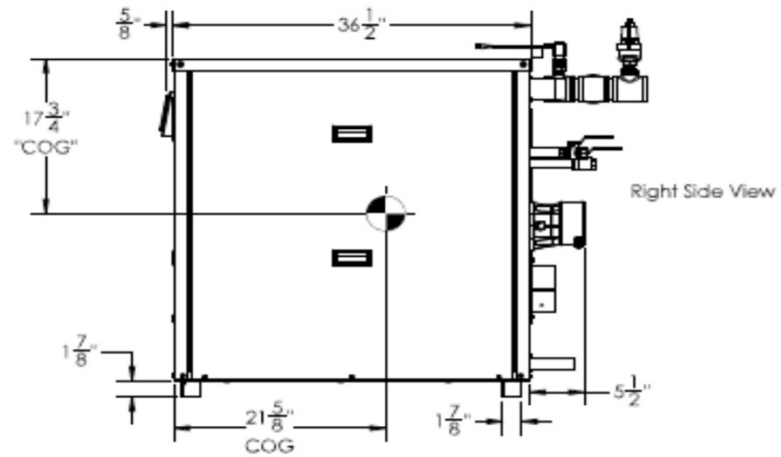
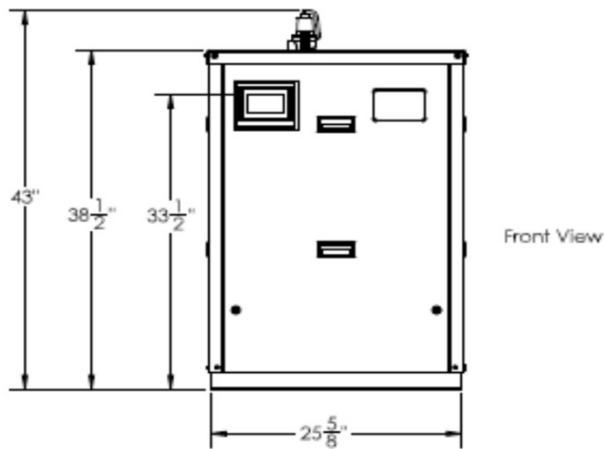
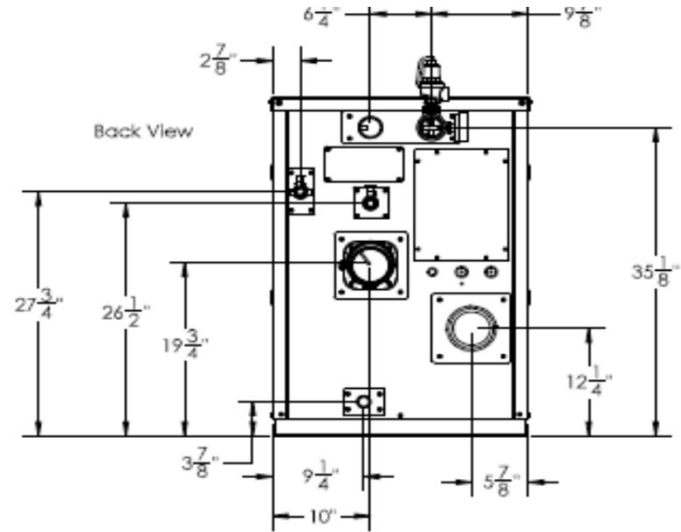
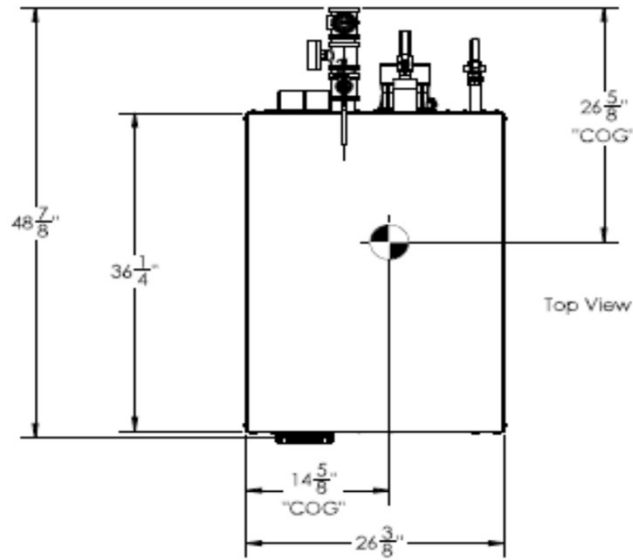




AMP-L CONDENSING BOILERS - SUBMITTAL DATA SHEET



400-500 Boiler Dimensional

AMP-L CONDENSING BOILERS - SUBMITTAL DATA SHEET

RATINGS AND CAPACITIES		
Input - Low fire:	40,000	BTU/HR
Input - High Fire:	399,000	BTU/HR
Output - High Fire:	387,030	BTU/HR
Boiler Horsepower:	11.6	BHP
Thermal Efficiency:	97.0%	
Heating Surface:	34.8	Sq.Ft.
Water Content:	3.8	Gallons
Fuel:	Natural Gas or LP Gas	
Firing Rate:	Full Modulation	
Burner Turndown:	10:1	
Low NOx Emissions:	< 10 ppm	
Inlet Gas Pressure (NG):	4" wc	Min.
Inlet Gas Pressure (LP):	8" wc	Min.
	14" wc	Max.
Shipping Weight, Approximate:	460	lbs
ASME Section IV (Max 160 PSIG / 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.)		
		
ETL Certified to ANSI Z21.13 / CSA 4.9 ETL Certified to UL 795 / CSA 3.1		
		
DIMENSIONS / CONNECTIONS		
Height:	38-1/2"	(Note 1)
Width:	26-3/8"	(Note 2)
Length:	37-3/4"	(Note 3)
Supply Connection:	2" NPT	
Return Connection:	2" NPT	
Vent / Air Intake Connections:	4"	
Condensate / Boiler Drain Connection:	1"	
Gas Connection:	3/4" NPT	

FLOWS AND PRESSURE DROPS		
Delta T	Flow (GPM)	Δ P (Ft. Hd)
20°F Δ T (Max)	39	12.4
25°F Δ T	31	8.4
30°F Δ T	26	6.2
35°F Δ T	22	4.7
40°F Δ T	19	3.8
45°F Δ T	17	3.1
50°F Δ T	16	2.6
55°F Δ T (Min)	14	2.2

- NOTES:** 1. Height dimension is from floor to top of jacket.
 2. Length is from jacket front to jacket rear.
 3. Dimensions shown are for reference only

AMP-L CONDENSING BOILERS - 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: Accepts CPVC, PP or Stainless Steel
 Includes 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

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:
 Outdoor Air Temperature Sensor:
 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 Starter Kit
 Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks)
 Conductor Sequencing Panel

Direct Immersion
 Wired

Well Immersion (with Well)
 Wireless

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

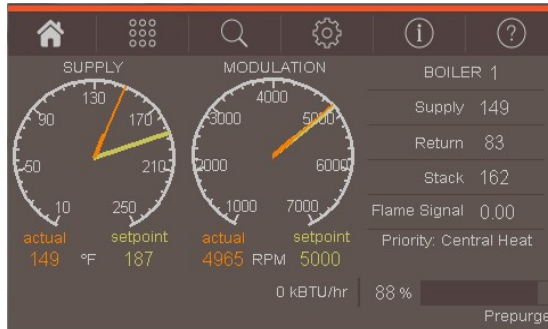
10-Year Parts

5-Year Parts/Labor

10-Year Parts/Labor

AMP-L CONDENSING BOILERS - 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
420mAdc Input/Output (010Vdc Optional Converter)
ModBus Input/Output (BACnet or LonWorks
 Optional Gateway)
Simultaneous Interface with PeertoPeer

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

AntiCycling Technology
Multiplier boiler base load common rate
Outdoor Air Temperature Reset Curve
Warm Weather Shutdown
Boost Temperature & Time
Ramp Delay
OverTemperature 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