

Genentech Inc. - Warehouse

Genentech
IN BUSINESS FOR LIFE

Genentech Inc. contacted Airius to address temperature regulation problems in their new pharmaceutical warehouse, where the existing HVAC system was not able to reach FDA regulations.

Following installation of the Airius system the warehouse passed all FDA validation testing floor to ceiling, wall to wall. It also opened up Billions of Dollars worth of additional inventory space.



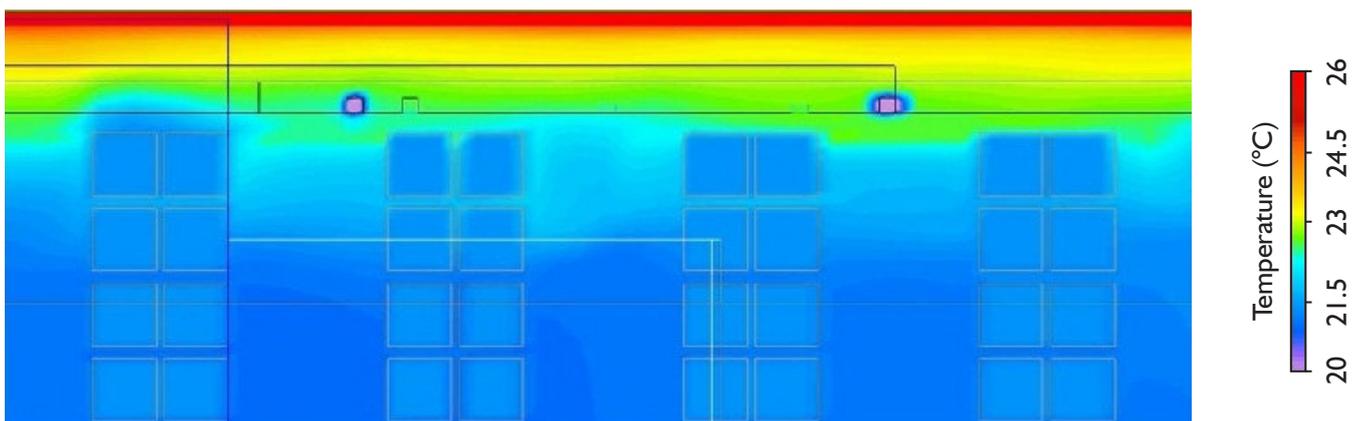
Key Points:

- **Stratification reduced from 5°C to 1.5°C.**
- **Billions of Dollars of inventory space reclaimed.**
- **Used to destratify temperature regulated cooled air facilities.**
- **Facility passed FDA regulations with Airius.**
- **System = 50 x Airius Model 25's.**
- **Floor Area = 4,600m².**

The accompanying thermal images were developed from the temperature controlled warehouse of a major pharmaceutical company. The company's new 50,000 sq ft. warehouse facility in Louisville, KY did not pass the Food and Drug Administration's required Temperature Validation Tests with the originally designed HVAC system.

As can be seen in the 'Before Airius' image without Airius fans, the top levels of the pallet racking were exposed to 22.5°C air, too high a temperature for the inventory.

BEFORE AIRIUS

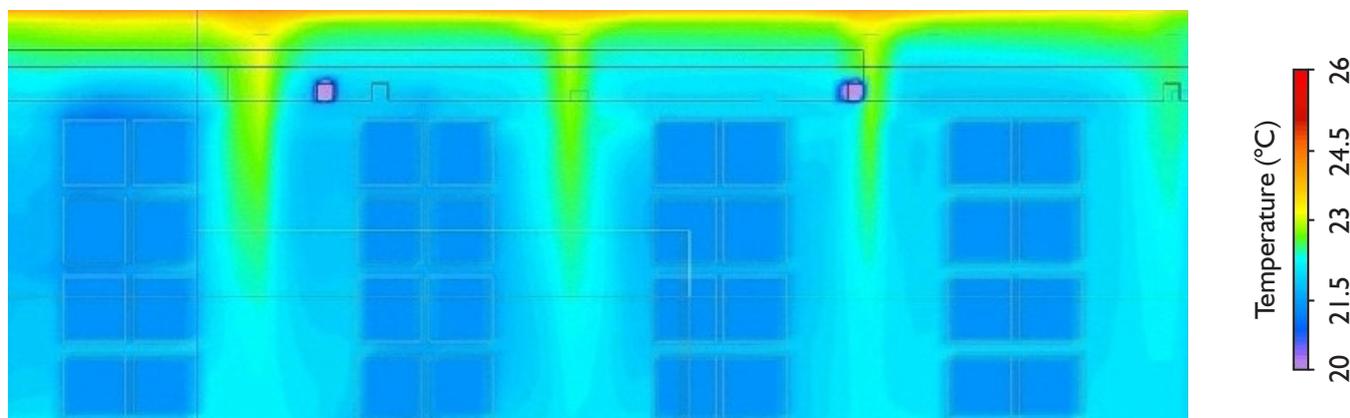


This was a major problem; the facility was due to open and the space was badly needed. The HVAC contractor had tried everything they could think of and had no answers for the problem, short of starting over with a re-designed system. A senior facility engineer suggested the use of Airius for this application. The HVAC Contractor was very sceptical the devices could raise the cold air levels and maintain them. Airius personnel were called in to review the situation and it was determined for this large application that 50 Airius model 25 destratification fans would be required and were air freighted at the customer's request within 2 days.

The facility quickly agreed and the installation was a success. In spite of the fact that the destratification fans were originally developed to de-stratify heated air, and the fact that cold air naturally sinks, it can be seen by comparing the 'Before Airius' image to the 'After Airius' image that the use of the Airius fans has balanced the level of cooler air in the room to the point where the upper rack levels are no longer in jeopardy – Thermal Equalisation!

The elevation graphic shows a complete equalisation of temperature around the pallet racks supporting literally billions of dollars of inventory from floor to ceiling meeting FDA regulations and approval.

AFTER AIRIUS



This Airius installation allowed the warehouse to pass FDA Validation Testing and helps ensure the safety of the products for the manufacturer and the consumer. It has been reported to Airius that the temperature variance from the bottom of the 18' racks to the top with the fans running over the last year is only 1 to 2°C.

This case is a graphic example of how the Airius destratification systems can work in air conditioned environments as well as heated environments and testifies as to how well they truly do equalise nearly 100% of the air temperature in a given space.

The results of this original installation; Airius is now specified in the next two warehouse projects, one in 2007 and another in 2008, for this same pharmaceutical company.