

**INTERPRETATION IC 62.1-2016-9 OF
ANSI/ASHRAE STANDARD 62.1-2016
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY**

Approved: June 14, 2021

Request from: Adam Fecteau, Aldes North America, 100 Carter St., St. Leonard d'Aston, QC, Canada J0C 1M0.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 62.1-2016, Table 6.2.2.2 – Zone Air Distribution Effectiveness, regarding Note 5.

Background: Diffusers manufacturers used ASHRAE Standard 129 to test their diffuser's air-change effectiveness in one laboratory setting, calculated an average E_z of 1.1 and now claim on their literature that designers can reduce their outdoor air requirement by 9% simply by using their product, independently of the actual design parameters.

Note 5 of Table 6.2.2.2 states that "As an alternative to using the above values, E_z may be regarded as equal to air-change effectiveness determined in accordance with ASHRAE Standard 129¹⁶ for air distribution configurations except unidirectional flow."

ASHRAE Standard 129 testing procedure used in a laboratory setting is not sufficient to extrapolate the results to any designs and E_z shall be assessed for every design.

Interpretation: A designer cannot extrapolate the results of an ASHRAE Standard 129 test for a given diffuser held in a laboratory setting to any designs and must assess the appropriate E_z to be used for every design.

Question: Is this interpretation correct?

Answer: Yes

Comments: Air change effectiveness is particular to the room geometry, orientation, diffuser position, and airflow rate, therefore it cannot be attached to an air device, however this does not preclude laboratory testing of applications of an air device, other than for unidirectional flow, to a particular design. It should also be noted that changing the zone air distribution effectiveness (E_z) does not necessarily change the system ventilation efficiency (E_v).