

## **Clean Room Assembly Basics:**

**Remember: the greatest source of contamination is the human body. Proper washing and gowning methods help to prevent contamination from your body from making contact with or entering the products you are assembling.**

**Contamination can lead to serious consequences to both the company (including bankruptcy and possible jail sentences for upper management) and to the customer (including serious injury and death).**

**PPE: Personal Protective Equipment. Employees must be trained to know:**

- **When PPE is necessary;**
- **What PPE is necessary;**
- **How to properly put on, take off, adjust and wear the PPE;**
- **The limitations of the PPE; and,**
- **Proper care, maintenance, useful life and disposal of PPE.**

**A clean room is a space where the concentration of airborne particles is controlled to specified limits. The Federal standard 209E document establishes standard classes or air cleanliness for airborne particulate levels in clean rooms and clean zones. The standard prescribes methods for class verification and monitoring air cleanliness.**

**Clean rooms are classified as class 1, 10, 100, 1000, etc., in accordance to the permitted number of particles per cubic foot of air.**

**Example: a class 100 clean room limits the concentration of airborne particles equal to or greater than 0.5 microns size to 100 particles in a cubic foot of air. HEPA filters are a critical component in clean rooms.**

**The purpose of the clean room air-conditioning system is to supply airflow in sufficient volume and cleanliness to support the cleanliness rating of the room. Air is introduced into the clean room in a manner to prevent stagnant areas where particles could accumulate. The air must also be conditioned to meet the clean-room temperature and humidity requirements.**

**Positive pressurization is the basis of assuring that uncontrolled and untreated air does not infiltrate the protected area. Conditioned air must be introduced at a rate that maintains the specified positive pressurization.**

**No matter how many precautions are taken, the greatest weapon against contamination will always be the individual. Always follow guidelines and report possible issues immediately.**