

A 100% EMPLOYEE-OWNED COMPANY. SERVING THE INDUSTRY SINCE 1948

HEAT PUMP WATER HEATER CLASS

~ KENDAL SMITH ~

by

~ R.J. SANTIAGO, CPD, GPD ~

Kendal holds a Bachelor of Science in Mechanical Engineering from Brigham Young University (BYU). He began his career in 2017 as a mechanical designer for one of the largest MEP consulting firms in downtown Los Angeles, where he specialized in optimizing HVAC systems for various building types across the United States. Currently, he is a valued member of Dawson Company's Business Development Group (BDG). In this role, he supports mechanical and plumbing engineers in system design, ensures proper equipment application, and facilitates clear communication on project plans.

R.J. holds a Bachelor of Science in Mechanical Engineering from California State University, Fullerton, and is certified in Plumbing Design (CPD) as well as Green Plumbing Design (GPD). Prior to joining Dawson Company, R.J. served as a Project Manager for an engineering consulting firm, where he played a key role in managing both local and international design projects. He is currently a valued member of Dawson Company's Business Development Group. In this role, he supports mechanical and plumbing engineers in system design, verifies proper equipment application, and ensures clear communication of project plans.

WHO SHOULD ATTEND

Plumbing Engineers / Plumbing Engineers for Design Build Contractors

Topic: Centralized Heat Pump Water Heater (CHPWH) System Design Considerations and New Sizing Techniques

PART 1:

- Overview of heat pump refrigerant cycle
- Discuss Minimum Lift and Water Side DeltaT
- Current 3rd Party Testing Standards (Energy Star, DOE, AHRI Standard 1300)
- Typical refrigerants used for CHPWH
- General design considerations

PART 2:

- "Single-Pass" vs. "Multi-Pass" configuration vs. piping schematic
- Peak and off-peak scenario hydronic analysis
- General comments on "single-pass" vs. "multi-pass", pro's/cons
- Electric Swing Tank vs. Electric Backup – hydronic analysis

PART 3:

- General comments vs. gas-fired, ASPE Fixture Tables
- CHPWH Sizing Methods
 - Peak/Off-Peak Sizing Method
 - Ecotope Sizing Method
 - CBECC-Res 2019 Sizing Method
- Other Sizing Methods – ASHRAE Load Profile
- Sizing example with CHPWH Sizing Methods

THURSDAY, MARCH 26, 2026

8:30 AM - 12:00 PM, to be held at:

DAWSON COMPANY LEARNING CENTER * 1681 W. 2ND STREET, POMONA, CA 917665 (626)-797-9710

CONTINENTAL BREAKFAST WILL BE PROVIDED AT 8:00, LUNCH SERVED AT 12NOON

To ensure that each attendee receives the full benefit of this seminar, the class size is limited to 40 attendees.

Name _____
 Company _____
 Phone _____
 Email _____

Name _____
 Company _____
 Phone _____
 Email _____

Name _____
 Company _____
 Phone _____
 Email _____

(A) Total Number of Persons Attending _____
 (B) Total Cost of Seminar per Person: \$25.00
 Total Enclosed (Ax B): \$ _____

Please let us know if you have any dietary requirements:

Payment Method 1 - <https://dawson-company.coursestorm.com/>

Payment Method 2 - check - Mail to: Dawson Company, P.O. Box 6011, Pomona, CA 91769-6011

Payment Method 3 - credit card (Visa/MasterCard/American Express) - Contact Crystal Olguin at 626-797-9710 ext. 121, colguin@dawsonco.com