



COMMERCIAL ELECTRIC HEAT PUMP WATER HEATER WATER - TO - WATER



**DTI's capabilities: Hot water systems' consultancy,
Design, Supply, Installation, Maintenance and Repair.**

WATER-TO-WATER HEAT PUMP WATER HEATER FEATURES

Heat pump water heaters absorb heat from various water sources (geo loop, cooling tower, chiller loops) and use it to heat water.

WW-35 to WW-170

HIGH EFFICIENCY WATER HEATING

- Coefficient of performance (COP) up to 4.3 (under AHRI conditions), generates significant energy savings (up to 80% compared to standard electric water heaters) resulting in a quick payback on investment.

HIGH TEMPERATURE OPERATION

- Outlet water temperatures up to 150°F (66°C) at 50° F minimum Source temperatures - easily maintains tank temperatures up to 140°F (60°C) efficiently.
- Can be used as preheat for higher system temperature requirements..

ENVIRONMENTALLY FRIENDLY GREEN TECHNOLOGY

- Uses non-ozone depleting R-134a refrigerant.

EFFICIENT COMPRESSOR

- Scroll compressor technology provides reliable service and energy savings.

SANITARY HOT WATER FOR COMMERCIAL OR INDUSTRIAL USE

- Double wall condenser rated for potable water heating.

DESIGNED FOR EASE OF INSTALLATION

- Female pipe thread flanges for easy water connections.
- Factory installed circulating water pump - sized for 25 equivalent feet of supply and return water piping for a total of 50 equivalent feet.
- Factory installed Digital Temperature Controller with remote tank temperature probe and sensor well for storage tank.

CORROSION RESISTANT

- Mill Finish aluminum cabinet provides superior protection against corrosion.

BUILT-IN PROTECTION

- High and low refrigerant pressure switch protection with lockout relay. Compressor and pump are thermally protected.

WARRANTY

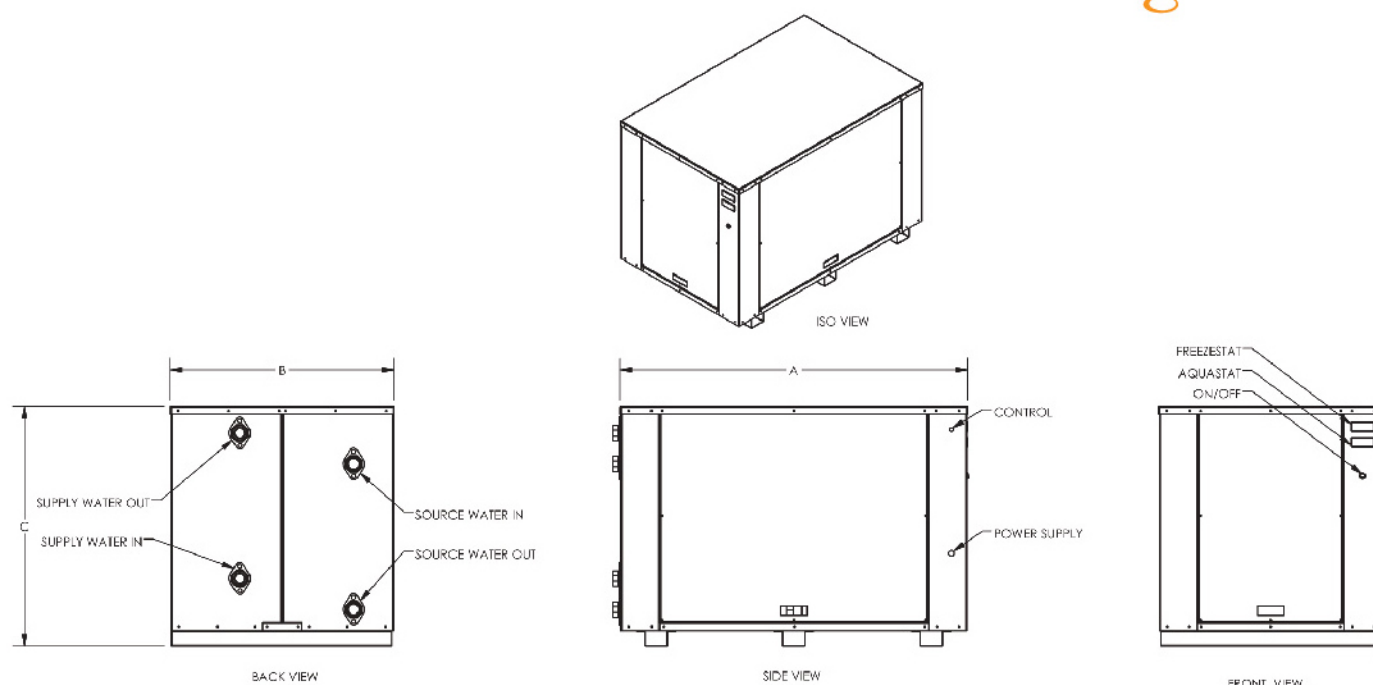
- Five year compressor warranty
- One year parts warranty
- For complete information, consult written warranty.

OPTIONS

- 316 stainless steel cabinet.
- Power Options: 460 VAC, 3 phase on all models, 208/230 VAC 1 phase on WW-35 and WW-55 only (Standard voltage is 208/230 VAC, 3 phase on all models)
- Fully insulated cabinet for noise reduction.
- Units can be ordered without factory installed pump.
- Units can be ordered with flow control valve (for source temperatures over 80°F).



Heat pump water heaters are not sized for system applications in the same way as conventional tank type water heaters or boilers. Heat pumps are designed to absorb heat from various water sources and gradually transfer the captured heat into a water storage tank that has been sized to meet peak demand requirements. When sized properly, heat pump water heaters will operate 12 to 16 hours per day. For sizing and system design information, see the commercial electric heat pump products page at www.hotwater.com.



SPECIFICATION TABLE WATER-TO-WATER HEAT PUMP WATER HEATERS

MODEL NUMBER	PERFORMANCE				C.O.P. (Heating)	GPM Hot Water	GPM Source	DIMENSIONS IN INCHES				APPROX. SHIPPING WEIGHT (LBS)
	Water Heating		Cooling Capacity					Inlet/Outlet (FPT)	Width A	Depth B	Height C	
	kW	Btu/hr*	Btu/hr*	Tons of Cooling								
WW-35	9.2	31,600	24,200	2.1	3.7	7	6	1.0"	36	29	30	450
WW-55	15.5	53,000	42,000	3.5	4.3	11	9.5	1.0"	36	29	30	475
WW-75	20.5	70,000	55,000	4.6	4.2	15	12.5	1.5"	45	29	31	640
WW-100	25.9	88,500	69,000	5.8	4.2	20	16	1.5"	45	29	31	680
WW-115	29.9	102,000	79,000	6.6	4.2	23	19	1.5"	45	29	31	700
WW-140	38	130,000	101,000	8.4	4	28	23	2.0"	50	29	34	720
WW-170	46	157,000	122,000	10.2	4.1	34	28	2.0"	50	29	34	920

Design AHRI set points at EWT 110°F and ESWT 70°F

Notes: Capacities for source water inlet temperatures above 80°F are same as for 80°F because water flow will be restricted by flow control valve.

C.O.P. - coefficient of performance

Control panel constructed to UL 508 specifications

SUGGESTED SPECIFICATION

The water heater shall be water-to-water heat pump model no. as manufactured by A. O. Smith Corporation. Water heater shall be rated at Btu/hr heating capacity and Btu/hr cooling capacity.

The unit cabinet shall be constructed of formed, mill finish aluminum panels for superior corrosion resistance. All unit fasteners shall be coated with zinc-based plating for corrosion resistance. The panels shall be insulated with matte-finish, fiberglass insulation for thermal barrier and noise reduction.

The refrigeration circuit shall consist of a minimum of a scroll-type compressor, suction line accumulator, direct expansion valve, liquid line filter dryer, sight glass, evaporator coil (brazed plate single wall) and a brazed plate refrigerant to water heat exchanger stainless steel, double wall). The refrigerant tubing shall be ACR rated and brazed with a 15% silver alloy. The suction line and suction line accumulator shall be totally insulated.

A unit mounted circulating pump shall pump water between the storage tank and heat pump. Female pipe thread flanges shall be provided for easy water connections to the unit.

Water heating shall be initiated when the tank temperature drops below the heating set point. After a factory set time delay, the compressor shall be energized to heat water until the tank set point is reached. The compressor shall be protected by high and low pressure switches as well as thermal overload. A unit mounted phase monitor shall protect the motors from phase loss or undercurrent conditions (available on the 100, 115, 140 and 170 models only).

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