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CENTRAL HEAT PUMP WATER HEATERS

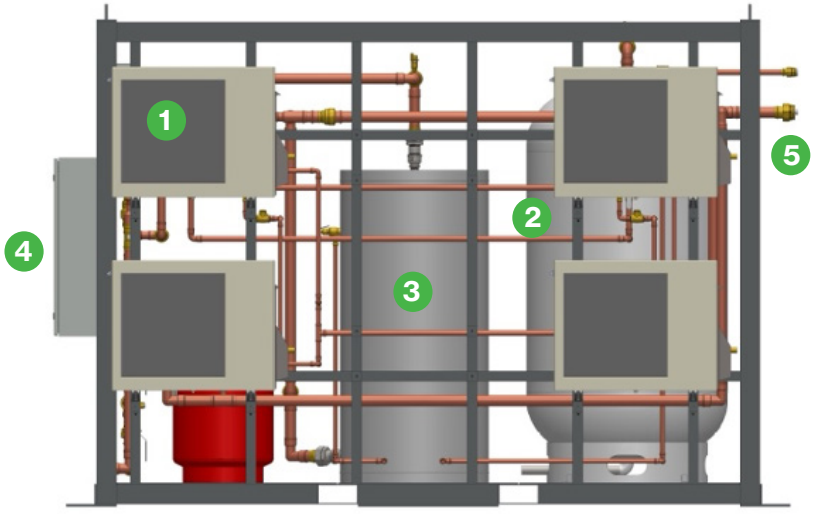
The Best Solutions Come in Easy-to-Use Packages

Image source: Small Planet Supply

Packaged systems offer all the benefits without the complexity.

Central heat pump water heater (CHPWH) systems serve the domestic hot water needs of a building in one central plant. Though they have become a key decarbonization technology by reducing greenhouse gas emissions and saving energy and costs, their complex design and installation requirements can pose barriers to widespread adoption.

Packaged systems reduce this complexity by simplifying design and installation. With pre-made sizes based on storage capacity, packaged systems reduce the need for plumbing and electrical site work to minimize complexity for designers, installers, and maintenance staff, while offering flexibility to meet unique site conditions. Even with all this significant added value, packaged solutions are often cheaper to install than non-packaged HPWH systems.



Everything you need, all on one skid.

In one easy bundle, packaged systems include all key CHPWH components, including:

1. **Heat pump:** Multiple heat pumps can be included on a single skid to ensure adequate heating capacity.
2. **Storage tank:** Tank volume can be sized to meet peak load, while also accounting for the recovery rate of the heat pumps.
3. **Swing tank:** The swing tank provides recirculation loop temperature maintenance and backup heating via electric resistance.
4. **Controls:** An integrated package with communications and alarms make maintenance easy, and many units come with full measurement and verification (M&V) capability.
5. **Plumbing connections:** Simple building hookups (i.e., one power, two drains, and three water) reduce installation confusion in the field.
6. **Flexible load management:** Additional load-shift cost savings for operators is offered by the CTA-2045 (EcoPort™) communication port.

Packaged CHPWH in Action: The WaterDrop System

Based in Tumwater, Washington, Small Planet Supply manufactures the WaterDrop System, a plug-and-play HPWH solution for residential and commercial buildings that leverages state of the art technology and integration.

- Watch a comprehensive virtual tour of their factory, including the production process and detailed photos and videos describing the components of the system.
- View a case study spotlighting one of the first WaterDrop installations in a low-rise multifamily building.

HPWH Pioneer

Kenneth Eklund was instrumental in bringing the first CO2-based HPWH to the U.S. market. His research not only opened the door for HPWH to become available domestically, but it also explored how to scale HPWH into larger plants that could serve the domestic hot water needs of multifamily buildings. This product class is an extension of his pioneering work.

Image source: Small Planet Supply

Tools and resources to learn more.

- Compare products using the Northwest Energy Efficiency Alliance's Qualified Products List (QPL), which offers key information about HPWHs that meet the requirements of the Advanced Water Heating Specification (AWHS).
- Get help with system design using the Ecosizer, a free tool for sizing CHPWH systems in multifamily buildings.
- Discover resources at CHPWH.org, a repository of CHPWH tools, standards, technical information, reports and project spotlights.

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To learn more about CHPWH, visit **betterbricks.com/solutions/water-heating**.