

TurboQ

The New
Generation
of Hi-Vacuum
EM Coaters





High-Vacuum Coating System

The TurboQ is an automated and versatile turbo pumped coater offering unparalleled ease of use. Recommended for sample preparation for the examination of specimens using Electron Microscopy (EM).

**Available in 3 configurations
based on your application needs**

TurboQ S

Sputter coater for noble and/or oxidising metals. Cr target offered as standard.

Options available: Pt, Ir, Au, W, Au/Pd, Pd, Cu, Ag, Ti, Co, Sn, ITO, Mg, Ta, Fe, Al, Mo, Ni

TurboQ E

Evaporation coater for carbon/metal evaporation. Carbon rod source offered as standard.

Options available: Carbon fibre

TurboQ ES

Combined coater offering both sputter coating and carbon and metal evaporation. Cr target and carbon rod source available as standard.

Options available

Targets: Pt, Ir, Au, W, Au/Pd, Pd, Cu, Ag, Ti, Co, Sn, ITO, Mg, Ta, Fe, Al, Mo, Ni

Evaporation source options: Carbon Fibre



SPECIALISTS IN ELECTRON MICROSCOPY SAMPLE PREPARATION

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TurboQ

Features

- ⇒ High vacuum instrument for ultra-high-resolution EM up to and beyond 200k
- ⇒ Ultra fine grain size for high-resolution analysis
- ⇒ Rapid cycle time for maximum sample throughput
- ⇒ Tilt stage design giving uniform coating of complex 3D structures
- ⇒ Film Thickness Monitor (FTM) to control deposition of coating
- ⇒ Intuitive and responsive touchscreen colour panel design
- ⇒ Multi-colour LED visual status indicator offering process updates
- ⇒ Pre-set recipes for standard protocols resulting in sample reproducibility
- ⇒ Customisable recipes for tailored applications
- ⇒ Easy and quick set-up of profiles
- ⇒ Multiple stage options based on application needs



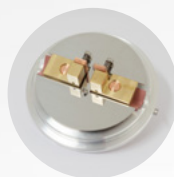
Coating Inserts



Sputter Head



Carbon Rod Head



Carbon Fibre Head



Glow Discharge Head



Metal Evaporation Head

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Standard Stages

Quorum provides a comprehensive selection of sample stages designed to meet a range of application needs. The adaptable stage configurations enable precise control, making them ideal for coating even the most delicate specimens with accuracy and care.



Tilt Stage (Extended)

Configuration: Available on the TurboQ S and ES



Tilt Stage

Configuration: Available on the TurboQ E and ES

Optional Stages



Rota Cota Stage (Extended)

Configuration: Available on the TurboQ S and ES

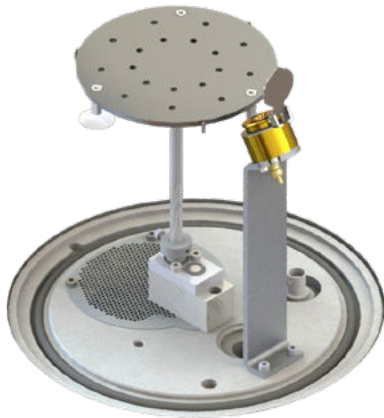


Rota Cota Stage

Configuration: Available on the TurboQ E and ES

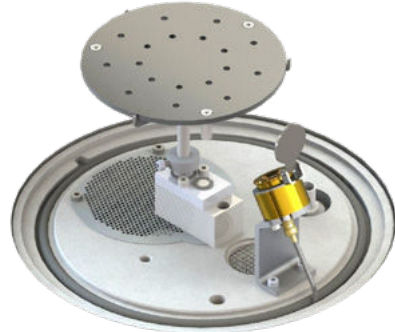
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4" Wafer Stage (Extended)

Configuration: Available on TurboQ S and ES



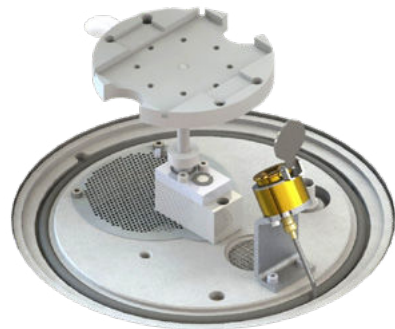
4" Wafer Stage

Configuration: Available on TurboQ E and ES



Slide Stage (Extended)

Configuration: Available on TurboQ S and ES



Slide Stage

Configuration: Available on TurboQ E and ES



8 Place 30 mm Stub Stage (Extended)

Configuration: Available on TurboQ S and ES



8 Place 30 mm Stub Stage

Configuration: Available on the TurboQ E and ES

TurboQ

The TurboQ is designed to meet the requirements of various applications, ranging from biological sciences to material sciences.

TurboQ ES

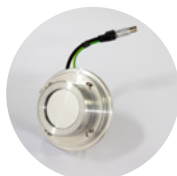
Biological Sample Preparation



K850
Critical Point Dryer



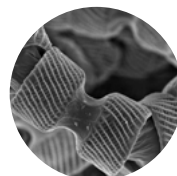
Sample
Mounting



Sputter
Head



TurboQ S
Coating



SEM Imaging
and Analysis

TurboQ ES

TEM Grid Preparation



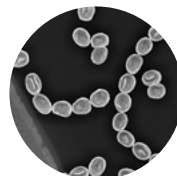
Carbon Rod Head



TurboQ E
Carbon Coating



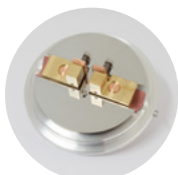
GloQube
Glow Discharge



TEM Grids

TurboQ ES

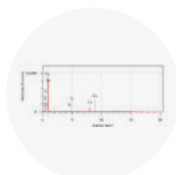
Materials Sample Preparation



Carbon
Fibre Head



TurboQ ES
Carbon Coating



Elemental
Analysis

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Specifications	
Unit Weight	38 Kg (ES model)
Packed weight	54 Kg (ES model)
Instrument size	440 mm (W) x 556 mm (H) x 551 mm (D)
Instrument size with chamber open	440 mm (W) x 860 mm (H) x 551 mm (D)
Specimen stage	Short stage: 65 mm (H) from chamber base, 50 mm Ø diameter
	Tall stage: 145 mm (H) from chamber base, 50 mm Ø diameter
Chamber size	150 mm Ø diameter, 220 mm (H)
Ultimate vacuum	1x10 ⁻⁶ mbar
Operational vacuum	5x10 ⁻⁶ mbar
Vacuum gauge range	1000 to x10 ⁻⁹ mbar
User interface	Touch screen colour display
Supply voltage	100V – 240V
Sputter Coater (TurboQ S and TurboQ ES)	
Sputter target	Target Disc style, 57 mm Ø diameter x 0.5 mm (thickness) (Cr supplied as standard)
Specimen Stage	50 mm Ø diameter rotating tilt stage
Deposition Current	10-150 mA
Deposition Rate	0.1-20 nm/min (e.g. for gold)
Sputter Timer	0-60 min
Evaporation Coater (TurboQ E and TurboQ ES)	
Evaporation current (rod)	5-75 A (dependent on process)
Outgas current	1-40 A
Carbon source	3.2 mm rods or carbon fibre

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Quorum Technologies

Judges House
Lewes Road
Laughton
East Sussex
BN8 6BN
United Kingdom

T: +44 (0) 1323 810981

E: sales@quorumtech.com

W: www.quorumtech.com



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