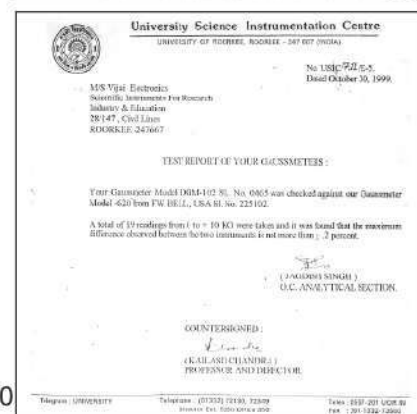
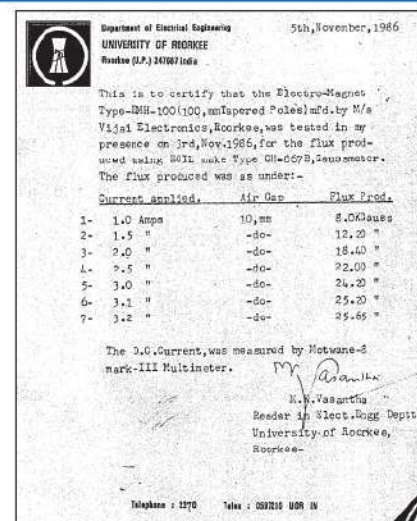
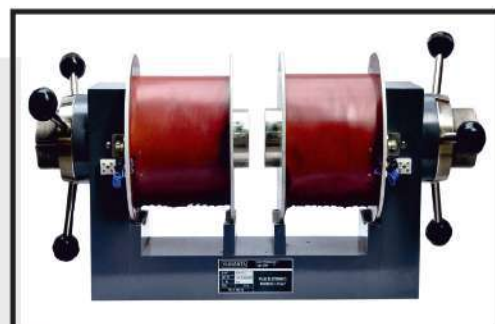
ELECTROMAGNET MODEL-EMH-100 SPECIFICATIONS:

- Field** : 14 K Gauss $\pm 5\%$ with flat faced poles at an air-gap of 10 mm, Air-gap is continuously adjustable upto 100mm, with two way knobbed wheel screw adjusting system but with Tapered poles it produces field upto 22 K, Gauss $\pm 5\%$.
- Poles Pieces** : 100 mm. in diameter.
- Energizing Coils** : Two, each coil is wound on non-magnetic former and has a resistance of 14, ohms approximately.
- Power requirement** : 0-6, Amps.

ELECTROMAGNET, MODEL-EMU-75.

SPECIFICATIONS:

- Field** : 12.5 K Gauss $\pm 5\%$ with Flat faced poles at an Air-Gap of 10, mm. The air-gap is continuously variable upto 75, mm with "Two way knobbed wheel screw adjusting system" but with Tapered Poles it produces field upto 18K, Gauss $\pm 5\%$.
- Poles** : 75 mm., in diameter.
- Energizing Coils** : Two, each coil is wound on non-magnetic former and has a resistance of 11, ohms approximately.
- Power Requirement** : 0-5, Amps.





Excellency in Quality

VIJAYANTA

ELECTROMAGNETS & MAGNETIC FIELD MEASURING DEVICES



ISO 9001:2000
Quality Management System
Cert. No. 1088

ELECTROMAGNET, MODEL – EMH – 75.

(Vertical Mounting)

SPECIFICATIONS:

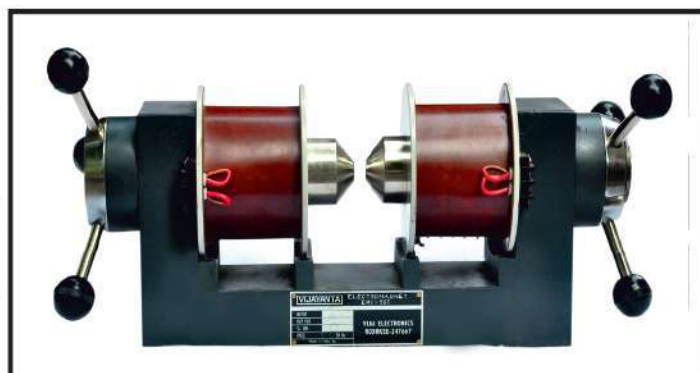
- Field** : **12.5 K Gauss, $\pm 5\%$** with Flat faced poles at an Air-Gap of 10, mm. Air gap is adjustable from **0- 95mm**, with “Two way knobbed wheel screw adjusting system” but with Tapered poles it produces **18 K gauss $\pm 5\%$** at 10mm air gap
- Poles** : **75mm.**, in diameter
- Energizing Coils** : Two each coil is wound on non – magnetic former and has a resistance of 11, ohms /coil (app.).
- Yoke material** : Made out of soft iron blocks.
- Power Requirement** : 0 – 5, Amps.



ELECTROMAGNET, MODEL – EMU – 50.

SPECIFICATIONS:

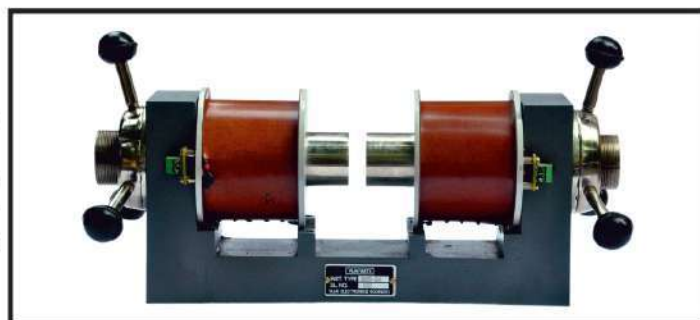
- Field** : **7.5 K Gauss $\pm 5\%$** with Flat faced poles at 10 mm Air-Gap between poles . The air-gap is adjustable by the help of “Two way knobbed wheel screw adjusting system” from 0-55mm but with Tapered poles it produces field upto **10 K Gauss $\pm 5\%$** .
- Poles** : **50mm.**, in diameter
- Energizing Coils** : Two each coil is wound on non – magnetic former and has a resistance app.: -4.0 ohms /coil.



ELECTROMAGNET, MODEL – EMU – 35.

SPECIFICATIONS:

- Field** : **5.5 K Gauss $\pm 5\%$** , with Flat faced poles at 10 mm air gap . The air-gap is adjustable upto 0-40mm , with “Two way knobbed wheel screw adjusting system”
- Poles** : **35, mm.** flat faced poles
- Power Requirement** : 0 – 3, Amps.
- Energizing Coils** : Two each coil is wound on non – magnetic former and has a resistance 4.5 ohms coil app.



Note:-

Poles: Flat & Tapered pole caps are supplied with EMH-100 and EMU-75 magnet. To change the pole simply unscrew the cap and replace it with another cap as desired.



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ELECTROMAGNETS & MAGNETIC FIELD MEASURING DEVICES



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CONSTANT CURRENT POWER SUPPLIES

GENERAL

For unmatched efficiency and reliability power, mosfets employs in these Power Supplies. These units are specially designed for Electromagnets and for similar equipment.

The control circuit is assembled on a glass epoxy PCB. The design is based on latest I.C.'s and components, these are highly regulated current sources.

FEATURE:

- Builtin Spikes, Surge and Noise Suppressor.
- Electronic overload protection and short. Circuiting protection.
- High Regulation.
- Continuously variable current.
- Very Low Ripples.
- Advance MOSFET Technology.

SPECIFICATIONS:

Input	: 220 Volt, 10%, 50 Hz, Single Phase.
Output	: As given below.
Stabilization	: Better than 0.1% for 10% changes in mains.
Load Regulation	: Better than 0.1% for no loads to full load.
Metering	: 3½ digits digital current meter mounted on front panel to read output.
Protection	: The unit is fully protected against over loading and short circuiting.

1. Model – CC – 100



0 – 6, Amp Suitable
for Electromagnet, Model EMH-100

2. Model – CC – 75



0 – 5, Amp. Suitable for
Electromagnet, Model EMU-75/ EMH - 75

3. Model – CC – 50



0 – 4, Amp. Suitable for
Electromagnet, Model EMU-50.

4. Model – CC – 35



0 – 3, Amp. Suitable for
Electromagnet, Model EMU-35.



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ELECTROMAGNETS & MAGNETIC FIELD MEASURING DEVICES



ISO 9001:2000
Quality Management System
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MAGNETIC FIELD MEASURING DEVICES

DIGITAL GAUSS METER, MODEL – DGM – 100

DGM – 100, Gauss meter operates on the principle of hall effect in semiconductors. A semiconductor material carrying current develop an electromotive force, when placed in a magnetic field, in the direction perpendicular to the direction of both electric current and magnetic field. The magnitude of this e.m.f. is proportional to the field intensity if the current is kept constant. This e.m.f is called **Hall voltage**. This small hall voltage is amplified through a high stability amplifier so that a mill voltmeter connected at the output of the amplifier which can be calibrated directly in **magnetic field units (gauss)**.

FEATURES:

- Magnetic Field Measurement.
- Excellent Linearity.
- I.C. Controlled Circuit
- Excellent Stability

SPECIFICATIONS:

Ranges	: 0-2 Killo Gauss & 0-20 Killo Gauss
Resolution	: 1, Gauss at 0-2 K Gauss range
Accuracy	: $\pm 0.5\%$
Temperature	: Upto 50°C
Display	: 3½ Digits, 7 segment LED Digital Panel Meter
Power	: 220 volts $\pm 10\%$ 50 Hz
Transducer	: Hall Probe with an imported Hall element .
Special feature	: Hall Probe also indicates the direction of magnetic field.



DIGITAL GAUSS METER, MODEL – DGM – 100 A



Same as above but

Ranges	: Three as under –
	• 0 - 2 kilo gauss
	• 0-20 Kilo gauss
	• 0 - 40 kilo gauss.
Application	: DGM – 100 is ideally suitable to measure high magnetic field i.e. upto 40 Killo Gauss in 3 ranges.
Accuracy	: Better than $\pm 0.5\%$
Linearity	: Better than $\pm 0.25\%$

ADJUSTABLE MULTI UTILITY STAND



Stand is suitable for mounting both types of **Hall Probes**, and **Quinck's Tube**

Manufactured with non-ferrous material, convenient in use.