

SECTION 23 36 00
AIR TERMINAL UNITS
Design Standard

PART 1 GENERAL

1.1 PURPOSE

Air terminal 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 terminal unit requirements throughout the San Mateo County Community College District therefore achieving a standard of quality for maintenance, energy efficiency, and reliability throughout all renovation and new building projects.

PART 2 PRODUCTS

2.1 Design and specify work to include materials, installation and testing for variable air volume terminal units, including reheat central air terminals for a complete and operating system

- A. Variable air volume (VAV) systems shall typically be zoned so that three to five offices are ganged on a temperature sensor. Offices grouped together shall be ganged in a logical manner, such as having the same floor area, building face exposure, and similar internal loads. Corner zones shall always be an independent zone not connected to any other rooms.
- B. VAV boxes shall have a minimum position setting for ventilation air requirements.
- C. Use of reheat coils shall be limited to hot water reheat coils. Utilize two row coils only where necessary to meet space temperature loads. 5/8-inch OD seamless copper tubes mechanically expanded to aluminum fins. 150 PSIG working pressure. Sweat connections.
- D. All duct connections to the terminal units shall be rigid. The only acceptable location for a flexible duct connection shall be on fan powered terminal units.
- E. VAV boxes with perimeter radiation shall be sequenced from the same room temperature sensor to ensure that the systems do not "fight" each other.
- F. VAV boxes that are DDC type shall have factory-installed controls. Controls are to be furnished by the controls contractor.
- G. When multiple boxes are used to serve a single zone, all shall be controlled from a single thermostat.
- H. Location of all boxes shall be accessible for maintenance.
- I. Box controls shall be pressure independent.
- J. Thermostat shall be an Occupant Controlled Smart Thermostat (OCST). Each thermostat shall be assigned an addressable identification number coordinated to the assigned terminal box number. The thermostat shall be remotely accessible for resetting and for load shedding if required.

2.2 APPROVED MANUFACTURERS

- A. Air terminal units:
 - 1. Trane

2. Titus
3. Tuttle & Bailey
4. Krueger
5. Price
6. Carnes
7. Nailor

PART 3 EXECUTION

3.1 SUBSTITUTES ALLOWED?

Yes, if performance and quality equivalency can be evidenced.

3.2 ASSOCIATED DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS

23 05 29 - Hangers and Supports for HVAC Piping and Equipment Design Standard

23 05 53 - Identification for HVAC Piping and Equipment Design Standard

23 05 93 - Testing, Adjusting and Balancing Design Standard

23 31 00 – Ductwork Design Standard

25 55 00 – Building Management and Control System Design Standard

END OF SECTION