

# PORTAFAB

## CASE STUDY

### Cleanroom for Semiconductor Industry

**Location:** Colorado Springs, CO

**Application:** Cleanroom

**Product:** Series 300 & P2000 ESD (electro-static discharge) Epoxy-Coated Aluminum Skins on Fire & Sound Panels.

**Benefits Provided:**

- Anti-static wall system to maintain standards for semiconductor fabrication.
- Double-wall system to ensure maximum environmental control.
- Removable wall section to ease transfer of large equipment.
- Use of P2000 wall system for economical construction of gowning area and air shower entry.



### THE SITUATION

A major provider of products and systems for semiconductor device fabrication required the installation of a cleanroom environment in which to safely package wafers for transportation. The cleanroom would require various ISO classifications in order to retain material purity and to ensure safe transport of wafers to clients within the industry.



### THE CHALLENGE

The client required visibility into the cleanroom to serve as a demonstration piece for visiting clients to see the processes inside. In order to prevent potential contamination with using full glass panels, our distributor worked closely with PortaFab to provide a double wall around the enclosure. With a high attention to detail, our distributor ensured the large glass wall partitions and framework within each wall matched up to provide clear visibility into the cleanroom.

Additionally, the new cleanroom would require the integration of PortaFab's wall systems on top of a raised floor. PortaFab's engineering department overcame this challenge by working closely with our distributor and the manufacturer of a raised floor product to ensure complete integration of their floor product with PortaFab's wall systems. Our distributor also added a personnel ramp to provide ease of entry due to the raised floor.

### THE SOLUTION

Based on the various ISO classifications between the gowning room and main cleanroom area, our distributor utilized two wall systems to create the structure. Due to the semiconductor environment and need for anti-static conditions, PortaFab's Series 300 wall system provided an ideal solution to meet those needs. In addition, the P2000 system was used to create air return walls and vestibule walls while minimizing the impact to the internal room dimensions as well as cost.

Because of size of structure and height of envelope there was limited space to access the roof for maintenance of the HVAC system. Our distributor's solution was to provide a 'ship's ladder' for ease of access as well as not take up valuable floor space within facility. For future expansion and to ease the transfer of larger equipment directly into the cleanroom, our distributor incorporated a large removable section of wall panels that would accommodate these future situations. These modifications serving as a testament to the ease of flexibility and adaptability of building with modular systems.

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