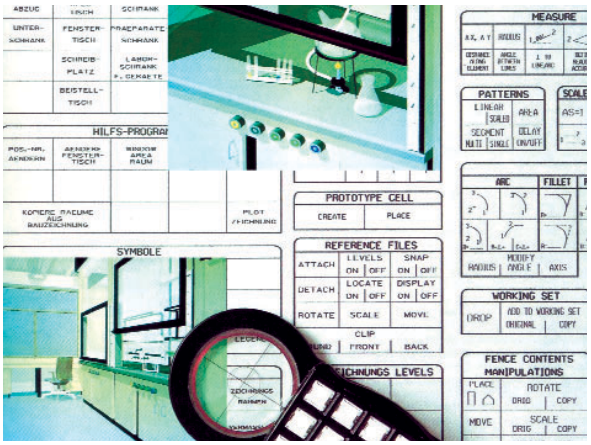
Laboratory Equipment – innovative and efficient

Our service …

We are leaders in the field of design and installation of laboratory equipment for:

- laboratory buildings and plant labs;
- research labs/buildings;
- pilot plants.

The laboratories that we design meet the requirements of researchers in many different disciplines all over the world. We develop customized solutions that will meet your expectations in terms of technology, quality and efficiency for new buildings, conversions or retrofitting. We also offer our expert services for lab optimization.



We will design your lab equipment using the latest computer tools such as LAB, the CAD tendering, awarding and invoicing program developed in-house.

Our experts will design the following for you:

- wet chemical laboratories with exhaust hoods, washing systems and systems for the supply and removal of media;
- analytical labs with GC workplaces, systems for deriving highly-purified water and media supply and removal;
- microbiological labs (S2/L3 workplaces for microbiology and genetic engineering).

Innovative solutions, e.g., for the supply and removal of media from above the workplace

… is your gain.

We not only offer a complete laboratory design service, we have extensive project planning experience and capabilities.

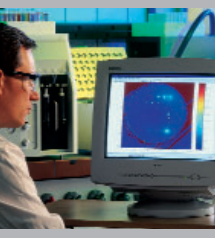
In addition, we are also happy to undertake the design, coordination and implementation of associated systems, such as HVAC and refrigeration services; electrical, automation and lighting systems; and in particular the supply and removal of media (e.g., compressed air, vacuum, purified and highly-purified water, and technical gases such as hydrogen, nitrogen, oxygen, propane, butane, methane, acetylene, hydrogen sulfide, natural gas, helium, argon, CO_2 and HCl).

You will receive expert design service for energy-efficient future-proof laboratory facilities, either at a fixed price or on a cost basis.

We assume building owners tasks (permits and safety coordination) to ensure legal compliance. Our specialist construction management team will make sure that deadlines are met without compromising quality.

Our comprehensive project management experience enables projects to be realized economically (including conversion projects) without interrupting plant processes, so that the impact on plant operation is minimized.

Bayer Technology Services



Our approach

The exact services required, together with the project-specific boundary conditions, are first discussed with the building owner, laboratory manager and/or researchers. Our designers will then draw up convincing concepts that will be discussed with you, planned in detail and efficiently implemented. An Industry Standard has been drafted in consultation with all of the major German chemicals companies and manufacturers of laboratory equipment to enable an objective assessment of quality.

LAB, the CAD AVA program developed in-house, allows visualization and price comparison of preconfigured and comparable modules from all German manufacturers in 2D/3D. This enables an objective assessment of offers by the client. The system also has advantages for the manufacturer as the costs of producing an offer or measurements are negligible. We also offer the following additional services to supplement the design process:

- assessment of current status and 3D as-build documentation;
- performance measurements;
- acceptance tests.

We no longer require expensive mock-up laboratories for the economic design of laboratory equipment and the presentation of our concepts at the client's premises. The client can now make a decision on the lab equipment – in terms of quality, design and technology – on the basis of a virtual laboratory tour. Our design of the technology will be presented live using digital media such as 3D animation, digital video, photography and other imaging modalities.

We actively contribute to standards committees for exhaust hoods, lab worktops and media supply, and bear global responsibility for the "Laboratory" object class of the Bayer plant structure code. This ensures that we can exert influence on the drafting of standards and provides us with a high level of knowledge and experience that will lead your project to a successful conclusion.

References

Over the last 20 years, we have designed complete laboratory systems both in Germany and abroad with a total project value in excess of € 800,000,000. These include:

- Monheim (Agricultural Center: 22 lab buildings);
- Krefeld-Uerdingen (Lab school A8, Science head laboratory R79, Lab/office building L36);
- Dormagen (adhesives lab F46, multi-purpose plant A792, TDI/TDA lab M61, M62, M70);
- Kyoto, Japan (RCK Research Center Kyoto);
- West Haven, USA (Flexible Chemistry Lab);
- Wuppertal-Elberfeld (Chemical Process Development pilot plant 80, Lab building 460).

One of the most frequently requested items of equipment is CROSSBOX®, a system developed and patented by Bayer for the economic regulation of airflow volumes for exhaust hoods in laboratories. This is just one example of our policy of Responsible Care to protect people and the environment through a reduction in the levels of SO_2, NOX, dust and CO_2 released into the atmosphere.

3D design of a lab unit in Building 460, Elberfeld (ELB), Germany, Bayer AG

A real lab unit in Building 460, ELB, Bayer AG after execution

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