

4-Pipe Chilled Water



Pros



When connected to a heat recovery chiller plant, can recover heat from that process, rather than generating new heat through the consumption of electricity or natural gas.



Usually results in lower overall electrical infrastructure than DX units due to ability to share loads between rooms without sharing air between rooms.



Usually among the most energy efficient options.



Flexible air handling options (ducted/ductless, with multiple sizes and configurations available).



Long life expectancy if maintained properly (over 20 years).



Flexible biosecurity options (MERV/HEPA/UV/PCO).



Ability to economize via a dry cooler in colder climates saving significant amounts of energy by turning off the compressors in the system.



When controls are properly applied, flexibility to adjust to changing room parameters and insight into system operation (perfecting operation and troubleshooting where required) are unmatched.



Strongest precision of all options in varying conditions.



Cons



Controls and installation are more complex than other systems and may increase first cost.



Longer lead times for engineering and equipment production due to the complexity and custom nature of the design and machines themselves.



Not as common as DX units (usually utilized in true industrial applications).