

## ENERGY EFFICIENCY IN CLEAN ROOMS

### CALCULATING LIFECYCLE COSTS AND SAVING ENERGY



Modern air handling units and systems are controlled **in a demand-based manner** in the present day. For example, thermal outputs and airflows are adjusted depending on the actual demand.

The **energy requirement of an air handling system** depends on this control. The climatic conditions occurring at the respective location have an additional influence.



Handling **In order to take these effects into consideration at the design stage**, TROX offers the possibility for X-CUBE air handling units to determine the life cycle costs (LCC) in an hourly step simulation for a specific air handling unit at a selectable location in the world and for an adjustable operating scenario.

The energy requirements are determined for every hour of the year with the help of weather data records. Based on these LCC calculations, the **most efficient device solution** can be determined for each application.

### I WILL BE HAPPY TO ADVISE YOU



I WILL BE HAPPY TO ADVISE YOU ON THE TOPIC OF LIFECYCLE COSTS FOR AIR HANDLING UNITS.

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### REDUCING ENERGY COSTS BY MIXING IN RECIRCULATION AIR



Enter the **X-CUBE CROFCU** – and with it a completely new design concept for clean rooms. The compact, factory-tested **Secondary air unit** for use with centralised ventilation and air conditioning systems is **typically installed in false ceilings**, reimbursed.

With its unique features, it meets the essential requirements on the ventilation and air conditioning of clean rooms and is especially designed for GMP class C and class D.

- Dissipation of high thermal loads
- Addition of fresh air as required
- Maintenance of room pressure by integral volume flow rate control

#### **Maximum efficiency**

The quasi plug-in construction of the X-CUBE CROFCU reduces the installation time on site considerably.

#### **Easy installation**

The X-CUBE CROFCU is delivered ready to operate. 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.

#### **Versatile and flexible**

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.