

# Thermo Scientific ARL EQUINOX 5000 Series

High Resolution X-Ray Diffractometer

The Thermo Scientific™ ARL™ EQUINOX 5000 is a multi purpose X-ray diffractometer designed specifically for high level research applications including powder analysis, thin layer analysis, texture, stress, and micro diffraction.

The system utilizes a unique tall vertical goniometer in  $\theta/\theta$  or  $\theta/2\theta$  mode and the user has a large choice of features including higher resolution detectors and a large choice of X-ray sources. The free space in the sample compartment is very large and will accommodate practically any sample and any sample handling device including furnaces, auto samplers, and large assemblies.



Perfect for advanced research applications.



Research



Environment / Geology



Polymers /  
Biomaterials



Metallurgy



Electronics



Photovoltaic

The EQUINOX 5500 is an evolution of EQUINOX 5000 model. It is exactly the same configuration except that it works with a bigger radius of curvature detector. So, obtained data have a better resolution.

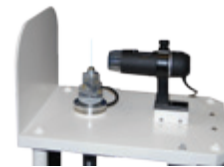


- Real time acquisition**
- Extremely accurate**
- Easy to use**
- No alignment needed**
- Very reliable**
- Superb resolution**
- No maintenance**



## Specifications

X-ray source	Generator: 3500 W (60kV/60mA - Option 30kV limitation Standard sealed X-Ray tube (Cu, Co, Cr, Mo, ... radiation)
Detector	Curved Position Sensitive X-ray Detector, CPS120 Curvature radius: 250mm Acquisition in real time over 120° 2Theta Option: CPS590 (500mm, 90° 2Theta – EQUINOX 5500)
Goniometric table	Theta / Theta or Theta / 2 theta column Motorization per step with encoder, up to 5/10000° Acquisition in asymmetric mode
Sample holders	Fixed, with or without sample rotation Reflection or transmission mode Sample changer: 30 positions Thin film attachment (reflectometry, grazing incidence) Chi/Phi attachment (texture, stress) Mapping attachment (X, Y, Z translations)
In-situ camera	Heating camera: low and high temperature Humidity chamber, Electrochemistry cell Tensile stage
Optic	Monochromatic
Computer	Windows© 8, 7 Vista, XP
Software	Real time diffractogram display Multiple and automatic recording Peak search and deconvolution with several shapes Search match and quantification Degree of crystallinity determination Cell parameters, crystallite size, lattice strain Crystal structure analysis Microstructure analysis Rietveld analysis Phase transition, dynamic studies Thin film and multilayer analysis Free open database, COD Option: ICDD PDF2 or PDF4 databases
Power	30-32A / 208-230V / 50-60 Hz
Cooling water	Flow: ≈ 3,5 L/min - T°C: ≈18 to 25 °C
Dimensions	1815 mm H x 744 mm D x 1206 mm W EQUINOX 5000 1966 mm H x 1445 mm D x 1433 mm W EQUINOX 5500



You want to perform transmission analysis? Choose either the Sample Spinner for reflection and transmission analysis on Powder samples or the Capillary sample holder for Transmission mode analysis depending on your needs.



You need to analysis several powder samples a day, to reduce dramatically operator's time? Optimize your throughput with the 30-positions sample changer.



You need to perform grazing incidence measurement? Try our Thin Layer analysis attachment.



HTK1200N

This system allows you to work with controlled temperature or atmosphere chamber. Anton Paar and other suppliers chambers can be available depending on your needs.



High resolution diffractometer with a CPS 590 curved detector.

## [www.thermoscientific.com/xrd](http://www.thermoscientific.com/xrd)

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**Africa** +43 1 333 50 34 0  
**Australia** +61 3 9757 4300  
**Austria** +43 810 282 206  
**Belgium** +32 53 73 42 41  
**Canada** +1 800 530 8447  
**China** +86 21 6865 4588

**Denmark** +45 70 23 62 60  
**Europe-Other** +43 1 333 50 34 0  
**Finland/Norway/Sweden**  
+46 8 556 468 00  
**France** +33 2 38 80 45 45  
**Germany** +49 6103 408 1014

**India** +91 22 6742 9494  
**Italy** +39 02 950 591  
**Japan** +81 45 453 9100  
**Latin America** +1 561 688 8700  
**Middle East** +43 1 333 50 34 0  
**Netherlands** +31 76 579 55 55

**New Zealand** +64 9 980 6700  
**Russia/CIS** +43 1 333 50 34 0  
**Spain** +34 914 845 965  
**Switzerland** +41 61 716 77 00  
**UK** +44 1442 233555  
**USA** +1 800 532 4752



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