



# Air-Cooled Chillers

A wide range of options for sustainability, efficiency, acoustics... and beyond



# Define your priorities to select your best chiller.

Achieve the level of performance that your building or process requires. You define the outcomes, and we'll get you there. Trane's air-cooled chiller lineup gives you the flexibility to choose from a wide range of capacities and features. From outstanding efficiency to amazing acoustics, to occupant comfort and well-being. You can have it all... in varying degrees.

## Get the results you need.



### Sustainability

Select features you need to reduce greenhouse gas emissions, or to advance your organization's strategic goals for building decarbonization

- High efficiency (both full and part load) reduce fossil fuel energy use and carbon emissions
- Optional free cooling uses nature's cooler air to cool down interior spaces
- Some chiller models go further with heat recovery and low GWP refrigerants
- Since air-cooled chillers do not require a cooling tower, applying this asset into your building comfort solution will conserve water usage



### Precision

Maintaining temperatures within tight tolerances is a chiller's number-one job in applications such as precision manufacturing, data centers and operating suites. Trane can meet the most demanding requirements.



### Acoustical performance

Along with indoor air quality, thermal comfort and lighting, sound plays an important role in the overall indoor environmental quality of your building. Lower sound levels support concentration and rest

- Our in-house acoustical testing labs validate chillers' sound-reducing traits
- We provide acoustical data to help system designers achieve appropriate sound levels for any context, from classrooms to hospital rooms, industrial to office spaces



### Low total cost of ownership

Some projects place hard limits on installed cost. Others have more flexibility to achieve greater savings by focusing on total cost of ownership—paying less for energy and maintenance over time. Our spectrum of solutions means you'll get the best performance for your budget.



## For long-term reliability, choose an ongoing relationship.

It goes without saying that a Trane air-cooled chiller can run dependably for many years. And, because they don't require a cooling tower, air-cooled chillers inherently require less maintenance than water-cooled chillers.

Post-installation, we'll help you get the most from your chiller year after year.

Service Agreements	Intelligent Services	Controls Integration	Warranty Coverage
Provides on-site coverage from our own team of pros. Trane technicians are factory trained to maintain peak chiller performance—within its system and under challenging operating conditions.	Enables Trane to monitor and manage performance remotely through your connected equipment.	Ensures seamless and powerful connectivity that optimizes building performance through connected HVAC, lighting, and more.	Provides the peace of mind you need. Go further with Trane extended warranties—for a longer duration or more comprehensive coverage.

## Controls: The key to operational excellence.

Controls help you achieve best-in-class performance every day, including during start-up and commissioning, from one chiller or multiple units.

- Open and compatible with most building systems, Trane controls' communication protocols provide labor-saving integration with BACnet platforms.
- Factory-mounted unit controllers featuring standardized screens, graphics and settings are pre-programmed with Adaptive Controls™ to maintain efficiency and alarms to ensure continuous performance.
- Air-Fi® Wireless eliminates hard-wire hassles, simplifying future retrofits and providing greater reliability and flexibility over time.
- Mobile interfaces through the BAS make it easy to monitor and respond to chiller conditions. You have the flexibility to choose how you want to communicate and interact with your chiller.

## Service: The secret to longevity.

Our extensive world-wide service network is there to help ensure Trane chillers lead long and productive lives. Local offices with factory-trained technicians—plus locally-available OEM parts—help ensure rapid responsiveness and professional results.

And, when you need backup cooling or a supplementary source, Trane Rental Services can provide a professional temporary solution, with expert installation.

## A partner in sustainability.

With Trane Technologies we're on the forefront of sustainability, delivering premier performance and a positive impact on people and the planet.

### Uniquely positioned to lead a movement to reduce greenhouse gas (GHG) emissions

#### Accelerate Clean Technologies



CLEAN200™

#66 Corporate Knights Clean200 list of public companies ranked by green revenue

20 million+ metric ton reduction in the use phase emissions of our products since 2014

#### Addressing System Energy Efficiency

##### Holistic Solutions

Connecting, monitoring and automating a building's entire mechanical system to operate in the most efficient way possible

##### Strategic Electrification of Heating

Innovating new solutions to remove fossil fuels on-site and help our customers be resilient in what's set to be a tumultuous decade

#### Transitioning Out of High GWP Refrigerants

By 2030 we will fully transition out of high GWP refrigerants, ahead of regulation

30+ countries (most of which do not have regulations in place) where our next-generation chillers can be purchased

## Air-Cooled Chiller Line-up

Benefit	First Cost	Sound	Efficiency	Sustainability	Trane Solution
Lowest installed cost	\$				CGAM scroll 20-130T RTAC screw 140-500T
Balance installed and operating costs	\$\$				ACS scroll 140-230T RTAF screw 115 - 520T
Lowest total cost of ownership	\$\$\$				ACR screw 150-550T TACA centrifugal 60-440T
Balanced installed cost and sustainability	\$\$\$				ACX scroll 140-230T, 1500-2500 MBh RTAF screw 115-520T
Lowest Sound	\$\$\$\$				ACR screw 150-550T TACA centrifugal 60-440T

# Air-cooled Scroll Chiller

## Model CGAM

The CGAM air-cooled scroll chiller offers the perfect combination of sustainability, efficiency and low noise—all within a compact footprint. It is one of the quieter air-cooled chillers available today. Available in multiple efficiency levels.



## Noteworthy

- Capable of starting and operating with outside air temperatures from -20°F to 125°F (-29°C to 52°C)
- 130T with partial heat recovery ~25% heat recovered and temperatures up to 158F
- 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 the edge

**Low sound.** 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 sound reduction can be achieved for applications requiring ultraquiet operation.

**Sustainability features.** Using partial heat recovery, rejected heat can be redirected through a heat exchanger to provide heat for VAV reheat coils. Combine this with energy storage (using a Thermal Battery™ cooling system design) and CGAM helps to facilitate the utilization of cleaner, renewable energy in real time. It all comes together with a scroll chiller that provides a lighter carbon footprint.

## 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 sound, energy storage, partial heat recovery and sound-reduction packages

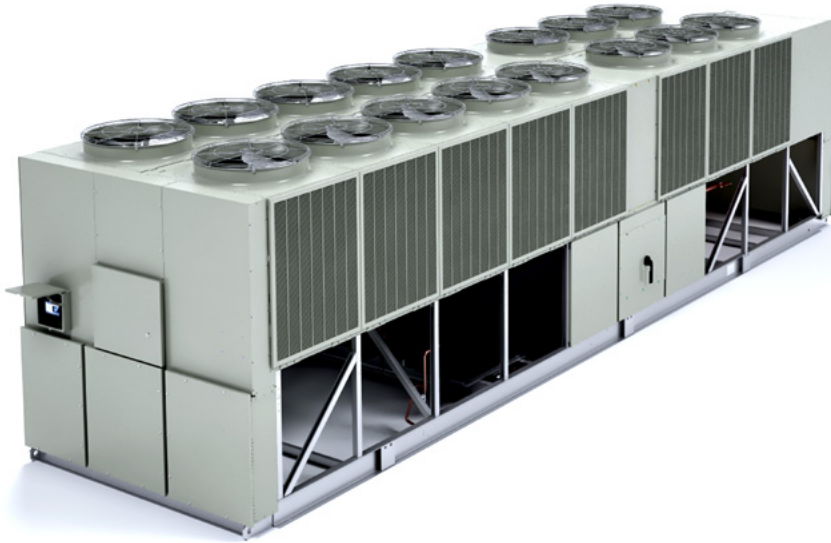
**Energy Efficiency Rating (EER):**

- 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

The dependable workhorse of Trane's air-cooled line-up, with over 50,000 units currently installed globally—including over 250,000 air- and water-cooled helical rotary compressors.



## Noteworthy

- Rapid Restart<sup>®</sup> 60-second compressor re-boot following a power outage
- Multiple levels of efficiency to meet local code requirements
- Slim 4-ft. (1.22 m) side clearance—the tightest in the industry

**Proven reliability.** Model RTAC features a hallmark direct-drive, low-speed, semi-hermetic compressor design which has been refined through 25 years of Trane helical rotary chiller engineering and manufacturing. Rigorous design verification and testing processes help ensure consistently high quality.

## 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:**  
Energy storage 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

When sustainability is a priority, Sintesis chillers stand out.



**Environmentally sound.** These are the first air-cooled chillers from Trane to offer R-513A, a next-generation, low global warming potential (GWP) refrigerant. This gives you the option to choose when to transition to a lower GWP alternative that is convertible and compatible.

**Efficient and sustainable.** 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<sup>™</sup> 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.

## Noteworthy

- Free-cooling option takes advantage of cooler ambient air temperature to reduce energy consumption
- Part of the EcoWise<sup>®</sup> 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

## Specifications

**Capacity Range:** 115 to 520 tons

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

**Compressor Design:** Helical rotary screw

**Controls:** UC<sup>™</sup> 800 with Adaptive Controls

**Factory-installed Optional Features:**  
Energy storage and free cooling

**Energy Efficiency Rating (EER):**

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

# Ascend<sup>®</sup> Air-to-Water Heat Pump

## Model ACX

Trane's air-to-water heat-pump chiller provides cooling or heating from one all-electric source, making it an effective—and more affordable—way to decarbonize.



## Noteworthy

- Low sound requirements are met by Model ACX's minimal compressor attenuation, quiet variable speed fans and EC fan motors that run silently at part load
- Transverse "V" condenser coils have easy access for cleaning and service
- Maintenance-free, long-lasting permanent magnet condenser fan motors improve reliability

**3X more efficient.** Ascend model ACX brings Trane's proven, economical heat pump technology platform up to scale to provide heating or cooling for larger commercial buildings, with three times the efficiency of gas-fired boilers. Its all-electric heating and cooling is ideal when striving to meet regulations, attain certifications or achieve net zero energy buildings. Plus, the Symbio<sup>®</sup> 800 Controller with open standard protocols and wireless options enables remote, secure monitoring to optimize efficient operations and ward off costly failures.

**Reliable comfort.** Model ACX is built on Trane's proven Ascend chiller platform. This common platform reduces service and maintenance. Couple that with Trane heat pump innovation and ACX delivers reliable comfort in a wide range of climates. The chiller can produce 100°F water in outdoor temperatures as low as to 0°F.

## Specifications

**Capacity Range:** 140-230 tons cooling

1500-2500 MBh heating

**Refrigerant:** R-410a

**Compressor Design:** Scroll

**Controls:** Symbio<sup>®</sup> 800 controller with Adaptive Controls™

**Factory-installed Optional Features:**

Pump packages, energy storage, sound reduction

**Energy Efficiency Rating (EER):**

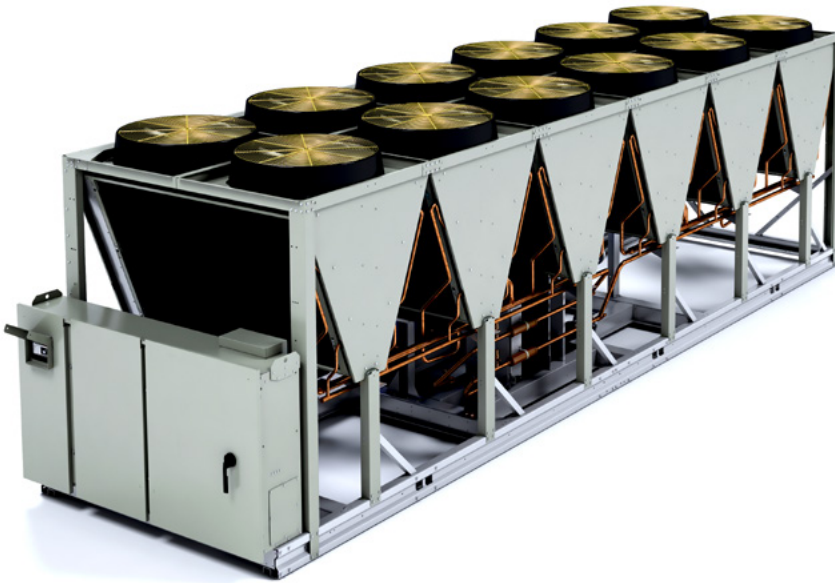
- EER 9.35 - 9.69



# Ascend® Air-cooled Chiller

## Model ACS

Model ACS chillers are optimized for part-load efficiency and low sound. Best of all, these chillers require little oversight, so they are easy to maintain when you are short on maintenance staff.



**Flexible acoustic options.** 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. Model ACS is well-suited for residential or school environments where sound sensitivity is a top priority.

**Simplified maintenance.** ACS chillers are designed to make installation and maintenance duties easier, safer and less frequent. The Symbio® 800 unit controller makes it easy to operate, with or without a building automation system. It supports all three IP protocols and can use ethernet or wires with no gateway or additional devices. Adaptive controls maintain efficient, reliable operation.

## Noteworthy

- Minimal maintenance requirements, well-suited to rural areas with limited access to Trane service locations
- Designed for safer, easier maintenance
- Full- and part-load performance meets ASHRAE 90.1-2019 standards

## Specifications

**Capacity Range:** 140 to 230 tons

**Refrigerant:** R-410A

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

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

**Factory-installed Optional Features:**  
Energy storage, 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

High energy efficiency meets quiet operation. ACR chillers are specially designed for easy integration with facilities that have specialized requirements.



**Premium efficiency.** Delivers amazing efficiency under all operating conditions, plus free cooling in units up to 550 tons. Ascend Model ACR can maximize savings, especially in spaces that require more energy. An optional harmonic filtration system utilizes a matrix filter design to meet the requirements of IEEE® 519, while also reducing harmonic distortion to 5% (or less) total demand distortion (TDD).

**Superior sound performance.** Model ACR chillers use industry-leading sound technologies including InvisiSound®, compressors with variable-volume-ratio capability, and permanent magnet motors.

**Reliable operation.** Rapid Restart™ enables the chiller to quickly regain full operational capacity following a power interruption. Symbio® 800 controller alarms alert you to changes in performance.

## Noteworthy

- Free-cooling option takes advantage of cooler ambient air temperature to reduce energy consumption
- Variable volume ratio screw compressor and variable speed condense fans optimized for variable-speed operation, delivers peak efficiency under all operating conditions
- Exceeds ASHRAE® 90.1-2019 Path B by 18% at full load and 22% at part load
- AdaptiSpeed® technology—the integration of a direct-drive, specific-speed screw compressor, permanent-magnet motors and third-generation Trane Adaptive Frequency™ Drive (AFD3)—delivers robust efficiency with some of the lowest sound levels in the industry

## Specifications

**Capacity Range:** 150 to 550 tons

**Refrigerant:** R-134a

**Compressor Design:** Helical rotary screw

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

**Factory-installed Optional Features:**

Energy storage and harmonic filtering, sound-reduction packages and factory-installed free cooling

**Energy Efficiency Rating (EER):**

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

# Oil-free Magnetic Bearing Air-cooled Chiller

## Model TACA

Cutting-edge energy efficiency makes this a stand-out chiller for data centers, health care, K-12 schools and higher education.



## Noteworthy

- Compressors use magnetic bearing levitation which virtually eliminates friction, a leading cause of noise, inefficiency and equipment wear
- The adaptive controller monitors energy performance to spot opportunities to optimize—so it keeps getting better
- Designed to use refrigerant alternatives, including R-513a, that reduce carbon emissions today—and in the future

**Premium efficiency.** The mag-bearing compressor delivers water-cooled efficiency from an air-cooled chiller. The refrigerant pump option ensures proper compressor motor cooling during low lift operation, down to a 1.1 pressure ratio. Full load efficiency far exceeds ASHRAE 90.1 and state energy efficiency requirements.

**Lower operating cost.** Optional free-cooling saves energy and money by relying on lower ambient temperatures instead of the compressor during cooler weather. The oil-free compressor reduces maintenance costs by eliminating the complexity and service requirements of the oil management system. Plus, the Adaptive Controller with open standard protocols enables remote monitoring by Trane to help ward off costly failures and identify money-saving optimization opportunities.

## Specifications

**Capacity Range:** 60 to 440 tons

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

**Compressor Design:**

Oil free magnetic bearing centrifugal compressor

**Controls:** Adaptive Logic Controller with 15-in. touchscreen

**Factory-installed Optional Features:**

Harmonic filter, split systems compatibility, free cooling

**Energy Efficiency Rating (EER):**

- EER 10.51-20.01
- IPLV 20.21-25.72

Learn More  
Contact your local Trane service office  
Visit [Trane.com](https://www.trane.com)



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