

XRD - 3270

XRD



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Analytical Technologies Limited

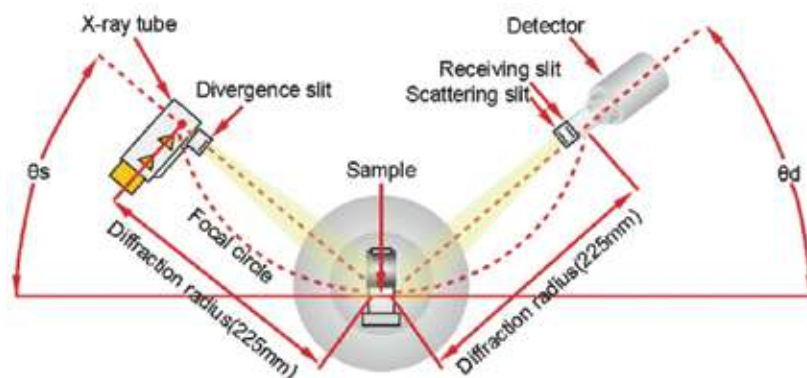
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►► XRay Diffractometer

This XRD adopts the most advanced technology. The angle accuracy and precision of the goniometer has reached world advanced level.

The light source and detector can work stably for a long time to ensure the accuracy and precision of diffraction Peak Position. Peak shape and intensity measurement.



θ-θ XRD Geometrical optical diagram

►► Main Technical Parameters

High stability X-ray source Unit

Rated power: 3 kW (HF HV control technology)

Tube voltage: 10~60k V, 1kV/step;

Tube current: 5~50mA, 1mA/step;

Stability of tube voltage and tube current: ≤0.005% ;

There is Protection for over voltage, over current and over power and water depletion.

X-ray tube: metal ceramic x-ray tube / Cu Target / Focus size: 1x10mm²/ 2.4kW

High Precision Goniometer Unit

Goniometer: Adopt servo motor and optical coding technique to drive θs and θd;

Scanning mode: θ-θ goniometer; it is vertical; the sample is put horizontally

2θ measuring range: -6°—160°. Radius of goniometer: 225mm;

Scanning mode: continuous, stepping and Omg;

Minimum step width Angle: 0.0001°

Angle accuracy: ≤0.001°; Angle repeatability: ≤0.0001°

It can cancel the idle running and do angle calibration automatically.

Angle locating speed: 1500°/min;

Diffraction Angle linearity: the Angle deviation of all peaks within the full spectrum shall not exceed +0.02°.

►► **Detector Unit**

Closed proportional Detector

Spectral resolution: <25% (Cu α K spectral line)

Maximum linear count rate: >5x10⁵cps

Protection

X-ray scattering ray protection device is safe and reliable with interlocking mechanism. When the sample is measured, the radiation-shielding door is automatically forbidden to open, which can protect the operator from the scattering ray radiation under any circumstances, and the scattering ray dose conforms to the international standard 1.0 sv/h.

Control and processing software

Windows 10 operating system;

Qualitative and quantitative analysis of material phases, $K\alpha_1$, α_2 peeling, Full spectrum fitting, peak fitting, FWHM and grain size calculation, crystal cell measuring, second kind stress calculation, diffraction line indexation, multiple plotting, 3D plotting, diffraction data calibration, background subtraction, quantitative analysis without standards, full spectral image fitting (WPF), XRD diffraction image simulation, etc.

►► Configuration List

Part	Configuration	Qty	Remark
X-ray high-voltage Generator	(1)AF3 X ray high frequency high voltage generator	1	High frequency & High Voltage
	(2)X27.05 high voltage cable 100kVP	1	3 Meters
	(3)3310 pipe sleeve (including auto shutter)	1	
	(4)X25.07X-ray generator auto control system	1	Includes 1 cable
	(5)X25.0 2 stage Metal shell	1	Lead and lead glass
	(6)AS2901/24Metal ceramic insulation X-ray tube	1	Cu target, 2.4kW
Goniometer System	(1)AG-3512H/DW -3270 Agonimeter	1	θ - θ Structure
	(2)Slit and power sample holder	1	1 for each
	(3)Through-hole sample plate	5	Aluminium matrix
	(4)Blind-hole sample plate	15	Glass matrix
	(5)Filter	1	Match with target material
	(6)Slite plate and lighting system adjustment accessories	1	
Recording and Controlling System	(1)Closed proportional detector	1	Includes 1 connection cable
	(2)Recording and controlling unit	1	
	(3)Motor and comunication cable	1	2 motor cables, 1 comunication cable
	(4)Power suppl	1	
Circulating water cooling system	(1)DWC-3Circulating water cooling system	1	Split structure
	(2)Circulating water connecting system	2	
PC System	(1)Intel i proccessor, RAM 4G, 128G Solid state disk, 19 inch LED, High performance HD display card	1	DELL
	(2)HP1108 A4 Laser printer	1	
System control and application software	(1)DW Series Diffractomer control program system	1	Window 10
	(2)Phase qualitative and qualitative analysis software	1	
	(3)Data proccesing and application software	1	
	(4)Diffraction data card base	1	
	(5)Crystal structure data base	1	

Technical Documnts	(1)DW series XRD user manual	1	
	(2)Data process and application software user manual	1	
	(3)DWC 3 circulating water cooling system user manual	1	
Accessory	(1)DW S 3 crystal graphite monochromator	1	Reflectivity > 28%
Spare Part	(1)Fuses 1, 1.5, 2, 2.5, 3, 3+A	10	10 for each
	(2)Tools	1	
	(3)Agate Mortar Φ 100mm	1	

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HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

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Spectrophotometer



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