

# HEAT PUMP WATER HEATER CLASS

by **ERIC DECKER, PE, CPD**

Eric Decker, PE, CPD, graduated from the University of Illinois at Chicago with a B.S. in Mechanical Engineering. After graduating, he worked for Bell & Gossett in Morton Grove, Illinois in the Commercial Pumps Marketing Department. In 2011, he joined Dawson Company's Business Development Group, calling on mechanical and plumbing consulting engineers in the Orange County area. In 2017, Eric became Manager of the department.

Eric recently presented at the 2023 ASPE Symposium in Bellevue, WA on this topic. He has presented at Los Angeles, Orange County, and San Diego ASPE Chapter meetings. He has also presented at Orange Empire, San Diego, SoCal, and Tri-County ASHRAE Chapter meetings. Eric is a Registered Professional Mechanical Engineer (P.E.) as well as Certified in Plumbing Design (CPD). He is a Past President of the Orange Empire ASHRAE Chapter.

## 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, FEBRUARY 27, 2025**

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 \_\_\_\_\_  
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(A) Total Number of Persons Attending \_\_\_\_\_  
(B) Total Cost of Seminar per Person: \$50.00  
Total Enclosed (AxB): \$ \_\_\_\_\_

**Please let us know if you have any dietary requirements:**

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