



ANTICIPATING THE FUTURE.
LABORATORY BUILDINGS IN MODULAR
CONSTRUCTION BY CADOLTO.

Leber- und
Infektionszentrum

cadolto

RESEARCH REQUIRES FREEDOM. WE GIVE IT THE SPACE IT NEEDS.

WITH CLEAN ROOM AND LABORATORY BUILDINGS BY CADOLTO.

In research one must work quickly and with determination. But more than anything, one must be flexible. Willing to rethink things over and over again. Able to react quickly to the unexpected. And determined to leave no stone unturned. Scientists, in fact, think exactly the way we do. And it is precisely for this reason that we provide the perfect environment for their cutting-edge ideas – with clean room and laboratory buildings in modular construction designed by Cadolto.

The individually manufactured buildings take precisely the form you wish to give them, thereby providing optimal conditions for your research activities. They can be modified according to your wishes and recombined any number of times. Because we are always thinking of tomorrow. So that you can stay focused on what is important.

We, too, have an abiding interest in the future. We look at the big picture and provide buildings that are every bit as durable as conventional construction while offering many benefits besides. The product of a substantially better, faster and more expedient construction process, these buildings retain all the flexibility needed for later conversion and fast transformation. Our work always follows the example you have set: fast, efficient, well thought out. And we even provide simple, straightforward options for leasing and individualised financing solutions. In short, they are typical Cadolto.

You can learn more about Cadolto and our sustainable construction methods beginning on **page 4**.

We provide information about our laboratories on **page 8**.

Our clean rooms are described in greater detail on **page 10**.

Reference projects and laboratory design concepts are presented beginning on **page 12**.





OUR BIGGEST PROJECT:

REVOLUTIONISING MODERN CONSTRUCTION.

You read it right. Noise, dust, emissions, bad weather, delays and inefficiency all are things of the past. It's strange that the old methods are still practised today.

The future doesn't exist yet. But our dreams and visions do. And so does the space to realise them in. We build things our way, and take pleasure in doing so. As we have been since 1890. With 350 employees. Using modules. And as the market leader in high-tech buildings in modular construction for the healthcare sector.

And if everything changes tomorrow, we can take everything apart and put it all back together again somewhere else, regardless of whether it is a clinic, computing centre, office building, or laboratory.

That's because 'tomorrow' is whatever you and we make of it together: a modularly constructed building that is complete even before it goes up. Forward-thinking. Distinct. Exclusive.

Cadolto Modular Construction meets the highest standards of industrial building fabrication in the world. More than 90% of the fabrication process takes place in our factory – irrespective of the weather, subjected to continuous quality control, on schedule and cost-efficiently.



OUR GREENEST CALLING CARD: SUSTAINABILITY.

We don't take sustainability seriously. We take it literally. Our modules continue to deliver what we promise you long after their construction. And not just at their first locations. While 70% of our construction projects are still being used for their initial purpose today, the other 30% have been incorporated into new projects, either in their entirety or in parts. Modular up-cycling, so to speak. And if the life cycle of a module should come to an end one day, 100% of its construction materials can be reused.

Another advantage of our emphatically sustainable modular construction is our adaptability. Every building can be expanded, relocated, dismantled, or have storeys added to it. In record time; after all, sustainability also implies efficiency: from the planning stage to final construction, all of the trades involved work hand-in-hand, and under one roof. The local environment also benefits from this prefabrication approach. We reduce the volume of packaging materials and emissions at the construction site and have 80% less construction site traffic than conventional construction sites. The result? Fewer environmental risks and an all-round improvement in the environmental balance. Delivered with our compliments. We produce sustainably by taking into account today what the construction of the future will need tomorrow: the highest level of efficiency, achieved through recyclability and ease of dismantling, with no reduction in quality or planning certainty. In short: We are faster. We are more efficient. We are more sustainable. And you can take us at our word.

RESEARCH IN A NEW DIMENSION. WITH ROOM FOR RELIABILITY.

LABORATORIES BY CADOLTO.

To engage in research is to master challenges – on an almost daily basis. Researchers find themselves confronted with a multitude of extreme demands in their scientific work and everyday business matters – and the same goes for the building technology that makes their work possible. And that is where we enter the picture. Innovation is, after all, our own favourite field of research. We will develop an individualised laboratory for you that not only satisfies your current requirements but also lends itself to continual further development and adaptation in the future.

Our many years of experience in building laboratories is reflected in more than just the abundant variety of our products. With their customised automated ventilation systems and appropriate surface materials, our biological laboratories meet the highest standards, from BSL 1 to BSL 4. The requirements for surfaces in chemical laboratories are particularly stringent in terms of chemical resistance. With turnkey laboratory modules by Cadolto, these present no problem at all. Our physical/analytical laboratories are equipped with intelligent and effectively regulated ventilation and air-conditioning technology. We also assemble radioisotope laboratories in compliance with DIN 25425 and DIN 25422 for all radiation protection categories from S0 to S4. The focus of these projects is on special requirements for radiation protection that are met with lead foils or lead plates.



OUR HIGHEST PRIORITY FOR YOUR RESEARCH ACTIVITIES: PURITY.

CLEAN ROOMS BY CADOLTO.

It goes without saying that research cannot be restricted to conventional laboratory buildings. Researching the future entails developing solutions for tomorrow. And for that a special environment is needed. That is why we have devoted many years to developing clean room modules for biotechnology, stem cell research, and pharmaceutical production that conform to GMP standards up to Class A. Higher purity levels are achieved with filter fan units or laminar flow ceiling systems and separated by levels with air locks and access control systems, which include monitoring systems. Cadolto manufactures modules for clean room production facilities, semiconductor technology and micro-mechanics according to the highest ISO standards, guaranteeing purity by reducing and avoiding particles.



TO BRIEFLY SUMMARISE:

- Cadolto Modular Construction offers you
- absolute freedom of design. Our laboratories are adaptable to your requirements in their every dimension and will be produced according to your wishes
 - high-quality prefabrication in the factory. Regardless of how unique your wishes are, we make their customised implementation a reality right in our production facilities
 - great reliability. Because weather conditions have no effect on our production process, we are able to offer you a reliable guarantee of delivery dates and costs
 - great flexibility. With use-specific conversions or relocation, expansion, or down-sizing of your building
 - attractive leasing and financing solutions
 - pioneering sustainability certification. As compared to traditional construction methods, our construction methods embody a level of efficiency that makes it easier for us to meet certification requirements such as DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen e.V.) or Egnaton

A GLIMPSE INTO THE FUTURE. WITH A RETROSPECTIVE LOOK AT OUR WORK.

SPACE FOR BIOTECHNOLOGY.
TECHNOLOGIEPARK MÜNSTER.

Great things come from small beginnings. An idea that animates every start-up. But how does one translate that into office buildings? We had an idea. And it resulted in a new building, constructed in modules on 3,400 square metres, for three start-ups in the biomedicine/biotechnology sector. The necessary freedom with the right equipment. A building of this sort must, of course, satisfy several criteria in the biomedicine/biotechnology sector. Expensive air conditioning and ventilation systems were therefore installed, as was the highest-grade laboratory equipment. Mission accepted and accomplished – in a mere six months. And if the ‘great things’ come faster than expected? Then we grow along with them, flexibly and quickly, like the start-ups themselves.

RESEARCH WITH THE HIGHEST STANDARDS. LEBER- UND INFEKTIONSZENTRUM DÜSSELDORF.

A unique centre requires unique solutions. For the Leber- und Infektionszentrum Düsseldorf, Cadolto therefore realised the answer to a structural challenge in twelve months on a 5,000-square metre site. A complete ward for highly infectious diseases that not only was to be attached to the University Hospital itself during regular operation but that also had to satisfy the most stringent structural and hygienic requirements. The completed structure – which includes special isolation units and high-security infectious disease laboratories that comply with BSL 4 requirements – has served the needs of hepatological research and the care of patients with infectious diseases at the UKD since 2011. Challenge accepted – and the task accomplished with distinction.



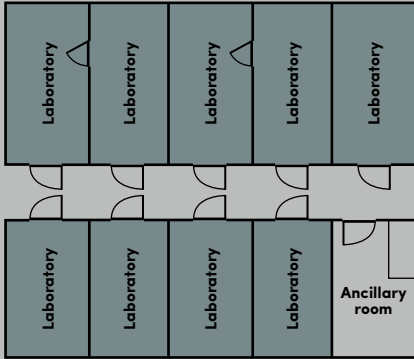
TODAY A MODEL, TOMORROW ALREADY A REALITY.

LABORATORY DESIGN CONCEPTS BY CADOLTO.

Research projects are as individual as the goals of those who carry them out. Taking into account the guidelines and standards that must be met on top of that, researchers see themselves confronted with a multitude of challenges. But challenges have never deterred us. On the contrary, we seek them out and find the perfect solution. With our modular laboratory design concepts, we are able to provide you with a flexible basis that can be further customised according to your wishes. They enable us to realise your ideas in every respect, easily and in structures up to six storeys tall. With a modular grid width of 3,600 mm, our modules match the prevailing installation conditions and the recommendations of the BG RCI (employers' liability insurance association for raw materials and the chemical industry) and of DIN EN 14056.

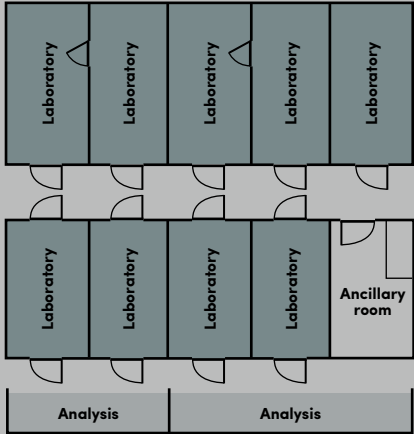


LABORATORIES WITH INTEGRATED ANALYSIS STATIONS.



Two joined sections with five laboratory modules and traditional layout: laboratory – corridor – laboratory. As for all modular design concepts, we recommend a vertical access concept wherein supply and disposal shafts are arranged in a central location to afford your building maximum flexibility. Decentralised shafts specific to individual laboratory axes can easily be arranged as well.

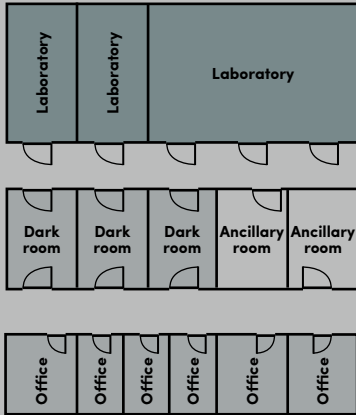
LABORATORIES WITH SEPARATE ANALYSIS STATIONS, ANCILLARY ROOMS AND OFFICES.



Two joined sections with separate analysis rooms consisting of five modules: The ratio between laboratory space and office space is 6:1. To keep pace with the increasing proportion of work that is devoted to analytical and documentation activities, the analysis stations are placed in front here and isolated from the actual laboratories by all-glass partition systems. The positive side effect: work areas and the laboratories are spacious, transparent, and flooded with light.

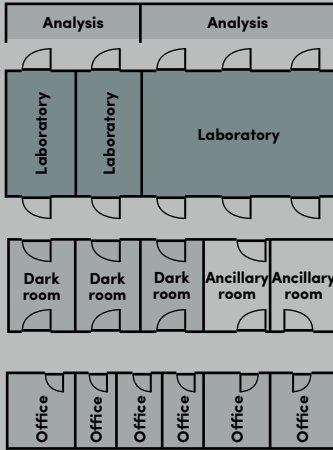


LABORATORIES WITH INTEGRATED ANALYSIS STATIONS, DARK ZONES, ANCILLARY ROOMS AND OFFICES.

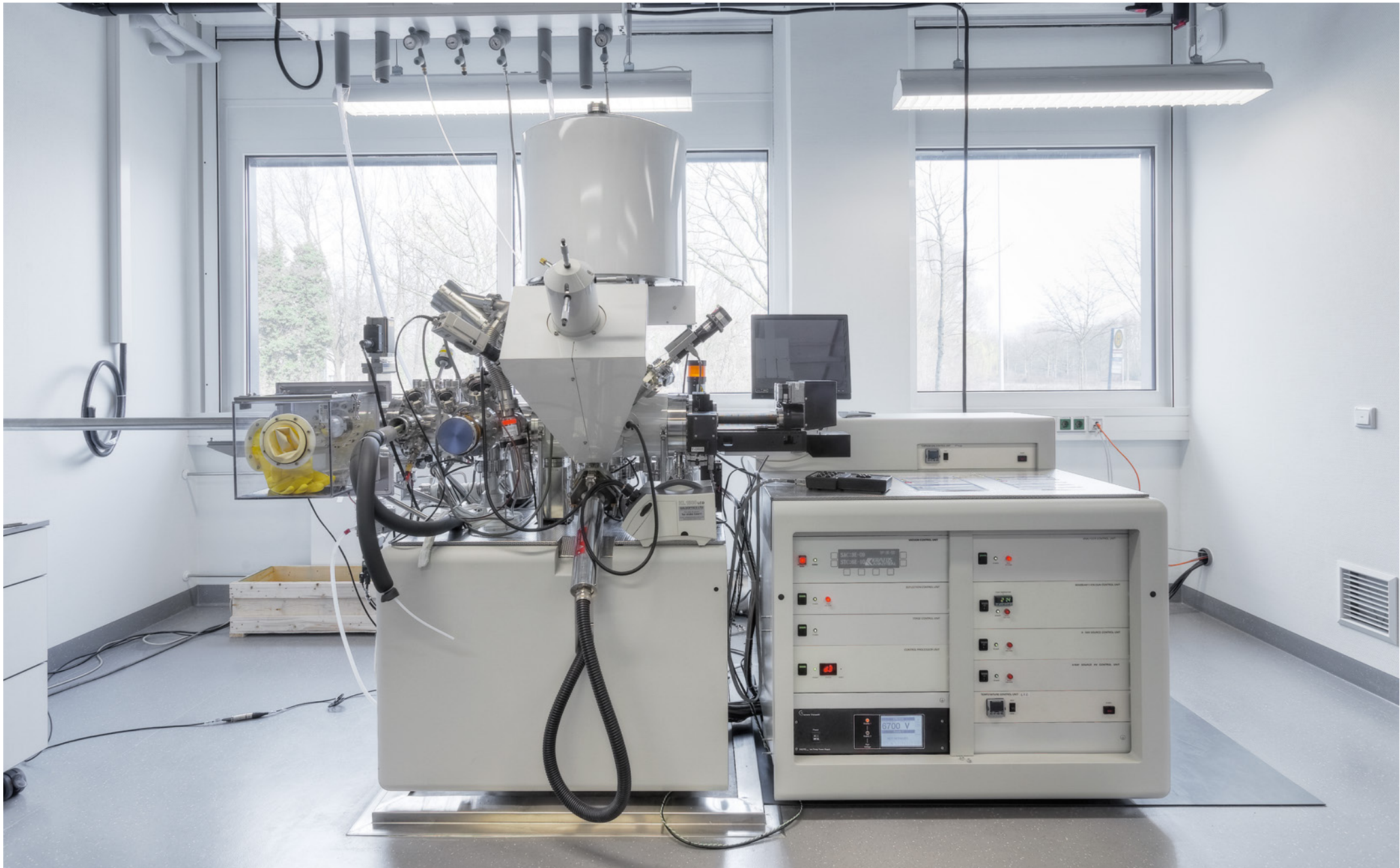


Three joined sections with integrated analysis stations consisting of five modules: The ratio of laboratory to office space is 3:1. This type of laboratory is ideal for laboratories with a high concentration of machines and storage areas. It also provides special dark rooms without daylight. The analysis stations, in contrast, remain brightly-lit and are located inside the laboratories.

LABORATORIES WITH SEPARATE ANALYSIS STATIONS, DARK ZONES, ANCILLARY ROOMS AND OFFICES.



Three joined sections with separate analysis stations consisting of five modules. The ratio between laboratory space and office space is 2:1. This type of laboratory also is designed for laboratories with many machines and storage areas, and it provides separate rooms without daylight. Here, however, the analysis stations are separated by the laboratories and provide more space for documentation work.



TOMORROW DOES NOT YET EXIST.

BUT PERHAPS YOUR PLANS ALREADY DO.

IF SO, WE NEED TO TALK RIGHT AWAY.

Who actually decides how the world should look tomorrow? How we will live and work? Politicians? Scientists? Artists? First and foremost, it's people with ideas. The ones who seize opportunities. The movers. The pioneers. In other words: you and us. We look forward to receiving your message or call.

Cadolto Fertiggebäude GmbH & Co. KG | Wachendorfer Straße 34
90556 Cadolzburg, Germany
Tel. +49 9103 502-0 | Fax +49 9103 502-120
info@cadolto.com | www.cadolto.com

cadolto