

Errata to Principles of Heating, Ventilating, and Air Conditioning

2/9/07

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These errata were incorporated into the February 2007 reprint.

Page	Errata
15–19	Table 2-1, second line in title should reference the 2005 ASHRAE Handbook—Fundamentals, not the 2001 version.
22	Table number should be 2-2, not 2-1.
23	Graphic is cut off.
24	Graphic is cut off.
25	Graphic is cut off.
27	Table number should be 2-3, not 2-2.
39	Last line of Equation (2-49) should read as follows: $= \left[m_f \left(u + \frac{V^2}{2g_c} + \frac{gz}{g_c} \right) - m_i \left(u + \frac{V^2}{2g_c} + \frac{gz}{g_c} \right) \right]_{i_{system}}$
71	Example 3-3, lowercase w should be uppercase W (in six places, but not in subscripts).
74	In first equation, Q should be q, and cp_a should be c_{pa} . Second column, first sentence, cfm should be scfm. Under (d), Qs should be qs.
135	In Problem 5.44, last line, “1:3” should read “1.3.”
153	Footnote of Table 6-6 should read “(see Table 6-7)” rather than “(see Table 8).” Under Equation (6-14), “ CF_{slab} = slab cooling factor, Btu/h·ft ² ” (remove “·°F”). Under 6.3.3, last sentence should read: “Representative R_{cvt} values are found in Table 5-15 and in chapter 6...”
154	Equation (6-18) should read as follows: $PXI = T_x[E_d + (1 - F_{shd})E_D]$ (shaded fenestration)
155	Third line down in right-hand column, “ft ² ” should be “ft ² ” in the definition for “ A_{cf} ”
166	In Problem 6.15, “Repeat Problem 6.18” should read “Repeat Problem 6.14.” “Diagram for Problem 6.11” is now “Diagram for Problem 6.9.” Diagram for Problem 6.14 is deleted.
167	“Diagram for Problem 6.15” is now “Diagram for Problem 6.11.”
179	The last line of Section 7.3 should read “2005 ASHRAE Handbook—Fundamentals” rather than “2001 ASHRAE Handbook—Fundamentals.”
181	Equation (7-10) should read as follows: $q_b = AE_D SHGC(\Theta) IAC$
182	Equation (7-13) should read as follows: Total fenestration heat gain q: $q = q_b + q_d + q_c$ In the nomenclature in the left-hand column, the “D” in “(SHGC) ^D ” should be subscript rather than superscript. In Table 7-3, the equation at the top of the right-hand column is cut off on the left- and right-hand sides. It should read as follows: $\text{If } \beta > 0 \quad E_{DN} = \left[\frac{A}{\exp(B/\sin\beta)} \right] CN$

- 188** In the line before Equation (7-17), “PH” should read “ P_H .”
- 189** In the headings at the top and bottom of Table 7-13, all “W” should be changed to “E” and all “E” should be changed to “W.”

Table 7-13 is now mislabeled along the top. It should NOT be the same as at the bottom, but should read:

N NNE NE ENE E ESE SE SSE S SSW SW WSW N NNE NE ENE E ESE SE SSE S SSW SW WSW HOR

- 201** In Step 2 in the right-hand column, “Table 7-28” should read “Table 7-27.”
- 202** In lines six and five from the bottom of the right-hand column, “Tables 7-29 and 7-30” should read “Tables 7-28 and 7-29” and “Table 7-31” should read “Table 7-30,” respectively.
- 207** In the third paragraph down in the left-hand column, “Table 7-28” should read “Table 7-27.”
In the first full paragraph in the right-hand column, “Tables 7-32 and 7-33” should read “Tables 7-31 and 7-32” and “Table 7-34” should read “Table 7-33.”
- 291** In the second-to-last paragraph in the right-hand column, five lines down, “3.0 in.” should read “4.0 in.”
- 313** Graphic is cut off.
- 350** In the ninth line from the bottom in the right-hand column, “, 4” should be deleted.
- 351** Bottom of first column, add under “System Sketch” the following: “Use Figure 3-1 as schematic for problem.”
- 353** The last three equations in the left-hand column should read as follows:

$$Q_{c2} = 1162 \text{ cfm}; Q_{cc,max} = 2498 + 1162 = 3660 \text{ cfm}$$

$$m_{cc} = \frac{3660(60)}{13.33} = 16,474 \text{ lb/h}$$

$$q_{cc} = 16,474[32.45 - 25.2 - (0.0114 - 0.0103)26]$$

$$= 119,000 \text{ Btu/h}$$
- 436** Second column, first sentence, “1720” should be “1740.”
- 462** Lower portion of Table 18-2 SI is missing; should be as follows:

Table 18-2 SI Typical Performance Values for Reciprocating Compressors

(Table 2, Chapter 34, 2000 ASHRAE Handbook—HVAC Systems and Equipment)

Compressor Size and Type	Operating Conditions and Refrigerants			
	R-404a	R-134a	R-22	R-22
	Evap. Temp. = -40°C	Evap. Temp. = -17.8°C	Evap. Temp. = 4.4°C	Evap. Temp. = 7.2°C
	Cond. Temp. = 41°C	Cond. Temp. = 43°C	Cond. Temp. = 41°C	Cond. Temp. = 54.4°C
	Suction Gas = 18.3°C	Suction Gas = 18.3°C	Suction Gas = 12.8°C	Suction Gas = 18.3°C
	Subcooling = 0 K	Subcooling = 0 K	Subcooling = 0 K	Subcooling = 0 K
	Refrigerant Output/Power Input, W/W			
Large, over 19 kW				
Open	0.99	1.89	4.95	5.04
Hermetic	0.92	1.76	4.16	3.05
Medium, 4 to 19 kW				
Open	0.90	1.74	4.71	4.71
Hermetic	0.85	1.64	4.10	3.02
Small, 4 kW				
Open	—	—	—	—
Hermetic	—	1.11	4.04	2.93