

**INTERPRETATION IC 62.1-2007-13 OF
ANSI/ASHRAE STANDARD 62.1-2007
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY**

Transfer Approved: January 20, 2008

Originally issued as interpretation of Standard 62-2001 (IC 62-2001-48) on February 6, 2005, transferred to Standard 62.1-2004 (IC 62.1-2004-13) on June 25, 2006 and subsequently transferred to 62.1-2007. Even though Standard 62.1-2007 includes some changes to relevant sections of Standard 62.1-2004, only minor revisions related to referenced sections were made in transferring this interpretation to apply to Standard 62.1-2007.

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Reference: This request for interpretation refers to Addendum “n” to ANSI/ASHRAE Standard 62-2001 that incorporates a new Ventilation Rate Procedure in Section 6.2, specifically related to the calculation of system average population in Sections 6.2.2.1, 6.2.5.3 and 6.2.6.2.

Background: Equation 6-7 is used to calculate the [system] *occupancy diversity* (D) which is then used in Equation 6-6 to calculate the system *uncorrected outdoor air intake* (V_{ou}). One of the variables used to calculate D is the sum of *zone population* (P_z) for all the zones served by the system. The other variable used to calculate D is the *system population* (P_s). In Section 6.2.2.1 the definition for P_z states that each P_z can be averaged as described in Section 6.2.6.2 if the expected zone population fluctuates with time.

Interpretation No. 1: The individual zone P_z to be used in Equation 6-7 may be averaged based on the averaging method described in Section 6.2.6.2 provided that averaging time T of Equation 6-9 is calculated based on the individual zone volume and on the individual zone *breathing zone outdoor airflow* (V_{bz}).

Question No. 1: Is this Interpretation correct?

Answer No. 1: Yes.

Comments No. 1: None.

Interpretation No. 2: In the case where the individual *zone populations* (P_z) used in Equation 6-7 are averaged the *system population* (P_s) is also averaged.

Question No. 2: Is this Interpretation correct?

Answer No. 2: No.

Comments No. 2: *System population* P_s is the total population in the area served by the system. If this population changes over time it may be averaged over the time period found using Equation 6-9, but such averaging is not a requirement whenever average zone population values are used in Equation 6-7. Note that the averaging adjustments applied to zone population and those applied to system population account for two different effects. Zone population averaging (average P_z) accounts for fluctuating population within a ventilation zone (due to occupants entering and leaving the zone), which does not necessarily affect the system population. System population averaging (average P_s), on the other hand,

accounts for fluctuating population within the ventilation system as a whole (due to occupants entering and leaving the system).

Interpretation No. 3: The *system population* (P_s) is averaged over time period T where T is calculated from Equation 6-9 based on the total volume of all the zones served by the system in question and the sum of all the zone outdoor airflows (V_{bz}) of the zones served by the system.

Question No. 3: Is this Interpretation correct?

Answer No. 3: Yes.

Comments No. 3: None.