

CHAPTER 2 - CONSERVATION AND EFFICIENCY: BUILDING SYSTEMS

500

502.15 CONTROL OF AIR FLOW



INTENT

To maintain occupant's comfort, health and well-being and to prevent corrosion or mold growth in building fabric.

REQUIREMENT

For Golden and Platinum Sa'fa and for all new buildings, the fresh air supply to the building shall be controlled to prevent damage due to moisture. This is to ensure that occupant comfort, safety and health conditions are effectively maintained. This shall be achieved with appropriate and adequate use of temperature, humidity and DDC devices as part of a central building management system.

SIGNIFICANCE

Humidity control for fresh air supply is an essential element in maintaining a healthy environment for building occupants. Relative Humidity (RH) levels that are too high can contribute to the growth and spread of unhealthy biological pollutants while humidity levels that are too low may contribute to irritation of mucous membranes, dry eyes and sinus discomfort (U.S. EPA, 1997).

RH affects the performance of the buildings causing condensation, mold growth, mildew, staining, slip hazards, damage to equipment and the corrosion and decay of building fabric, as well as poor performance of insulation. RH can also affect the integrity of stored materials and impair the reliability of machinery, resulting in disruption to the manufacturing process.

APPLICABILITY

This regulation is applicable to all building types except villas. Refer to Table 101.07(2) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

The key intent of this regulation is to maintain relative humidity in building spaces.

RH in should be maintained between 30% and 60% RH (fig. 502.15(1)) for good occupant comfort, health and wellbeing (Sterling, E.M. & Arundel, A & Sterling, T.D.,1985). This minimises risks to human health by biological contaminants and chemical interaction.