

PORTAFAB

CASE STUDY

Environmentally Controlled Room for Coordinate Measuring Machines

Customer: Toyota Industrial Equipment Manufacturing

Location: Columbus, Indiana

Application: CMM Room 28' x 30' x 13'

Product: S3000 with Fire & Sound Wall Panels

Benefits Provided:

- Humidity and temperature control
- Ability to relocate easily
- Sound insulation



THE SITUATION

As a leading manufacturer of forklifts, Toyota Industrial Equipment Manufacturing is dedicated to maintaining a high level of quality throughout all areas of its assembly process. When the manufacturer implemented plans to have highly sensitive coordinate measuring machine installed within its facility, it needed to house the equipment in an environmentally controlled workspace.

THE CHALLENGE

Due to the sensitive nature of the equipment, the CMM room needed to be kept at approximately 68°F despite the fact that temperatures within the plant often exceeded 90°F in summer months. In addition, the new CMM measuring equipment had been ordered and would be ready for installation in a short period of time, so a decision on how to house it had to be made quickly.

"We had a very short lead time," said Brent Meienburg, quality assurance engineer for Toyota Industrial Equipment Manufacturing. "We had to get the builders, electricians, HVAC, fire protection, and internal maintenance scheduled in concurrently - we were looking for help."

THE EVALUATION

Toyota management determined that only a modular system would meet its requirement for a building that could be moved or easily expanded and PortaFab quickly drew up the plans. The proposed building was to be 28' x 30' x 13' high and was designed to provide both humidity and temperature control. Fire and sound wall panels were chosen due to their Class A noncombustion rating and excellent noise-reducing properties.

The S3000 system was also selected because it could accommodate a load-bearing roof to handle the storage of the HVAC system and its duct work. In fact, its superior load-bearing capabilities also allowed it to accommodate the interior ceiling, a steel dust cover, and twenty seven 2' x 4' recessed lights.

THE SOLUTION

Once Toyota management approved the recommendation, PortaFab's design team worked closely with its local distributor and Toyota personnel ensure timely delivery. With its experience in inplant building design and extensive inventory and manufacturing capacity, PortaFab shipped the building complete in just 12 days and its local distributor needed just four day to complete the installation - with no problems.

The finished CMM room included wall panels with a white Fiberglas™ laminated finish on both inside and outside surfaces to provide increased durability in a manufacturing environment where material moves in and out constantly.

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