

SUCCESS
ON THE
JOB

CUSTOM MADE COILS

HEATCRAFT COMMERCIAL PRODUCTS



The environmental testing chamber at the McKinley Climatic Laboratory at Eglin Air Force Base depends on custom-installed Heatcraft coils to test the durability and performance of aircraft and weapon systems at temperatures as low as -65°F.

Heatcraft Coils Keep Planes at Eglin Air Force Base Ready for Any Weather

THE PROBLEMS

One: The United States Air Force needed to double the capacity of the McKinley Climatic Laboratory which simulates extreme environmental conditions to test the durability of weapons, weapon systems and aircraft.

Two: Unavoidable delays on the job site meant all the coils – 84 of them – needed to be stored for months until delivery could be scheduled.

THE SOLUTION

Call Heatcraft's Commercial Products plant in Grenada, Mississippi, where custom-made "guaranteed to fit" coils are manufactured exactly to specifications.

The Air Force wanted to increase the length of time they could test in McKinley's main chamber, so they asked the U.S. Army Corps of Engineers to double the chamber's capacity. That's when Caddell Construction in Montgomery, Alabama received their first call from the Corps of Engineers. "The chamber at Eglin is primarily used to run tests on aircraft although they can test anything.

HEATCRAFT



Air cooled to -65°F instantly turns to fog as it exits the chamber into the humid Florida air.

They have ways to actually tie down the aircraft and simulate conditions of flying planes in any environment. Other coils are used to bring the temperature inside the hangar down to around -65°F or up to 165°F. The new coils would supply cold make-up air used up by the airplane's huge engines while it is "flying" inside the hangar," explained Bob Nanney, Caddell's project manager. "I called Heatcraft."

The coils, which would be installed in a coil bank, would need to condition the air supplied to the hangar to simulate environmental conditions at an altitude of about 30,000 feet – the air would need to be supplied to the chamber at almost -65°F. The hangar is immense, measuring about 252 feet wide, 201 feet deep, 70 feet high in the center and 35 feet high on the sides – necessitating an enormous amount of air flow. In addition, the air is sucked through and exhausted out of the jet engines at an incredible rate. In order to maintain the

integrity of the tests, the air needs to be replaced at the same rate. Heatcraft engineers and coil designers went to work on a design that would get the job done. A total of 84 coils, some as large as 60" x 186" and 16 rows deep and weighing 6300 pounds, were built at Heatcraft's factory in Grenada.

Among other challenges, the coil's design required one fin per inch spacing which had to be done by hand. The sheer size of the coils made it cumbersome to simply move them around the plant. It took between six to eight months to design and build the coils for Eglin's installation.

"Heatcraft's professionalism and flexibility was evident from the time they began manufacturing the coils," says Nanney. "Right in the middle of production – the coil order was about 10 percent complete – unavoidable delays on the job site presented a real storage dilemma. There was no way the coils could be delivered as originally scheduled. But Heatcraft saved the day by warehousing the completed coils. When it was time to install the coils, Heatcraft delivered them on a staggered schedule to ease the work load and they all fit and perform beautifully."



This building will house the 84 custom made Heatcraft coils for the environmental chamber.

THE RESULT

Teamwork between Heatcraft's factory trained field representatives, production crew and engineers were key to getting the right coils for the job built and delivered when Eglin needed them.

• CUSTOM DESIGNED COILS ARE OUR SPECIALTY
• TIMELY DELIVERY IS OUR PROMISE
• SATISFIED CUSTOMERS ARE THE RESULT

HEATCRAFT

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