

Digital Iron Loss Tester DW22



The DW-22 is a fourth-generation single sheet iron loss tester engineered for rapid and reliable evaluation of core losses in electrical steel sheets such as CRGO, CRNO, motor stampings, and EI laminations. Ideal for both fully processed and semi-processed non-oriented steels, the DW-22 delivers direct watt/kg readings with exceptional accuracy. For high-precision applications, an Epstein Tester is recommended; however, DW-22 offers an excellent balance of portability, ease of use, and accuracy for routine inspections.

Operating Principle

DW-22 uses a stroboscopic probe that completes a magnetic circuit with the specimen. This probe contains primary and secondary coils, functioning similarly to a transformer. When the primary coil is energized, the induced signal in the secondary coil is measured. These signals, along with specimen data such as core area and weight, are processed by the MCU, yielding accurate power loss in watt/kg.



Key Features

- ✓ Crystal-accurate inbuilt sine wave generator
- ✓ Test frequencies: 50 Hz & 60 Hz
- ✓ Automatic probe and sample detection
- ✓ Overload protection
- ✓ Rotary knobs for setting thickness and induction (Tesla)
- ✓ Graphic LCD display (128x64 pixel)
- ✓ Compact & portable design
- ✓ Direct readings up to 25 W/kg
- ✓ Auto-detection of small & big probes
- ✓ Suitable for any size of specimen, no need to cut.



GOPAL ELECTRONICS

Technical Specifications

Category	Specification
Power Supply	AC 110 V @ 60 Hz or 230 V @ 50 Hz (Universal Auxiliary Supply)
Power Consumption	10 VA $\pm$ 20%
Test Frequency	50 Hz & 60 Hz
Magnetic Capacity	Up to 1.8 Tesla @ 0.5 mm specimen thickness
Induction Range	1.0 – 1.8 Tesla
Thickness Range	0.18 mm – 0.65 mm
Voltage Accuracy	$\pm$ 0.1%
Current Accuracy	$\pm$ 0.1%
Power Accuracy	$\pm$ 0.2%
Frequency Accuracy	$\pm$ 0.05 Hz

Specimen Requirements

Parameter	Specification
Standard Specimen Size	30 mm $\times$ 305 mm
Minimum Specimen Size - small probe	45 mm $\times$ 15 mm
Minimum Specimen Size - big probe	60 mm $\times$ 20 mm
Compatible Materials	CRGO, CRNO, HR Steel, Electrical Steel Sheets
Type of Steel Supported	Oriented, Non-Oriented, Sheared, Annealed

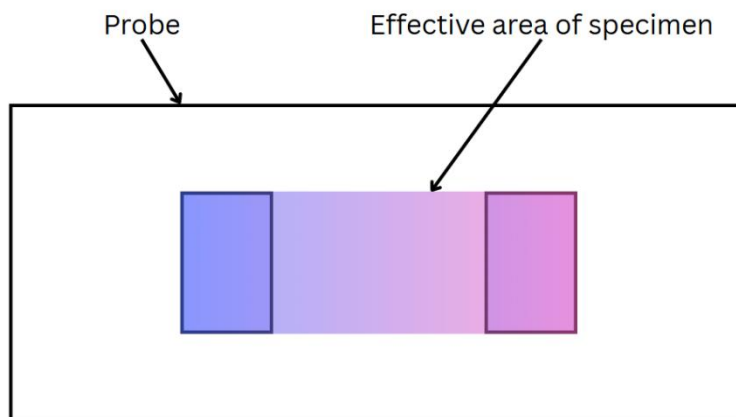


GOPAL ELECTRONICS

Probe selection

Users that require to test small stamping, EI lamination sheets, motor laminations, and other types of small laminated sheet samples, they should buy Small probe. If no need for testing small laminated sheet then user can select big probe; as the effective area will be bigger for big probe.

Probe by size	Big probe/ small probe(Standard: Big Probe)
Effective area of specimen	45 mm × 15 mm (Small probe), 60 mm x 20 mm (Big probe)



Applications

- Quality control for electrical stamping suppliers
- Evaluation of motor laminations, fan motor cores, and EI cores
- Quick analysis of semi-processed and oriented steels (sheared or annealed)



GOPAL ELECTRONICS