



# Air-cooled Chillers

A full portfolio of solutions for  
comfort and process applications





← Caregiver Lounge  
↙ Down to 3N

← Learning Resource Center  
↑ Restrooms

# No matter your application, there's a Trane® air-cooled chiller that's right for you

As buildings continue to evolve in size and function, their cooling systems must meet increasingly rigorous demands in an efficient and sustainable way. But often, what works for one project may not work for another, even with similar specifications. Location, utility rates and architectural features all introduce challenging variables that must be accounted for.

That's why Trane has developed a robust portfolio of air-cooled chillers with intentional overlap in capacity, efficiency and sound performance. Our large selection gives customers the ability to make targeted equipment customizations with the opportunity to reduce energy intensity and lessen environmental impact.

The result is numerous system designs and chiller configurations with a variety of possible efficiency levels. So, whether our customers are calculating energy efficiency to meet local code requirements, determining eligibility for LEED® credits or utility rebates, or selecting an HVAC system with the lowest operating costs, there's a Trane solution for you.

No matter which one you choose, you can rest easy knowing that every Trane product is backed by over 100 years of proven reliability and performance. It's how we help customers make the easy decision to choose Trane — and how we continue to go beyond.

Read on to see which Trane air-cooled chiller model is right for your project »



## Air-cooled Chillers

High efficiency and low noise are the hallmarks of all our air-cooled chillers. The full line features a wide range of sizes, efficiencies and performance features that help our customers keep operations running reliably. Whether you need a classic chiller with dependable performance or an environmentally conscious chiller with next-generation refrigerant, there's a Trane model for you.



### Air-cooled Scroll Chiller

The CGAM air-cooled scroll chiller offers efficient, flexible and quiet operation. It is the perfect combination of sound and efficiency for your small jobs.

**Model CGAM**



### Series R<sup>®</sup> Helical Rotary Chiller

The Series R<sup>®</sup> helical rotary chiller is the workhorse of the Trane air-cooled portfolio — a classic chiller with proven performance and reliability.

**Model RTAC**

## 2020 Climate Commitment: 2013-2018 Progress



**50%**

Reduce our products' GHG\* footprint by 2020; add lower-GWP\*\* product alternatives by 2030

**-53%**

Next-gen refrigerants; reduced leak rates; increased product efficiencies



**35%**

Reduce the GHG footprint of our own operations by 2020

**-45%**

Refrigerant transition and management; lighting and HVAC improvements



**\$500M**

Invest in product research and development to fund a reduction in GHG emissions by 2020

**~\$400M**

Next-gen refrigerant development; refrigerant testing

\*GHG = greenhouse gas; \*\*GWP = global warming potential



### Sintesis® Air-cooled Chiller

Sintesis® chillers are among our most environmentally conscious and sustainable air-cooled chillers.

**Model RTAF**



### Ascend™ Air-cooled Chiller

The Ascend™ model ACS chiller is the right balance of energy efficiency and quiet operation, making it an ideal solution for schools.

**Model ACS**



### Ascend™ Air-cooled Chiller

The Ascend™ model ACR chiller achieves low sound levels and maximizes efficiency under all operating conditions.

**Model ACR**

# Air-cooled Scroll Chiller

## Model CGAM

Efficient, flexible and quiet— the perfect combination of sound and efficiency for your small tonnage applications



## Overview

The CGAM air-cooled scroll chiller offers the perfect combination of flexibility, efficiency and low noise. Available in sizes ranging from 20 to 130 tons with a compact footprint, the CGAM is one of the quieter air-cooled chillers available today. There are multiple levels of efficiency to choose from to comply with your local code requirements.

The CGAM consistently delivers sound levels five to eight decibels lower than typical fixed-speed helical rotary chillers. With factory-installed attenuation, an additional three-decibel-reduction can be achieved for applications requiring ultraquiet operation.

Using partial heat recovery, rejected heat can be redirected through a heat exchanger to provide heat for VAV reheat coils. A Thermal Battery™ cooling system design uses ice made at night, when energy demand and cost are lowest, to cool the building during the day.

## At a glance

- Capable of starting and operating with outside air temperatures from -20°F to 125°F (-29°C to 52°C)
- Ease of installation with standard factory-installed strainer and flow switch; optional integrated pump packages further ease installation and reduce risk
- Easy serviceability, with all major components within 18 inches (46 cm) of edge

## Specifications

**Capacity Range:** 20 to 130 tons  
(50 and 60 Hz)

**Refrigerant:** R-410A

**Compressor Design:** Scroll

**Controls:** Tracer® CH530 with Adaptive Controls

**Factory-installed Optional Features:**  
Pump packages, extreme low-ambient, ice making, partial heat recovery and sound-reduction packages.

**Energy Efficiency Rating (EER):**

- IPLV: 13.7-16.6 (high-efficiency);  
14.5-16.9 (extra-high-efficiency)
- Full load: 9.8-10.4 (high-efficiency);  
10.3-10.9 (extra-high-efficiency)

# Series R<sup>®</sup> Helical Rotary Chiller

## Model RTAC

Performance that is dependable and reliability you can count on



### At a glance

- Can restart a compressor in as little as 60 seconds in the event of a power outage
- Offers multiple levels of efficiency to meet local code requirements
- Has the tightest recommended side clearance in the industry of 4 feet (1.22 m)

### Overview

The RTAC model is the workhorse of the Trane air-cooled portfolio, with more than 50,000 units currently installed around the world— including over 250,000 air- and water-cooled helical rotary compressors.

That installed base size is a testament to our proven direct-drive, low-speed, semi-hermetic compressor design, which has been refined over 25 years of helical-rotary chiller engineering and manufacturing experience. That expertise, combined with a rigorous design verification and testing process, ensures our customers receive the highest-quality products designed to keep their operation running reliably and efficiently.

### Specifications

**Capacity Range:** 140 to 500 tons

**Refrigerant:** R-134a

**Compressor Design:** Helical rotary screw

**Controls:** Tracer<sup>®</sup> CH530 with Adaptive Controls

**Factory-installed Optional Features:**  
Ice making and sound-reduction package

**Energy Efficiency Rating (EER):**

- IPLV: 13.6-15.4 (standard); 14.2-15.9 (high-efficiency); 14.1-15.2 (extra-high-efficiency)
- Full load: 9.6-9.9 (standard); 10.4-10.9 (high-efficiency); 10.6-11.1 (extra-high-efficiency)

# Sintesis<sup>®</sup> Air-cooled Chiller

Model RTAF

Our most environmentally conscious air-cooled chiller that gives you choices



## At a glance

- Free-cooling option takes advantage of cooler ambient air temperature to reduce energy consumption
- Part of the EcoWise™ portfolio of products, designed to lower environmental impact with next-generation low-GWP refrigerants
- Ideal for ice-enhanced thermal storage systems, helping to improve energy efficiency and the environment

## Overview

Sintesis<sup>®</sup> chillers are among our most environmentally conscious and sustainable air-cooled units. They are the first air-cooled chillers from Trane to offer customers the choice of either R-134a or R-513A, a next-generation, low global warming potential (GWP) refrigerant. This gives customers the option to choose when to transition to a lower GWP alternative that is convertible and compatible.

Sintesis chillers offer over 10% higher full-load and part-load efficiency than required by ASHRAE<sup>®</sup> 90.1-2016 standards. This makes them ideal for Thermal Battery™ cooling systems, where energy consumption can be shifted to off-peak hours when electricity often is cheaper and generated from a greater mix of renewable and cleaner sources.

## Specifications

**Capacity Range:** 115 to 520 tons

**Refrigerant:** R-134a or R-513A

**Compressor Design:** Helical rotary screw

**Controls:** Tracer UC™ 800 with Adaptive Controls

**Factory-installed Optional Features:**  
Ice making and free cooling

**Energy Efficiency Rating (EER):**

- IPLV: 16.0-18.0 (high-efficiency)
- Full load: 10.4-11.0 (high-efficiency)

# Ascend™ Air-cooled Chiller

## Model ACS

The right balance of energy efficiency and quiet operation



## Overview

The ACS model is part of Trane's Ascend™ line of air-cooled chillers, offering the right balance of energy efficiency and quiet operation. ACS models, in particular, are optimized for part-load efficiencies, making them ideal for buildings with a large amount of off-peak operation.

ACS chillers offer flexible acoustic options, allowing customers to choose the level of sound treatment that best meets application requirements, with packages that offer sound levels as low as 95 dBA at AHRI® conditions for full-load operations. As a result, ACS chillers are especially well-suited for residential or school environments where sound sensitivity is a top priority.

Additionally, ACS chillers are designed to make installation and maintenance duties easier, safer and less frequent.

## At a glance

- Minimal maintenance requirements, especially for operators in rural areas with limited access to Trane service locations
- Designed to deliver simplified service, making maintenance duties easier, safer and less frequent
- Full- and part-load performance meets ASHRAE 90.1-2016 standards

## Specifications

**Capacity Range:** 140 to 230 tons

**Refrigerant:** R-410A

**Compressor Design:**  
Scroll with variable volume ratio

**Controls:** Tracer UC™ 800 with Adaptive Controls

**Factory-installed Optional Features:**  
Ice making, integrated pumping packages and sound-reduction packages

**Energy Efficiency Rating (EER):**

- IPLV: 15.8-16.5
- Full load: 9.7-10.4

# Ascend™ Air-cooled Chiller

Model ACR

An unbeatable combination of high energy efficiency and quiet operation



## Overview

The ACR model is part of Trane's Ascend™ line of air-cooled chillers, offering an unbeatable combination of high energy efficiency and quiet performance. ACR models use advanced technologies like InvisiSound® acoustic-reduction treatments, compressors with variable-volume-ratio capability, permanent magnet motors and premium efficiency drives to help achieve low sound levels, maximize efficiency under all operating conditions, lower utility bills and save money.

ACR chillers are specially designed for easy integration with facilities that have specialized requirements. And, an optional harmonic filtration system utilizes a matrix filter design to meet the requirements of IEEE® 519, reducing harmonic distortion to 5% or less total demand distortion (TDD). Rapid Restart® features, standard in our air-cooled chiller portfolio, allow the chiller to quickly regain full operational capacity after a power interruption, so mission-critical applications can continue with minimal interruption.

## At a glance

- AdaptiSpeed® technology delivers robust efficiency with some of the lowest sound levels in the industry
- Variable volume ratio screw compressor—optimized for variable-speed operation, it delivers peak efficiency under all operating conditions
- Exceeds ASHRAE® 90.1-2016 Path B by 18% at full load and 22% at part load

## Specifications

**Capacity Range:** 150 to 450 tons

**Refrigerant:** R-134a

**Compressor Design:** Helical rotary screw

**Controls:** Tracer Symbio™ 800 with Adaptive Controls

**Factory-installed Optional Features:**

Ice making and harmonic filtering, allowing for 5% TDD at the chiller electrical connection, sound-reduction packages and factory-installed free cooling

**Energy Efficiency Rating (EER):**

- IPLV: 19.7-21.6
- Full load: 11.4-11.7



## Air-cooled Chillers

Our wide range of air-cooled chiller models features intentional overlap in capacity, efficiency and sound performance. This large selection gives customers the ability to make targeted customizations to their equipment to meet their specific application requirements. Compare our full lineup below to find the Trane air-cooled chiller that's right for you.

Benefit	First Cost	Sound	Efficiency	TRANE - Solution
Lowest Installed Cost	\$			 CGAM & RTAC
Balance Installed and Operating Cost	\$			 ACS & RTAF
Lowest Total Cost of Ownership	\$			 ACR

For more information, contact your Trane sales representative or visit [trane.com/commercial](https://trane.com/commercial)

Learn more at [trane.com](https://trane.com)



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](https://trane.com) or [tranetechnologies.com](https://tranetechnologies.com).

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