

# Turnkey cleanroom technology

Secure solutions you can rely on. Fast, flexible and precise.

## Your partner for cleanroom technology

### Highest precision, customized solutions and excellent service

Kretz + Wahl is your partner for turnkey cleanroom components, for high-precision climate control systems and for excellent services from A to Z. Whether design, installation, qualification or maintenance - or the complete all-round package. As a strong, reliable partner, we are there for you and provide you with the best system for your demands.

What makes us stand out: We offer flexibility and quick responses, delivering optimal solutions on time. Benefit from our turnkey solutions and all-encompassing services from one source.

#### Meet our leading expert in cleanroom technology

»With over 40 years of experience, we know the high demands placed on cleanrooms and the tough challenges our customers face.



We always focus on understanding their individual processes - and developing customized solutions to best meet their needs.«

#### Karl-Heinz Lotz Head of Division Cleanroom Technology Dipl.-Ing. in energy and thermal engineering

#### Your contact partner our leading expert:

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## Safe and reliable cleanrooms and climate systems

Protect your product, your processes, your people

Whether in the manufacture of medical products or when handling food or sensitive electronic components: The right space and the right climate are crucial to prevent product contamination, to comply with strict quality and safety standards - or to protect your staff members from hazardous substances.



#### Holistic room concepts that meet your standards

Our cleanroom and containment solutions guarantee particularly clean, low-particle air conditions and exactly the climatic conditions that you require for your product or process. We offer holistic concepts in which room enclosure and furnishings floor (walls, ceiling, furniture), room climate (temperature, humidity, purity, pressure) but also process-relevant media are brought into harmony in a way that is necessary for your specific requirements.

New construction, complex conversion and retrofitting in existing buildings or maintenance and service – we offer the perfect solution for your industry and your demands.

> Our competence - tolerances: +/- 0.1 K temperature constancy in time and space +/- 1% relative humidity

#### Our solutions - your benefits:

- > Holistic and turnkey cleanroom systems
- > Modular systems that can be flexibly expanded
- > Economical room-in-room solutions
- > Easy operation with central control
- > Minimal maintenance, high availability

## Ideal solutions for your industry

## Ensuring unparalleled integrity for critical environments

In industries where even microscopic contaminants can cause significant damage, the integrity and cleanliness of the environment is of paramount importance. Our cleanroom solutions are carefully designed to keep contaminants such as particles, germs, airborne molecular contamination and chemical vapours at maximum low levels.

Our expertise extends into many areas of application in high-tech industries such as industrial manufacturing and research, but we also feel at home with our services in the field of life science technologies such as pharmaceuticals, medical technology, pharmacies and the food industry or vertical farming.



#### **High-tech industries**

- Optics/Optoelectronics
- Laser technology
- Microelectronics/semiconductor technology
- Microsystems technology/Sensor technology
- Aerospace
- Nanotechnology
- Battery cell production
- Photovoltaics/solar cell production

## **Bio- and lifescience technologies**

- Biotechnology
- Pharmaceutics
- Pharmacy stores
- Medical Technology
- Medical Packaging
- Food industry
- Phytopharmaceuticals
- Farming/Vertical Farming

#### Benefit from our system solutions:

- > Optimum hygiene & safety
- > Germ-free production environment
- > Process air free of particles and molecular contamination
- > Protection of your employees from hazardous substances
- > Protection of the environment from pollutants
- > Avoidance of cross-contamination
- > Compliance with innternational legal requirements



## Our turnkey solutions for optimal climate

Modular systems tailored to your needs

With our modular system solutions for cleanroom technology, we offer you maximum flexibility combined with economic efficiency. Each system is of the highest quality and is precisely adapted to your location and your specific requirements.

### All systems are suitable for:

New construction | Reconstruction | Retrofitting

#### Cleanroom systems

Our top solutions in the field of cleanroom technology stand for absolute precision and reliability. Thanks to the most advanced technologies, we guarantee extremely clean and virtually particle-free air conditions that are precisely tailored to your product and process requirements.

#### Dry room systems

Our drying rooms guarantee a constant low humidity. By using the latest dehumidification technologies, we ensure consistently dry conditions that can be optimally adapted to the respective requirements. We create the ideal environment to ensure the quality, efficiency and longevity of your products.

#### We comply with all relevant standards, laws and guidelines:

DIN ISO 14644 | VDI 2083 | VDI/VDE 2627 | GMP guideline | GEG | VDI 6022 | DIN 1946 ... and many more!

#### Measuring room systems

Our state-of-the-art measuring rooms offer you perfectly constant and precisely defined conditions to safely check even the most sensitive products. Be it temperature, humidity or specific measurement parameters – we adapt everything individually to your requirements.

#### Customized solutions

Every project brings its own challenges. Whether special room conditions, innovative technologies or unconventional material applications – with our in-depth know-how and close cooperation, we tailor the right customized solution for your requirements.

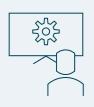
> Our focus in cleanroom technology is always the product, the processes, the people or the environment that are to be protected.

## Carefree all-in-one solution

### We are your full-service system provider

With our innovative solutions and extensive partner network, we set standards in cleanroom technology. We dive deep into your processes to find the perfect solution tailored to you. Thanks to our own engineers, production experts, installers and service staff, we are closer to the process and consistently in tune with your requirements.

### Our offer:



#### Consulting & design Hand in hand to the perfect solution

We provide comprehensive advice and clarify technical prerequisites, process requirements, and ensure compliance with all normative standards. From the initial feasibility analysis to the economic evaluation and detailed implementation planning - we are your reliable partner and navigate you safely through all official hurdles and approval procedures.



#### Construction & execution Precision in detail

Our high-quality product portfolio for the most demanding climatic requirements is designed with the highest precision and flexibility: We integrate existing system parts or components from third-party manufacturers and ensure perfect coordination of all elements.



#### Installation & commissioning Efficiency in every step

We guarantee a quick and proficient installation as well as a safe commissioning of your systems. Our in-house mechanics are experienced specialists and are always up to date with the latest technical and normative standards.



#### Maintenance & services Always at your side

We offer continuous and expert service for your system throughout its entire life cycle. Our extensive spare parts warehouse and our highly trained service experts guarantee fast response times and first-class support. Whether maintenance, repair or modernization – we are there for you.



### Qualification & requalification

Reliable measurements, evaluations and documentation

- > Climate measurements
- > Air movement measurements
- > Static measurements of the air
- > Measurement of particles
- > Other measurement and verification

#### Choose what is best for you:

the complete package from start to finish or individual services of our portfolio.

## Our promise:

## Faster. More flexible. More precise.

Flexibility and fast response times are standard for us, throughout the project phase and beyond. With us, you receive turnkey solutions and comprehensive services from a single source – and within the agreed deadlines. In addition, a permanent contact person is at your side and ensures the necessary transfer of knowledge. So that you and your teams can concentrate on your core business.



Kretz + Wahl is a leading provider of **building services engineering** and has decades of experience in the field of **ventilation and air conditioning technology**.

Scan and get in touch.



Karl-Heinz Lotz Dipl.-Ing. | Director



Johannes Wilhelm Dipl.-Ing. | Sales + Engineering

#### Memberships

Deutsches Reinrauminstitut e. V. (DRRI e. V.) ITGA e.V/Industrieverband Technische Gebäudeausrüstung und Umwelttechnik Hessen e. V. Silicon Saxony e. V. VIP3000 e. V./Verein Interessengemeinschaft Pharmabau e. V. ISO 9001 certified

# Your cleanroom project deserves the best.

The best technology. The best solution. The best partner.



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