

DIVISION 15 - MECHANICAL

Section 15855 - Air Handling Systems

Introduction

Equipment associated with:

CENTRAL STATION AIR CONDITIONING AND DISTRIBUTION.

See related Sections:

15540 Heat Transfer Equipment
15860 Fans
15885 Filters

Part 1 - General

- Preferred system design based on Dual Duct VAV Concept complete with dual fans. Alternative systems must be justified by life cycle cost analysis. Discuss all system selections with UA Planning, Design & Construction.
- Dual Deck Systems with > 40% Outdoor Air – Discuss with UFS Project Manager and Mechanical Engineer the options to include cooling in existing and new hot decks be it via chilled water supply or return or other means.
- AHU to be 'draw-thru' type.
- Preferred location of OA intakes is above roof level - not ground level. However, avoid location of AHU outside air intake in vicinity of plumbing vent stacks, emergency generator stacks and loading dock areas.
- OA intakes to be hard ducted through Mech. Rooms unless a separate AHU room is provided.
- Equipment layout shall minimize / eliminate any system effect on fan static pressure.

Part 2 - Products

- Provide hinged access doors to both sides of coils, fans, filters, and damper sections.
- Provide removable side panels in fan sections to allow for fan and shaft removal/replacement.
- AHU shall not be constructed using porous or semi porous materials.
- AHU shall be double walled casing - minimum 18 gauge.
- AHU shall have interior inspection lights.
- Large AHU to have inspection windows in access doors.
- Utilize only 'premium efficiency' motors in AHU's. See Section 15050.
- AHU should be designed to minimize the number of field connections between sections.

Part 3 - Execution

- Ensure coil drain pans and condensate pipework is pitched to drain, (minimum pitch 1/4" per foot).
- In new construction utilize AHU to 'flush' building to reduce off-gassing of interior furnishings prior to

occupancy. Fit AHU with temporary filters during this period.

- Replace filters before system balancing.
- Provide vibration safety switches on all Vane Axial type fans.
- Provide suitable access for servicing/removal of fan assemblies.
- Control valves shall be located outside of air handler enclosure. (i.e. not within the airstream)
- Ensure access is provided to both sides of AHU fans to allow bearing replacement.
- Factory leak tests and sound tests are required.

End of Section 15855