

**Errata to  
Fundamentals of Design and Control of Central Chilled-Water Plants (I-P)  
(2017)**

**June 18, 2019**

*Shaded items have been added since the previously published errata sheet dated October 30, 2018.*

**Page 38**

Under the section Oil Return, “Using an oil pump can reduce the minimum lift to about 5.5°C” should read “Using an oil pump can reduce the minimum lift to about **10°F**”.

In third paragraph in the section Absorption Chillers, “Because of absorption chillers’ low, the heat rejection system must be about 50% larger than with a compression chiller plant, increasing the cost of condenser water pumps, piping, and cooling towers.” should read “Because of absorption chillers’ low **COPs**, the heat rejection system must be about 50% larger than with a compression chiller plant, increasing the cost of condenser water pumps, piping, and cooling towers.”

In the first bullet point in the section Absorption Chillers, the phrase “water at that temperature has the lowest density, enhancing tank stratification and increasing storage capacity” should read “water at that temperature has the **higher** density, enhancing tank stratification and increasing storage capacity.”

**Page 160:**

The values in Table 5-7 should read as follow:

**Table 5-7 Typical Coil Performance Versus  
Chilled-Water Temperature Difference**

Chilled-Water $\Delta T$ , °F	10	13	16	19	22	25
<b>Coil water pressure drop, ft H<sub>2</sub>O</b>	<b>23.5</b>	<b>13.9</b>	<b>9.1</b>	<b>8.3</b>	<b>6.7</b>	<b>4.7</b>
<b>Coil air-side pressure drop, in. H<sub>2</sub>O</b>	<b>0.48</b>	<b>0.50</b>	<b>0.52</b>	<b>0.60</b>	<b>0.63</b>	<b>0.78</b>
<b>Rows</b>	6	6	6	8	8	8
<b>Fins per in. (fpi)</b>	<b>7.4</b>	<b>8.3</b>	<b>9.4</b>	<b>7.7</b>	<b>8.6</b>	<b>11.6</b>

Cooling coil pressure air- and water-side drops were determined from a manufacturer’s AHRI-certified selection program assuming 500 fpm coil face velocity, smooth tubes, maximum 12 fpi fin spacing, 43°F CHW supply temperature, 78°F/63°F entering air temperature, and 53°F leaving air temperature.

The values in Table 5-8 should read as follow:

**Table 5-8 Cooling Coil and Associated Piping Costs**  
 (For 20,000 cfm coil sized at 500 fpm, 42°F CHW supply temperature, 78°F entering dry-bulb temperature, 62°F entering wet-bulb temperature, and 53°F leaving dry-bulb temperature)

Coil							Piping		
Fins per in.	Rows	Air Pressure Drop, in. H <sub>2</sub> O	Fluid ΔT, °F	Fluid Flow, gpm	Fluid Pressure Drop, ft H <sub>2</sub> O	Coil Cost	Pipe Size, in.	Coil Connection	Total Cost
10	4	<b>0.70</b>	10.1	118.7	9.1	\$3598	3	\$4551	\$8149
11	6	<b>0.65</b>	18.2	66.0	7.6	\$4845	2.5	\$3581	\$8426
10	8	<b>0.80</b>	24.9	47.0	5.7	\$5956	2	\$2101	\$8057

The x-axis of Figure 5-11 should read “Condenser Water Temperature/ΔT,” rather than “Chilled Water Supply Temperature/ΔT”

Equation 5-1  $T_A + \Delta T_{CW} = 15 - 0.0006CDD_{50}$  should read

$$T_A + \Delta T_{CW} = 27 - 0.001CDD_{50} .$$

Equation 5-2  $T_A = 15 - \Delta T_{CW} - 0.0006CDD_{50}$  should read

$$T_A = 27 - \Delta T_{CW} - 0.001CDD_{50} .$$