

Additions and Corrections

This report includes additional information, and technical errors found between June 15, 2005, and April 7, 2009, in the inch-pound (I-P) editions of the 2006, 2007, and 2008 *ASHRAE Handbook* volumes. Occasional typographical errors and nonstandard symbol labels will be corrected in future volumes. The most current list of Handbook additions and corrections is on the ASHRAE Web site (www.ashrae.org).

The authors and editor encourage you to notify them if you find other technical errors. Please send corrections to: Handbook Editor, ASHRAE, 1791 Tullie Circle NE, Atlanta, GA 30329, or e-mail mowen@ashrae.org.

2006 Refrigeration

p. 2.22, Table 21. The data for R-22 and R-134a were transposed; please reverse the order of the data columns, as shown above.

p. 45.4, Testing for Leaks, 2nd paragraph. Change the first sentence to read, “ASHRAE *Standard 147* established. . . .”

p. 45.7, References. Add the following source:

ASHRAE. 2002. Reducing the release of halogenated refrigerants from refrigerating and air-conditioning equipment and systems. ANSI/ASHRAE *Standard 147-2002*.

2007 HVAC Applications

Contributors List. Wayne Lawton of X-nth should be listed as contributor for Chapters 29 and 30.

p. 13.30, Example 2, step 4. Replace the equation and bulleted item with the following:

$$C_{occ} = 10^{-3} (116 \text{ mg/m}^3) (22.5 - 0.773Q - 2.09P - 0.109X - 0.346Z + 0.0159QZ + 0.236PX + 0.0407PZ + 0.00190XZ - 0.00499PXZ) = 1.13 \text{ mg/m}^3$$

- Iterate between steps 5 and 4. With 5 ach, $C_{occ} = 1.13 \text{ mg/m}^3$. This is greater than the desired limit of 0.94 mg/m^3 . If the fan flow rate is increased to provide 10.5 ach, C_{occ} decreases to 0.94 mg/m^3 . This meets the design criterion.

Ch. 14, Laboratories. Revisions were inadvertently omitted from the 2007 volume; please go to <http://www.ashrae.org/publications/page/158> to download the revised chapter.

p. 17.2, Fig. 1B. The title should read “Allowable Data Center Class 1, Class 2, and NEBS Operating Conditions.”

p. 17.3, Table 1, Relative humidity control range. The maximum dew point for Class 1 should be 63°F .

p. 17.16, References. Please update the following two URLs:

For LBNL 2003,

<http://hightech.lbl.gov/dc-benchmarking-results.html>.

For NIOSH 1986,

<http://www.cdc.gov/niosh/86-113.html>.

p. 21.13, Table 3. Class AA control should be defined as “Precision control, no seasonal rh adjustment, very limited seasonal temperature adjustment possible.”

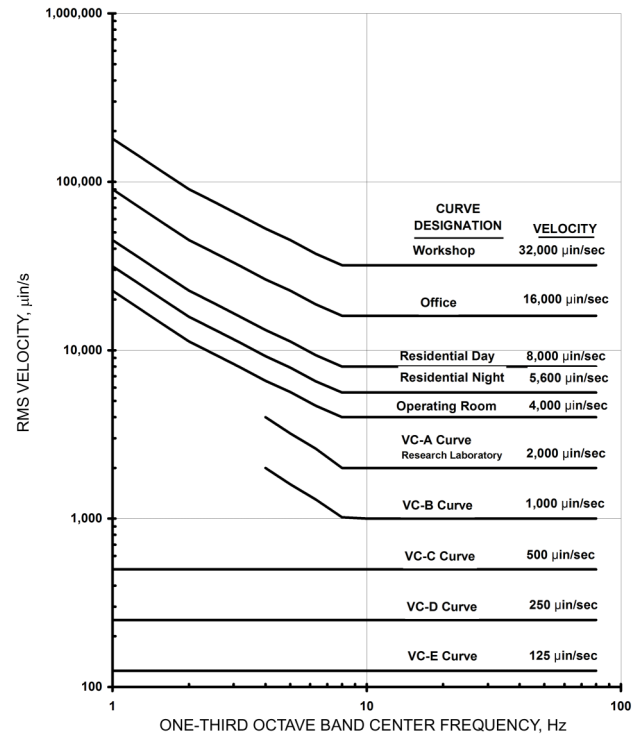


Fig. 37 Building Vibration Criteria for Vibration Measured on Building Structure

(2007 HVAC Applications, Chapter 47, p. 39)

p. 32.14, 2nd col., 1st paragraph. The reference to Table 5 should be to Table 4.

p. 32.15, Table 6. Units for “Bore Fill Conductivity” should be $\text{Btu/h} \cdot \text{ft} \cdot ^\circ\text{F}$.

p. 32.15, 1st col., 1st and 2nd lines, and following Eq. (4). Change “outside pipe” to “borehole.” In the definitions for Eq. (4), units should be ft^2/day for α_g , days for τ , and ft for d , which is defined as borehole diameter.

p. 41.22, Example 3. The reference to Table 6 should be to Table 5. In the next-to-last line of text, change 0.85 to 0.8.

p. 41.25, Eq. (26). The second term on the left side of the equation should be $\dot{Q}_{blr,i}$.

p. 41.30, Eq. (33). Change D to Δ .

p. 47.26, Eq. (26). The final number subtracted should be 0.5, not 11.

p. 47.37, Eq. (29). The final term should be $10^{L_{w2}/10}$.

p. 47.38, Vibration Criteria, 1st paragraph. ANSI *Standard 3.29* is the former designation; update this to ANSI *Standard S2.71-1983 (R2006)*.

p. 47.39, Fig. 37. The corrected figure is as shown above.

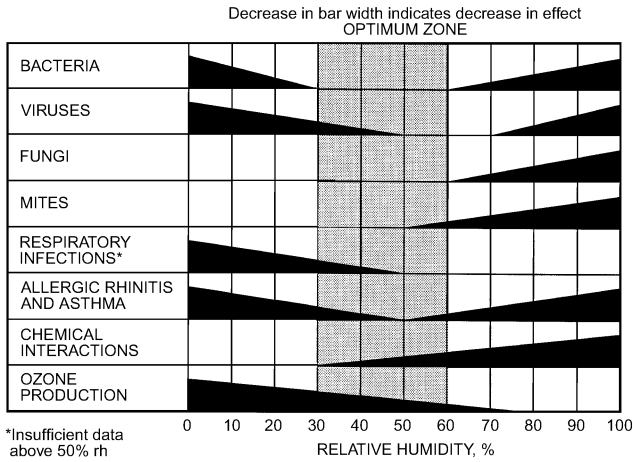


Fig. 1 Optimum Humidity Range for Human Comfort and Health

(Adapted from Sterling et al. 1985)
(2008 HVAC Systems and Equipment, Chapter 21, p. 1)

p. 47.40, Table 48, Packaged AH, AC, H and V Units. In the Horsepower and Other column, change all \leq to \geq (i.e., should be ≥ 15 , ≥ 4 in. SP).

p. 49.17, Fig. 21. Along the (horizontal) x axis, the labels should be 0, 12, 24, 36, and 48.

p. 49.24, Figs. 25 and 26. The current Figure 25 should be Figure 26; its caption should refer to Figure 25, not Figure 22. The current Figure 26 should be Figure 25.

p. 52.10, Example 7, 3rd paragraph. The equation for A_{bo} should be $6030(0.17 \times 10^{-3}) = 1.025 \text{ ft}^2$. Consequently, the pressure difference Δp_{sbt} (third line from end of example) should be 0.331 in. of water, and the flow of pressurization air (last line of example) should be 5585 cfm.

p. 52.18, Symbols. The variable for floor-to-ceiling height should be H , and the variable for number of floors should be N .

p. 54.3, 2nd col., definition for R_p . The reference to Table 4 should be to Table 3.

p. 54.15, Example 1. For calculations using Eqs. (2) and (3), S_{DS} should be 0.623, not 0.85. The result using Eq. (2) should be 1495 lb, and the result using Eq. (3) should be 280 lb.

p. 54.17, Example 2. For calculations using Eqs. (2) and (3), S_{DS} should be 0.623, not 0.85. The result using Eq. (2) should be 1495 lb, and the result using Eq. (3) should be 280 lb.

p. 54.18, Example 3. For calculations using Eqs. (2) and (3), S_{DS} should be 0.623, not 0.85. The result using Eq. (2) should be 3738 lb, and the result using Eq. (3) should be 701 lb.

p. 54.19, Example 4. For calculations using Eqs. (2) and (3), S_{DS} should be 0.623, not 0.85. The result using Eq. (2) should be 747 lb, and the result using Eq. (3) should be 140 lb.

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p. 6.4, Eq. (10). The equation should read as follows:

$$q_c = 0.31 |t_p - t_a|^{0.31} (t_p - t_a)$$

p. 12.11, Eq. (18). Change the “ Dh ” to “ Δh .”

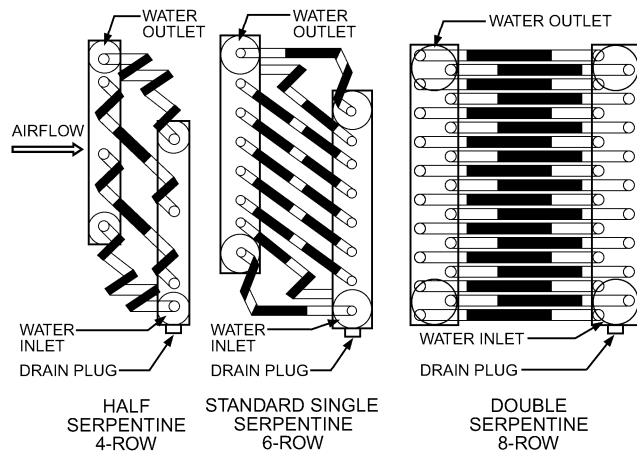


Fig. 1 Typical Water Circuit Arrangements
(2008 HVAC Systems and Equipment, Chapter 22, p. 1)

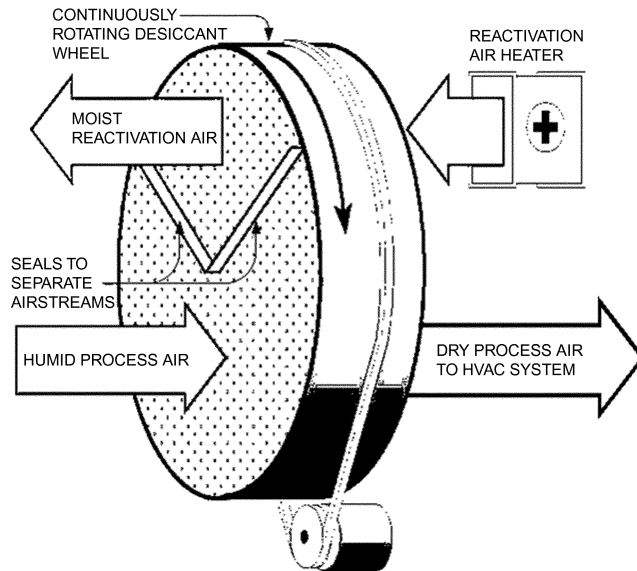


Fig. 7 Typical Rotary Dehumidification Wheel
(2008 HVAC Systems and Equipment, Chapter 23, p. 4)

p. 12.21, 1st col., 2nd paragraph. The reference to Equation (23) should be to Equation (20).

p. 12.24, 2nd col., 1st full paragraph. The reference to Equation (23) should be to Equation (20).

p. 21.1, Fig. 1. Replace the figure with the one shown at top left.

p. 22.1, Fig. 1. Replace the figure with the one shown above.

p. 23.4, Fig. 7. Replace the figure with the one shown above.

p. 23.10, Dry Air-Conditioning Systems, 4th paragraph. After the second sentence, add, “Dehumidified ventilation air that positively pressurizes the building may help counter moist air infiltration.”

p. 31.7, 2nd col., 7th line. Change “sue” to “use.”

p. 49.3, 1st col., 3rd line. The Energy Policy and Conservation Act of 2005 should be Public Law 109-58.