



**CASE STUDY**

# CLEAN ROOMS

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# CLEAN ROOMS

## ➔ What are Clean Rooms?

Clean rooms filter out pollutants, dust, and other particles. They are mainly used in the manufacturing of pharmaceuticals, medical equipment, and electronics.

## ➔ How do they work?

Outside air is collected and circulated through a filter system that removes pollutants and other contaminants. After the air is clean, it enters the clean room. The process is recycled, though, throughout the production cycle. “The purpose is to protect sensitive processes and products from unwanted particles, microbes, and other contaminants.” In the battery industry, making the batteries creates byproducts that need to be collected to maximize efficiency and ensure the byproducts or dust do not contaminate further processes down the line.

## ➔ Industries Served

### Common industries in which you can find clean rooms:

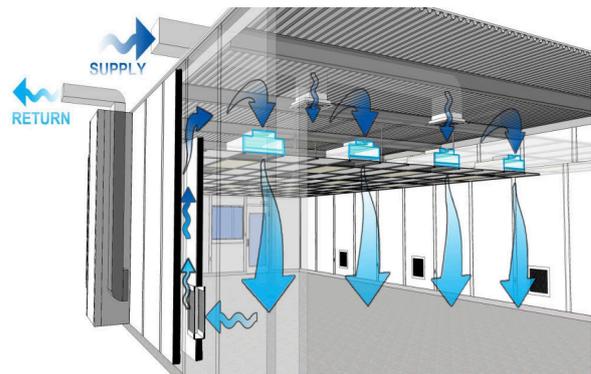
- Pharmaceuticals
- Medical Device Manufacturing
- Electronics
- Aerospace
- Military
- Solar



## THE APPLICATION

Filter Plus works on many cleanroom projects. When installing clean rooms, they use US Tubing for the airtight, leak-free connections needed to keep the air clean!

Their pre-engineered clean room systems are custom-designed and built with precise tolerances to meet your specific needs and classification requirements. The cleanroom systems have interfacing walls, floors, and ceilings with smooth edges, accurate cuts, and precisely mitered joints.



This precision engineering ensures a tight, air-leak-proof construction and assembly that facilitates air particle filtration and the control of airflow, pressure, temperature, and humidity. These cleanroom interior surfaces and air plenums are made from non-particulate-shedding materials such as stainless steel, vinyl, fiberglass, and pre-finished aluminum.

Since clean rooms are meant to filter out particulates, the ducting needs to be airtight. Any leakage can compromise the cleanroom's efficiency. Dirty air from the room is filtered and redistributed back into the room.



## THE SOLUTION

US Tubing is a great solution for all your clean room applications. The beauty of US tubing is in the clamps. The contoured gasket is specifically manufactured to create an airtight seal between the two flat, turned-out ends of the tube and accessories when compressed by our custom clamp. The gasket fits snugly over one of the ends at each joint.

The high-strength clamp then compresses the pipe together on the gasket, providing the amazingly tight seal of the US Tubing Clamp-Connect System. Depending on your application, you can select just the right gasket and o-ring to seal your duct.

## CHOOSE FROM

- EPDM Conductive in conjunction with our SS grounding Clamps for special applications that require conductivity for grounding purposes
- Silicone for corrosive and high-temperature applications
- EPDM Standard Seal for dust collection, non-corrosive, and mist applications

