

Q150GB

The Q150GB features:

- ⇒ Modular system for mounting in glove boxes
- ⇒ Integral glove box pressure monitoring
- ⇒ Metal sputtering, carbon evaporation – or both
- ⇒ Remote operation from touchscreen control panel
- ⇒ Fine grain sputtering
- ⇒ High vacuum turbo pumping
- ⇒ Thickness control using film thickness monitor





Q150GB Turbo Pumped System for Glove Box Use

The Q150GB is available as a single platform incorporating:

- ⇒ Sputtering of oxidising and noble metals
- ⇒ Carbon evaporation
- ⇒ Metal evaporation

The Q150GB can be a:

- ⇒ Sputter coater for high resolution SEM
- ⇒ Carbon coater suitable for SEM and TEM
- ⇒ or both, in a single easy to use system

Use in Glove Box

- ⇒ A modular design enables the vacuum chamber to be mounted through the base of the glove box or when supplied with optional feedthroughs, inside the glove box when modification to the glove box floor is not possible.
- ⇒ A separate power supply housed in a rugged case is designed to be floor mounted and can be positioned conveniently beneath the glove box or bench.
- ⇒ The touch screen user interface is housed in a robust stainless steel case and can be positioned ergonomically for the operator outside of the glove box environment.



Main features

Vacuum module mounted in the floor of the glove box

A cut out is made in the floor of the glove box and the vacuum chamber is fitted and sealed with the gasket supplied. Connections from the floor mounted power supply, vacuum pump and argon gas can then be made externally direct to the chamber assembly.

Vacuum module placed inside the glove box

The chamber assembly is placed inside the glove box and the power supply, vacuum pump and argon gas connections are made through two KF40 feedthroughs in the rear of the glove box.

Touch-screen in stainless steel case

Mounted at a convenient position outside the glove box, the colour touch screen allows multiple users to input and store coating protocols.

Vacuum module assembly

Houses all the working components, including the efficient 70L/s air-cooled turbo molecular pump. Automatic bleed control ensures optimum vacuum conditions during sputtering. A full range active gauge is fitted as standard to monitor the vacuum. The Q150GB includes "vacuum shutdown" which enhances vacuum performance by allowing the chamber vacuum to be maintained when the system is not in use.

A unique feature of the Q150GB is the integral pressure interlock switch. This independently monitors the pressure inside the glove box and shuts off the vacuum pump if the glove box atmosphere is unacceptably reduced due to a vacuum leak.

The vacuum chamber is 214mm high for increased source to substrate distance and for coating large specimens. It has an external diameter of 165mm and comes with an integral implosion guard. The chamber assembly is easily removed to facilitate sample loading and cleaning.

A variable speed rotary specimen stage is fitted as standard, various other stages are available as options.

Sputter coating, carbon coating or metal evaporation?

Sputter – a high resolution sputter coater for oxidising and non-oxidising (noble) metals. A wide selection of sputtering targets are available, including iridium and chromium, which are highly recommended for FE-SEM applications.

Carbon coating – a high vacuum carbon coater, ideal for the production of highly stable carbon films and surface replicas for transmission electron microscopy (TEM). The system uses economical 3.05mm diameter carbon rods.

Metal evaporation – a quick change insert that allows metal evaporation from tungsten baskets or Molybdenum boats, ideal for thin film applications. For ease of loading, the metal charge can be loaded into the evaporation source away from the vacuum chamber. More convenient when using gloves. The deposition inserts can be swapped in seconds and the intelligent system logic automatically recognises which insert is in place and displays the appropriate operating settings. Each of the above configurations can be used with a range of optional accessories (eg film thickness monitor and various stage configurations). See options for details.

Rapid data entry

At the operational heart of Q150GB is a simple colour touch screen, which allows even the most inexperienced or occasional operators to rapidly enter and store their own process data. To further aid ease of use a number of typical sputtering and evaporation profiles are provided

Q150GB Specification

For full specifications, please see our website

Vacuum Module Size:	267 mm W x 490 mm D x 494 mm H (total height with coating head open: 767 mm)
Power Supply Size:	310 mm W x 357mm D x 262 mm H
User Interface Size:	160 mm W x 157 mm D x 42 mm H
Total Weight:	40 kg
Packed Dimensions:	725 mm W x 660 mm D x 787 mm H (44 kg)
Work Chamber:	Borosilicate glass 152 mm Ø (inside) x 214 mm H
Safety Shield:	Integral polyethylene terephthalate (PET) cylinder
Display:	145 mm 320 x 240 colour graphic TFT (Thin Film Transistor) display
User Interface:	Intuitive full graphical interface with touch screen buttons, includes features such as a log of the last 100 coatings carried out and reminders for when maintenance is due
Sputtering Target:	Disc style 57 mm Ø x 0.3 mm thick chromium target is fitted as standard
Specimen Stage:	50 mm Ø rotating stage. Rotation speed 8-20 rpm



HEADQUARTERS

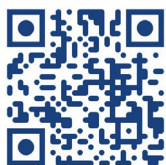
Quorum Technologies

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

T: +44 1323 810981

E: sales@quorumtech.com

W: www.quorumtech.com



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SPECIALISTS IN EM SAMPLE PREPARATION

E: SALES@QUORUMTECH.COM • **T:** +44 (0) 1323 810981 • **W:** QUORUMTECH.COM