CONDITION AND CONCEAL WITH WATER-SOURCE VRF SYSTEMS

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As architects, you're challenged with strategically creating spaces that combine function, accessibility and design to meet your clients' needs. In any project, there is give-and-take guided by budgets, timelines and aesthetic preferences.

All of these factors come into play when specifying mechanical systems. Architects must carefully consider the placement and visibility of indoor and outdoor units.

If a client wants a sustainable building conditioned by an energy-efficient Variable Refrigerant Flow (VRF) system, the architect can specify ducted indoor units for spaces where the client prefers concealed equipment. But what if the client doesn't want visible outdoor units? Allow us to introduce you to water-source VRF systems.

Water-source VRF heat pump systems extract heat energy from water. They're typically installed indoors since they don't require outside air for operation. The systems are easily concealed within mechanical rooms and can be applied with water provided by an existing boiler or geothermal water loop.

The design flexibility offered by water-source systems is appealing to architects, whose clients may want usable rooftop space, or simply want inconspicuous mechanical systems. Water-source systems also offer efficiency and performance benefits, with less performance degradation than air-source systems in cold climates. Since water-source systems lack exposure to the outdoors, they can heat and cool in extreme climates using less energy.

After reviewing schematic plans for the new corporate headquarters of Fairway Independent Mortgage Corporation in Madison, Wisconsin, Excel Engineering specified a water-source VRF system to maximize performance and increase usable space. The energy-efficient water-source system supports the client's commitment to sustainability and eliminated the need for large shafts, rooftop units and screening that came with the rooftop variable air volume system specified in the previous design. With energy recovery, the water-source VRF system keeps staff comfortable even during Wisconsin's chilly winters.

Water-source systems are an efficient, flexible option for a range of applications, including high-rise buildings and hospitality settings. For clients committed to sustainability, but demand fully-concealed equipment, water-source VRF systems can solve design challenges while providing consistent comfort in all climates.

WR2-SERIES WATER-SOURCE VRF SYSTEMS

With condenser units that can be installed indoors, and the option to connect to a geothermal water loop or source, water-source VRF is a high-performance solution for a wide range of projects. Mitsubishi Electric's CITY MULTI® WR2-Series of water-source heat recovery systems provides simultaneous heating and cooling for applications including schools, offices, hotels and high-rises. Learn more at mitsubishipro.com.

BENEFITS

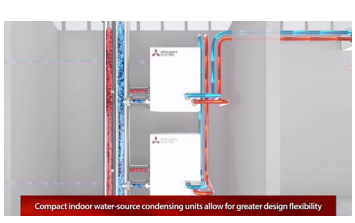
- Single modules up to 20 tons with the ability to combine modules for systems up to 30 tons
- 0-10V output signal to modulate water flow for compliance with energy codes
- Does not require ventilation from within the mechanical room
- Option to stack multiple units to take advantage of vertical space
- Minimizes required mechanical space with front-side service access
- Quiet operation at approximately 46 decibels

TESTIMONIAL

"On the interior of the building, VRF was ideal because the ventilation shafts are minimal, the small horizontal duct work maximizes the available ceiling height and the VRF equipment is easily hidden above ceilings. On the exterior, this VRF system requires no unsightly rooftop units and screening."

- Jonathan Brinkley, architect, Excel Engineering | Project: Fairway Independent Mortgage

VIDEO



CITY MULTI® WATER-SOURCE SYSTEMS | WATCH NOW

Watch our YouTube video to see how CITY MULTI VRF technology might work in your project.