

Design Standard Air Handling Units

Purpose:

Air handling units are an essential element of the mechanical space ventilation, cooling, and heating systems. This design standard has the purpose of creating a consistent application of air handling unit requirements throughout the East Side Union High School District, therefore achieving a standard of quality for maintenance, energy efficiency, and reliability throughout all renovation and new building projects.

Design Standard:

Design and specify work to include materials, installation and testing of central station air handling unit for a complete and operating system

- All air handling units shall have, at minimum, a dedicated set of two-position outside air dampers for ventilation requirements plus a second set of modulating outside air dampers, as required, for economizer operation or tracking with exhaust air.
- A full coil section width casing with access door shall be used to separate the chilled and heating coils.
- Coils shall be copper coils with aluminum fins.
- Insulated casings and plenums shall be specified for all units, including those serving heat and vent applications. Provide double wall casings at all locations.
- Casings for heat and vent applications shall have space for installation of future cooling coil.
- Units shall be installed to allow removal of all coils and filters. Clearance equal to full-finned width of coil shall be provided to facilitate removal.
- Units shall be mounted on internal vibration isolators and concrete housekeeping pads.
- Units shall have a mixing box and filter box or a combination filter/mixing box properly sized so as not to exceed the filter manufacturer's recommended face velocities. Low leakage dampers (2%) shall be provided for mixing box dampers.
- All cooling coil drain pans shall be stainless steel.
- Variable speed drives shall be installed on the air handlers in a separate conditioned vestibule.

Approved Manufacturers:

- Light Commercial Air Handlers
 - Carrier
 - York
 - McQuay
 - Trane
- Commercial Package A/C Units
 - Temtrol
 - Governair
 - Team Air
 - Haakon
 - Hunt Air
 - Dynamic Air Technologies

Substitutes Allowed:

Yes, if performance and quality equivalency can be evidenced.

Associated Design Standards and Construction Specifications

- Division 23 HVAC Design Standards
- 23 05 29 - Hangers and Supports for HVAC Piping and Equipment
- 23 05 48 - Vibration and Seismic Controls for HVAC Piping and Equipment
- 23 05 53 - Identification for HVAC Piping and Equipment
- 23 05 93 - Testing, Adjusting and Balancing
- 23 31 00 – Ductwork

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