

High Temperature Heat Pump Systems

Plugging HVAC innovation into new or existing buildings.



CVHH Centrifugal Heat Pump

Leaving hot water temperatures up to 180°F (82°C)
11,000-35,000 MBH heating capacity



Series R® Model RTWD Heat Pump

Leaving hot water temps up to 200°F (93°C)
Up to 2,900 MBH of heating at various lift conditions

Supply water temperatures up to at least 200°F (93°C) are now possible.¹

We're challenging the status quo with heating technology. Working collaboratively with customers ready to take a big step forward on their decarbonization journeys, we are introducing our newest high temperature, electrified heat pump systems. Designed to adapt our proven compressor technologies, these heat pump systems produce supply water temperatures up to 200°F (93°C) — or higher for specific applications¹ — and use environmentally friendly refrigerants. We're replacing traditional gas boilers and reducing greenhouse gas emissions all while providing 3-5 times more energy efficiency than other forms of electric heating.



Heat Energy Sources

Leveraging the heat you're already creating

Heat pump technology works by capturing the sources of waste heat already in your building and efficiently moving the heat to where you need it. Unlike other alternative heating sources that can be dependent on factors far outside of your control, these systems can draw from a wide variety of sources making them inherently reliable no matter where you are. Common heat energy sources include:

- Cooling loads
- Condenser water
- Exhaust air
- Waste water
- Thermal energy storage
- Data center cooling
- Geothermal sources
- Ground heat exchangers
- Surface water – lakes/rivers



System Solutions

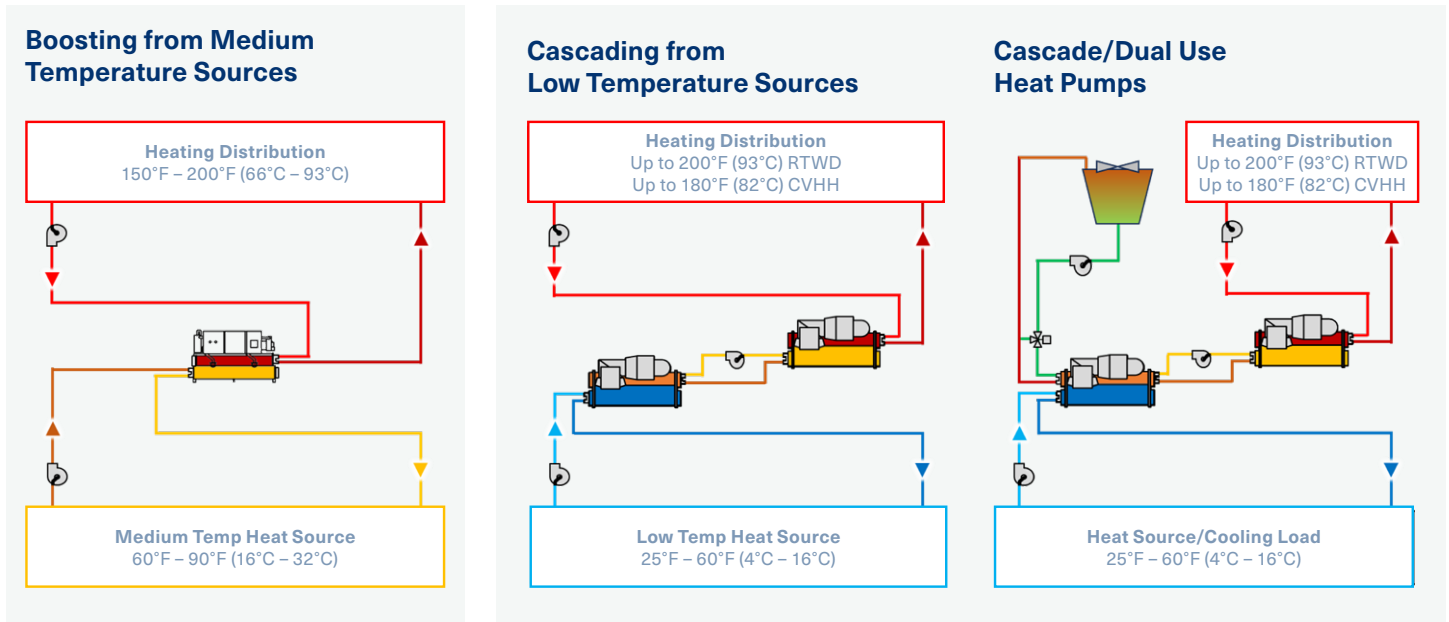
Join the movement

At Trane we know the best innovations come from purposeful collaboration with experts from every field. That is why we are collaborating with our customers who are ready to take a big leap. Customers selected to participate in this new approach to co-creation can expect support with:

- System concepts and applications expertise
- System control and performance monitoring
- System heating load analysis
- Customized equipment selections and options
- Ongoing operation, maintenance and service support

An existing cooling dominant system with some hot water loads would be a perfect candidate to electrify. The system could easily be retrofitted with a High Temperature heat pump utilizing the existing condenser loop for source water and supplying hot water in lieu of the existing boiler — reducing carbon footprint while also improving the efficiency of the system.

High temperature hydronic heat pump system concepts



Boost: Applying a heating machine to use a partially heated source fluid to provide the required heating application temperature.

Cascade: Arranging heating machines such that the heat output of one machine is the source heat for the second machine to achieve the heating application temperature.

Dual Use: Capable of acting as a dedicated chiller or heat pump. Flexible for variable load conditions, allowing additional cooling capacity when building heat loads are reduced.

Full range of Trane Heat Pump Solutions



Air-Source

- Hydronic packaged heat pumps
- Modular heat pumps
- Multipipe heat pumps
- Air-source unitary equipment
- VRF systems
- Potable water heat pumps



Water-Source

- Commercial heat pumps
- Modular heat pumps
- Multipipe heat pumps
- Zone terminal heat pumps
- VRF systems



Contact your Trane Account Manager today to see how you can move electrification of heat forward faster.

¹ Extended operating ranges including temperatures in excess of 200°F (93°C) possible for specific applications. Contact your Trane Account Manager to learn more.



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 or tranetechnologies.com.

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