A. O. Smith VOLTEX™ Hybrid Electric Heat Pump Water Heater

VOLTEX—EXCELLENT EFFICIENCY

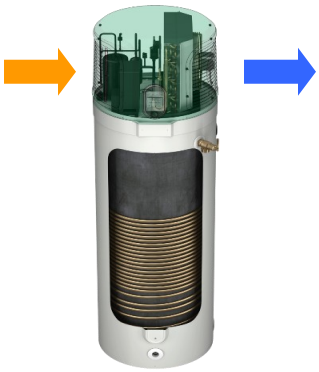
Selling Message

VOLTEX™ from A. O. Smith is the latest advancement in electric water heating. The hybrid electric design integrates heat pump technology to produce a product that is over twice as efficient as a standard electric water heater. It is the most versatile and energy efficient option for homeowners looking to go green and save some green. For this technology, more storage equals more savings.

How does it work?

The VOLTEX Hybrid Electric model is an integrated system that utilizes heat pump technology to provide a more efficient way to heat water with electricity. Similar to your home air conditioner in reverse, the VOLTEX pulls heat from the surrounding air and deposits the heat into the tank. The byproduct is cooler and dehumidified air while producing very efficient hot water.

More storage capacity allows the heater to operate in the most efficient mode and generate greater savings compared to smaller capacity heat pump models.



Features and Benefits

2.3 EF: Saves the homeowner significant money. Standard electric units are .93 to .95 EF. Less than half the cost to operate compared to a standard electric model (average of $575 versus $215 for VOLTEX). Payback will be less than 3 years (or quicker with state and local rebates).

Extra capacity to store the "cheap" hot water: With 80 gallon capacity, the model can store more energy created from the heat pump technology (versus from the electric element) and produce larger savings.

ENERGY STAR® qualified: The only electric water heater that is ENERGY STAR rated. Many state and local agencies have significant rebates for these types of products.

Tax Credit eligible: Through 2010, it's eligible for a Federal Tax credit of up to $1,500 (30% of the total installation cost).

Advanced Technology: The most advanced and efficient technology in electric water heating.

Simple installation: Similar footprint to conventional electric models with condensate drain.

Advanced Control: Three modes of operation (High Efficiency, Hybrid and Conventional Electric) based upon hot water needs. The High Efficiency mode = heat pump only, most efficient with the most savings. Hybrid mode will switch between heat pump and electric element mode based upon demand. Conventional mode operates as a standard electric model.

High-Tech Powered anodes: Continues to protect the tank for the entire life span – non-sacrificial. Powered anodes provide better protection in a variety of water conditions and require no routine maintenance to ensure corrosion protection (unlike conventional anodes).

Target Customer

VOLTEX is designed for the electric water heater customer who is looking for significant efficiency improvements. This hybrid electric design can produce considerable savings and will appeal to any consumer looking for a dramatic reduction in their monthly expenses. The VOLTEX is great for replacement applications, as it installs very similarly to a standard electric model. It is the latest in electric water heating and will appeal to those customers interested in new technology as well as the eco-conscious consumer.

Selling VOLTEX vs. the Competition

Key Selling Point

More Storage = More Savings

vs. Standard Electric:

- The performance will be very similar in terms of hot water delivery compared to a 66 gallon electric model at less than half the annual cost of operation.
- The initial cost will be greater, but payback will far exceed the initial investment (see Payback Scenario below).
- Energy Star rated and eligible for rebates

Payback Scenario	
MSRP	$1,995
Federal Tax Credit (30%)	-$599
SEEARP (State Energy Star Rebate)	-$200
Utility Rebate	-$100
Standard 50 gallon electric cost	-$300
Upgrade cost delta	$797
Annual cost of operation savings	$350
Payback	2.3 yrs
Total product life savings	$4,200

Assumptions:
State funding remains for Energy Star products
Utility rebates are available
Cost of operation vs 10 year old .53EF gas model
Product lifespan of 12 years

vs. Rheem:

- True capacity is 46 gallons. Due to the small capacity, "Energy Saver" mode actually operates elements in conjunction with the heat pump to provide adequate hot water delivery. As a result, the savings potential will be greatly reduced compared to the A. O. Smith VOLTEX.
- "Energy Saver" mode will only produce 42 gallons of usable hot water (70 degree delta) versus 70 gallons for the A. O. Smith VOLTEX.
- Lower efficiency and lower savings - 2.0 EF in "Energy Saver" mode versus 2.3 EF for the A. O. Smith VOLTEX.
- Even in "Normal" mode, the electric elements will operate more frequently (versus the heat pump) in order to satisfy hot water demand. This translates to lower savings compared to the A. O. Smith VOLTEX.
- Water is re-circulated up and through the heat exchanger versus the A. O. Smith coil design. This most likely will result in additional service calls.
- Circulating pump is un-insulated – serves as a heat sink.
- Somewhat primitive user interface – no temperature set points (just ranges), no error code function / diagnostics.
- R410a refrigerant requires higher system pressure than R134a (A. O. Smith). Higher system pressure may result in reduced compressor life.
- Standard anodes (sacrificial) that cannot be replaced. Life of entire unit is contingent upon the life of the tank and capability of anode protection. The A. O. Smith VOLTEX has a powered anode that is non-sacrificial.

vs. GE:

- True capacity is 45 gallons. Due to the small capacity, "eHeat" mode most likely will not provide an adequate amount of hot water for many homes.
- "eHeat" mode will produce 38 gallons of usable hot water (70 degree delta) versus 70 gallons from the A. O. Smith VOLTEX
- Even in "Hybrid" mode, the electric elements will operate more frequently than the VOLTEX (versus the heat pump) in order to satisfy hot water demand. This translates to lower savings compared to the A. O. Smith VOLTEX.
- Standard anodes (sacrificial) that cannot be replaced. Life of entire unit is contingent upon the life of the tank and capability of anode protection. The A. O. Smith VOLTEX has a powered anode that is non-sacrificial.

Grid management capable:
The VOLTEX is compatible with future enhancements in electric grid communication.

REBATE AND INCENTIVE ELIGIBILITY

Up to $1500 TAX CREDIT

ENERGY STAR

Check www.dsireusa.org for additional utility incentives in your market