



# Thermafit<sup>®</sup> Modular Units

The ultimate, all-electric combination of flexibility, reliability and high performance

## Solve space challenges. Move in higher performance.

Achieve the level of performance your building requires where space is limited. Thermafit® modular chillers and heat pumps fit easily where others can't. Components are sized to easily go through standard doorways and onto freight elevators. Modules reassemble into a fully functional, high-performance chiller in a matter of hours.

Thermafit® modular equipment performance is lab-verified and validated by Trane. Modules provide true redundancy—meaning they eliminate as many single points of failure as possible.



### Check more boxes on your way to meeting decarbonization goals.

Maximizing energy efficiency is essential to building sustainability and help to reduce operating costs. Various Thermafit® modules include the following features to stretch energy efficiency to its max:

- Heat recovery
- Free cooling
- Variable speed compressors and fans
- Heat pumps
- Multi-pipe



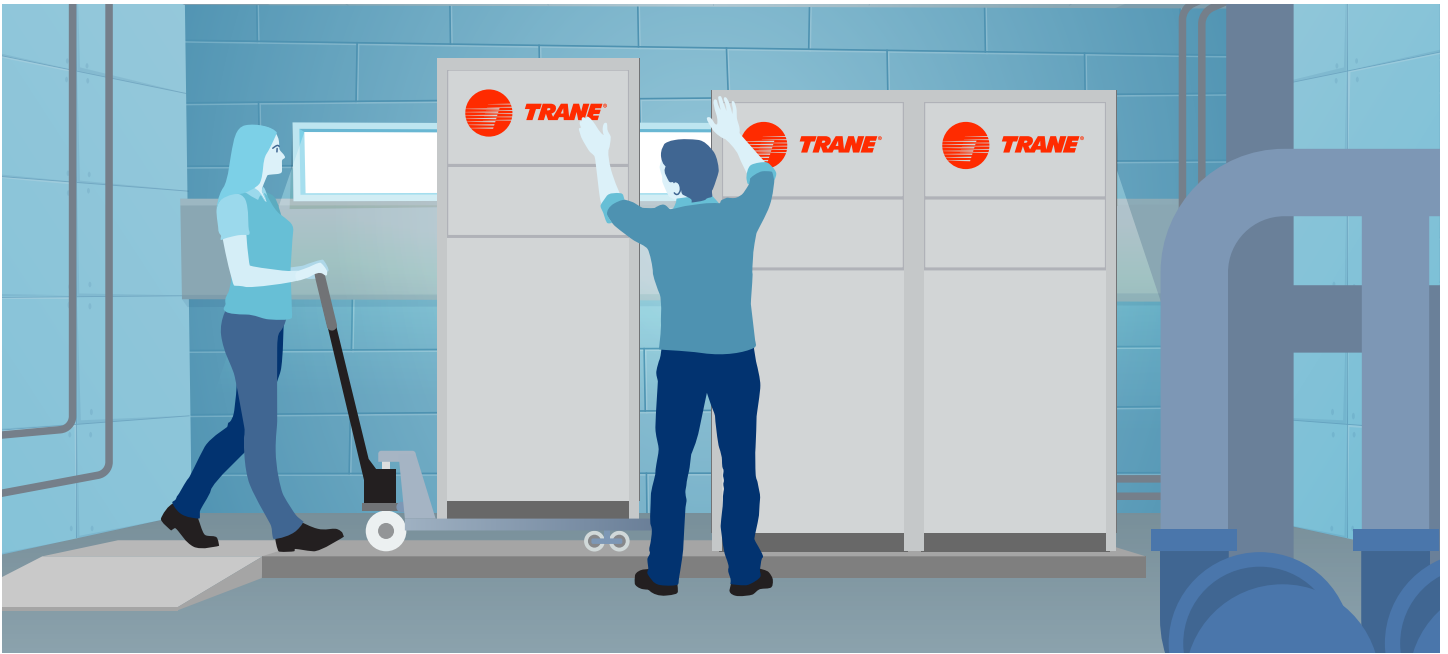
### Switch to electric heating.

Select the heating capabilities you need to help reduce carbon emissions. One major step in the journey to building decarbonization is the replacement of boilers that burn fossil fuels with an energy-efficient, electrified heating source. Many Thermafit® modules have an electric heating capability, making them ideal for bringing existing buildings into compliance with building codes and regulations for electrification.



## Trane is the real difference.

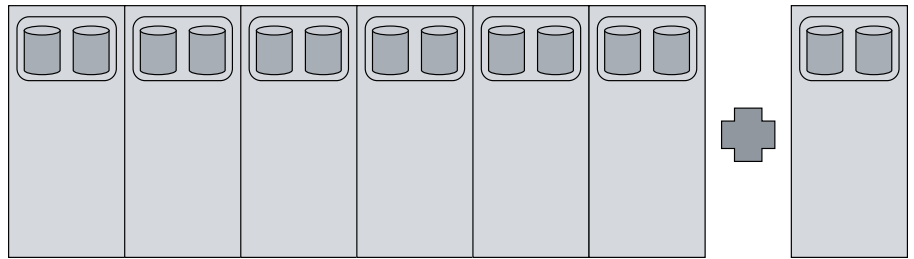
When you select a modular unit, the name standing behind it may make a difference in how well it performs in a building, and how high satisfaction stays during its many years of service. At Trane, we bring our depth and breadth of expertise, backgrounds, and perspectives to new technology innovation—as well as individualized solutions. Our exceptional system design and expert support makes sure that we get it right for your building today and the world tomorrow. With over 250 local sales offices throughout North America, help is always nearby when you need it.



**Build the capacity you need today with foresight into future needs.**

Meet big and small capacity requirements by joining several Thermafit® modules. Multiple independent modules can be coupled together on a shared header system, electrical system, and control system. Installing multiple modules creates true redundancy and builds peace of mind. A bank of modules enables different levels of control to optimize comfort, reliability and more: A primary microprocessor controller activates/deactivates modules as needed to maintain proper leaving water temperature. Easily add capacity as the business and occupancy grows—without expanding electrical service.

**Multiple Modules**

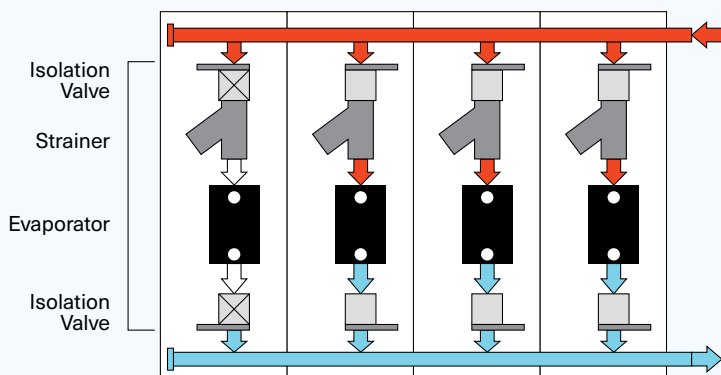


**Achieve service and operational advantages.**

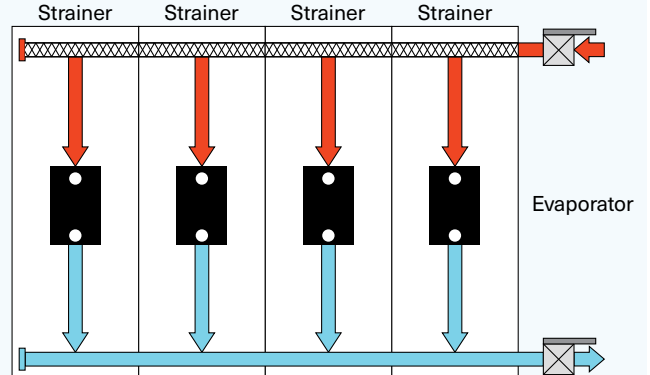
Thermafit® simplifies service and maintenance by providing easy access to strainers. Strainer cleaning is a method of removing debris from the fluid loop to protect the heat exchanger. Fine mesh strainers allow for cleaning without equipment shutdown. Isolation valves allow some modules to be serviced while others continue operating.

Thermafit modular units fit where other chillers don't. Now every retrofit is an opportunity to help introduce greater energy efficiency and sustainability.

**Thermafit – Strainer Cleaning**



**Competitor – Strainer Cleaning**





**Connectivity: take the next step.**

The easy-to-operate touchscreen controller connects with any building automation system (BAS) or building management system (BMS) including Trane's Tracer® SC+ and Tracer® Ensemble®. This makes Thermafit® easy to integrate with other energy-using systems, such as lighting. Coordinated scheduling through the BMS lets you match system use to occupancy, so you can help reduce your energy bill along with your carbon impact.

**Trane gives you complete support**

Every Thermafit® unit is wrapped in Trane's unique domain of systems expertise and lifecycle chiller maintenance and service.

- **Collaboration at every step**—assistance with start-up, with 250 local sales offices to making it more convenient to get the support you need.
- **System design**—ensuring you have the best equipment and controls working together to establish performance-driven solutions.
- **Installation and commissioning**—establishing proper performance within the space.
- **Local, professional service and maintenance**—ensuring your equipment is installed and operating as designed.
- **Professional refrigerant handling**—Trane technicians support worry-free compliance with EPA Section 608.



**Put data to use.**

Once a unit is connected, our digital services can leverage its data to create simple dashboards that help you to understand performance of your building and its assets. Dashboards can proactively identify trends to help find opportunities that help increase efficiency and productivity and decrease energy use through system optimization.

**Thermafit® Family**

Choose from a comprehensive line of modular chillers with an array of choices: cooling only, or heating and cooling; air- and water-cooled units; scalable capacities; and multiple features to serve specific application requirements and site limitations. You tell us about the vision for your building, and we'll make it happen.

	Chiller	Chiller	Chiller + Free Cooling	Chiller + Heat Recovery	Heat Pump	Multi-pipe
	<b>Cooling Only</b>	<b>High Efficiency Cooling</b>	<b>Cooling with Low Ambient</b>	<b>Heating while Cooling</b>	<b>Heating or Cooling</b>	<b>Any Combination</b>
	<b>AMC</b> 15-80 Ton (1-12 mod/bank)	<b>MAR</b> 15-80 Ton (1-12 mod/bank)	<b>AMC</b> 15-80 Ton (1-12 mod/bank)	<b>AMC</b> 30-80 Ton 410-1074 MBH (1-12 mod/bank)	<b>AXM</b> 30 Ton 374 MBH (2-12 mod/bank)	<b>MAS</b> 30 Ton 433 MBH (3-10 mod/bank)
<b>Air Cooled</b>						
	<b>MWC</b> 15-80 Ton (1-12 mod/bank)	<b>TACW</b> 65-135 Ton (1-8 mod/bank)	n/a	<b>MWC</b> 15-80 Ton 203-1083 MBH (1-12 mod/bank)	<b>WXM</b> 20-80 Ton 262-1033 MBH (1-12 mod/bank)	<b>MWS</b> 30-60 Ton 432-842 MBH (3-10 mod/bank)
<b>Water Cooled</b>			n/a			

# Thermafit® Air-cooled Modular Chillers

Free cooling and heat recovery option

## Model AMC

Thermafit® air-cooled modular chillers unite modular flexibility with efficient comfort—all while providing true redundancy and reliability.

### Level up on efficiency

Variable speed compressor and fans, full heat recovery and free cooling help enhance energy efficiency.

AMC utilizes full heat recovery instead of rejecting waste heat to the atmosphere. Our heat recovery option can be applied to any 4-pipe system to produce COPs of 3 to 6. Free-cooling option takes advantage of cooler ambient air temperature to help reduce energy consumption.

### Thermafit® offers heating and cooling

Heat recovery reduces the overall need to operate gas or electric boilers. The air-cooled chiller would be sized for the dominant cooling load, but it provides the flexibility to reuse any or all of the waste heat. Modular system design allows the chiller-heaters to respond to varying heating loads by staging anywhere from one, up to the full bank of units in heat recovery mode, helping to optimize system efficiency. Any additional modules that are needed to meet peak cooling demand will still operate in cooling mode.

### Noteworthy

- Gain higher part load efficiency by selecting a variable speed compressor and variable speed fans.
- Save energy with partial or full free cooling and avoiding compressor operation when outdoor ambient temperatures are cooler.
- Decarbonize by utilizing full heat recovery instead of rejecting waste heat to the atmosphere.
- Brazed plate heat exchanger requires smaller amounts of refrigerant.
- Dual refrigerant circuits allow for greater reliability.



## Specifications

### Capacity Range:

15-80 tons per module  
(1-12 mod/bank)

### Refrigerant: R-454B

### Compressor Design:

Fixed speed scroll with variable speed option

### Factory-Installed Optional Features:

Heat recovery, Free Cooling, Tank and Pump Module, Variable Speed Drives, Electronic Isolation Valve, BMS Integration

# Thermafit® Air-to-water Modular Heat Pump

Efficient cooling or heating year round

## Model AXM

Thermafit® air-to-water heat pumps combine modular flexibility with Trane's lab-verified performance in colder climates.

### Electrify to decarbonize

Policies to eliminate fossil fuel use in buildings are increasing the demand for heat pumps that can perform efficiently and reliably in a wider range of conditions. AXM features vapor injection which allows for greater lift; and thus, higher leaving hot water temperatures. The units are lab-tested to provide reliable heating in outdoor ambient temperatures down to 0°F, and hot water temperatures up to 140°F. Multiple circuits help with tight temperature control.

### Noteworthy

- Vapor injection allows for heating in colder climates.
- Reversing valve allows for independent module defrost cycles.
- Independent controls on each module allow for independent operation of all modules as required for capacity or maintenance needs.
- ECM fans with variable speed fan/motor assemblies reduce sound and energy usage.
- Minimum of 2 modules required.



## Specifications

### Capacity Range:

30 Ton (374 MBH) per module  
(2-12 mod/bank)

**Refrigerant:** R-454B

**Compressor Design:** Fixed speed vapor injection scroll

### Factory-Installed Optional Features:

BMS Integration and Pump Module

# Thermafite® Air-cooled Modular Chillers

Air-cooled split system with remote condenser

## Model MAR

Thermafite® air-cooled modular chillers provide energy efficient cooling, plus the redundancy, reliability and flexibility of a modular design.

Thermafite model MAR features an indoor modular chiller paired with a remote, outdoor air-cooled condenser. Two smaller components make this configuration ideal for new construction and retrofits with indoor/outdoor space limitations.

### Noteworthy

- Space-saving, split component design
- System requires no glycol
- Chilled water temperatures down to 10°F
- Chillers fit through standard doorways and onto freight elevators for easy retrofits
- Multiple circuits enable precise temperature control
- Variable speed fan and motor assemblies produce minimal noise
- Connectivity for remote monitoring available

### Great cold-climate performance.

Indoor chiller installation reduces or eliminates the need for glycol in airside and terminal devices. Thermafite MAR is ideal when buildings need cooling during the coldest winter days.

- Units can provide low ambient cooling down to -20°F.
- Indoor evaporator eliminates freeze protection requirements: no glycol, system draining, heat trace or running pumps throughout the winter.

### Energy efficient and reliable.

- A set of fixed and variable-speed drives work in tandem to optimize part load efficiency.
- Multiple circuits enable tighter, more precise temperature control.
- Controls enable connectivity for remote monitoring and detection of reliability issues and efficiency losses that diminish sustainability over time.



### Specifications

**Capacity Range:**  
15 to 80 Tons

**Refrigerant:** R-454B

**Compressor Design:** 2 scroll compressors, dual circuit per module

**Factory-Installed Optional Features:**  
VSD condenser fans, anti-corrosion options, VSD compressor, low sound

# Thermafit® Air-Source Modular Multi-pipe

A flexible, all-in-one solution for simultaneous heating and cooling

## Model MAS

Thermafit® air-source multi-pipe units provide all-electric simultaneous heating and cooling.

### Up to 8.2 times more efficient than other forms of electric heating

Thermafit® model MAS is an all-in-one solution that eliminates the need for separate boiler and chiller systems to fulfill simultaneous heating and cooling needs. The unit can act as a chiller to cool the building, as a heat pump to heat the building, or as a heat recovery unit to deliver simultaneous heating and cooling. Thermafit® MAS can provide chilled water and hot water at the same time, controlling two independent chilled water and hot water setpoints.

Building owners currently developing or implementing decarbonization, sustainability, or ESG initiatives will find Thermafit® model MAS the ideal solution wherever electrification regulations and policies are changing.

### Noteworthy

- Vapor injection extends the operating range of the compressor enabling hot water temperatures of up to 140°F (130°F at 0°F outdoor ambient temperatures).
- Electronically controlled valves direct flow of refrigerant for each mode of operation.
- Braze plate heat exchangers (BPHE) for dedicated cooling and heating.
- ECM fans with variable speed fan/motor assemblies to reduce fan power when ambient conditions allow it.
- 3/4" insulation on each brazed plate heat exchanger, fluid piping, and components to help improve efficiency by reducing heat loss or gain depending on operating mode.
- A tandem scroll compressor that provides better unloading and can provide up to 50% turndown per module for greater part load efficiency.
- Minimum of 3 modules required.



### Specifications

**Capacity Range:**

30 Ton (433 MBH) per module  
(3-10 mod/bank)

**Refrigerant:** R-454B

**Compressor Design:**

Vapor injection scroll compressor for cold climate operation

**Factory-Installed Optional Features:**

BMS Integration and Pump Module



# Thermafit® Water-cooled Chillers

## Cooling and heat recovery

### Models MWC

Thermafit® water-cooled modules provide a energy-efficient way to decarbonize cooling and heating.

#### Sustainability and efficiency features

Variable speed drives with permanent magnet motors work to match load needs precisely, providing superior part load efficiency. Along with exceptionally energy-efficient cooling, electrified cooling with a heat recovery option can help reduce the overall carbon footprint.

#### Noteworthy

- Heat recovery produces hot water up to 175°F.
- Set of fixed- and variable-speed drives work in tandem to optimize part load efficiency.
- Multiple circuits enable tighter, more precise temperature control.
- Optional double wall brazed plate heat exchanger on model MWC produces domestic hot water.



### Specifications

**Capacity Range:**

15-80 Ton (203-1083 MBH) per module  
(1-12 mod/bank)

**Refrigerant:** R-454B**Compressor Design:**

Fixed speed scroll with optional variable speed

**Factory-Installed Optional Features:**

Tank and Pump Module, Variable Speed Drive, Electronic Isolation Valve, Shell and Tube Condenser, Double Wall Condenser, BMS Integration

# Thermafit® Water-to-water Heat Pumps

Efficient cooling or heating

## Model WXM

Thermafit® water-to-water heat pumps are the practical and sustainable choice to help reduce greenhouse gas emissions as the use of renewable energy grows.

### Efficient and electric

Heat pumps move energy rather than generate energy so they can be three times more efficient than other forms of electric heating. That makes them a great way to go all-electric. Using less electricity helps to lower utility bills and can also help ease the grid's transition to clean energy sources.

### Sustainability features

Achieve LEED credits and net-zero goals. WXM is ideal for applications with nearby cold water sources such as a lake, ground water, wastewater or geothermal bore fields. These renewable sources allow for the transfer of energy to power heat pumps for year-round heating and cooling.

### Noteworthy

- Each unit has its own controller and a reversing valve on each refrigeration circuit.
- The bank of modules can easily ramp up space cooling or heating to meet specific comfort needs.
- Up to twelve modules can be connected in a bank to provide centralized plant benefits, including primary control, high-efficiency reduced piping, simplified maintenance, acoustical advantages and air-distribution flexibility.
- Dual refrigeration circuits allow for greater reliability.



## Specifications

### Capacity Range:

20-80 Ton (262-1033 MBH) per module  
(1-12 mod/bank)

**Refrigerant:** R-454B

**Compressor Design:** Fixed speed scroll / Optional variable speed

### Factory-Installed Optional Features:

Tank and Pump Module, Variable Speed Drive, BMS Integration

## Thermafit® Water-source Multi-pipe Units

Simultaneous cooling and heating ideal for Geothermal

### Model MWS

Thermafit® water-source multi-pipe units optimize comfort and efficiency in your building year-round. They are ideal for geothermal applications.

#### Sustainability and efficiency features

Trane's water-source multi-pipe units enable simultaneous heating and cooling, so you can optimize comfort in the building year-round. Independent heating and cooling setpoints deliver industry-leading combined heating and cooling efficiencies up to 28 EER while in simultaneous mode. Independent fluid loops help to improve efficiency and reduce glycol requirements by allowing water in the heating and cooling loops and glycol in the source loop.

#### Noteworthy

- Saves space by combining heating and cooling duties and eliminating glycol mixing.
- Provides up to 140°F leaving water temperature to support year-round heating.
- Independent heating and cooling setpoints deliver industry-leading combined heating and cooling efficiencies up to 28 EER while in simultaneous mode.
- Minimum of 3 modules required.



### Specifications

**Capacity Range:**

30-60 Ton (432-842 MBH) per module  
(3-10 mod/bank)

**Heating Capacity Range:** 450 MBh to 7,200 MBh

**Refrigerant:** R-454B

**Compressor Design:** Tandem set fixed speed scroll

**Factory-Installed Optional Features:** BMS Integration

# Thermafite® Magnetic Bearing Modular Units

Highly efficient, reliable cooling

## Model TACW

Trane packs in the advantages. The Thermafite® TACW oil-free magnetic bearing modular unit offers the ultimate combination of compact design, efficiency and low sound.

### Compact design

This earth-friendly mini modular unit is the smallest of them all, yet it doesn't skimp on performance. TACW installs in very small spaces and facilitates convenient curbside delivery. Fully assembled, it passes through standard 36-inch doorways and rides on passenger elevators. Units knock down even more to squeeze into tighter spaces. Components can be taken apart fully or partially for rigging into places like cramped equipment rooms.

### Efficiency and sustainability features

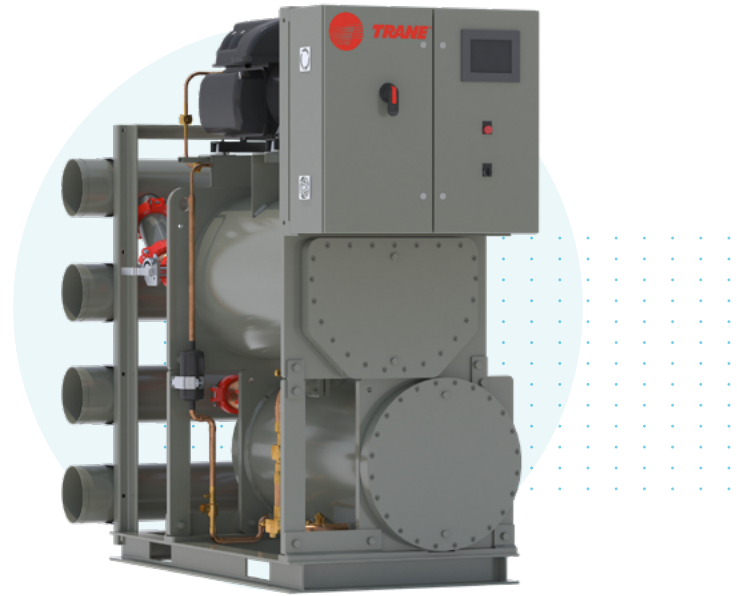
TACW units are oil-free, which eliminates fossil fuel use. They are designed with a low GWP refrigerant to help lower environmental impact. High-efficiency compressors with variable speed drives reduce emissions and utility costs.

### Ultra-quiet performance

Ultra-quiet compressors produce 75 dB of sound at 10 feet (about the same as a TV at normal volume). Moving mechanical parts never touch the housing or frame to create noise.

### Noteworthy

- Low starting current (Amps) avoids expansion of electrical service.
- Zero oil-related maintenance.
- Cleanable shell and tube heat-exchanger.
- Dedicated compressors for each refrigerant circuit avoid systems shut down.
- Full load efficiency exceeds ASHRAE® 90.1 standards.



## Specifications

**Capacity Range:**  
65-135 Ton per module  
(1-8 mod/bank)

**Refrigerant:** R-513A

**Compressor Design:** Oil-free magnetic bearing centrifugal

**Factory-Installed Optional Features:**  
Waterbox Hinges, Low Lift Pump, Harmonic Filters,  
Remote Monitoring

Older buildings can be more sustainable. Thermafit is ideal for retrofits.  
**Ask your Trane Account Manager for additional details.**



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](http://trane.com) or [tranetechnologies.com](http://tranetechnologies.com).

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