

**X**CUBE CROFCU

**Air distribution for clean rooms. Clever and flexible.**



**TROX<sup>®</sup> TECHNIK**  
The art of handling air



### **X-CUBE CROFCU increases the efficiency**

The quasi plug-in construction of the X-CUBE CROFCU reduces the installation time on site considerably. More savings potential results from the easy and straightforward maintenance since all components are easily accessible. Fresh air is added based on demand such that no energy is wasted. A factory acceptance test ensures that each unit complies with the applicable standards and meets the requirements of the customer. All required parameters are factory set. As a consequence, only a minimum amount of time is required for commissioning and on-site tests.



### **Unparalleled hygiene**

With the special shape of the casing, its smooth surfaces, and the way in which the components are installed, the X-CUBE CROFCU complies with the VDI 6022 guideline.



### **Easy installation**

The X-CUBE CROFCU is delivered ready to operate. Transport is easy as holes are provided for the insertion of transportation rods such that the unit can be lifted with a crane. The dimensions fit the usual grid sizes of clean room ceilings. Due to its rigid base the unit can be safely installed in ceilings or set up on the floor. Any wiring inside the CROFCU is already complete and need not be performed on site.

### **Rapid commissioning**

All required parameters are factory set. A factory acceptance test ensures that each unit meets the normative requirements as well as those of the customer. No more wiring is required on site, which allows for rapid and hence cost-saving commissioning.



### **Safe maintenance**

The X-CUBE CROFCU has been designed without any sharp edges and hence ensures maximum safety. All components are easily accessible and easy to maintain.

### **Flexibility**

It is possible to use the X-CUBE CROFCU as a single unit or to combine several units. In conjunction with the TROX software this results in a flexible ventilation solution for clean rooms. The CROFCU allows for stand-alone operation as well as for integration with modern building management systems.

### **Made in Germany**

Thanks to its most advanced manufacturing technology in Germany, TROX can supply excellent quality and meet the most demanding delivery times. Just for the X-CUBE TROX built a dedicated 15,000 m<sup>2</sup> production facility in Anholt, near the German-Dutch border, which has been equipped with the most advanced manufacturing technology. Almost needless to mention that TROX implements the relevant industry standards and has all its components and processes certified.



*X-CUBE CROFCU  
production facility in  
Anholt, Germany*

## ► Air distribution for clean rooms. Clever and flexible. ►►

Most clean rooms are characterised by a very high air change rate. Depending on the situation, it may be necessary to change the air volume in a room up to 40 times per hour.

On the other hand, only a few people may be working in the production rooms or labs at any one time. This means that only a small quantity of air is ‚used‘ and hence only a low fresh air flow rate is required. A similar case are thermal loads, which need to be dissipated only in selected spots.

Enter the X-CUBE CROFCU – and with it a completely new design concept for clean rooms. The compact, factory tested secondary unit for use with centralised ventilation and air conditioning systems is typically installed in false ceilings. With its unique features it meets the essential requirements on the ventilation and air conditioning of class C and class D clean rooms.

- Dissipation of high thermal loads
- Addition of fresh air as required
- Maintenance of room pressure by integral volume flow rate control
- Suitable for all clean room concepts
- Suitable for all classes of clean rooms (ISO 14644-1) when combined with particulate filters
- Pumped chilled water cooling system with room temperature control
- Variable recirculated air volume flow rates of up to 6000 m<sup>3</sup>/h
- Increased flexibility if several units are connected
- Energy-efficient plug fan with EC motor
- Addition of fresh air from 50 m<sup>3</sup>/h to 2000 m<sup>3</sup>/h
- Monitoring of filters downstream
- Contamination check by means of pressure zone control
- Space-saving due to smaller ducts
- Simple and quick commissioning due to plug and play





### Panels

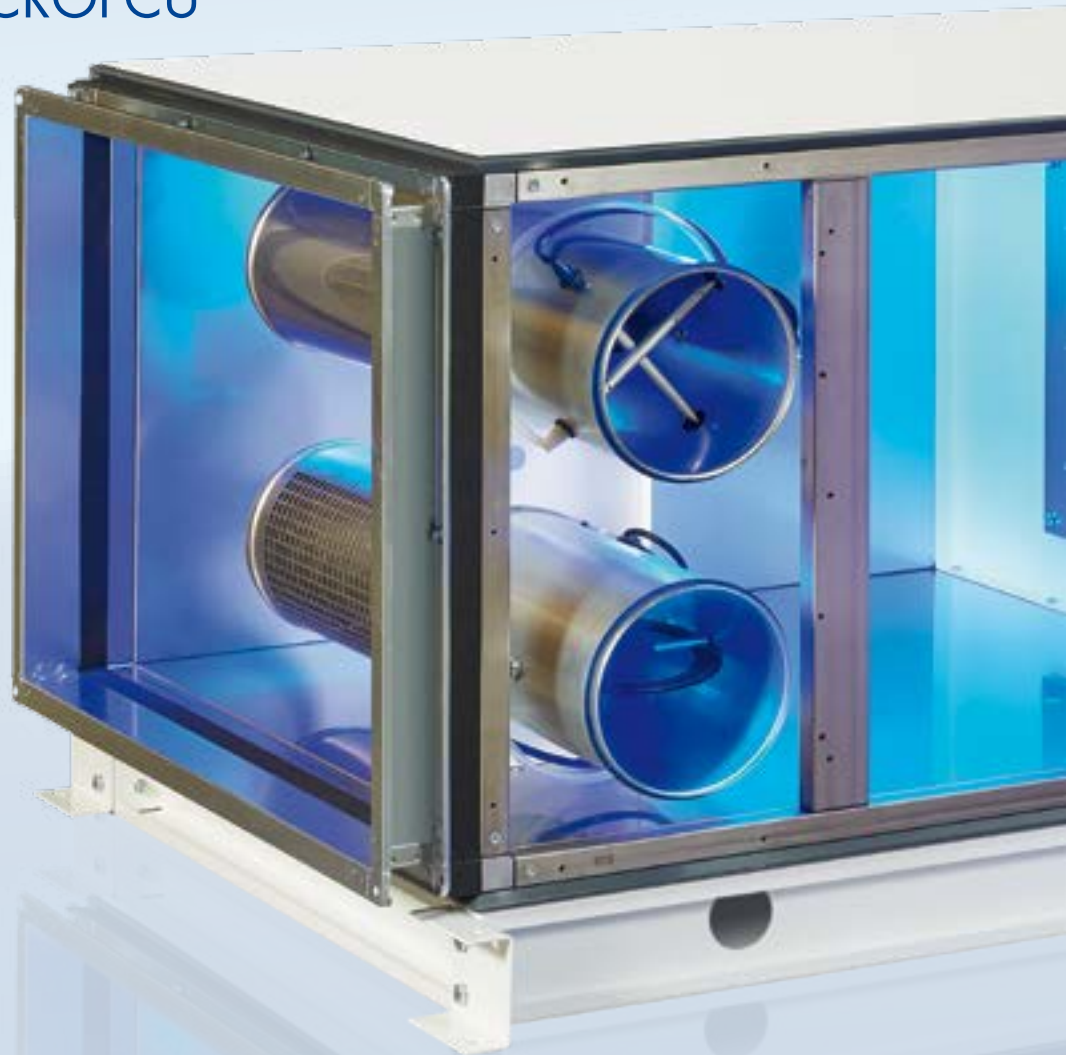
- *Integral cover profiles*
- *Compression latches facilitate inspection and cleaning*



### Interior surfaces

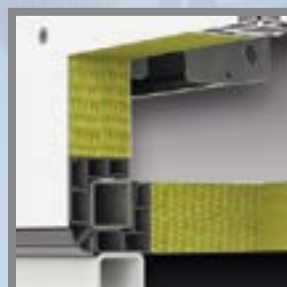
- *Stainless steel or powder coating for maximum hygiene*

 **CUBE** CROFCU



### Steel frame

- *Powder-coated*
- *Completely covered by panels*



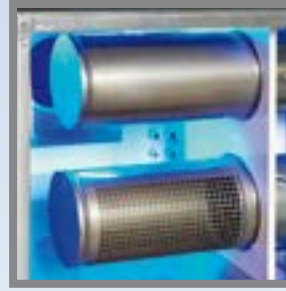
### Casing

- *Integral acoustic and thermal insulation*
- *Elimination of thermal bridging due to separation between inner skin and outer skin as well as between supply air and extract air*



### Volume flow control

- High control accuracy
- For airflow velocities up to 13 m/s
- Closed blade air leakage class 4 to EN 1751



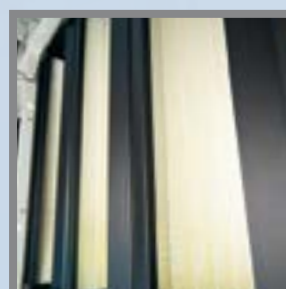
### Primary air system

- Optimum addition of primary air
- No mixing with exhaust air



### Centrifugal fan

- EC motor without impeller housing
- High efficiency
- Low sound power level
- Complies with the future efficiency class IE4 according to IEC 60034-30



### Optional particulate filter

- Eurovent-certified, energy class A
- Compact depth
- Low initial differential pressure
- High dust holding capacity
- Stainless steel clamping rails



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