

CO₂ Articles & Papers For Reference

Note: Underlined titles will provide web links to the described documents.



AirTest Whitepaper: CO₂ And Over Ventilation: Explains how CO₂ control can be used to better control outside air delivery to space in order to ensure spaces are not ventilated arbitrarily beyond design conditions.



Application Of CO₂ Based Demand Controlled Ventilation & ASHRAE Standard 62 – Optimizing Energy Use & Ventilation. A good technical overview on how CO₂ is used to control cfm/person ventilation rates in buildings. Appeared in ASHRAE Transactions 1998. (1.8 MB: PDF)



Accessing CO₂ Control In Retrofits This article documents the methodology used to perform a CO₂ retrofit on a 30-story office building in Atlanta. The project resulted in \$100,000 in annual savings and a payback in less than 2 years. Appeared in ASHRAE Journal, Nov 2002. (928 KB: PDF)



Real Time Ventilation Control. Discusses practical guidelines zone based ventilation control in new and retrofit applications. Provides an estimate of energy savings possible for various regions in the US. Appeared in HPAC Magazine, April 2002. (656 KB: PDF)



Proven Energy Savings With DCV Retrofits... Using CO₂ to Vary Fresh Air Ventilation Rates and Save Energy Documents three CO₂ installation projects, how they were designed and the energy savings that resulted. Appeared in HPAC Magazine, February 2001. (188 KB: PDF)



Demand Control Ventilation Using CO₂: This article summarizes the current state-of-the-art in CO₂ ventilation control including a discussion of the technology used, its reliability and how it is best applied. Appeared in ASHRAE Journal 2001. (659 KB: PDF)



Making Sense Of Sensors... CO₂ and VOC Sensors Discusses the application of CO₂ and so-called VOC or mixed gas sensors in buildings. The article explains the differences between these technologies and how they are best applied in buildings. The two sensors do have different applications. Appeared in Engineered Systems Magazine 1999. (188 KB: PDF)



ASHRAE Interpretation IC62-99-33: Interpretation Of ASHRAE Standard 62 "Ventilation for Acceptable Indoor Air Quality" which clarifies the use of CO₂ in the standard using the Ventilation Rate Procedure. (20 KB: PDF)



CO₂ And the International Mechanical Code (IMC): The IMC is a guideline document used by most state and local building code organizations as a reference to develop local codes. This short paper describes how the IMC allows CO₂ based demand controlled ventilation. AirTest Application Note. (91 KB: PDF)



CO₂ & Combustion Fumes: Discusses how CO₂ can be used to detect the presence of combustion fumes and odors. Correlates CO₂ levels in spaces to the presence of various harmful contaminants often associated with combustion fumes. AirTest Application Note (233 KB: PDF)



CO₂ And The Title 24 Energy Code In California: The current version of Title 24 requires CO₂ based demand controlled ventilation in certain applications. This application note describes this requirement and references the appropriate sections of the code. It is important to note that CO₂ is included in the code because of the significant energy savings possible. AirTest Application Note (188 KB: PDF)



CO₂ & Ventilation Control In Hospitality Areas With Smoking Significant energy savings are possible when controlling ventilation in smoking areas based on CO₂ concentrations.

7/25/08