

## the challenge:

The employee break room at the Armstrong ceiling plant in Macon, GA is centrally located in the plant's fabrication area and heavily used three shifts per day by employees as well as contractors and visitors. However, according to John Wharton, the plant's capital projects and engineering manager, the 1,000-square-foot space was showing its age and in need of significant repair. "It really required attention," he states. "In addition, the company had just begun a 'Healthy Spaces Initiative' which included improvements in indoor air quality."



**CASE STUDY**

Project | *Armstrong Ceilings Manufacturing Facility, Employee Break Room*  
Location | *Macon, GA*  
Product | *Ultima® Health Zone™ AirAssure™ Ceiling*

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## the solution:

"As a company, we're committed to building better, healthier spaces for everyone and this includes our employees so we decided to start over rather than just make cosmetic improvements," he continues. "As a result, the entire space was gutted, including the ceiling, walls, and floor. We wanted to start with a blank space."

Indoor air quality was a key element in creating a healthy space. To ensure that aspect, the existing ceiling panels were replaced with Armstrong Ultima® Health Zone™ AirAssure™ ceiling panels. AirAssure ceiling panels with factory-gasketed edges, when placed in a standard ceiling suspension system, form a tight seal and reduce airflow leakage through the ceiling plane up to four times more than panels without AirAssure performance.

To improve air quality even further, the room was also pressurized. Prior to renovation, the room was at -0.015 w.c. (water column) negative pressure, meaning air and particulate matter such as dust from the manufacturing floor would enter the room through cracks and door openings. Following renovation, target pressurization is now +0.014 to +0.021 w.c. positive pressure.

The positive pressure keeps manufacturing floor air and dust out of the break room. Particulate matter in the room was reduced from 28 micrograms/cubic meter before renovation to just 5 micrograms/cubic meter after. **This is an 82% decrease resulting in the overall Indoor Air Quality (IAQ) score going from "fair" to "excellent," according to the most recent EPA standards.** Compared to a non-gasketed ceiling, the AirAssure ceiling required 83% less fan power to achieve pressurization.

The facility was also able to bring in 40% more outside air. Net air flow is now outward from the break room into the manufacturing floor resulting in a clean, comfortable, well-ventilated break area for the production staff.

Wharton reports employee reaction to the break room renovation has been "nothing short of great. The Healthy Spaces Initiative was one of the facility's biggest commitments and affected the most people," he notes. "Employees feel reassured that they are breathing clean, healthy air with the combination of room pressurization and AirAssure ceilings."