



# SUBMITTAL DATA SHEET

JOB NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_  
 WHOLESALER: \_\_\_\_\_  
 CONTRACTOR: \_\_\_\_\_  
 SUBMITTED TO: \_\_\_\_\_  
 MODEL DESIGNATION: \_\_\_\_\_ FUEL: \_\_\_\_\_

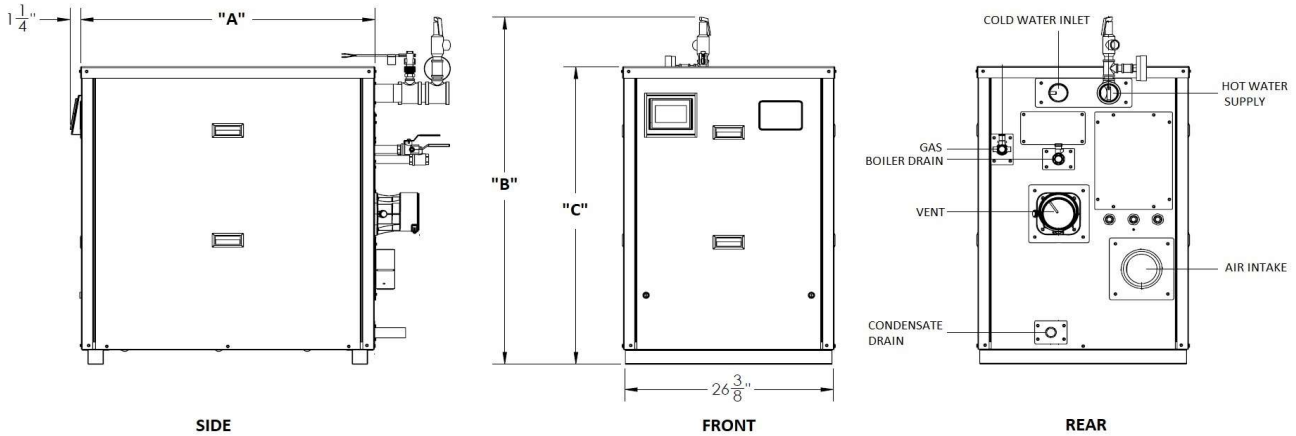


CHECK ONE: \_\_\_\_\_ REFERENCE (NOT FOR PRODUCTION)  
 \_\_\_\_\_ APPROVED (IMMEDIATE PRODUCTION)  
 \_\_\_\_\_ APPROVED WITH CHANGES NOTED (IMMEDIATE PRODUCTION)

## RATINGS AND TECHNICAL DATA

AMP-L WATER HEATER MODELS	INPUT		GROSS OUPUT (MBH)	THERMAL EFFICIENCY (%)	*DHW RECOVERY (GPH)	WATER CONTENT (GAL.)	**FUEL		SHIPPING WEIGHT (LBS)
	MIN (MBH)	MAX (MBH)					NAT. GAS MIN / MAX	PROPANE MIN / MAX	
	AMPW-400	40	399	391	98.0%	475	3.8	4"/14"wc	8"/14"wc
AMPW-500	50	500	490	98.0%	594	4.3	4"/14"wc	8"/14"wc	470
AMPW-650	65	650	637	98.0%	772	5.6	4"/14"wc	8"/14"wc	530
AMPW-800	80	800	784	98.0%	950	6.6	4"/14"wc	8"/14"wc	560
AMPW-1000L	100	1000	980	98.0%	1188	8.1	4"/14"wc	8"/14"wc	600

## DIMENSIONS



AMP-L WATER HEATER MODELS	"A"	WIDTH	"B"	"C"	VENT / AIR INTAKE		GAS	SUPPLY	RETURN
	LENGTH		O/A HGT.		HEIGHT	SIZE		EQUIV.	OUTLET
	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	LENGTH (Ft.)	(Inches)	NPT Female	NPT Male
AMPW-400	37 3/4	26 3/8	46 7/8	38 1/2	4	Up to 200	3/4 NPT	2	2
AMPW-500	37 3/4	26 3/8	46 7/8	38 1/2	4	Up to 200	3/4 NPT	2	2
AMPW-650	53 7/8	26 3/8	66 3/8	38 1/2	6	Up to 200	1 NPT	2	2
AMPW-800	53 7/8	26 3/8	66 3/8	38 1/2	6	Up to 200	1 NPT	2	2
AMPW-1000L	53 7/8	26 3/8	66 3/8	38 1/2	6	Up to 200	1 NPT	2	2



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## STANDARD EQUIPMENT

### PRESSURE VESSEL DESIGN

Stainless Steel Heat Exchanger  
 ASME Section IV Certified, "HLW" Stamp  
 MAWP 160 PSIG & Max Temp 210°F  
 Five Year Limited Heat Exchanger Warranty  
 Ten Year Limited Pressure Vessel Warranty

### COMBUSTION DESIGN

Stainless Steel Pre-Mix Burner  
 Low NOx Emissions ( < 10 ppm)  
 Full Modulation, 10:1 Turndown  
 Natural Gas or Propane  
 4" wc (8" wc Propane) to 14" wc inlet gas pressure  
 Direct Spark Ignition System  
 High/Low gas pressure switches, manual reset  
 Variable Speed Combustion Blower  
 Air Proving Switch  
 Blocked Vent Switch

### VENTING

Category II or IV Venting  
 Individual or Common (Engineered) Vent System  
 Vertical or Horizontal  
 CPVC, PP or SS Venting \*Materials Acceptable  
 Combustion Air Intake - Sealed or Room

### WATER HEATER EQUIPMENT

Concert™ Control (24 Vac)  
 High Limit Temp Control, Manual Reset  
 Low water cutoff, manual reset  
 Water Flow Switch  
 Supply, Return & DHW Water Temperature Sensors  
 Flue Gas Temperature Sensor  
 Condensate trap  
 Blocked Condensate Switch  
 Pressure & Temperature Gauge  
 ASME Temperature & Pressure Relief Valve, 150 psi

### ELECTRICAL DESIGN

#### Models 400-500:

- 120 VAC Only  
 Amp Draw: 7.0 Amps

#### Models 650-1000L:

- 120 VAC Only  
 Amp Draw: 8.0 Amps  
 - PCB (Printed Circuit Board) Fused Connections  
24VAC/5VDC - Low Voltage PCB

- EMS Communications  
 (Dual RJ45 Jacks for Peer-To-Peer or ModBus)  
 - DHW Demand Contacts  
 - Remote Header Sensor Contacts  
 - Remote 4-20mA Contacts

\* Flue system material shall be capable of continuous operation at 210°F or higher and shall be certified to UL 1738 – venting system for gas-burning appliances cat II, III and IV.

## OPTIONAL EQUIPMENT

\_\_\_\_\_ External High Limit Temperature Control, Manual Reset

\_\_\_\_\_ Condensate Neutralizer

\_\_\_\_\_ Hot Water Header Temperature Sensor:     Direct Immersion     Well Immersion (with Well)

\_\_\_\_\_ EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA)

\_\_\_\_\_ Alarm Buzzer with Silencing Switch

\_\_\_\_\_ Vent Adapter - CPVC, Polypropylene, or Stainless Steel

\_\_\_\_\_ Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks)

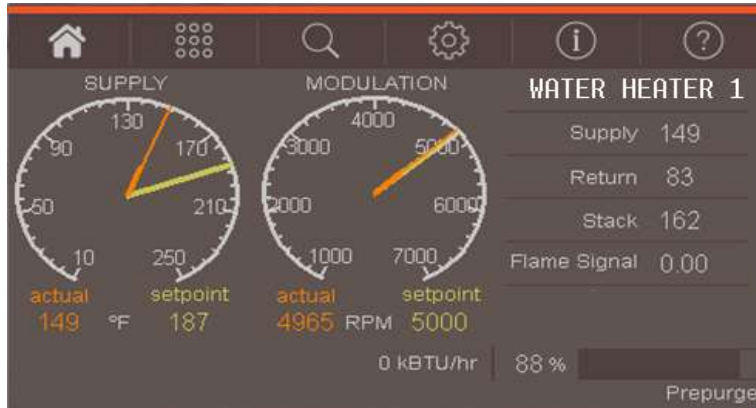
\_\_\_\_\_ Conductor Sequencing Panel

The Conductor manages multiple condensing & non-condensing, small & large heat output, new and/or existing boilers (full modulation or on-off), and steam or hot water applications. It helps improve system efficiency by selecting and modulating the right boiler to match operating conditions. The Conductor offers a single point boiler plant Energy Management System (EMS) interface including Modbus TCP/IP, Modbus RTU RS485, BACnet/IP and BACnet MSTP standard. If Lonworks needed, add for the separate Lonworks gateway.



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## CONCERT CONTROL FEATURES



### Dashboard - Color Touchscreen Display, 4"

- Intuitive Icon Navigation
- "Quick" Setup Menus
- \*Real Time BTU/H Display

### Temperature Demand Inputs

- Time of Day Setback Capability  
(Envirocom Thermostat must be installed)

### Two (2) Pump Control

- System Pump
- Alternative Control to Combustion  
Air Damper or Standby Loss Damper
- Pump Overrun for Heat Dissipation
- Pump Exercise
- Pump Rotor Seizing Protection

### Peer-to-Peer Boiler Communications

- Multiple Size Unit Sequencing Up to 8 Units
- Lead Boiler Automatic Rotation

### Energy Management System (EMS) Interface

- \*Firing Rate and Water Temperature Based Algorithms for Multiple Boilers; loss of EMS signal defaults to local settings
- 4-20mA Input/Output (0-10Vdc Optional Converter)
- ModBus Input/Output (BACnet or LonWorks Optional Gateway)
- Simultaneous Interface with Peer-to-Peer

### \*USB Data Port Transfer

- Upload Settings Between Units
- Download Parameters for Troubleshooting
- Import Data into .CRV Formatted Files for Performance Analysis

### Energy Efficiency Enhancer

- Anti-Cycling Technology
- Multiplier Unit Base Load Common Rate
- Boost Temperature & Time
- Ramp Delay
- Over-Temperature Safeguarding

### Self-Guiding Diagnostics

- Identifies Fault
- Describes Possible Problems
- Provides Corrective Actions
- \*Time/Date Stamp on Alarms and Lockouts

### Unmatched Archives

- Historical Trends - Collects Up to 4 months Data
- Event History - Up to 3000 Alarms, Lockouts and Cycle & Run Times
- Alarm - Limit String Faults, Holds, Lockouts and Others
- Cycle & Run Time - Water Heaters & Pumps
- Resettable (Lockouts/Alarms/Cycles & Run Time)

### Other Features

- \*Factory Default Settings
- Three Level Password Security
- Frost Protection
- Contractor Contacts (Up to 3)
- Low Water Flow Safety Control & Indication
- Proportion Integral Derivative (PID) Parameters for DWH, Sequencer and Fan
- Built-in Brown-Out Protection

\* Unique to Concert



Updated 9/2023