



# ADDENDA

**ASHRAE Addendum e to  
ASHRAE Guideline 28-2016**

# **Air Quality within Commercial Aircraft**

Approved by ASHRAE on December 3, 2019.

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**ASHRAE Standing Standard Project Committee 161**  
**Cognizant TC: 9.3 (Lead), Transportation Air Conditioning and**  
**TC 4.3 (Co-Cognizant), Ventilation Requirements and Infiltration**  
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**FOREWORD**

*Addendum e modifies Table 4.1.1, “Conversion Factors for Concentrations Calculations.”*

**Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

**Addendum e to Guideline 28-2016**

*Revise Table 4.1.1 as shown.*

**Table 4.1.1 Conversion Factors for Concentration Calculations**

Cabin Altitude		Cabin Pressure				1000 P/RT
ft	M	atm	psi	kPa	mmHg	mol/m <sup>3</sup>
0	0	1.0	14.696	101.33	<del>760</del>	40.9
1000	305	0.965	14.175	97.74	<del>733</del>	39.4
2000	610	0.930	13.664	94.21	<del>707</del>	38.0
3000	914	0.896	13.173	90.83	<del>681</del>	36.6
4000	1219	0.863	12.682	87.44	<del>656</del>	35.3
5000	1524	0.832	12.230	84.33	<del>633</del>	34.0
6000	1829	0.801	11.778	81.21	<del>609</del>	32.8
7000	2134	0.772	11.341	78.20	<del>587</del>	31.6
8000	2438	0.743	10.914	75.25	<del>564</del>	30.4
9000	2743	0.715	10.506	72.44	<del>543</del>	29.2
10,000	3048	0.688	10.108	69.70	<del>523</del>	28.1



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ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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