

# COMMERCIAL AND INDUSTRIAL APPLICATIONS



## CUSTOMER PARTNERSHIPS



**Thunder Horse.** In the challenging world of oil and gas exploration, we partnered with DWD International in the development and design of the air conditioning equipment for the world's largest semi-submersible oil platform (the size of a modern football stadium). Working together, we developed the cooling coils that not only cooled the living quarters for 229 people but also operation critical control rooms and motor control centers.

**Mad Dog II.** BP's latest Gulf of Mexico semi-submersible platform, capable of producing up to 140,000 barrels of crude oil per day, features Heatcraft coils for cooling efficiency for both housing and control rooms that are Modine ElectroFin coated for long life protection from corrosion associated with the salty sea environment.



**One Vanderbilt Place,** New York's tallest inhabitable space high rise required coils that could withstand high operating pressures due to the high head pressures associated with multi-story buildings. Heatcraft provided traditional copper tube coils for lower pressure areas as well as stainless steel tube coils that met over 3000 psi ultimate burst.

The **Butler-Warner Power Plant** in North Carolina, one of the world's largest thermal energy storage (TES) projects of its' time, depends on half-a-million feet of stainless steel tubing in 112 Heatcraft custom coils used to cool the air in electricity generation. These coils were cleanable in design, custom-made for the project and were delivered and installed one week ahead of schedule.

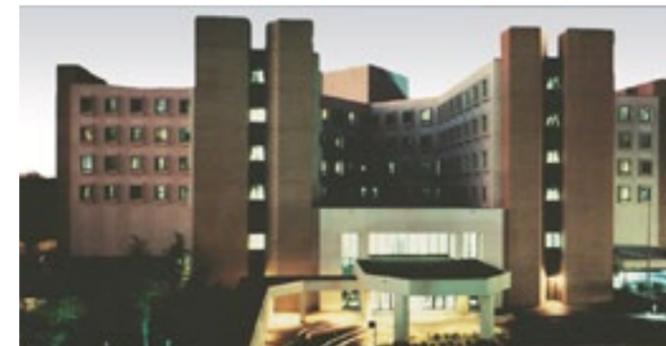


## CUSTOMER PARTNERSHIPS



Heatcraft provided 216 coils for the **Willis Tower** (formerly **Sears Tower**) in Chicago, one of the largest commercial office buildings in the world to this day. Project was delivered one year earlier than originally scheduled and was under budget with no tenant shutdown.

Technicians lower one of sixteen made-to-fit replacement coils manufactured by Heatcraft for the **Boston World Trade Center**. Due to heavy convention and trade show schedules and other special events, all coils had to be specially scheduled for a Friday delivery so that installation could be accomplished during a non-event weekend.



The **Mississippi Baptist Medical Center**, a 650 bed medical facility in Jackson, MS, relied on Heatcraft replacement coils to supply air at a constant 55°F temperature to 720,000 square feet of conditioned space. Since the project was completed, patient complaints have dropped "off the charts."

The environmental testing chamber at **McKinley Climatic Laboratory at Eglin Air Force Base** in Florida depends on custom-built Heatcraft coils designed for extreme frost management. With the help from special fin spacing, durability and performance testing of aircraft and weapon systems can be done at a brisk -65°F temperature.

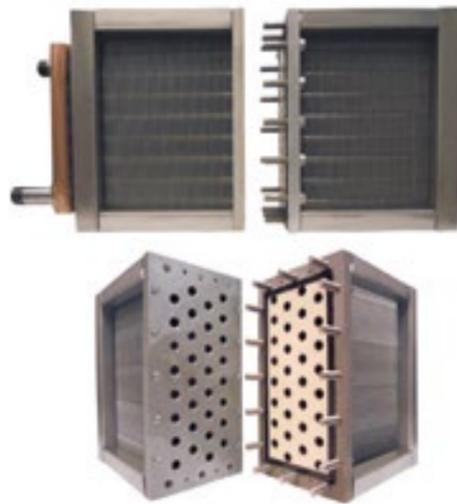


## CUSTOM MADE COILS



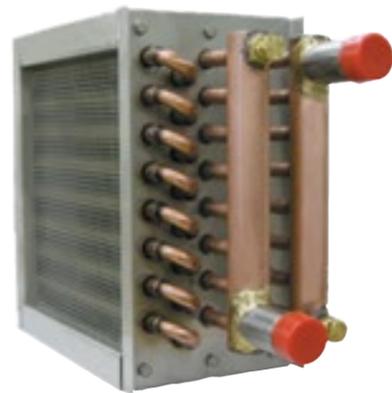
### Fluid Coils

Heatcraft's product portfolio features a large variety of drainable circuiting options as well as many different tube material, tube diameter and tube thickness combinations to meet any heat transfer application. Multiple fin styles and materials paired with those tubing options gives Heatcraft the most expansive product line offering in the market today.



### Modular Fluid Coils

Space in today's mechanical rooms and air handlers is at an all-time premium. Heatcraft's Modu-Coil designs, available in both 1/2" and 5/8" tube diameters, are the ideal replacement option when space to maneuver coils into their final installation is simply not there. The modular concept not only makes the installation easier but it also minimizes potential coil damage in handling and transportation as the sections can fit easily into jobsite elevators.



### Desaturation Coil

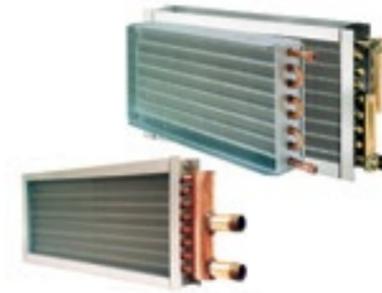
Having two coils in one provides a combination of cooling and re-heating in one common case that can both de-humidify and re-heat the same air to desired levels. These designs are often used in comfort cooling applications such as hospitals, clean rooms and science and research laboratories.



### Booster

Need that extra boost of heat? Heatcraft's Booster coils can be used in most heating applications and are offered with a wide variety of casing configurations including fully flanged, slip & drive, or end plates only to make your installation easy and successful.

## CUSTOM MADE COILS



### Quick Ship

Our quick ship coils are available in many different sizes and in two casing styles, slip & drive (SD) or fully cased (HC), in both single-row and two-row configurations. Quick ship steam coils are available in single-row designs in pitched casings for both horizontal and vertical airflow installations. Quick ship coils can ship in as fast as two days from receipt of order.

### Removable Box, Cleanable Coil

Do you have a fouling issue inside the tubes of your coil and can't get inside to clean them? Has your heat rejection gone down and your pump costs gone up because of a dirty fluid in your coil? Available for both cooling and heating, Heatcraft's 4, 6, 8, 10 or 12 row coils are built with removable carbon steel header boxes on either one or both ends to provide direct tube access for cleaning and rodding-out of fouled and/or clogged tubes, returning your coil to the originally specified performance and pressure drop expectations.

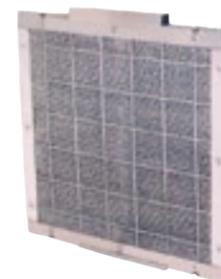


### Tube Plugs, Cleanable Coils

Don't want to remove boxes for cleaning but still having fouling issues? Heatcraft's "W" style cleanable coils may be the option you need. Removable plugs are aligned specifically with each tube allowing access for individual tube cleaning. Plugs can then be re-installed until the next cleaning.

### High-Pressure, Cleanable Coils

Designed for fouling fluid applications with higher operating pressures, Heatcraft offers several options for tube metallurgy including copper, cupro-nickel, or stainless steel. Removable boxes are provided on both ends for full access to tube ends for cleaning. Fins can be either aluminum, copper, or stainless steel to provide a very robust design.



### Mist Eliminators

Mist eliminators allow for higher-than-normal air velocities through the coil fin pack without concerns of moisture carry-over into the leaving airstream. Using mist eliminators may also allow for reduction of the coil face area, thus lowering the unit cost with minimal increases in airside pressure drop.

## CUSTOM MADE COILS



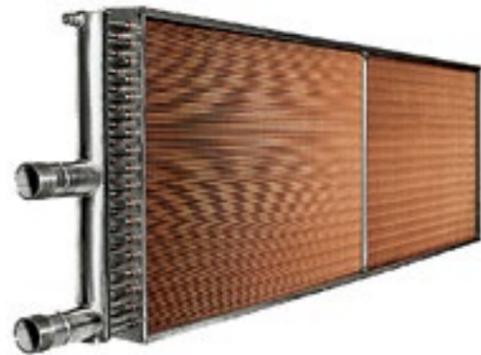
### DX (Direct Expansion) / Evaporator Coils

Single, dual or quad compressor circuits allow precise capacity control. Heatcraft's unique interlaced circuiting options assure uniform refrigerant distribution over the entire face area of the coil. Wide fin spacing availability reduces the affect of frost build-up in low temperature applications.



### Condenser / Heat Reclaim Coils

High pressure side refrigerant coils are engineered specific to customer applications and requirements. Fin spacing, circuiting and tube diameters can be varied to assure performance while maintaining air and refrigerant pressure drop limitations.



### Steam Coils

Heatcraft offers both standard and internal-distributing constructions for both high and low pressure applications. Steam supply can be either same-end or opposite-end construction, depending on coil length, to ensure optimum condensation of steam without cold spots in the face of the coil.

### MARC (Modular Auxiliary Removable Coil) Units

The MARC coil is removable through an access panel in the casing. Casings can be constructed of galvanized or stainless steel with single or double-wall insulation. MARC units can also include stainless steel drain pans and an optional internal filter rack with an access panel in the casing. MARC units can be used for auxiliary / supplementary heating or cooling as well as for adding make-up air unit capability.



## CUSTOM MADE COILS



### Drain Pans

Drain pans are constructed from minimum 16-gauge 304L stainless steel with optional upgrade to 316L. Drain pans feature completely welded corners and are built in accordance with ASHRAE standards.

### Thermostatic Air Vents & Vacuum Breakers

Thermostatic air vents allow the system to purge itself of non-condensable gases (air) that can decrease the effective area of the coil and cause potential freezing in the areas with the air pockets. As performance demand on steam coils reduces and the steam condenses to liquid, a vacuum can be created inside the coil. Addition of vacuum breakers allows the coil to drain the liquid from the coil as intended helps alleviate any potential freezing concerns. Also, as performance demand increases on the coil, elimination of air pockets inside the coil helps eliminate potential water-hammer conditions.



### CoilCalc

Heatcraft's CoilCalc software is our selection and rating program for fluid, DX, condenser and steam coil applications. CoilCalc produces performance predictions, a coil schedule or listing of all coils included in a particular project and certified approval drawings that can be used to generate a complete submittal package. Our CoilCalc program is also available on the web.

### Air Conditioning, Heating and Refrigeration Institute (AHRI)

In the world of application-specific, custom-designed coils, the user has no ability to prototype and test a coil to be sure of its performance in their specific system. AHRI, an independent third-party organization, is dedicated to ensuring that custom heating and cooling equipment meets the performance specified by the manufacturer's software. AHRI continually works with the HVACR industry and continually monitors participating manufacturer's performance ratings in accordance with Standard 410. AHRI is recognized as the industry authority on product rating procedures and performance monitoring. Heatcraft provides AHRI certified coils that, when paired with our timely deliveries and quality standards, meet our long-standing position as the industry leader in customer satisfaction.





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