

LARGE BUILDING WATER HEATING



DROP IN MODULAR SYSTEMS

SCALABLE TO ANY BUILDING SIZE

SIMPLE AND ACCESSIBLE

FOSSIL FUEL FREE

ASSEMBLED IN USA

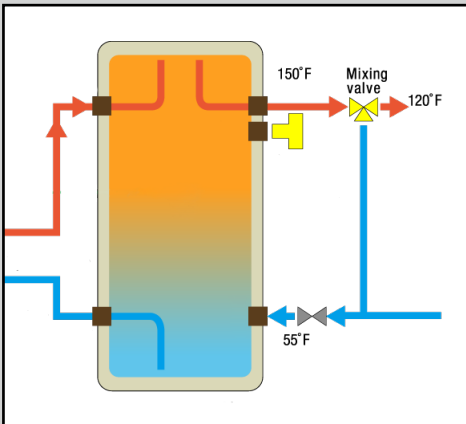


CO2 Heat Pumps



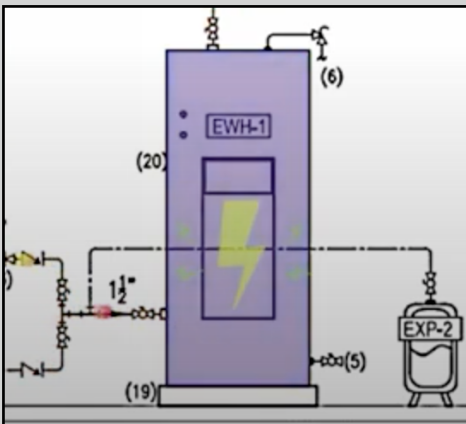
- Hot water production down to -20F & below.
- Fast recovery after hot water draw.
- Allows for use of off-peak power.
- CO2 refrigerant has a low global warming potential.
- 5x more efficient than traditional electric.
- 1200w power usage per unit.

Stratified Primary Storage



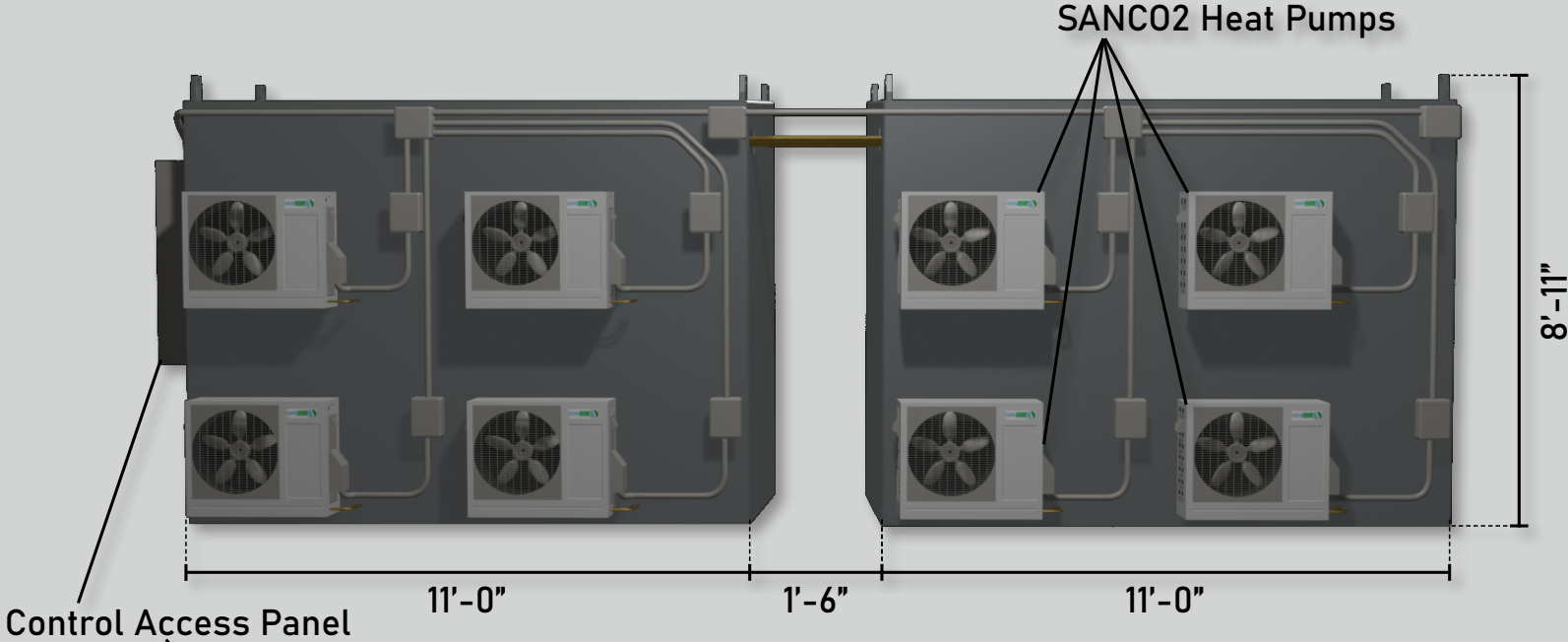
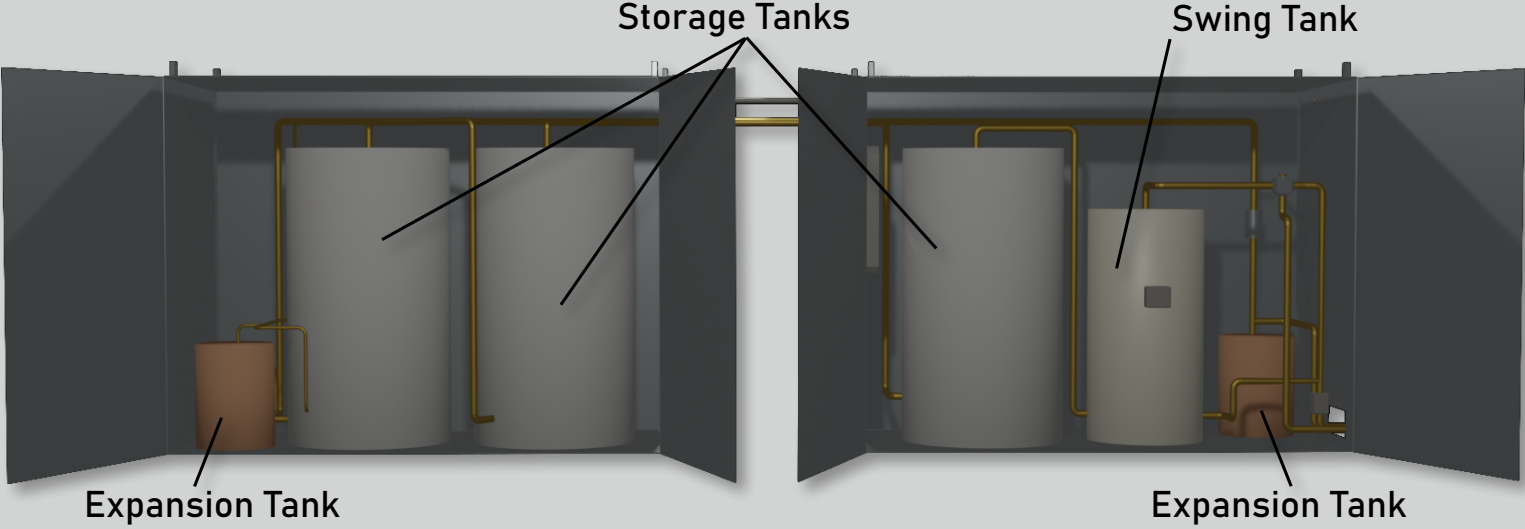
- Scalable using multiple tanks ganged together.
- Provides on demand supply for heat pumps.
- Stores water at 150F for higher effective volume.
- Feeds swing tank and mixing valve to deliver target temperature.
- Storage works as thermal battery to reduce peak demand energy usage.
- Included in the system's 6 year warranty.

Swing Tank Technology



- Maintains target temperature at all times.
- Keeps primary storage separate from recirc loop.
- Provides thermal storage to maintain recirculation loop temperature.
- Electrical element maintains loop temperature during extended periods of no usage.
- Increases heat pump efficiency by allowing them to heat only cold makeup water.
- Provides Extra Capacity Beyond Heat Pump Rating For Extreme Draws

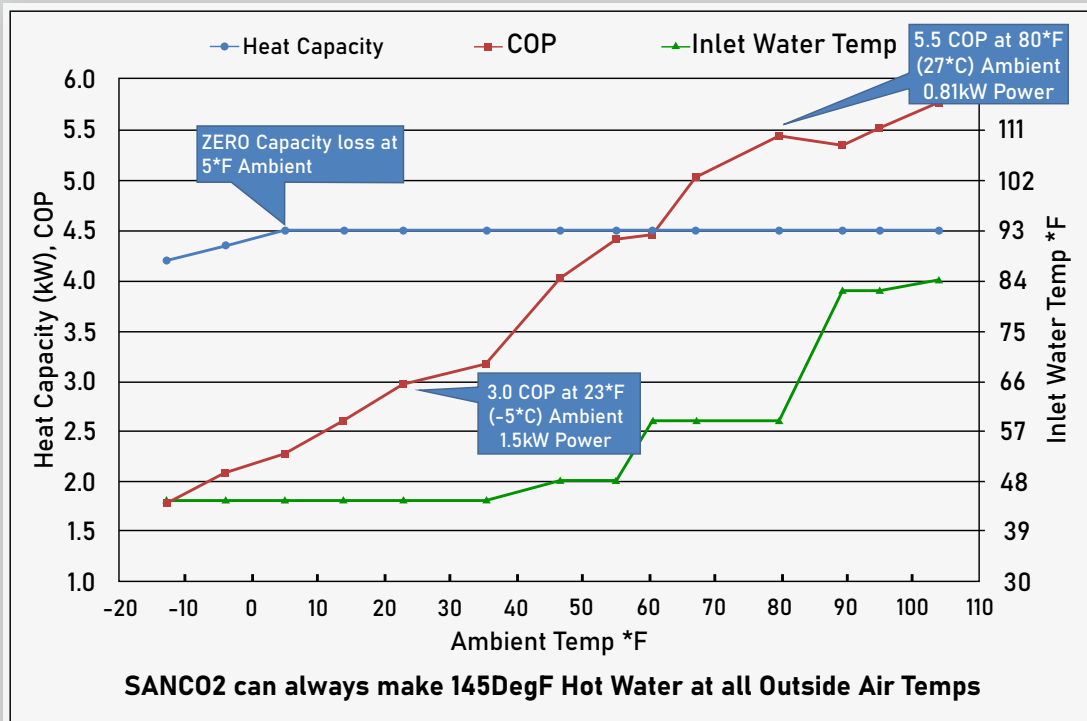
What's Inside A Water Drop



Choice Equipment For High Efficiency

All WaterDrop prefab systems contain the same essential components. Each one will consist of an array of SANC02 heat pumps, from 3 contained on one skid to upwards of 8 shared between 2 skid enclosures. These handle the primary heating load and fill the included primary storage tank(s) which range from 119g to 505g. The supplied variable speed recirculation pump keeps hot water readily available at the taps. This works in tandem with the electric resistance swing tank and primary storage to maintain a consistently available water temperature at the point of delivery, while keeping the entire system running efficiently.

Reliable And Efficient Water Heating



SANCO2 Heat Pumps have the highest Coefficient of Production of any hot water system, reaching up to a coefficient of 5.5. This is because the CO2 refrigerant reaches a transcritical state not achieved by other refrigerant, increasing the energy output of the system. WaterDrop systems are configured to use multiple heat pumps to heat water. In the unlikely event there is a problem with the unit, other units are still able to provide hot water, minimizing the inconvenience for occupants.

All Electric Hot Water Solution Without Fossil Fuels

WaterDrop heat pump water heating plants are the result of years of CO2 water heating research by American public electric utilities jointly funding research by engineering partners focused on successful building electrification. The result is the development of North America's first market ready large building CO2 based central water heating solution: WaterDrop. At the core of the system operation is the SANCO2 heat pump, a high efficiency CO2 refrigerant heat pump. This simple CO2 refrigerant heat pump, used in a modular array, will consistently produce 150F potable water in all climate conditions even in the very cold Canadian north. More jurisdictions are enacting carbon bans. By using a SANCO2 powered WaterDrop system you're ahead of any adoption curves while still providing building occupants with plenty of reliable hot water.

A Full System Approach

The WaterDrop system is a full solution from “sizing” to “start-up”. A WaterDrop system starts with sizing the plant to the buildings needs, Small Planet Supply handles providing a sizing and recommendation report, along with drop in piping schematics for the heat pumps, tanks, swing tanks and controls. With specification complete, bidders and installers are able to access online training and earn a WaterDrop “bidders certificate” that confirms basic understanding of the system components and piping to ensure accurate bid scope and pricing. At installation all of the key system components of heat pumps, tanks, & controls are supplied by Small Planet Supply. Our expert staff are on hand to help the contractor thru the installation. Once the plant is ready for start-up, A Small Planet Supply Commissioning Agent will arrive on-site to start the plant up, confirm and adjust controller functions and turn over the plant to the building operator. Once up and running, Small Planet Supply remains your single source for parts and any maintenance questions.

The Right Product to Serve Your Needs

WaterDrop systems are available in several pre specified models. Based on your projects parameters, a Small Planet Supply engineer will select the right system to fit your needs. All models feature a 119g 13.5Kw swing tank, and primary storage and swing tanks are ASME certified. The included recirculation pump and TMV are controlled by a staging type master controller that works over WiFi/LAN networks with optional BMS usability. All systems are covered by a 6 year warranty, with a 3 year warranty applied to the swing tank.

DHW Plant	DHW Plant Capacity				Delivery		Primary Storage
	Occ	Kw	Storage	Kbtu	Skids	Enclosure	Base
36Kw-855-120SW-2	100	36.0	855	123,200	2	R-12	285
27Kw-505-120SW	80	27.0	505	92,400	1	R-12	505
22.5Kw-360-120SW	60	22.5	360	77,000	1	R-12	360
18Kw-360-120SW	55	18.0	360	61,600	1	R-12	360
18Kw-357-120SW	55	18.0	357	61,600	1	R-12	119
13.5Kw-238-80SW	40	13.5	238	46,200	1	R-12	119

**A Small Planet
Supply Product**



**Your Source For
Startup Service
And Parts**

"Improving building performance and implementing cleaner fuel sources are changes that can be perceived as bringing high costs and unexpected outcomes when first encountered on a project. The reality is that like any change, if we just take time to understand it, we can implement it the first time out successfully, and gain new skills and understanding in the process."

- Albert Rooks, Small Planet Supply CEO

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Plan it with the planet in mind

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