



An altogether
different kind
of CDMO



Freiburg
Oral Solids



Welcome

Welcome to our Pfizer pharmaceutical manufacturing site in Freiburg, Germany. We are a partner site for Pfizer CentreOne and offer access to leading oral solid capabilities, innovative manufacturing technologies and collaborative problem-solving.

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Discover how
our Freiburg site
is **altogether**
different



Who we are

Our purpose


Patients are at the core of everything we do. With every tablet and capsule we manufacture, we enable you to deliver breakthroughs that change patients' lives.

Our vision

We aspire to bring medicines to patients with speed, efficiency and cost-effectiveness through intelligent collaboration with you.

Our contribution to global health

We manufacture about 4.5B tablets and capsules annually, supporting millions of patients all over the world. Our therapeutic expertise includes oncology, cardiovascular diseases, neurological disorders, rheumatology, and pain management.



Your trusted CDMO partner of choice – click [here](#) to see our video presentation

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What makes me proud of Freiburg is the impact we have had on patients' health through our 55-year history. Patients are the reason for everything we do. This powerful motivation, together with leading science, technology, and talent, is at the heart of our success.

Dr. Axel Glatz, Site Lead





Our focus on efficient processes and state-of-the-art technologies places Freiburg at the forefront of innovation. Every day we handle complexity, adapt to changing partner demands and deliver products we are proud of. Our success is driven by a strong team culture and collaboration with our partners.

Sabine Moeck,
Pfizer CentreOne Site Lead



What we offer

We are one of the world's largest manufacturing and packaging sites, with facilities spanning a total area of 155,000 m².

Backed by Pfizer's resources, we seek to treat your products as if they are our own, giving you access to the same expertise and state-of-the-art technologies that Pfizer uses to deliver its breakthroughs.

We offer you our unique expertise in oral solid process and product development, flexible volume manufacturing, leading packaging technologies, and global delivery.

Collaborate with assurance

By taking an open and collaborative approach to our partnerships, we help you solve your greatest oral solid challenges and guide your products to market.

We can offer you:

- Annual manufacture of 200+ product formulations and 3,500 SKUs
- End-to-end product and process development from lab and pilot scale to full manufacturing scale
- Flexible production that allows both small and large volumes, meeting a wide range of partner requirements
- Pfizer quality standards; 20 percent of employees dedicated to product quality
- Robust Manufacturing Excellence process to ensure best performance every time
- Reliable global delivery to more than 150 markets including Japan
- Pfizer's Packaging Center of Excellence, with 241M packs produced in 2019



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Your trusted CDMO partner of choice

We've been a trusted CDMO partner of choice for dozens of customers for more than 10 years.

Our extensive experience of successful tech transfers within Pfizer to and from our partners have helped us achieve this, enabling us to stand out as one of the most future-oriented and digitally-enabled pharmaceutical sites in the world.

What makes us different?

- Industry 4.0 digital processes and state-of-the-art-technologies
- Computer integrated manufacturing
- Fully automated process and material flow
- Electronic batch records
- Continuous manufacturing technology (CMT)
- High containment facility for production of highly potent and controlled drugs



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Manufacturing capabilities

At Freiburg, we offer fast, agile, and innovative supply solutions.

All material movements are fully automated, allowing for a flexible connection of each manufacturing step. As a result, any manufacturing sequence can be programmed and executed. For example, extrusion or wet granulation can be followed by encapsulation or compression.

The fully automated transport system ensures the continuous workflow between production steps. Combined with our fully flexible automated manufacturing processes, this lays the foundations for high efficiency and complexity handling. Automation allows for a multitude of different products to be manufactured at the same time.

Freiburg has a full range of OEB 1-5 engineering controls for development and commercial supply.





The flexibility of our manufacturing operations here at Freiburg truly sets us apart. Every aspect of the site is designed to facilitate flexible production and give us the agility to react to evolving project demands. From launching a new product in multiple markets to ramping up product volumes, we successfully adapt our approach.

**Anne Kessler,
Director of Manufacturing**



High Containment for Development Services (DevCon)

This cGMP-compliant, OEB 4/5 facility manufactures clinical supplies (phase 2B to 4) and includes all process steps to produce tablets, film-coated tablets and capsules. **DevCon delivers the following services to you:**



We offer you:

- Implementation, optimization and adaptation of analytical methods for raw materials, drug substances and drug products
- Scale-up, streamlining and optimization of processes for robustness and cost-efficiency
- Tech transfer of new products to commercial manufacturing sites
- Manufacture of registration stability batches and ICH stability testing
- Manufacture of small scale launch and commercial supplies
- Marketed product support

High Containment (HighCon) Manufacturing

The latest addition to the Freiburg site is a high containment facility due to open in 2021. Implementing latest technology in automated dispensing and weighing processes, the facility expands the site's high containment offer in OEB 4/5 and provides the level of expertise and capacity required to respond to partner challenges in highly potent oral solids.

The facility is designed to meet a range of partner demands and features high volume and flexible volume suites, with small-scale production starting at just 30kg. The area is

equipped to produce tablets, film-coated tables and capsules. Analytical capabilities include real-time release and NIR process analytical technology for blending and content uniformity. The facility equipment meets industry 4.0 standards and is certified for energy efficiency and sustainability through Leadership in Energy and Environmental Design (LEED) program.

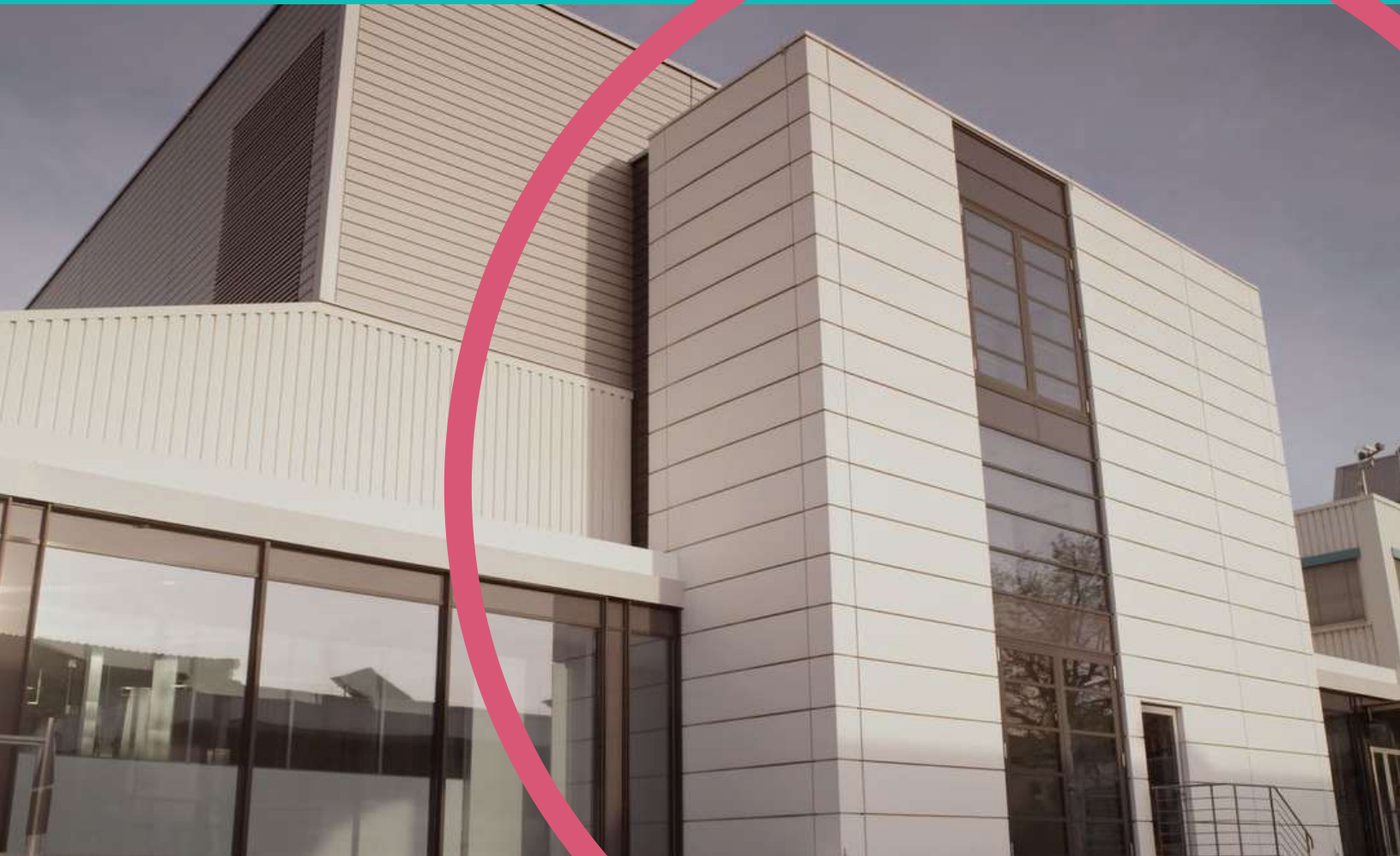
Continuous Manufacturing Technology (CMT) and Portable Continuous Miniature and Modular (PCMM) Manufacturing

These innovative, next generation technologies allow for continuous processing and offer you greater flexibility. CMT has proven to increase efficiency and quality of production. The process is made possible by a proprietary Pfizer technology called continuous mixing. With the technology, a specially designed mixing unit can blend active ingredients into a homogeneous compound without interruption. The process saves time and money, and reduces the possibility for error.

PCMM comprises a network that integrates a small footprint, continuous processing equipment, smart control systems and PODs

(portable, self-contained GMP modules) to process API powders and inactive ingredients into bulk tablets.

Materials arrive to production through a fully automated feeding system; this and the Pfizer-developed mixing technology ensure high homogeneity and uniformity. New measuring methods constantly check the quality during ongoing production in real time. This self-contained and fully automated process allows Freiburg to further increase production flexibility and accelerate your scale-up.



Spotlight

Science-minded YouTuber Marcel Häfele recently visited Freiburg. This 25-year-old influencer has a YouTube channel Techtastisch (Techtastic) which hosts videos about experiments, physics, chemistry and technology.

The German Association of Research-Based Pharmaceutical Companies arranged for Marcel to visit the Freiburg site as part of an initiative to inspire young people to embark on careers in the pharmaceutical industry.

Marcel spent the day exploring tablet production, stopping at various stations along the production line to learn more about each manufacturing step. After visiting Freiburg, Marcel was impressed. He said, "It is really fascinating how many professions stand behind the production of a single tablet. I hope I was able to inspire someone to go after their dreams through these insights."



[Watch the video](#)

Packaging capabilities

Freiburg has one of the highest packaging volumes for a pharmaceutical manufacturing facility, with 241M packs produced in 2019.

It is the Center of Excellence for blister and bottle packaging, which are delivered through flexible and high-speed technologies that ensure quality and speed to market. We can also handle highly potent products, controlled drugs and immunosuppressants in specially designated containment packaging areas.

Our latest flexible packaging technologies such as Packaging on Demand and Blister Express Center coupled with our high-speed packaging solutions can meet a wide range of specifications with packaging lot sizes ranging between 1 and 1,000,000. Highly automated processes such as material flow, palletizer robots, computer integrated manufacturing, and 100% electronic batch recording ensure the ability to handle complexity and meet partner timelines.

With decades of worldwide experience and regulatory approvals for all markets including U.S., China and Japan, Freiburg is ready to meet all global aggregation and serialization requirements.

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Our commitment to innovation

Innovation is the spirit of Freiburg. Recognized within the Pfizer network as a pioneering site in lean manufacturing, environmental protection and sustainability, our team collaborates with world-renowned local academic institutions such as Fraunhofer Institutes, the University of Freiburg and the University Hospital, Max Planck Institute, and Hahn-Schickard Institute.

Our relationships extend to the trinational BioValley and include academic and industry partners from Germany, Switzerland, and France, such as the European Campus of Eucor.



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Read our Ecosystem case study [here](#)

Read our Smart Green case study [here](#)



Pfizer Healthcare Hub Freiburg

Discover the
Healthcare Hub

The Freiburg city tram sponsored by Pfizer and featuring Pfizer colleagues is a daily reminder of the pride our team takes in innovating for the future.

The Freiburg site is also home to the Pfizer Healthcare Hub. Founded in 2018, the Pfizer Healthcare Club was established at our Freiburg site. Here, we develop new sustainable solutions for pharmaceutical manufacturing in collaboration with digital pioneers. In addition to academic and industry partnerships, the Hub collaborates with local accelerator Smart Green and has access to a nationwide network of healthcare and technology start-ups. The Freiburg hub maintains close cooperation with the Pfizer Healthcare Hub in Berlin, bringing together innovation in manufacturing and life sciences.



Our commitment to sustainability



Protecting the environment is one of our most important goals. We are a pioneer in environment-friendly and sustainable pharmaceutical production.



- We are certified in accordance with ISO 14001 and ISO 50001 Energy Management Systems.
- Our comprehensive on-site Energy Management System ensures greener manufacturing processes and helps reduce packaging and waste in all workflows.
- Ninety percent of the site's energy demand is covered with renewable sources. We rely on a mix of photovoltaic, geothermal, and biomass energy sources and heat recovery systems.
- We have an active program to assess and address the issues associated with pharmaceuticals in the environment (PIE) which includes detailed wastewater assessments to ensure good environmental management. We treat persistent, toxic wastewater onsite with an evaporator.

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As part of our commitment to sustainability,
we launched Freiburg Green Strategy.

- We leverage solar thermal air regeneration for room conditioning in production areas for coating and tablet/capsule inspections.
- We have a special geothermal system that cools offices in the summer and heats them in the winter.
- We use a wood pellet heating system that reduces fossil fuel consumption with a saving close to 5,500t CO₂. It produces steam and heat necessary for humidity and temperature control in production rooms and labs.
- In partnership with a start-up Envuco, we utilize an innovative green building automated system which analyzes and adjusts local energy flows in Freiburg administrative offices.
- We have a fleet of electric cars for internal and external transportation.



Our commitment to people

People are one of our greatest assets – their skills, passion and determination make it possible to deliver medicines to patients in need. We are committed to attracting the best local and global talent while enriching the experience of current employees.



Close to 1,400 highly qualified and specialized professionals across quality, tech services, engineering, production, packaging and other areas work at the site.



We are a diverse team bringing together 39 nationalities from all over the world.



The average length of service is 11 years while the rate of attrition is below 1 percent.



We are a recipient of the Job Motor awards recognizing outstanding companies in the region.





For me working at Freiburg means working as a team. While everyone is focused on their work, there is always a great atmosphere and constant interaction among teams and colleagues. This teamwork enables us to deliver best results every time.

Anna Richter, Production pharmacist

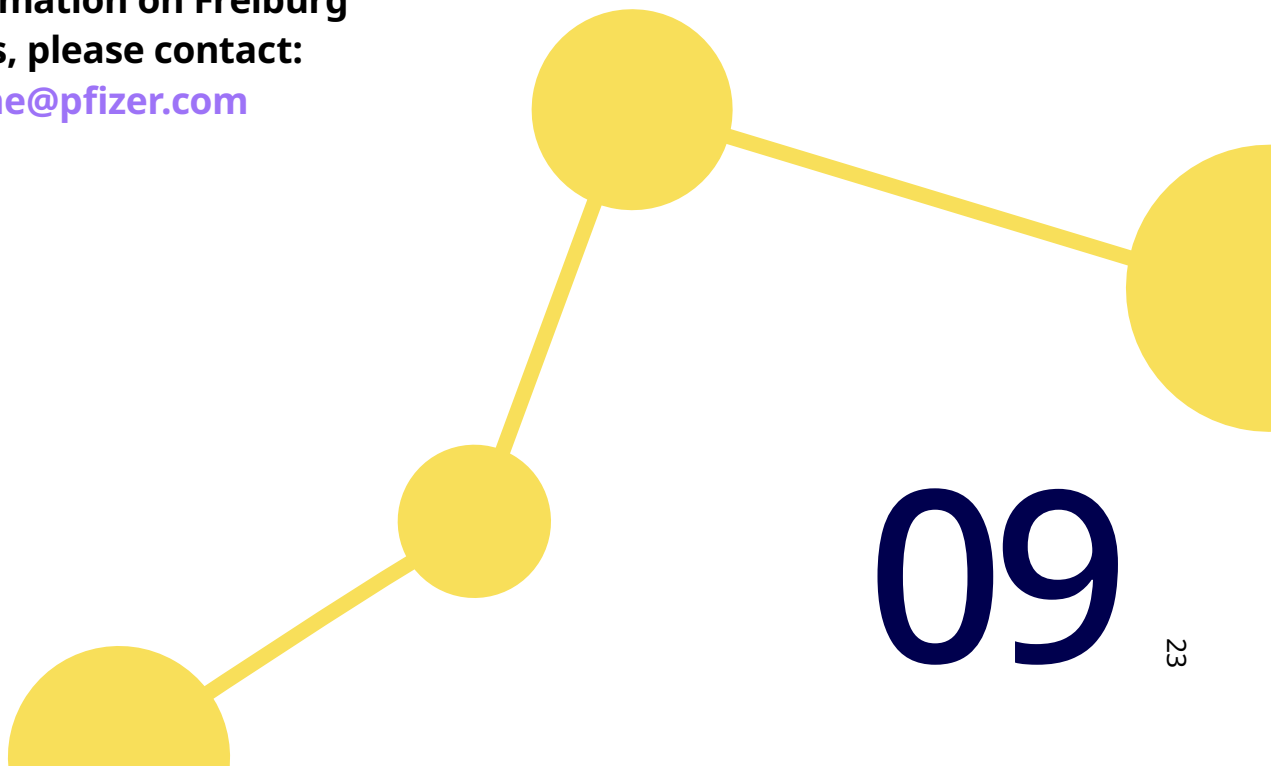


Our commitment to patients

At Freiburg we are united by a clear sense of purpose. We aspire to bring medicines to patients quickly and efficiently through intelligent collaboration with our partners. With every tablet and capsule we manufacture, we enable you to deliver breakthroughs that change patients' lives.

Discover how we're altogether different

For more information on Freiburg
CDMO services, please contact:
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For more information, visit
[pfizercentreone.com](https://www.pfizercentreone.com)