

Trane® / Mitsubishi Electric HVRF

Meet Trane® / Mitsubishi Electric HVRF: an all-electric, two-pipe hydronic VRF system. This future-forward, decarbonization solution uses refrigerant to connect outdoor units to the Hybrid Branch Controller (HBC) and water to connect the HBC to indoor units. It combines the advantages of VRF and hydronic chiller system into an all-electric heat pump that heats and cools simultaneously.



Indoor Units

Ducted or ductless styles, including medium static ducted, wall mounts and cassettes.

Air bleed valve: Releases air from the hydronic piping and heat exchanger.

Closed loop heating: Hot water that heats the room, gets cooler, then is returned by the indoor unit to the HBC or Sub HBC where it is reheated by the heat exchangers to provide continuous heating to the spaces that need it.

Sub Hybrid Branch Controller: The main HBC supplies both cold and hot water to the refrigerant-free Sub HBC which in turn feeds the water to up to 16 connected zones. 8 or 16 ports.

INDOORS

Water Line Set

Multi-layer composite piping (MLP) costs less than copper, and joints connect easier without brazing.

Hybrid Branch Controller

Exchanges heat between refrigerant (exterior) and water (interior). It allows for heat recovery, meaning the system can heat and cool simultaneously.

- Refrigerant-to-water heat exchangers
- HBC control panel communicates with the outdoor unit and indoor units
- 8 or 16 ports

Decarbonize! HVRF reduces overall system refrigerant use by up to 20%*.

Perfect for multi-zone spaces such as hotels, dorms, offices and multi-family living facilities.

SYSTEM ENHANCEMENTS

Trane® Horizon® Dedicated Outdoor Air Systems

Designed to condition up to 100% of outdoor air year-round, reduce latent loads and maintain indoor air quality.



Tracer® SC+

Trane's powerful building automation system integrates systems to simplify command and provide better control over comfort and efficiency.



Easier compliance with ASHRAE® 15 standards.

Built-in algorithms optimize HVRF system performance.

Refrigerant Line Set

Refrigerant (R-410A) transfers heat through the outdoor line sets.

OUTDOORS

Outdoor Units (N-Generation CITY MULTI®)

Heat exchanger: Unique all-aluminum design. Reliably operates within -13°F and 60°F for heating, 23°F to 126°F for cooling.

Compressor: Varies the amount of circulating refrigerant by adjusting the operating frequency based on the system's data.

Fan: Variable speed controlled by the unit to optimize heat exchange and energy efficiency.

Air-source and water-source options.