1 In Classrooms

1.1 FCUs and unit ventilators are to be avoided in classrooms.

Note: FCU & Unit Ventilators are not rugged and in a few years will 'shake rattle and roll' with an objectionable noise level.

1.1.1 When they must be used in classrooms, unit ventilators should be oversized so as to run on medium speed.

2 Fan Coil Unit Use

2.1 In general FCUs are to be avoided and used only where an FCU is the reasonable choice.

Note: FCUs age quickly. In a few years they are a high maintenance item that looks worn.

2.2 FCUs must be designed as a four pipe unit with separate heating and cooling coils.

2.2.1 To aid in dehumidification consider placing the heating coil in the reheat position.

2.2.2 Exercise caution in the placement of FCUs to avoid excessive noise levels and ensure adequate accessibility for maintenance.

Note: Maintenance staff must be able to get access the control valves, motor drive and filters. This is especially true for units overhead where the maintenance is performed on a ladder.

2.3 Do not bring un-tempered OA directly through an FCU or Unit Ventilator unless the mixing is performed in the RA ductwork far enough away and with at least two elbows to ensure proper mixing and avoid cold air stratification.

3 Chilled Water Coils

3.1 When dehumidification is not part of the operation then the chilled water coil should have a minimum of four rows.

3.2 When dehumidification is part of the operation then the chilled water coil should have a minimum six rows.

3.3 Size coils for Entering Water Temperature of 45°F

3.4 Size coils for Maximum Water Pressure Drop of 10 Ft. Head

3.5 Two-position (not be confused with two-way) chilled water control valves shall not be used unless specific application reviewed and approved by Purdue Engineering.

Note: Two-position (on/off) valves cause unwarranted chilled water consumption through buildings accompanied with low chilled water return temperature.