

A TRUE HEAT PUMP WATER HEATER



Accelera[®] 300
HEAT PUMP WATER HEATER

- » #1 IN ENERGY STAR RATINGS
- » 80 GALLON STORAGE CAPACITY
- » REDUCES HOT WATER COSTS BY UP TO 80%
- » COOLS AND DEHUMIDIFIES THE AIR AROUND IT
- » REMOVABLE SACRIFICIAL ANODE WITH WEAR INDICATOR
- » RELIABLE GERMAN TECHNOLOGY & MANUFACTURING BACKED BY A 10-YEAR WARRANTY



Saves Energy Where Solar Won't Work



The Accelera® 300 can extract up to 80% of its energy requirements from the energy in the air around it.

Energy from nature.

The beauty of heat pump water heating technology is that the amount of electrical energy needed to create hot water is greatly reduced compared to a conventional electric tank water heater. Every watt the Accelera's compressor and fan use generates 3-5 Watts of hot water. The higher the ambient air temperature is, the greater the efficiency of the unit. This ground breaking technology redefines the efficiency a water heater is capable of.

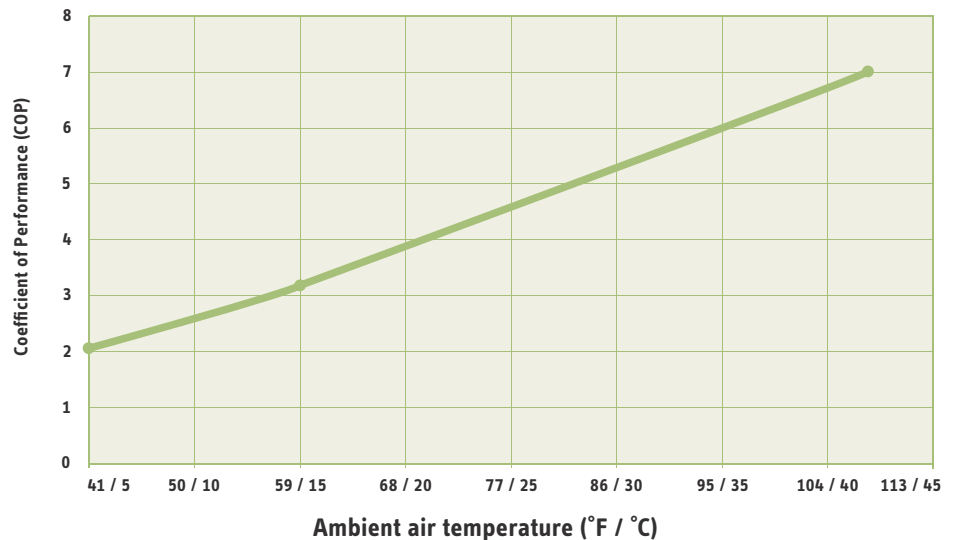
In a warm climate, the unit can be placed either in the garage, where it takes heat from the outside air, or inside the house, where it helps with the air conditioning load. In a cooler climate, the unit is typically placed in the basement where it also acts as a dehumidifier. You get hot water at a discount and a dry basement as well.

If the heat pump cannot keep up with the demand for hot water then a specially engineered 1700 W electric backup element supplies additional heat to the water.

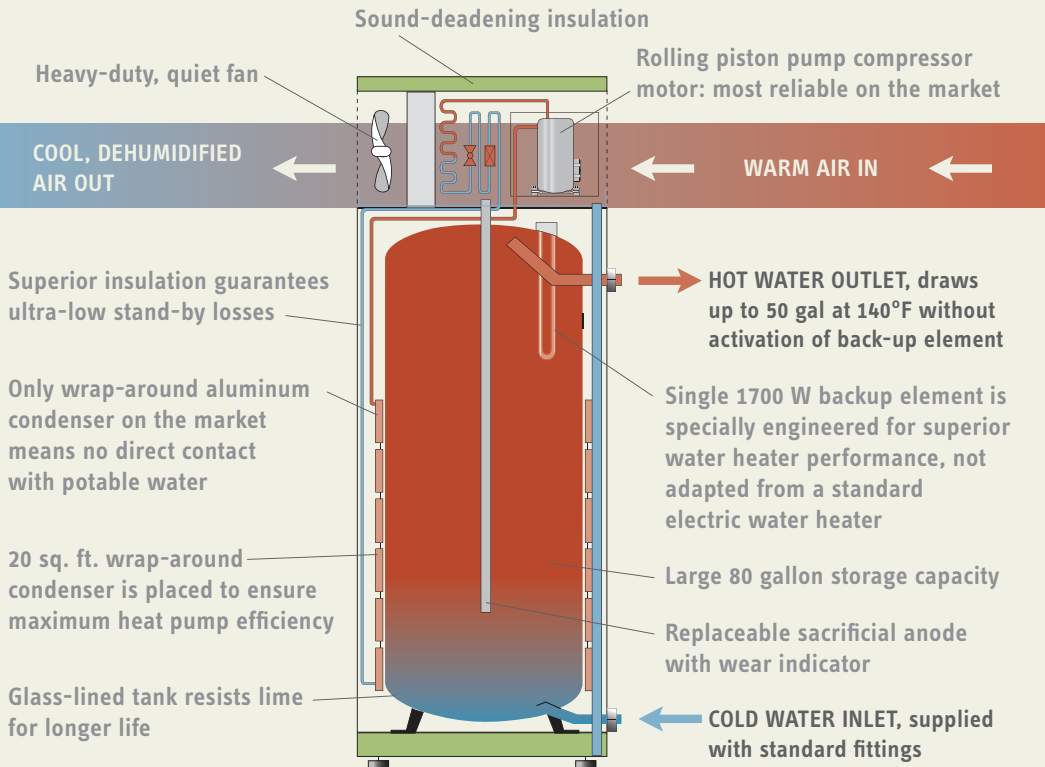
The 80 gallon tank is designed to give 50 gallons of hot water before the backup heating element activates.



Accelera® 300 Efficiency rate: COP measured according to EN 255.3 as function of ambient air temperature at 70% r.H. based on 59°F / 15°C cold water temperature



Capture the Energy



Simple innovation from Germany.

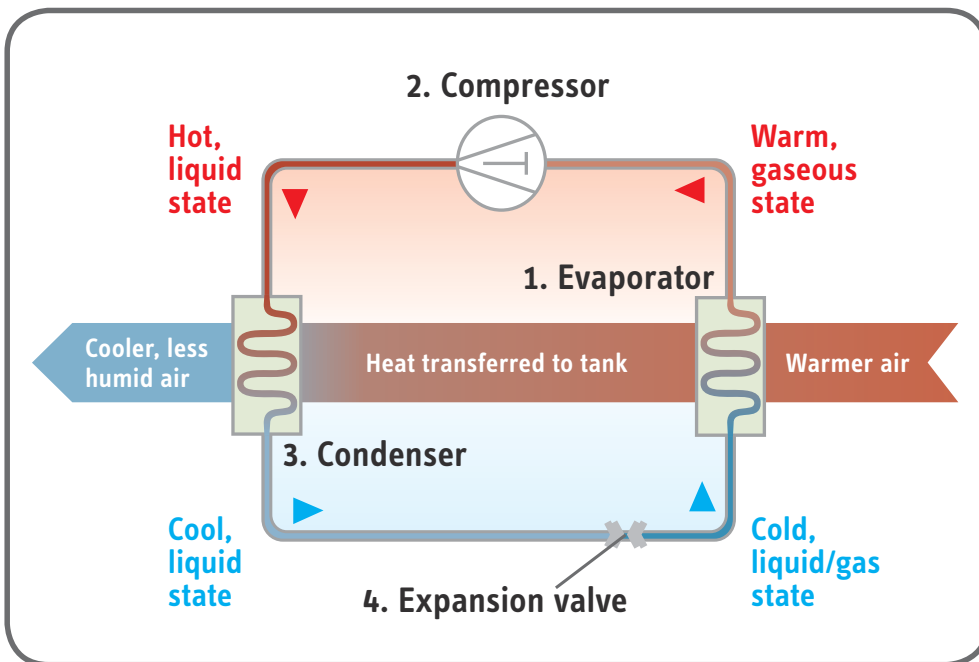
Heat pumps have been around for decades, but a heat pump water heater is a new concept. The Accelera® 300 works like an air conditioner but instead of dumping the heat outdoors, it puts it into the water.

The heat pump system contains a fan that forces air through an evaporator (1). The evaporator contains a liquid refrigerant. When this refrigerant evaporates, it extracts heat from the ambient air.

The now warm gaseous refrigerant passes through the compressor (2) which increases its pressure. As the pressure increases, the temperature of the refrigerant rises. The refrigerant turns back into a liquid which is now hot.

The hot refrigerant then passes through the condenser (3), which is wrapped around the water tank, transferring its heat to the water.

The refrigerant which is now cool then passes through an expansion valve (4), where it goes back into a gaseous state and the process begins anew.



State and Local Rebates / Incentives | Regional incentives for the Accelera® 300 may be available. The US Department of Energy's Database of State Incentives for Renewables & Efficiency website, DSIRE, has up-to-date details at: <http://www.dsireusa.org/>
www.flowfactor.com



Accelera® 300 Heat Pump Water Heater: 30 Years Of German Technology

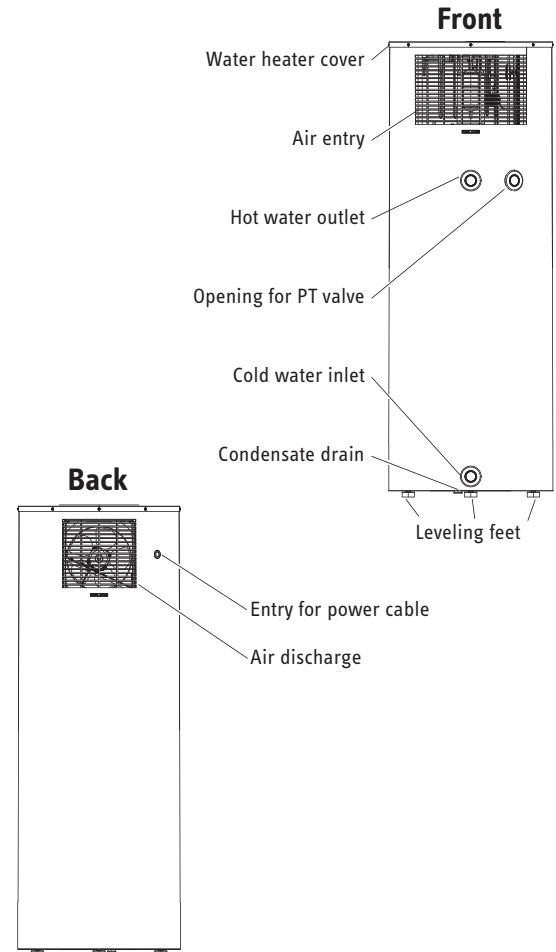
Technical Data



The Accelera® 300 is tested and certified by WQA against NSF/ANSI 372, for "lead free" compliance.



Accelera® 300 Heat Pump Water Heater	
General Data	
Item no.	222423
Operating temperature range	42°F to 108°F / 6°C to 42°C
DHW temperature	140°F / 60°C
Air flow rate	324 CFM
Sound level @ 1.1 yards / 1 m	64.2 dB(a)
Capacity	80.044 gal / 303 l
Refrigerant / filling weight	R134a / 900 g
Height	73.8" / 187.4 cm
Diameter	26" / 66 cm
Height of unit when tilted including packing	90" / 228.6 cm
Weight dry	286.6 lb / 130 kg
Weight wet	952.4 lb / 432 kg
Water connection	Union to 3/4" NPT
Condensate connection	3/4"
Safety condenser	Wraps around outside
Operating pressure, water side	87 psi / 0.6 MPa
Permissible positive pressure, refrigerant side	348.1 psi / 2.4 MPa
Electrical Data	
Voltage / Frequency	Single Phase 240/208 v / 60 Hz
Maximum power draw ¹	2200 w
Circuit breaker	15 A
Rated current compressor & fan	2.5 A
Rated power consumption compressor & fan ²	500 w
Rated power, booster heater	1700 w
Heating output, heat pump ³	approximately 1700 w
COP (t) ³	3.18
Typical COP range	3-6
ENERGY STAR energy factor	2.508
First hour rating	78.6 gal / 297.5 l



¹ T_{amb} = 107.6°F / 42°C T_{water} = 140°F / 60°C / 240 v ² Test point to DIN 8947 at 59°F / 15°C air temperature, 70% rel. humidity and 113°F / 45°C water temperature.

³ Test point at 59°F / 15°C air temperature, 70% rel. humidity, heating up water from 59°F / 15°C to 140°F / 60°C (according to EN 255 T3, 240 v / 60 Hz)

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Stiebel Eltron's plant in Holzminden, Germany.

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