

**Interpretation IC 170-2008-3 of
ANSI/ASHRAE/ASHE Standard 170-2008
Ventilation of Health Care Facilities**

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Reference: This request for interpretation refers to the requirements in ANSI/ASHRAE/ASHE Standard 170-2008, Section 7.4.1a, regarding the average air velocity of the diffusers in operating rooms.

Background: Section 7.4.1a states “The airflow shall be unidirectional, downwards, and the *average velocity* of the diffusers shall be 25 to 35 cfm/ft² (127 L/s/m² to 178 L/s/m²). The diffusers shall be concentrated to provide an airflow pattern over the patient and surgical team. (see Memarzadeh [2002] and Memarzadeh [2004] in Informative Annex B: Bibliography.)”

The basis for the velocity requirement in an OR of 25-35 fpm is based on the modeling by Memarzadeh in 2002. Recent research by the University of Colorado shows there is no wound plume.

Interpretation: It is acceptable to increase the airflow to 50-70 fpm with the same diffuser array size and coverage. In fact this would allow us to more easily meet the ACH with the same size diffuser.

Question: Is this interpretation correct?

Answer: No, it is not acceptable to increase the “average velocity” to 50 – 70 cfm/sf.

Comments: It is premature to base design recommendations on an unapproved ASHRAE research report.