

Product Data Sheet

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QLC 800 Versatile High Vacuum Coating System



Wordentec presents the QLC800 Versatile High Vacuum Coating System. The QLC800 system has been enabled by securing a batch high quality process chambers manufactured by Balzers AG. As a result, the QLC800 provides a cost effective basis for a production tool as well as an ideal process development / proving system. Wordentec can offer a wide range of accessories for the QLC800. The system also offers compatibility with many industry standard Balzers instruments and accessories.

Chamber

Adaptable front loading process chamber with water cooling.

Large variety of ISO, KF and 32.5 mm ports.

NW35CF instrument ports, ISO250 top flange (compatible with BD104 type rotary drive) , ISO320 rear pumping port.

800 diameter circular base flange, water cooled with an adaptable array of 32.5 mm ports. Inside chamber height 900 mm. This can be increased by fitting additional base plate spacer rings @210 mm each.

Chamber can accommodate an 800 mm diameter substrate carrier (dome).

Pumping System

Standard configuration is a PLC controlled 2200 ls-1 Pfeiffer Turbomolecular pump to provide a clean and reliable high vacuum environment.

Optionally, we offer a high throughput model and a high gas load model equipped with dual turbo pumps. We offer a choice of backing pumps and options of meisner water vapour pumping or full cryopumping.

System Frame

The system is mounted on a rigid epoxy powder coated steel framework. The lower part of the system is fitted with panels and lockable doors to enable safe enclosure of feedthroughs and accessories. A spacious power distribution cabinet is fitted to allow integration of powered accessories. Location for cooling water distribution and gas control is provided. The system framework is designed with easy maintenance and adaptability in mind.

System Control

System controls are mounted in a control rack (19 inch 39U). Additional racks are available. Basic vacuum system control is provided by standard PLC based controller and active gauges. Control is expandable using a variety of platforms including IC5, Custom C++ / Visual Basic or LabView.

Accessories

The full system configuration is defined by the selection of components from a range of proven accessories. We have a range of new and pre-owned items available. We are happy to integrate customer specified or customer supplied items.

Substrate handling

The QLC 800 accommodates a 800 mm diameter substrate dome.

The rotary drive is based on the BD104 but is offered with a robust magnetic fluid seal. The rotary drive is compatible with a single and multi-crystal holders and also our test glass changers for optical end point detection.

We have a variety of configurations of planetary substrate carriers available plus special purpose substrate manipulation mechanisms.

Substrate Heating

Back surface heating and quartz lamp front surface heating is available.

Evaporation Sources

A variety of coating sources are available to suit a range of applications. We occasionally have pre-owned sources but generally recommend dependant on application.

- Thermal sources
- EB Guns
- Sputter Sources
- Ion / plasma assist

Accessories

Source Shutters, Distribution Shields, Chamber Shielding

Residual gas analysis, Absolute pressure measurement, Mass Flow Control

Chamber Pressure Control

Service and Support

Wordentec offers full service and support of the QLC800. It is also worth noting that as our systems feature many industry standard components, local or in house service and maintenance is straight forward, world wide.

Self Build

We can supply the QLC 800 and accessories in a kit form to enable low cost or in house build options. In this case the QLC800 would normally be supplied as a fully Helium leak tested frame mounted 'pumped box'.

Prices

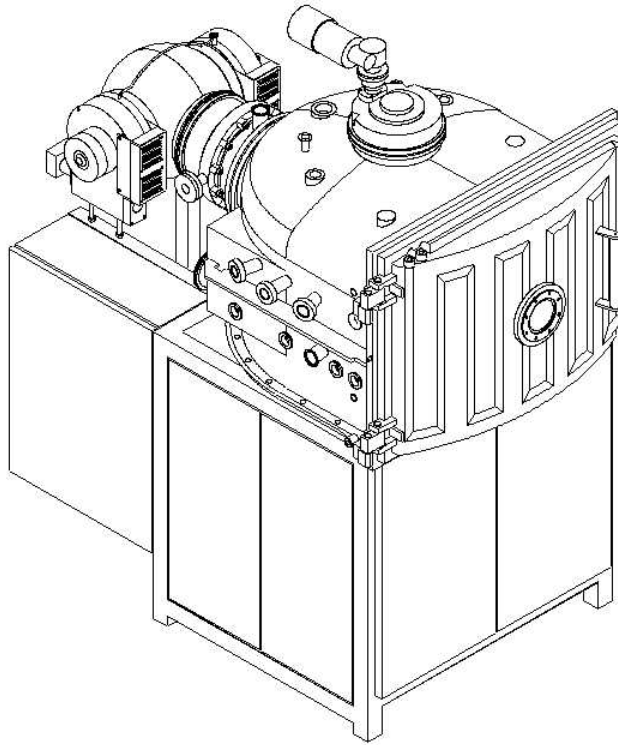
The system price is defined by the individual configuration of accessories etc. We have prepared a QLC configuration menu that will give a system guide price by selection of accessories by tick box. This is available in manual form or on line at www.wordentec.com. Please note that prices are subject to confirmation and in the case of pre-owned items, subject to prior sale.



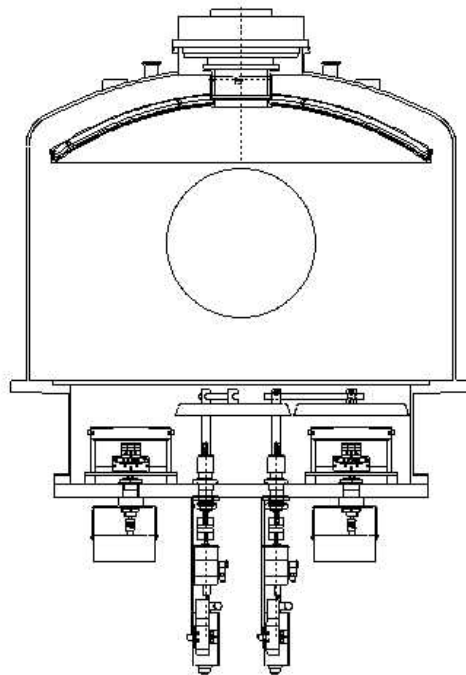
Standard QLC chamber with base extension



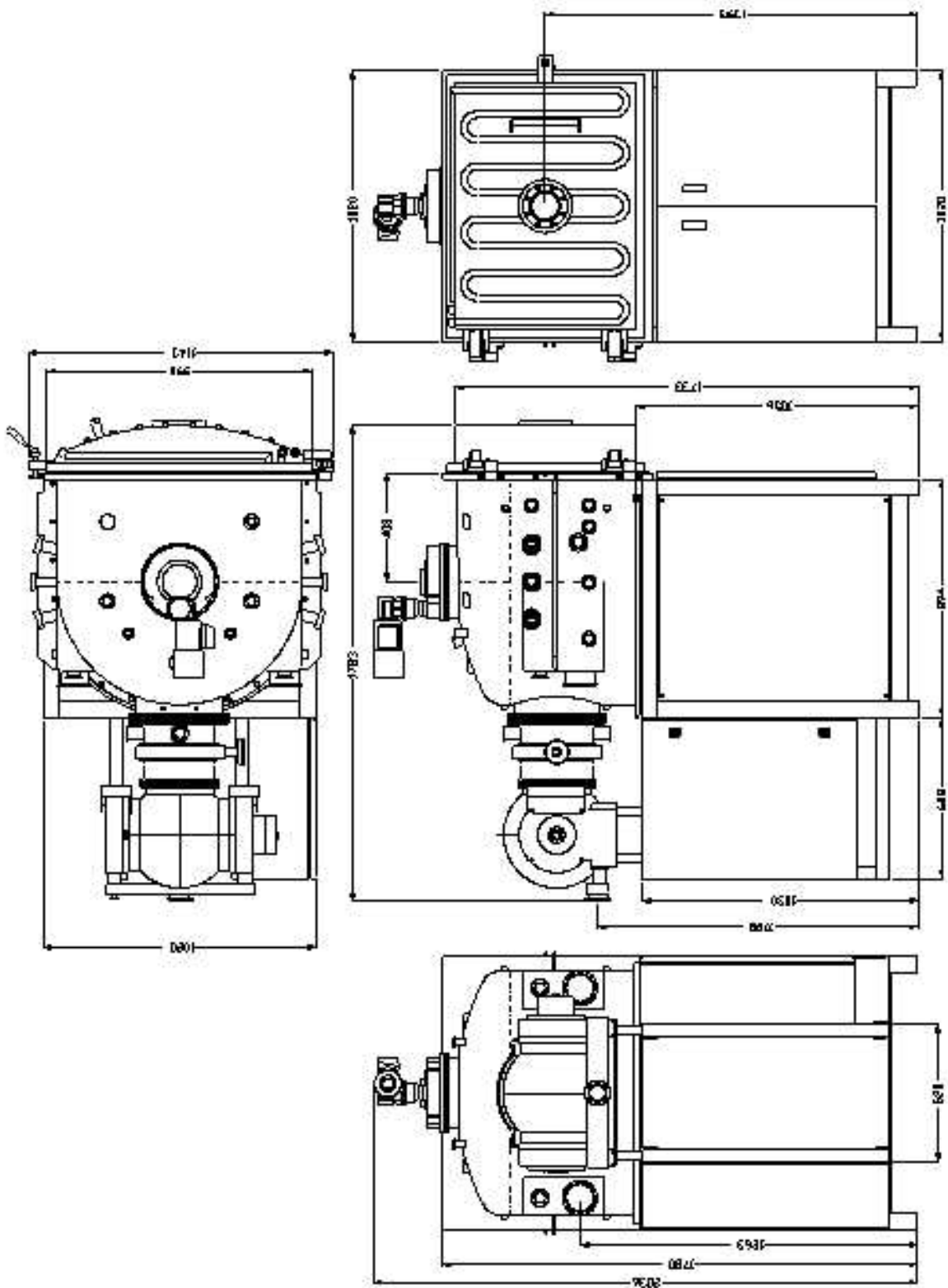
QLC Chamber with additional ISO 250 ports



QLC 800 Versatile High Vacuum Coating System



QLC 800 Cross Section showing 2 EB Sources + Shutters, Rotary Drive and Substrate Dome



QLC800 General Assembly