TY2100 Surface Magnetic Field Automatic Testing System V4.0

*Above picture is only for reference, subject to actual delivery

1. Summary

TY2100 is a special equipment for automatically measuring the magnetic field distribution of permanent magnet materials and motor rotor surface. It can automatically scan specimens surface in three-dimensional and calculate the surface magnetic field distribution.

2. Features

- **Tesla-Meter:** Measuring range: 0 ～ 2000mT, minimum resolution: 10μT, uncertainty of measurement: 0.5%.
- **Rotating test platform:** The test platform is equipped with a rotary chuck, which is driven by a precision stepping motor to drive the tested sample to rotate in the *W*-axis direction.
- **Chuck and bearing:** the concentricity of the standard chuck is 0.05 *mm*, which makes the operation more stable.
- **4 axis motion cotrol：** The motion control of XYZW axis has two modes: software automatic control and key manual control.
- **Plane sample fixture (optional):** used to measure plane specimens and cube specimens.
- **Radial probe (optional):** used for surface magnetic measurement of plane sample, cube sample, etc.

3. Applications

- **Measuring ring specimens :** It can test cylindrical permanent magnets, multi-pole magnetic rings, magnetic tiles, small motor rotors, etc. of different sizes.
- **Planar specimens measurement (optional):** Planar specimens fixture and Radial probe can be selected to measure the surface magnetic distribution characteristics of plane specimens and cube specimens.
- **Surface magnetic parameters:** pole number, polarity, peak value of magnetic pole, angle, area, width, half-width height, magnetization angle; The results of each table magnetic parameter include maximum value, minimum value, average value, standard deviation , etc.
- **Surface magnetic curve:** *X-Y* rectangular magnetic field distribution diagram, polar coordinate magnetic field distribution diagram, three-dimensional magnetic field distribution diagram, etc.

4. Specifications

Tesla-Meter	**Measuring range**	0 ～ 2000 mT
	minimum resolution	10 μT
	uncertainty of measurement (k= 2)	0.5%
XYZ axis	**Adjustable stroke**	XY axis：0～100 mm
		Z axis：0～200 mm
	minimum resolution	0.01 mm
	Positioning accuracy	± 0.02 mm
W 轴	**Subdivision**	50000 / 360°
	Concentricity	0.05 mm
	Maximum rotation speed	2s / 360°

5. Specifications of specimens

Ring specimens	Chuck clamping range	Internal diameter: Φ 2 mm ~ 70 mm External diameter: Φ 24 mm ~ 64 mm
	Diameter	≤ Φ 350 mm
	Quality	≤ 3 kg
Flat specimens	Size	≤100 mm × 100 mm (L×W)
	Quality	≤ 3 kg

6. General specifications

Power supply	AC (220 ± 22) V，(50 ± 2) Hz
Temperature performance	Working temperature：0°C～40°C； Storage temperature：-20°C～70°C
Humidity performance	Working humidity：40%～80% R·H，No condensation Store humidity：< 95% R·H，No condensation
Size	450 mm(W) ×510 mm(D) × 710 mm(H)