



## XRD Diffractometer FM-XRD-A100

### Overview

XRD Diffractometer FM-XRD-A100 has a scanning range of  $-110^{\circ}$  to  $161^{\circ}$  and a scanning speed between  $0.0012^{\circ}$  and  $120^{\circ}/\text{min}$  for precise angle measurement. It supports transmission mode for enhanced flexibility in data collection. This unit offers high resolution and a strong diffraction signal for reliable results. Our XRD Diffractometer comes with a lead door interlocking device for enhanced safety.

### Specifications :

Scanning Range	$-110^{\circ}$ to $161^{\circ}$
Scanning Speed	$0.0012^{\circ}$ $120^{\circ}/\text{min}$
Minimum Stepping Angle	$0.0001^{\circ}$
2, Angle Repeatability Accuracy	$0.0001^{\circ}$
Angle Positioning Speed	$1500^{\circ}/\text{min}$ (2,)
Structure of Angle Measuring Instrument	Vertical angle measuring instrument with ,s-,d structure (224-bit absolute incremental grating)
Scanning Radius	Standard 225 mm (continuously adjustable from 150 mm to 325 mm)
Drive Mode	,s-,d linkage; ,s or ,d single action
Output Stability	$\pm 0.005\%$ (with power supply voltage fluctuation of 10%)
Linearity of Full Spectrum Diffraction Angle	$\pm 0.01^{\circ}$ (International Standards)
Spectral Resolution	$687 - 5$ [eV] (rms) (MYTHEN) or 125 [eV] (SDD)
Maximum Linear Count Rate	$1 \times 10^6$ CPS (no noise, MYTHEN) or $1 \times 10^5$ CPS (noise $\pm 0.2$ CPS, SDD)
X-Ray Leakage	$\leq 0.12 \mu\text{Sv/h}$ (at maximum X-ray tube power)
Comprehensive Stability	$\pm 0.3\%$ (40 kV, 40 mA, continuous operation for 8 hours)
X-Ray Tube Voltage	10 60 kV, 1 kV/step
X-Ray Tube Current	2 60 mA, 1 mA/step
Power Supply	2.4 kW / 3 kW
Dimensions (L xW xH)	1300 x1000 x1800 (mm)

### Features :

- Integrates electronic Protection System
- Ensures ultra-high resolution
- Incorporates one-dimensional array detector
- Inbuilt circulating cooling water device
- Equipped with a printer

### Applications :

XRD Diffractometer FM-XRD-A100 is used to measure the structure, composition, and properties of materials by analyzing the way they scatter or diffract a beam of radiation and is mainly used in scientific research, the pharmaceutical industry, and nanotechnology.