



SUBMITTAL DATA SHEET

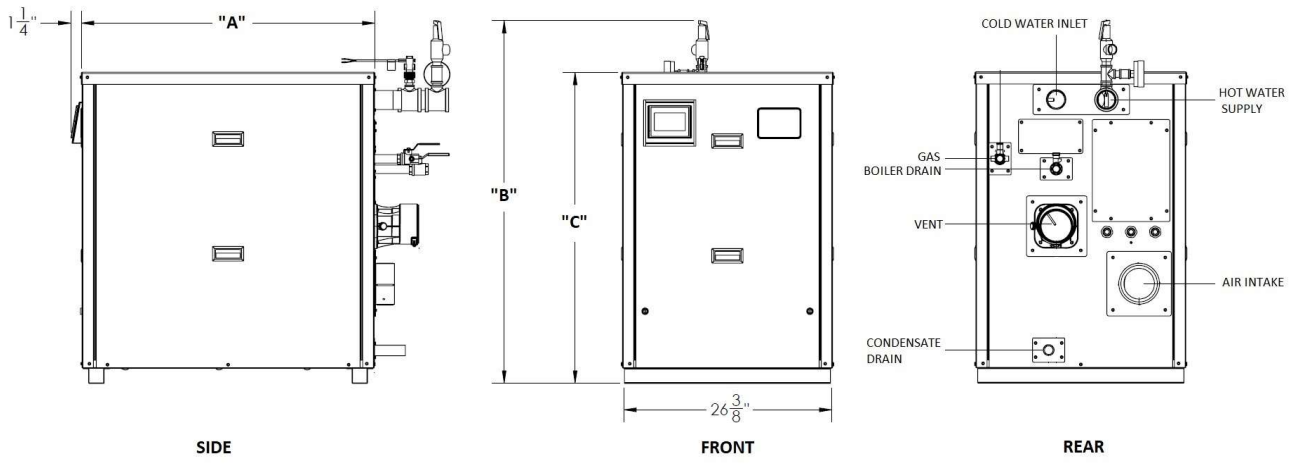
JOB NAME: _____ DATE: _____
 LOCATION: _____
 ENGINEER: _____
 WHOLESALER: _____
 CONTRACTOR: _____
 SUBMITTED TO: _____
 MODEL DESIGNATION: _____ FUEL: _____



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

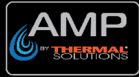
RATINGS AND TECHNICAL DATA									
AMP-L MODELS	INPUT		GROSS	THERMAL	*DHW	WATER	*FUEL		SHIPPING
	MIN	MAX	OUTPUT	EFFICIENCY	RECOVERY	CONTENT	NAT. GAS	PROPANE	WEIGHT
	(MBH)	(MBH)	(MBH)	(%)	(GPH)	(GAL.)	MIN / MAX	MIN / MAX	(LBS)
AMP-L-400 WH	40	399	391	98.0%	470	3.8	4"/14"wc	8"/14"wc	460
AMP-L-500 WH	50	500	490	98.0%	588	4.3	4"/14"wc	8"/14"wc	470
AMP-L-650 WH	65	650	637	98.0%	764	5.6	4"/14"wc	8"/14"wc	530
AMP-L-800 WH	80	800	784	98.0%	941	6.6	4"/14"wc	8"/14"wc	560
AMP-L-1000L WH	100	999	979	98.0%	1176	8.1	4"/14"wc	8"/14"wc	600

DIMENSIONS



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

* Based on combined 100' max eq. ft each combustion and vent length respectively.



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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
 Setpoint range is 60-185°F
 Adjustable, manual reset high limit setting of $\leq 200^\circ\text{F}$.
 ASME HLW stamp MAWT is 210°F for the vessel.
 (For max setpoint, see Setpoint range.)
 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
 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

WATER HEATER 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 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

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!

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

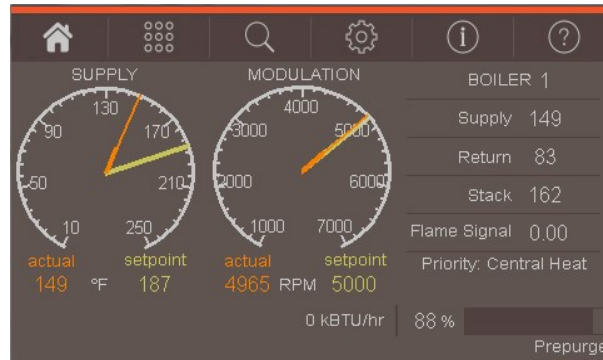
OPTIONAL EQUIPMENT

- 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
- PVC Starter Kit CPVC Vent Kit, Sizes 400-500 CPVC Vent Kit, Sizes 650-1000
- 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



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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

* Unique to Concert

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

