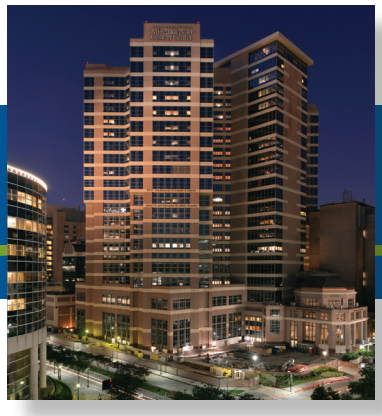
ClimateCraft®

# Project Profile

# University of Texas MD Anderson Cancer Center



MD Anderson Alkek Building at Sunset
Photo: MD Anderson

## The Challenge

The University of Texas MD Anderson Cancer Center ("MD Anderson") is known for its commitment to continuous facility improvement to deliver the highest level of patient comfort, safety, and satisfaction. What is especially impressive is their ability to do so while maintaining continuity of service. In order to maintain their high facilities standards, MD Anderson needed to replace existing, old air handling units. The challenge was to find a way to replace these units, without disrupting patients, hospital operations, or other mechanical equipment.


MD Anderson Cancer Center
Photo: MD Anderson

New units had to be transported within the confines of existing elevators, corridors, and doorways in order to be assembled in the basement mechanical room. MD Anderson also stated an additional requirement: to satisfy a leakage test requirement at both the factory and after installation at the job site. Most importantly, the entire project needed to occur with little, and preferably no disruption, to patients' quality of care at the institution.

## The Solution

MD Anderson replaced the existing air handling units with new ClimateCraft ACCESS™™ units. ClimateCraft utilized FanMatrix™ fan arrays to improve the high system performance standards. Units were built, witness tested, and then completely disassembled at the ClimateCraft factory and shipped to the MD Anderson job site for re-assembly.

First, the temporary air handling unit was put in place to cover air handling needs of the facility during the replacement of the permanent unit, so as not to disrupt day-to-day functions of the facility. Next, the large existing air handling unit, which consumed most of the space in the basement mechanical room, was demolished and removed in order to make space for the new units. Finally, the new ACCESS™ units were assembled on-site within the confines of the existing mechanical room.

The new ACCESS™ units were:

- Tested in-factory and in the field ***with almost the same performance in both scenarios*** for allowed leakage based on design airflow. In each case, ClimateCraft was about 50% of the allowable leakage stated in the design specifications. ClimateCraft's unique gasketed panel design and manufacturing excellence ensured the field assembly process was the same as factory assembly.

- Physically smaller than the previous air handling equipment, the smaller footprint used less space in the existing mechanical room
- Able to match the airflow requirements of the larger, older units
- Installed in shorter time frame than MD Anderson was accustomed to experiencing since the two new units took only about a week to install completely


MD Anderson Campus in Houston
Photo: MD Anderson

## The Benefit

From a capital project perspective, utilization of ClimateCraft's field assembled ACCESS™ unit versus other available air handling units resulted in:

- No disruption to patients or hospital services.
- Reduced total project cost
- Significantly reduced project timeline
- Less invasive construction which lowered the financial and operational risk of the project

In addition, reduced facility down-time was the end benefit of a quick installation involving working overnight and on the weekend to have the units commissioned before the next business week began. This project did not involve any building demolition, which was another factor in selecting to work with ClimateCraft. By removing the need for building demolition, the team eliminated the potential for added mitigation challenges that are unique to a healthcare environment.

Operationally, by utilizing ClimateCraft ACCESS™ units with FanMatrix fan arrays over alternative options, overall operating cost was reduced and reliability was improved.

With other air handling units that run one or two 200HP fans, the result of a fan failure is a much greater issue as there is no way to compensate for the lost airflow. It is not unusual for a portion of a facility to be unusable until the fan is replaced and the air handling unit is running to spec again.

ClimateCraft's solution provided eight 10 HP fans, in an array. If one fan fails, the other fans adjust to compensate for the shortage. This means the hospital is less likely to have a sudden air handling unit shut down due to a fan failure. Replacing this smaller fan would not require specialty equipment and a large contingency plan since the replacement would simply involve carrying out the bad fan and installing a new fan in its place.

Finally, ClimateCraft's gasketed design, allows MD Anderson to anticipate less airflow leakage over time due to aging versus traditional methods that rely on caulk and sealant which need to be reapplied periodically.

ClimateCraft's fan array products allow for fans to be turned off for safety, repair and maintenance purposes. ClimateCraft's fan array products are not designed to turn individual fans on and off for the purpose of improving fan array efficiency and ClimateCraft does not endorse turning individual fans on and off for the purpose of improving fan array efficiency. Any statements to the contrary are not supported by ClimateCraft.



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