



CompleteCoat™ corrosion protection

Corrosion-resistant, flexible coating uniformly bonded to all condenser coil surfaces

CompleteCoat™



Trane CompleteCoat offers more application flexibility

Trane has a corrosion-resistant coating available for our air-cooled chillers and Precedent™ packaged rooftop units that goes beyond the performance and protection of anything offered in the past. CompleteCoat provides the corrosion protection you need without the worry of performance degradation or coating breakdown.

Air-cooled chillers and Precedent packaged rooftop units are increasingly being chosen for a wide range of comfort and process-cooling applications. Unit efficiency continues to increase with advanced compressor and control designs. Trane air-cooled chillers and Precedent packaged rooftop units in particular have achieved a reputation for rugged reliability and efficiency.

A condenser coil-coating system makes Trane air-cooled chillers and Precedent packaged rooftop units the best choice for an even wider range of applications. Because of the potential for corrosion of air-cooled condenser coils, certain environments have traditionally limited the use of air-cooled chillers and Precedent packaged rooftop units. This includes coastal applications and a wide variety of industrial environments. In such areas, there may be airborne corrosive salts, acids, bases, and/or other chemicals that shorten the life of air-cooled heat exchangers.

CompleteCoat offers unprecedented protection.

CompleteCoat is a water-based, flexible epoxy polymer coating process engineered specifically for HVAC heat transfer coils. Electrocoating is the process by which a coil is submerged in a paint/water bath where electricity is used to deposit paint onto it.

Benefits of CompleteCoat factory-applied electrocoating process:

- The only process that can guarantee 100% coil coverage
- Proven to stand up to 6,000+ hour salt spray exposure test
- The coating process will ensure a uniform dry film thickness from 0.6 – 1.2 mils on all surface areas including fin edges
- Excellent corrosion and UV resistance make it suitable for coastal environments and other harsh environments
- The coating protects the coil in temperatures from -50°F to +450°F
- Units with the CompleteCoat option keep their UL listing and do not need to be re-rated

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Previously, the choices were to either accept the shortened life of the aluminum heat exchanger or use a variety of coatings that fell short on corrosion protection and performance.

Phenolic coatings offer some protection from corrosion, but provide inconsistent coverage and can break down in challenging environments. Furthermore, phenolic coatings significantly reduce the heat-exchange value of the coil (2–4%), requiring more energy usage and a larger unit to make up for the peak load performance loss. Because of their brittle nature, phenolic coatings can deteriorate from thermal flexing or from an abrasive environment.

The option to spray various coatings on in the field has also been available. This can provide a first-cost and delivery benefit compared to full coatings. However, these options can be very inconsistent in coverage, and provide protection mainly on the visible surfaces of the coils, allowing the interior fins and coils to corrode at the uncoated rate.

Another option is epoxy pre-coated fin stock. This generally provides the largest first-cost and delivery benefit when compared to other coating options. It does provide protection in low- to moderately-corrosive environments. The lack of coating on the edge of the fins, the condenser frame, and the coil heads makes this option less desirable when corrosion is a major concern.



Another reliability enhancement from Trane.

Trane air-cooled chiller and Precedent packaged rooftop units are available with the CompleteCoat coil-coating option. CompleteCoat is a tough epoxy coating that uniformly covers all condenser coil surfaces, including the edges of the fins, coils, heads, and frame, with a 0.6–1.2 mil layer. This advanced material is flexible, avoiding the thermal cracking problems of phenolics, and avoids bridging problems encountered with application of earlier, more viscous coatings.

Now you can consider the Trane air-cooled chillers and Precedent packaged rooftop units for an even wider range of applications. CompleteCoat opens the door to a range of marine and industrial uses that other coating options could not handle. With CompleteCoat, thermal breakdown, performance degradation, and incomplete coverage will no longer be your foremost concern. Ask your Trane sales engineer for additional information on the CompleteCoat coil protective system. If you have a concern about coil corrosion from most airborne contaminants, this is the right solution.



Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.Trane.com.