

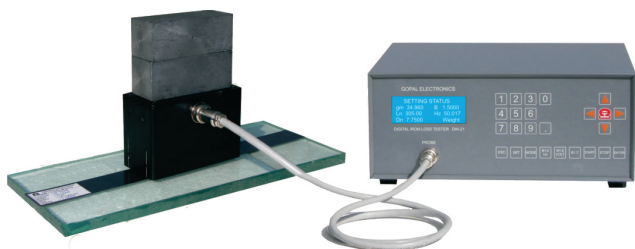
Digital Iron Loss Tester DW-21

DW-21 is very easy and very accurate single sheet iron loss tester. It has given two way measurement capabilities. one is by weight method and other is by thickness method. All parameters are digitally programmable using keypad. Separate setting keys are given for three standard induction input. User can test the specimen from 35Hz to 125Hz. All parameter of source and measure are controlled by micro controller so it gives best in class accuracy of Watt/kg measurement.

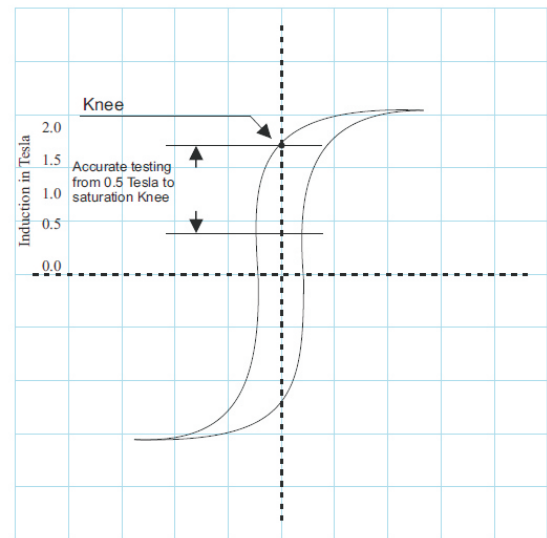
DW-21 can be expressed as economic alternate of Epstein Tester. It is based on single strip testing method so it's measurement accuracy is near to standard epstein test method.

Key Features

- Better accuracy than ever
- Microcontroller based design
- Pure sinusoidal source and measure
- Long terms stability and accuracy maintain
- Password protected calibration
- 24 feather touch Keys for easy operation
- Digital setting for all data (Hz,B,Th,Dn etc.)
- Direct key to enter three usual induction
- 20 x 4 character LCD display
- Direct readings of W/Kg & W/lb
- Connector type low loss probe
- Three mode for easy & accurate operation
- Last setting save in nonvolatile memory
- Standard & big size of sample possible to test
- Self demagnetizing process
- User-friendly operation & portable size



35Hz TO 125Hz
Source & Measure



Operation Theory

DW-21 is provided with a stroboscopic probe when placed on specimen, closes the magnetic path between probe and specimen. Probe has two coils one is primary and second is secondary (like transformer). When power applied to primary coil and detected by secondary coil appropriate to specimen data and measure voltage, current and power. Then measured data calculated by microcontroller appropriate to specimen's data (core area and weight) and directly displayed on LCD Watt/Kg and Watt/lb.

Scope of Measurements

- Iron Loss Watt per Kg
- Iron Loss Watt per pound

Technical Specification

Power Supply	= AC 230V / 110V, 50/60Hz (any one) 20VA
Source Capacity	= 1.5V x 300mA Sine wave
Frequency Range	= 35Hz to 125Hz
Measuring Range	= 0.1 to 22 Watt/kg and 10 Watt/lb
Magnetic Flux Density Range	= 0.2 to 1.8 Tesla (weber/square meter) or limited to source capacity

Accuracy

Volt Meter	= $\pm 0.1\%$ FSD True RMS Volt
Amp. Meter	= $\pm 0.1\%$ FSD True RMS
Power Meter	= $\pm 0.1\%$ FSD @ 1PF
Frequency	= $\pm 0.1\%$ which Instrument can set
Watt/kg (Iron Loss)	= Refer comparison table

Dimensions

Dimension of Main Unit	= H 110mm + Leg, L 280 mm, W 230 mm Approx.
Dimension of Probe	= H 72 mm, L 113mm, W 50mm
Weight of Main Unit	= 3.870 Kg. Approx.
Weight of Probe	= 872 gm Approx
Dimension of final carton	= H 390mm, L 390mm, W 240mm Aprox
Weight of final carton	= 5.0 Kg. Approx.

Specimen

Standard Specimen Size	= 30x305 mm to 30x280 mm
Non Standard Specimen Size	= More than 30x115 mm for comparisons
Specimen Thickness Range	= 0.1 to 0.75mm

Accuracy Comparison with Standard Epstein Test Method

• Eight Strips of each material tested by DW-21 and average of them is compared to standard Epstein tester EP-350

Type	ID	Thickness	1.0 Tesla		1.5 Tesla		1.7 Tesla	
			Epstein	DW-21	Epstein	DW-21	Epstein	DW-21
CRGO	GP-10	0.3mm	0.393	0.414	0.918	0.964	1.331	1.306
CRNO	GP-4	0.5mm	2.336	2.307	5.108	4.96	6.699	6.571
CRNO	21 Sample	0.35mm	0.863	0.855	2.249	2.001	--	--
CRGO	GPCRGO	0.23mm	0.296	0.296	0.695	0.687	1.064	0.985