

## EMERGE X AIR SOURCE HEAT PUMP WATER HEATER

State's new series of air-to-water heat pump water heaters are designed to be an energy-efficient, zero on-site emission solution for commercial water heating. It features low global warming potential (GWP) refrigerant, high coefficient of performance (COP), and a modular design which allows multiple units to be combined.

### STANDARD FEATURES

- High efficiency COP
- Zero on-site emissions
- Modular design
- Low GWP R513A refrigerant
- Maximum set point of 160°F
- Single pass or multi-pass
- Scroll compressor (Copeland) with CoreSense™ protection module
- ECM variable speed pump
- Electronic expansion valve
- Reversing valve
- 480V 3-phase
- Indoor or outdoor installation
- Manifold piping assembly (increases unit depth to 63")
- System control panel (remote mountable)

### CONTROL PANEL FEATURES

- Touch screen control
- Cascade sequencer for up to 64 heat pumps
- Building automation integration (0-10V DC)
- Variable speed pump control
- Fault logging
- Modbus TCP
- Low voltage terminal strip
- Alarm contact
- Backup enable
- Remote mountable

### APPLICATIONS

- Restaurants
- Hotels
- Multi-family buildings
- Laundry facilities
- Healthcare facilities
- Schools
- Grocery stores
- Sports arenas
- Gyms
- Prisons
- Military barracks
- Manufacturing facilities
- Many more

### OPTIONAL EQUIPMENT

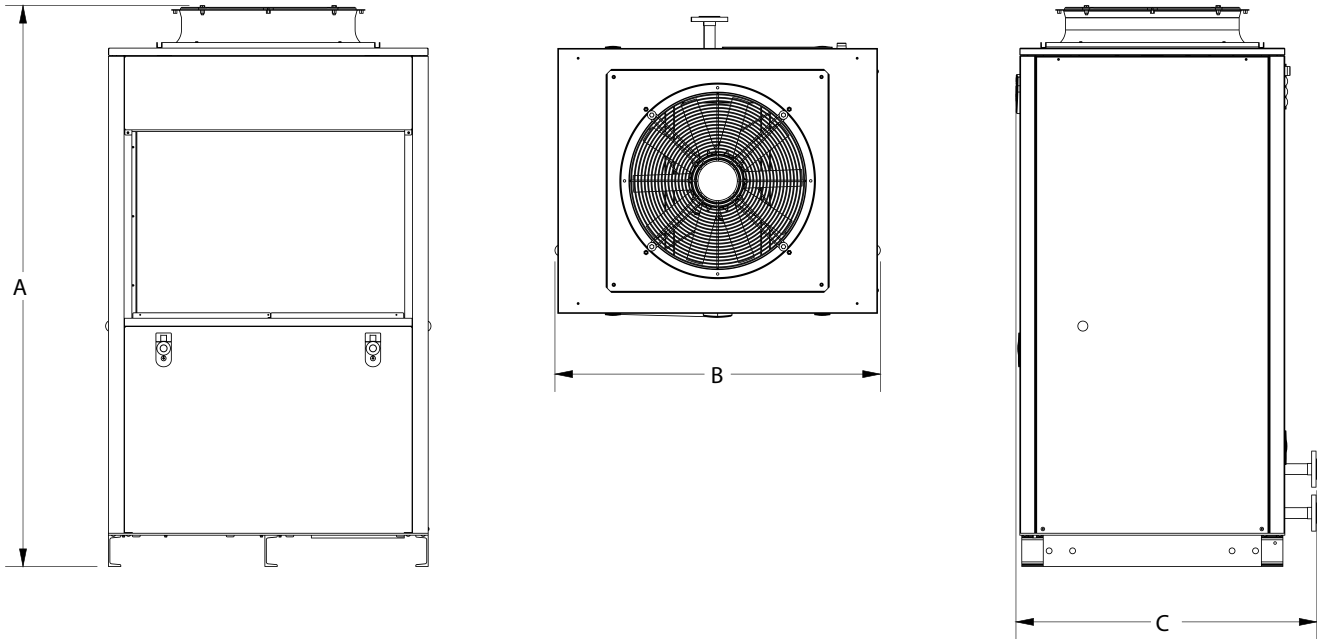
- Bus Panel
- Step-up transformer (208V 3-phase to 480V 3-phase)
- BMS Gateway to Modbus RS485
- BMS Gateway to BACnet IP / MSTP



**MODEL SHPA-140**

# SOLID. STATE.

### DIMENSIONS



Model Number	COP	*BTU/h Output	Dimensions			Shipping Weight
			A	B	**C	
SHPA-60	4.61	66,688	71-3/4"	30-5/8"	38-1/2"	913
SHPA-140	4.27	136,381	71-3/4"	41-5/8"	38-1/2"	1,119
SHPA-200	4.44	203,069	71-3/4"	72-1/4"	38-1/2"	2,032
SHPA-280	4.27	272,762	71-3/4"	83-1/4"	38-1/2"	2,238
SHPA-350	4.38	339,450	71-3/4"	113-7/8"	38-1/2"	3,151

\* DOE test standard, 80°F ambient with 63% humidity, inlet water temperature at 70°F, outlet water temperature at 120° F

\*\*Field installed manifold piping assembly increases unit depth to 63"

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.



### SPECIFICATIONS

		SHPA-60	SHPA-140	SHPA-200	SHPA-280	SHPA-350
Performance	BTU/h heating	66,688	136,381	203,069	272,762	339,450
	R513A refrigerant (lbs.)	12	14	26	28	40
	Air volume (CFM)	1,544	5,102	6,646	10,204	11,748
	Compressor type	Scroll	Scroll	Scroll	Scroll	Scroll
Water	Heated water flange connection	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
	Heated manifold connection	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"
Electrical	440V-480V/3PH/60HZ	Standard	Standard	Standard	Standard	Standard
	RLA	18	35	53	70	88
	MCA	22.5	43.75	66.25	87.50	110
	MOCP	25	45	70	90	110
Physical	Height	71-3/4"	71-3/4"	71-3/4"	71-3/4"	71-3/4"
	Width	30-5/8"	41-5/8"	72-1/4"	83-1/4"	113-7/8"
	Length	38-1/2"	38-1/2"	38-1/2"	38-1/2"	38-1/2"
	Shipping weight (lbs.)	913	1,119	2,032	2,238	3,151
	Operating weight (lbs.)	561	767	1,328	1,534	2,095
Service Clearances (Recommended)	Front	36"	36"	36"	36"	36"
	Rear	36"	36"	36"	36"	36"
	Right side	24"	24"	24"	24"	24"
	Left side	24"	24"	24"	24"	24"
Sound Rating (dB)	At 80°F ambient air temperature	58	64	64	64	64
	At 23°F ambient air temperature	69	72	72	72	72

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**SPECIFICATIONS**

The HEAT PUMP shall be a State Water Heaters Model SHPA \_\_\_\_\_ having an output rating of \_\_\_\_\_ Btu/Hr. HEAT PUMP shall be capable of following performance at 80.6F ambient, 63% relative humidity, inlet water temperature of 70F and outlet water temperature of 120F. Testing parameters are in the AHRI 1300 standard. COP testing not done to a standard testing procedure shall not be accepted.

Model Number	Heating Capacity Btu	COP
SHPA-060	66,688	4.61
SHPA-140	136,381	4.27
SHPA-200	203,069	4.44
SHPA-280	272,626	4.27
SHPA-350	339,450	4.38

Maximum unit dimensions shall be: Length \_\_\_\_\_ inches, Width \_\_\_\_\_ inches and Height \_\_\_\_\_ inches. Maximum operating (wet) unit weight shall be \_\_\_\_\_ pounds.

The HEAT PUMP shall have a scroll compressor with additional control for monitoring operation of compressor. Control shall provide diagnosis of the compressor with indication lights for status and codes. HEAT PUMP shall be factory charged with 513A refrigerant, ECM variable speed circulator pump, and double wall stainless steel condenser for potable water applications. The complete heat pump assembly shall carry a one (1) year limited warranty. Optional 5-year compressor warranty shall be offered by manufacturer.

The HEAT PUMP shall adjust the Evaporator fan speed depending on ambient temperature to optimize the performance of the heat pump.

The HEAT PUMP refrigerant circuit shall contain an electronic expansion valve, receiver, accumulator, filter drier and service ports for refrigerant gauges. The HEAT PUMP shall be certified and listed by UL to UL 60335-2-40 standard. The HEAT PUMP shall be certified for indoor and/or outdoor installation.

The HEAT PUMP shall be constructed with a heavy gauge sheet metal assembly and painted on both sides. Manufacturer shall provide results of a 9,000-hour salt spray test.

The HEAT PUMP shall utilize a 24 VAC control circuit and components. The control panel shall have a touch screen display for HEAT PUMP set-up, HEAT PUMP status, and HEAT PUMP diagnostics. All components shall be easily accessed and serviceable. Control panel shall be remote mountable, inside or outside installation is acceptable.

The HEAT PUMP shall be equipped with low and high refrigerant pressure switches; short cycle control; outlet water temperature sensor and return water temperature sensor.

The HEAT PUMP control shall provide for "Cascade" to sequence and rotate while maintaining operation of up to sixty-four HEAT PUMPs. The HEAT PUMP shall be capable of controlling a valve and ECM variable speed pump that maintains constant delivery temperature to the storage tank. The HEAT PUMP shall have an optional gateway device which will allow integration with BACnet. MODBUS TCP shall be standard feature.

The HEAT PUMP shall be equipped with terminal strips for electrical connection. A high voltage terminal strip shall be provided for Supply voltage. Supply voltage shall be 440-480V/3PH/60Hz. Optional field installed Voltage Transformer shall be offered by Manufacturer for additional voltages that shall be required.

The HEAT PUMP Control Panel shall contain the low voltage connections for the outdoor sensor, system sensor, Alarm Contacts, Runtime Contacts, Back Up Enable contacts and Booster Fan contacts.

**STANDARD CONSTRUCTION**

The HEAT PUMP shall be constructed in accordance with the code requirements as standard equipment.

Customer Name \_\_\_\_\_ Contact Name \_\_\_\_\_ Phone \_\_\_\_\_

Job Location \_\_\_\_\_ Model No. \_\_\_\_\_ Unit Qty. \_\_\_\_\_

Indoor  Outdoor Ducts Req'd?  Y  N Tank: Size (gal.) \_\_\_\_\_ Temp. Probes (qty.) \_\_\_\_\_ Harness Length (ft.) \_\_\_\_\_

Engineer \_\_\_\_\_ Voltage to Facility \_\_\_\_\_ Agent/Wholesaler \_\_\_\_\_

Equipment Tag(s) \_\_\_\_\_ Contractor \_\_\_\_\_

Notes:

FOR MORE INFORMATION ON CALL 1-800-365-0024. STATE WATER HEATERS RESERVES THE RIGHT TO MAKE PRODUCT CHANGES OR IMPROVEMENTS WITHOUT PRIOR NOTICE.