

Total Energy Recovery with Geothermal Heat Pumps

This unit and another like it are dedicated outdoor air energy recovery ventilation units, providing all of the air handling and conditioning needs of the 105,000 square foot Maple Grove, MN Government Center. Heating and cooling are provided by an array of heat pumps sourced by two closed loop systems. The primary loop operates within the exterior walls of the building and the other uses hydro-thermal energy from a water run-off pond.

Performance Specification

Model:	AVR-2000-XD-CW
Supply cfm:	10,000
Exhaust cfm:	9,000
Built:	March 2000
Dimensions:	94" H, 108" L, 234" W
Weight:	8,500 lbs
Energy Recovered:	940 MBH (Winter) 635 MBH (Summer)
Design Conditions:	-17 °F / 100% RH (Winter) 91 °F / 48% RH (Summer)



Unit Features

- 2 AIRotor Heat Wheels: Hygroscopic Wheel operates at 70% Winter Effectiveness recovering 940 MBH and 65% Summer Effectiveness recovering 384 MBH. Sensible Wheel operates at 70% Summer Effectiveness recovering 251 MBH for Reheat.
- Heavy Duty 18 Gauge Galvanized Steel Case, Posts, Corners, and 2" Insulated Double-Wall Construction on a Welded Structural Steel Frame w/ Integral Lift Lugs, and All-Welded Steel Drain Pans.
- 27" SWSI BI Plenum Blowers Powered by High-Efficient ODP Belt-Drive VFD-Controlled Motors (25 hp Supply, 15 hp Exhaust) Mounted on Spring Isolators.
- Dual Purpose Water Coil provides 353 MBH Heating and 434 MBH Cooling.
- Unit includes Dampers, Filters, and Full Temperature Operation for Economizer, Summer Recovery, and Frost Control.