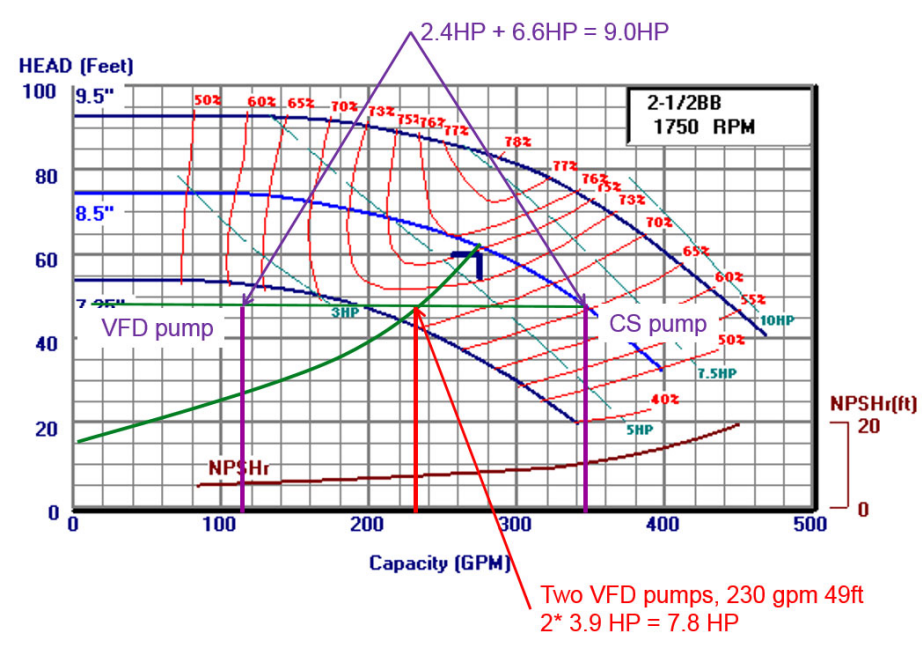
Errata to
Fundamentals of Design and Control of Central Chilled-Water Plants (I-P)
(2017)

March 11, 2025

Shaded items have been added since the previously published errata sheet dated June 18, 2019.

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 59:	The SI version was incorrectly included for Figure 3-25; it should be the I-P version, as shown below: 
Page 65:	The SI version was incorrectly included for Equation 3-5; it should be the I-P version, as shown below (bold indicates changes from the SI version): $$NPSHA = \frac{\mathbf{2.31}}{s}(P_a - P_{vp}) + \frac{\left(V_a^2 - V_s^2\right)}{\mathbf{61.3}} + (z_a - z_s) - H_{f,(a \rightarrow s)}$$ Also, in the text beneath Equation 3-5, the second line says "V is velocity (ft/min)" but should say "V is velocity (ft/**s**)."

For online access to these errata as well as updates to other publications, visit www.ashrae.org/publicationupdates.

Please notify ASHRAE of any other errors you might find by using the Comment on Publications form at www.ashrae.org/resources--publications.

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 DT, °FC	5.510	7.213	8.916	10.619	12.222	1425
Coil water pressure drop, ftm H_2O	7.223.5	4.213.9	2.89.1	2.58.3	2.06.7	1.44.7
Coil air-side pressure drop, in.mm H_2O	12.20.48	12.70.50	13.20.52	15.20.60	16.00.63	19.80.78
Rows	6	6	6	8	8	8
Fins per in. (fpi)cm	2.97.4	3.38.3	3.79.4	3.07.7	3.48.6	4.611.6

Cooling coil pressure air- and water-side drops were determined from a manufacturer's AHRI-certified selection program assuming 500 fpm2.5 m/s coil face velocity, smooth tubes, maximum 12 fpi fin4.7 fins per cm spacing, 43°F7.2°C CHW supply temperature, 78°F/63°F25.5°C/17.2°C entering air temperature, and 53°F11.7°C leaving air temperature.

Page 162:

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

Table 5-8 Cooling Coil and Associated Piping Costs (For 20,000 cfm9400 L/s coil sized at 500 fpm2.5 m/s, 42°F5.6°C CHW supply temperature, 78°F26°C entering dry-bulb temperature, 62°F17°C entering wet-bulb temperature, and 53°F12°C leaving dry-bulb temperature)

Coil							Piping		
Fins per cmFins per in.	**Rows**	**Air Pressure Drop, mmin. H_2O**	**Fluid Δ*T*, °CF**	**Fluid Flow, m^3/h gpm**	**Fluid Pressure Drop, mft H_2O**	**Coil Cost**	**Pipe Size, in.mm**	**Coil Connection**	**Total Cost**
410	4	0.7017.8	5.610.1	27.0118.7	2.89.1	$3598	753	$4551	$8149
4.311	6	0.6516.51	10.118.2	15.066.0	2.37.6	$4845	642.5	$3581	$8426
410	8	0.80	13.824.9	10.747.0	1.75.7	$5956	502	$2101	$8057

Page 165:

The *x*-axis of Figure 5-11 should read "**Condenser Water Temperature/Δ*T***," rather than "Chilled Water Supply Temperature/Δ*T*"

Page 172:

Equation 5-1 $T_A + \Delta T_{CW} = 15 - 0.0006\text{CDD}_{50}$ should read $T_A + \Delta T_{CW} = \mathbf{27 - 0.001CDD_{50}}$.

Equation 5-2 $T_A = 15 - \Delta T_{CW} - 0.0006\text{CDD}_{50}$ should read $T_A = \mathbf{27} - \Delta T_{CW} - \mathbf{0.001CDD_{50}}$.