



# SUBMITTAL DATA SHEET

JOB NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

WHOLESALER: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

SUBMITTED TO: \_\_\_\_\_

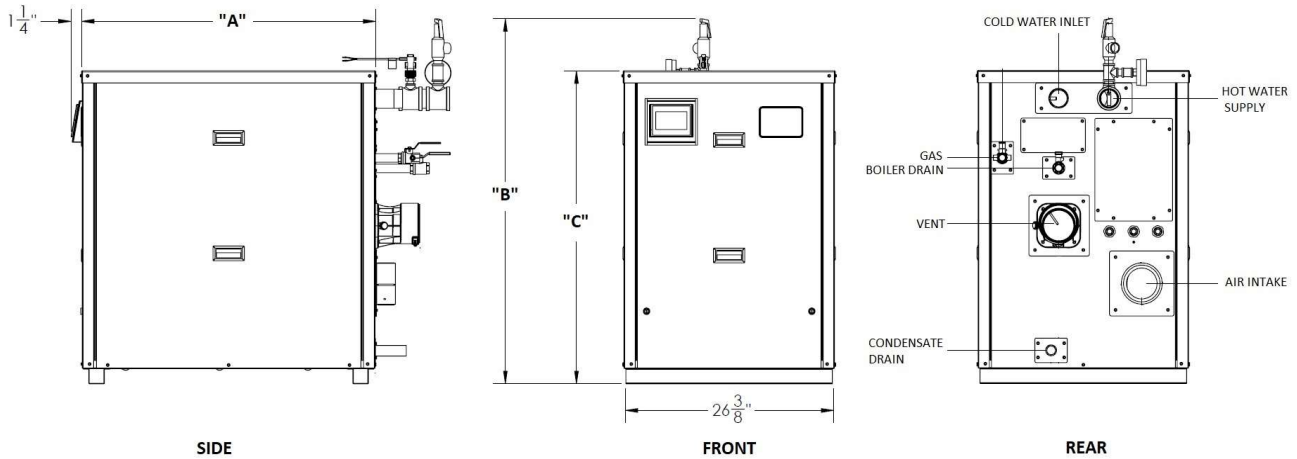
MODEL DESIGNATION: \_\_\_\_\_ FUEL: \_\_\_\_\_



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

RATINGS AND TECHNICAL DATA									
AMP-L MODELS	INPUT		GROSS	THERMAL	HEATING	WATER	*FUEL		SHIPPING
	MIN	MAX	OUTPUT	EFFICIENCY	SURFACE	CONTENT	NAT. GAS	PROPANE	WEIGHT
	(MBH)	(MBH)	(MBH)	(%)	(SQ/FT)	(GAL.)	MIN / MAX	MIN / MAX	(LBS)
AMP-400	40	399	387	97.0%	35	3.8	4"/14"wc	8"/14"wc	460
AMP-500	50	500	485	97.0%	39	4.3	4"/14"wc	8"/14"wc	470
AMP-650	65	650	631	97.0%	52	5.6	4"/14"wc	8"/14"wc	530
AMP-800	80	800	776	97.0%	61	6.6	4"/14"wc	8"/14"wc	560
AMP-1000L	100	999	969	97.0%	75	8.1	4"/14"wc	8"/14"wc	600

## DIMENSIONS



	"A"	WIDTH	"B"	"C"	VENT / AIR INTAKE			SUPPLY	RETURN
	LENGTH		O/A HGT.	HEIGHT	SIZE	EQUIV.	GAS	OUTLET	INLET
AMP-L MODELS	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	LENGTH (Ft.)	(Inches)	NPT Female	NPT Male
AMP-400	36 1/2	26 3/8	43	38 1/2	4	Up to 200*	3/4 NPT	2	2
AMP-500	36 1/2	26 3/8	43	38 1/2	4	Up to 200*	3/4 NPT	2	2
AMP-650	52 3/8	26 3/8	43	38 1/2	6	Up to 200*	1 NPT	2	2
AMP-800	52 3/8	26 3/8	43	38 1/2	6	Up to 200*	1 NPT	2	2
AMP-1000L	52 3/8	26 3/8	43	38 1/2	6	Up to 200*	1 NPT	2	2

\* Based on combined 100' max equivalent feet each combustion and vent length respectively.



# SUBMITTAL DATA SHEET

## STANDARD EQUIPMENT

### PRESSURE VESSEL DESIGN

Stainless Steel Heat Exchanger  
 ASME Section IV Certified, "H" Stamp  
 MAWP 160 PSIG & Max Temp 210°F  
 Setpoint range is 60-185°F  
 Adjustable, manual reset high limit setting of ≤ 200°F.  
 ASME H stamp MAWT is 210°F for the vessel.  
 (For max setpoint, see Setpoint range.)  
 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  
 Blocked Vent Switch

### VENTING

Category II or IV Venting  
 Individual or Common (Engineered) Vent System  
 Vertical or Horizontal  
 3-in-1 Vent Connector  
 Acceptable venting materials: CPVC, PP or SS Venting  
*NOTE: PVC venting requires CPVC Vent kit; Consult I&O Manual*  
 Built-in vent gas sensor test port  
 Combustion Air Intake - Sealed or Room

\* 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.

### BOILER EQUIPMENT

Concert™ Control (24 Vac)  
 High Limit Temp Control, Manual Reset  
 Low water cutoff, manual reset  
 Water Flow Switch  
 Supply & Return Water Temperature Sensors  
 Flue Gas Temperature Sensor  
 Condensate trap  
 Blocked Condensate Switch  
 Pressure & Temperature Gauge  
 ASME Relief Valve  
 (Available 30, 50, 60, 75, 100, 125 or 150 psig)

### 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)  
 - Boiler Options (Sensors)  
 - Pumps (Boiler, DHW, System) & Auxiliary Devices

**NOTE: Stacking Brace Kit (PN# 111405-01 is included with all 400-1000L models. The kit includes 2 braces and 8 self-drilling screws.**

**NOTE: OUTDOOR APPLIANCES CANNOT BE STACKED!**

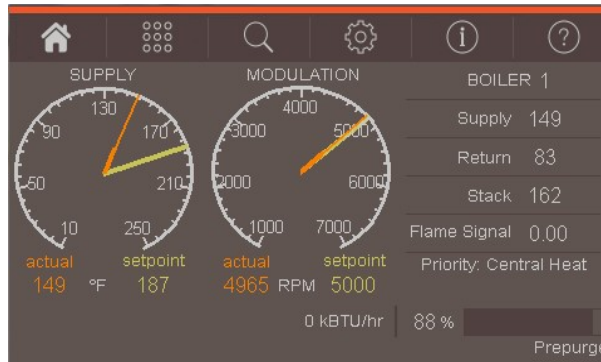
## OPTIONAL EQUIPMENT

- Hydronic Kit (Boiler Circulation Pump, Pump Flange Kit and Condensate Neutralizer)
- External High Limit Temperature Control, Manual Reset
- Condensate Neutralizer
- Supply Header Temperature Sensor:  Direct Immersion  Well Immersion (with Well)
- Outdoor Air Temperature Sensor:  Wired  Wireless
- EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA)
- Motorized Isolation Valves
- Alarm Buzzer with Silencing Switch
- PVC / CPVC Vent Kit  PN#111569-01, Sizes 400-500  PN# 111569-02, Sizes 650-1000L
- 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.
- Extended Warranty**
  - 3 Year Parts  5 Year Parts  10-Year Parts
  - 5-Yr. Prts/Lbr.  10 Yr. Prts/Lbr



# SUBMITTAL DATA SHEET

## CONCERT CONTROL FEATURES



### Dashboard - Color Touchscreen Display, 4"

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

### Two (2) Temperature Demand Inputs

- Outdoor Air Reset Curve for Each Input
- Time of Day Setback Capability  
(Envirocom Thermostat must be installed)

### Three (3) Pump Control

- Boiler Pump With On/Off or Variable Speed Control
- Domestic Hot Water (DHW) Pump
- 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 Boiler Sequencing Up to 8 Units
- \*Two (2) Boiler Start/Stop Trigger
- 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 boiler settings
- 4-20mAdc 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 Boilers
- Download Parameters for Troubleshooting
- Import Data into .CRV Formatted Files for Performance Analysis

\* Unique to Concert

### Energy Efficiency Enhancer

- Anti-Cycling Technology
- Multiplier boiler base load common rate
- Outdoor Air Temperature Reset Curve
- Warm Weather Shutdown
- 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 - Boilers & Pumps
- Resettable (Lockouts/Alarms/Cycles & Run Time)

### Domestic Hot Water Priority

- DHW Tank Piped With Priority in the Boiler Loop
- DHW Tank Piped as a Zone in the System With the Pumps Controlled by the Concert Control
- DHW Modulation Limiting
- Status Screens
- Sensor Monitoring and Control

### 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 Central Heat, DWH, Sequencer and Fan
- Built-in Brown-Out Protection

