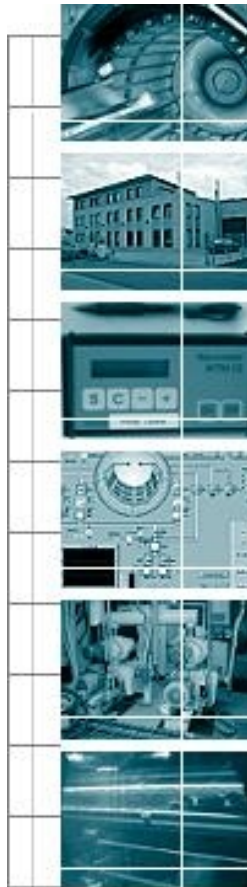


- Optical Coating
- Software development
- Special plants
- Retrofit
- Maintenance of plants



The company HILBERG & PARTNER is a successful specialist in the field of vacuum- and plant technology as well as the planning, constructing and manufacturing of vacuum- technical plants of various ranges of application. Extensive consulting and first class services are guaranteed.

**Specialist for vacuum- and plant technology for more than 20 years**



**Hilberg & Partner GmbH**  
**Keltenstrasse 16**  
**D-63486 Bruchk0ebel**  
**Germany**

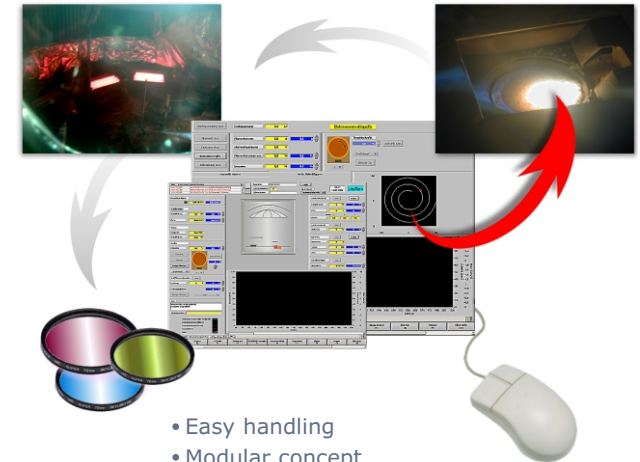
Phone: +49- (0)6181/ 990536  
Fax: +49- (0)6181 / 81591

eMail: [info@hilberg-vakuumtechnik.de](mailto:info@hilberg-vakuumtechnik.de)  
<http://www.hilberg-vakuumtechnik.de>

Managing Director: Reinhold Hilberg

## LayOp®

### Control system for optical coating plants

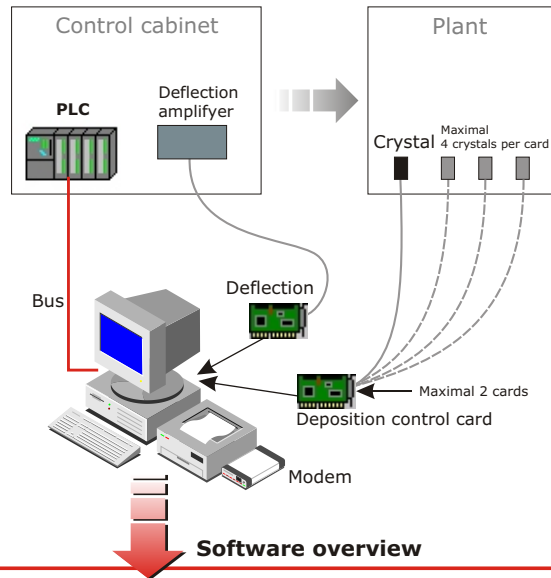


- Easy handling
- Modular concept
- Adaptable to individual customer needs and wishes
- Quality control
- Process data- and event acquisition in data bases

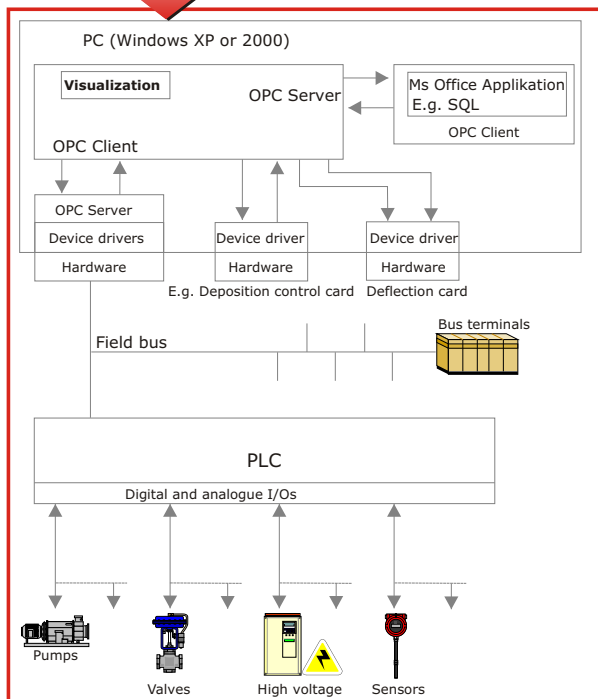
LayOp® is a control system that we developed for the individual needs of the modern optical vacuum coating processes.

This control system is universally adaptable for the upgrading of the plants of all well-known manufacturers.

## Hardware overview



## Software overview

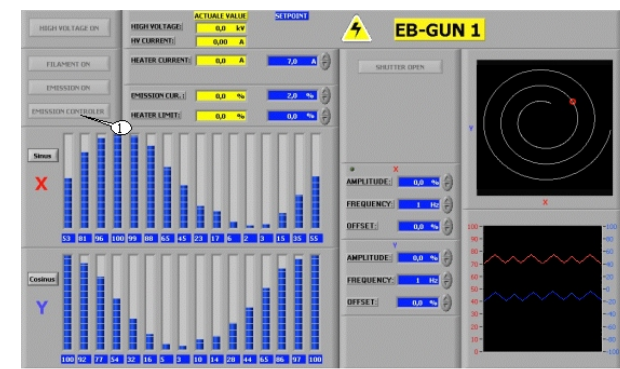


- Recipe management:**  
 Simple editing of process steps and its management as well as archiving
- Process description:**  
 All process parameters are displayed and monitored online
- EB-gun control:**  
 Automatic control of the **E**lectron **B**eam-source as well as its deflection and regulation
- Pump system control:**  
 Automatic vacuum control and operation of the vacuum components
- Deposition rate control:**  
 Online deposition control and its regulation  
 Display of parameters as oscilloscope function
- Online - diagrams:**  
 Display of freely editable parameters as oscilloscope functions and archiving in data bases  
 >> Quality control
- Alarm handling:**  
 Display of current alarms and its recording in long-term archives

The deposition control system is based on a PC-plug-in card to which up to 4 oscillating crystals can be connected. The frequency area of the card lies between 1 and 10 MHz. All parameters can be edited via the process screen deposition control as well as the recipe management.



Display: Deposition control



Display: EB-gun control

This window allows an easy operation of the EB-guns and its deflection. The "EMISSION CONTROLLER" (see >>) is integrated in the operating system and can be optimized online via a pop-up-menu.

