



**SCHILLING**  
ENGINEER  
Industrial Handling  
Cleanroom Systems

CleanCell4.0®

# CleanCell

CUSTOM CLEANROOM SYSTEMS

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ENGINEER

Industrial Handling

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# MODULAR CLEANROOMS

## INDIVIDUALLY PLANNED

With our modular cleanroom systems in the CleanCell series, you can achieve a controlled environment qualified in accordance with ISO-14644-1 or GMP.

We work closely with you to develop the best solution for your application. We support you in all stages from initial planning through design and set-up to qualification of the cleanroom.





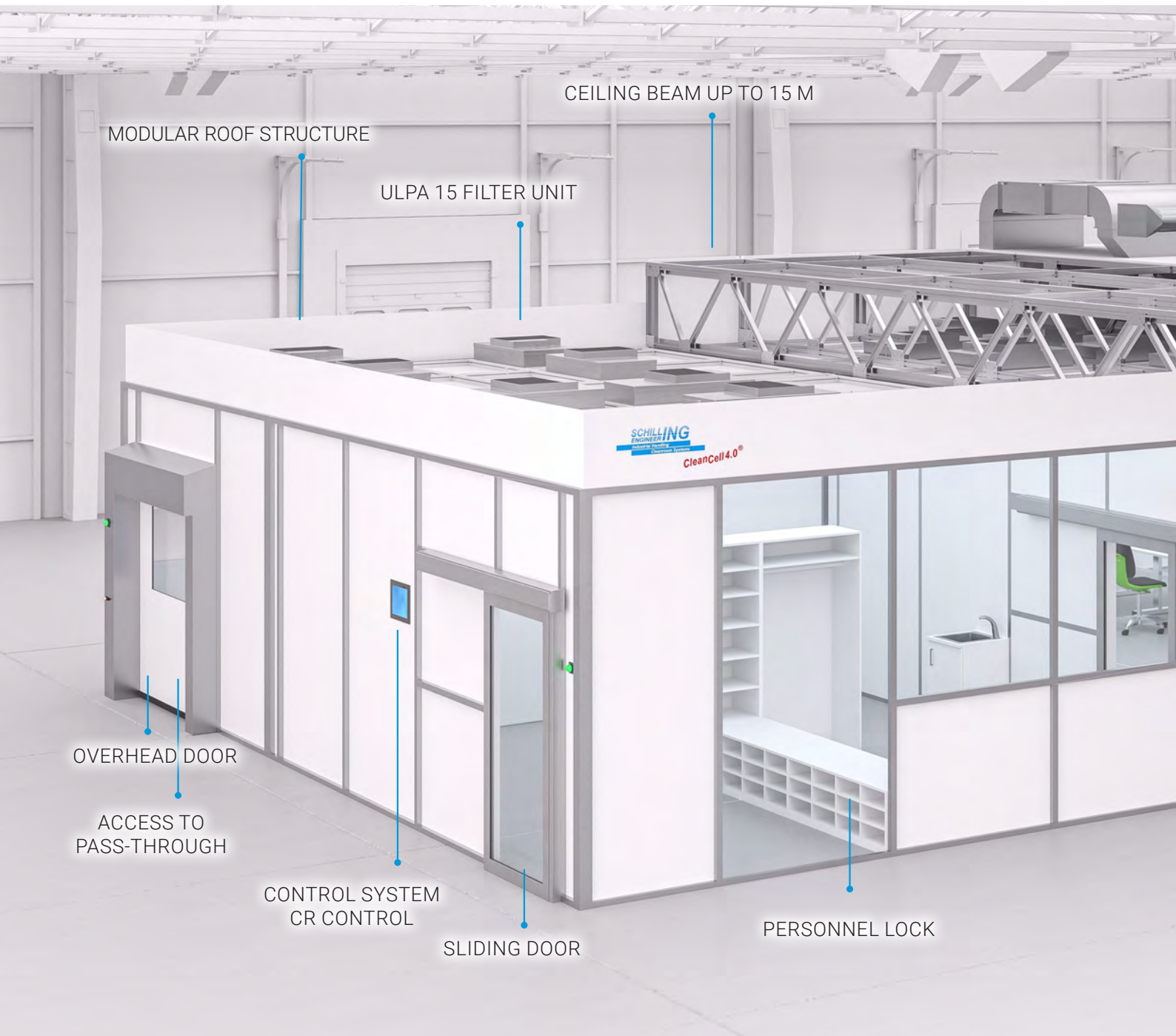
## AS MUCH AS NECESSARY – AS LITTLE AS POSSIBLE

### PERFECT FOR YOUR APPLICATION

With a cleanroom from SCHILLING ENGINEERING, you get exactly what you need for your production process. Because a cleanroom system consumes a lot of energy, the cleanroom volume and class should be kept as low as possible.

The modularity of the overall system means that you can add or subtract elements as needed to stay prepared for future developments.

# ISO 5-9

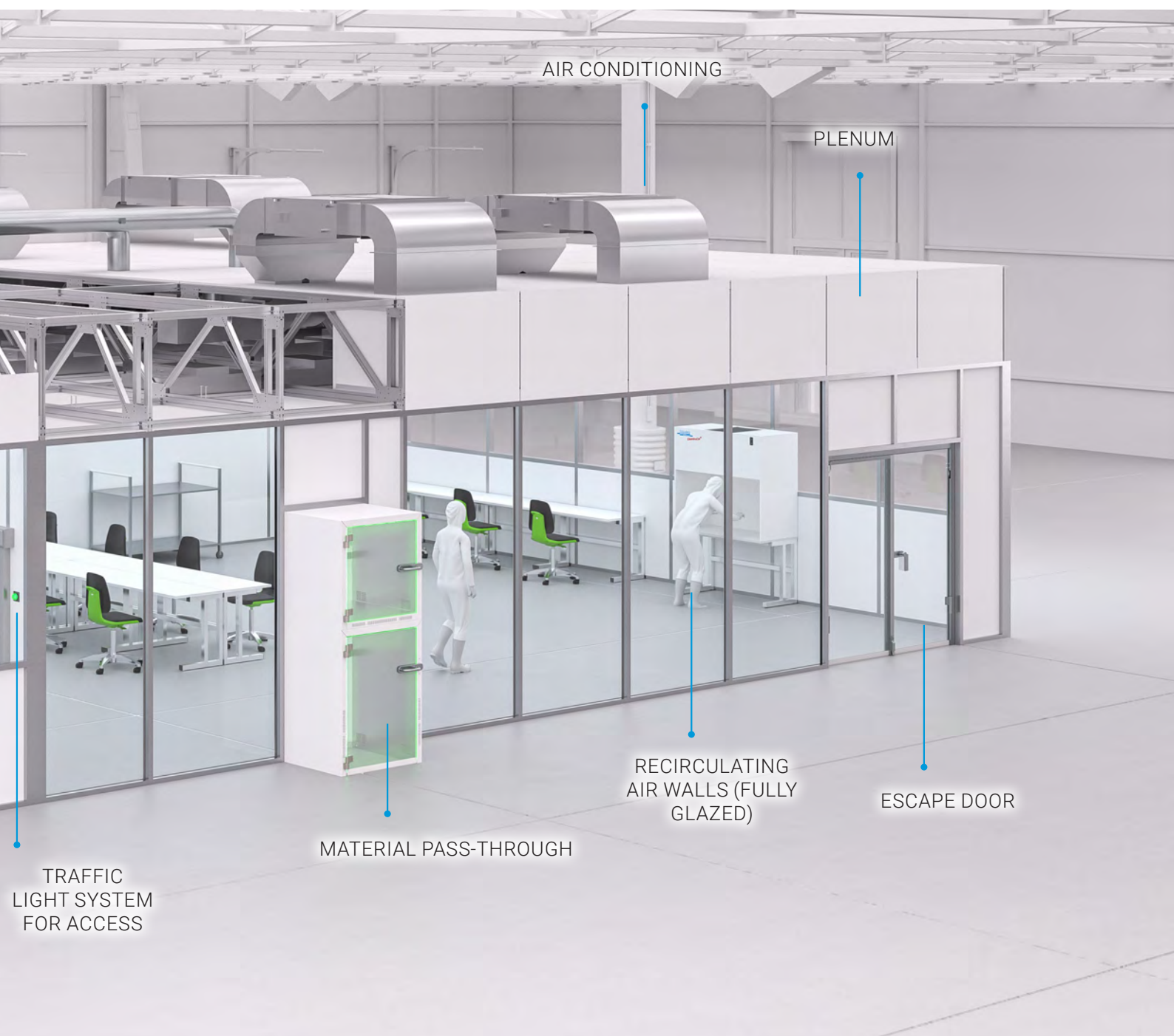


Our cleanrooms can be flexibly integrated into your existing location. Whether for new or existing production buildings, whether space is tight or abundant, the modular elements are configured to meet your exact size requirements. The free-standing structure means that you don't need a steel frame or supporting ceiling for the 'room within a room' system.

## A PERFECT FIT

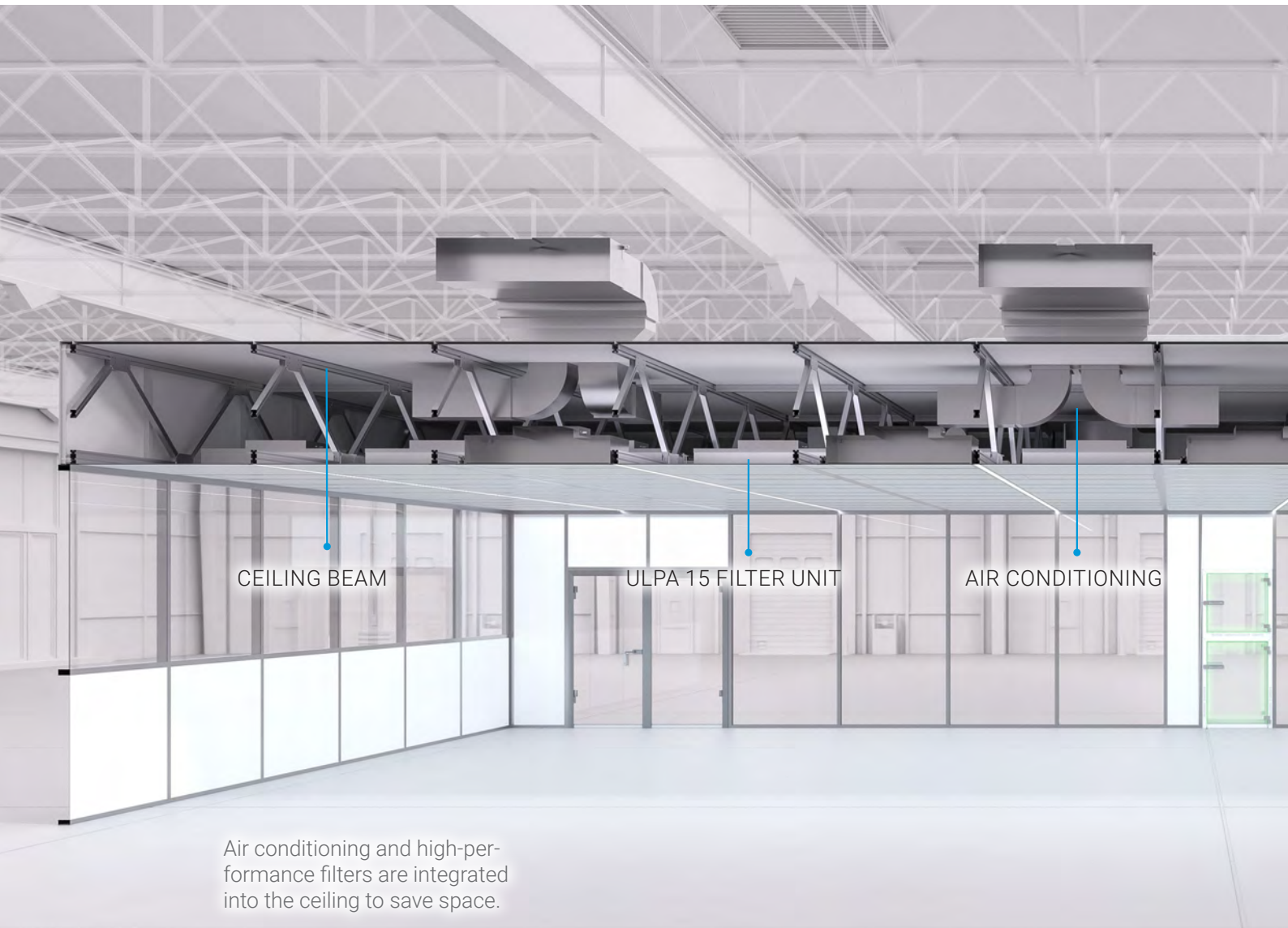
FREE-STANDING AND VARIABLE

# GMP A-D



## ON THE SAFE SIDE OUR CLEANCELL SERIES

For our cleanroom solutions, we always use the latest technology and only high-quality, tested materials. The cleanroom systems are qualified and handed over as turnkey systems that meet all the requirements of cleanroom classes ISO 5–9 and GMP A (in B), B, C and D.

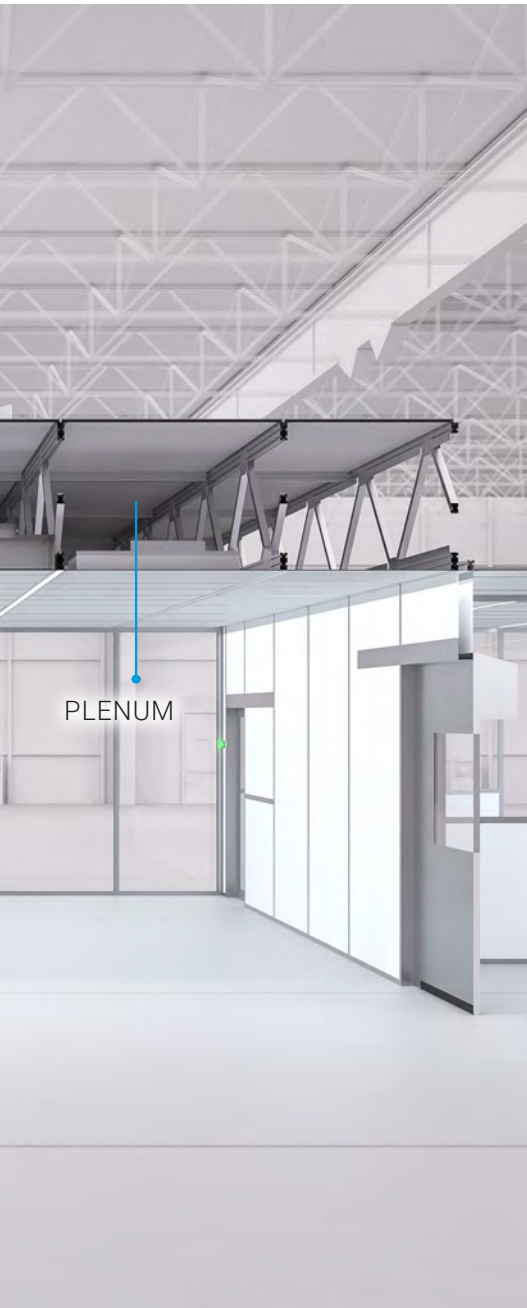


Air conditioning and high-performance filters are integrated into the ceiling to save space.

## PURITY WITH NO COMPROMISES

### HIGHLY RELIABLE AND QUIET

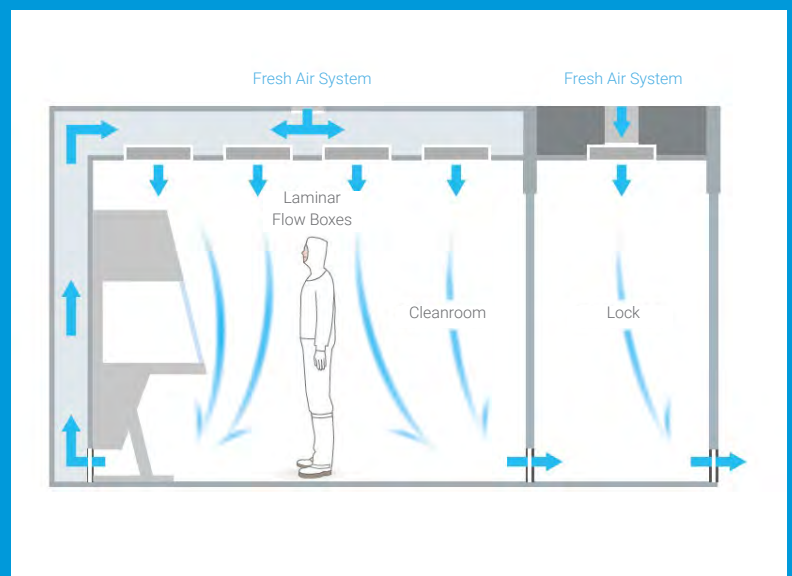
High-performance ULPA 15 filters provide for constant, controlled air quality. Thanks to the high filter performance, the required cleanliness level can be achieved with a small number of filter units and a low air change rate. The filter fan units suck in the air from the surrounding building or the plenum. They are very quiet, at less than 50 dB(A).



## SPACE-SAVING AND EFFICIENT AIR CIRCUIT IN RECIRCULATING

The purified air flows through controlled air-flow (laminar flow) from the ceiling to the floor and transports the airborne particles as overflow to the outside or back to the plenum in the recirculation process.

The air is returned inside the walls to the filter fan units. Reuse of the filtered and pre-cooled air saves energy and extends the filter life.





# FLEXIBLE AND FUTURE-READY

## MODULAR DESIGN

All elements – roof, wall, door and window elements – can be easily removed without sustaining damage and reused.

The wall and ceiling elements are modular and can be combined with new modules for later extensions and conversions.







## CONTROLLED TEMPERATURE AND HUMIDITY

We standardly achieve a deviation of  $\pm 2$  degrees C and  $\pm 10\%$  relative humidity, or better if required. Precise air conditioning is provided through ceiling air conditioning units or air conditioning cabinets. Decentralised air conditioning and heat recovery make operation of the CleanCell cleanrooms extremely efficient.

## CLEAR VIEW

### IDEAL LIGHT FOR ALL TASKS

The cleanroom features high-quality LED light strips that are practically and aesthetically integrated into the aluminium strips of the ceiling. The lighting is dimmable and achieves up to 1,300 lux. Fully glazed recirculating air walls provide an open atmosphere with plenty of natural light and good visibility from the outside.

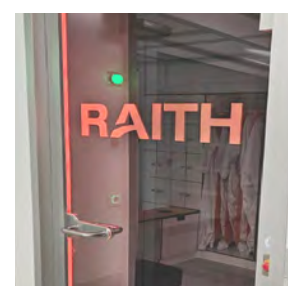
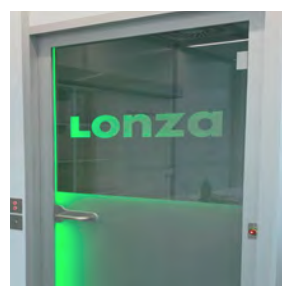




## COME IN

### PROCESS SAFETY THROUGH VISUALISATION

The LED strips around the edges of the illuminated doors of our CleanCell cleanrooms immediately show you the lock status. You can see whether access to the next room is permitted via the signals (green, blue and red).



*We can even light up your company logo on the glass doors!*

## MATERIAL LOCK

### IN AND OUT SAFELY

We can provide small or large pass-throughs according to your needs. The doors are interlocked and light signals indicate when they can be opened.





## PERSONNEL LOCK

### FURNISHINGS AND CLOTHING

The structured lock for inward and outward movement of personnel is fundamental for the quality of your cleanroom. We can advise you on all fit-out questions and provide furnishing concepts, clothing and other accessories.

AFTER SALES

QUALIFICATION

MAINTENANCE

TRAINING



### **Our cleanroom systems are handed over as qualified and ready-to-use systems**

The qualification tests are carried out in accordance with the EU GMP guidelines and DIN EN ISO 14644 and, if necessary, recorded in detailed GMP documentation. All work steps, test procedures and measured values are thus comprehensible and verifiable for external test centres.



### **There for you even after installation**

After commissioning has been completed, your daily work in the cleanroom can begin. We remain your contact, carry out service and requalifications and can assist you through our hotline. We can also train your personnel in cleanroom basics or clothing, behaviour and hygiene.



## CHARACTERISTICS CleanCell

- Cleanroom classes ISO 5–9 and GMP B, C, D
- Free-standing up to width of 15 m
- Ceiling elements with integrated filter fan units (ULPA 15)
- LEDs fully integrated into profiles
- Fully integrated recirculating air walls
- Central control and monitoring system
- Flexible expansion options
- Turnkey system including qualification

## TECHNICAL SPECIFICATIONS

### FILTER-FAN-UNIT

Degree of separation	99.9995 %
Air flow rate	1100 m <sup>3</sup> /h
Noise level	< 50 dB(A)

### LIGHTING AND CO.

Illuminance	up to 1,300 lux, dimmable
Sleep Mode	

### AIR CONDITIONING

Decentralised cooling for room-specific temperature control
Plenum technology with efficient system air recirculation
Humidity control according to individual requirements
Free cooling for energy-saving cold air generation



<https://schillingengineering.de/en/products/360-tour>

# OUR CLEANROOM SYSTEMS

## SUPPORT PROCESSES IN THESE INDUSTRIES

- Pharmaceutical industry
- Medical technology
- Biotechnology
- Clinics
- Pharmacies
- Blister centres
- Cytostatics laboratories
- Cosmetics industry
- Semiconductor industry
- Automobile industry
- Display fabrication
- Microtechnology
- Nanostructural engineering
- Optical industry
- Laser technology
- Data carrier technology
- Solar industry
- Food technology
- Packaging technology
- Aerospace technology
- 

## OUR BRANDS

**CleanEasyCell<sup>®</sup>**

**CleanMediCell<sup>®</sup>**

**CleanFlowCell<sup>®</sup>**

**CleanCell 4.0<sup>®</sup>**

**CleanSteriCell<sup>®</sup>**

**CRControl<sup>®</sup>**



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