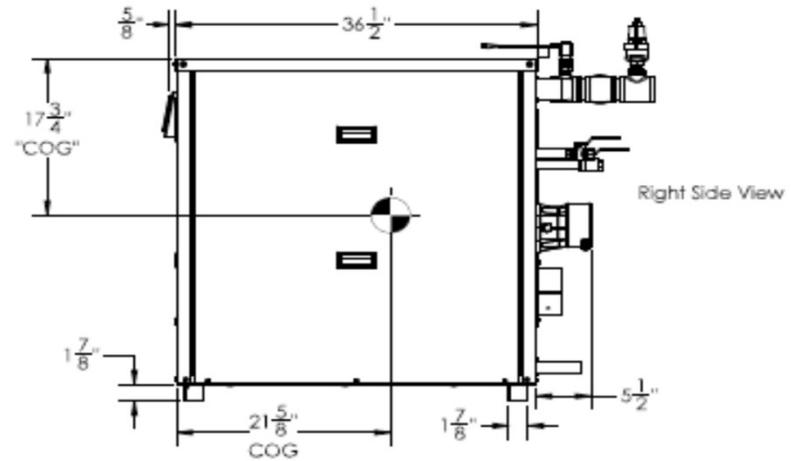
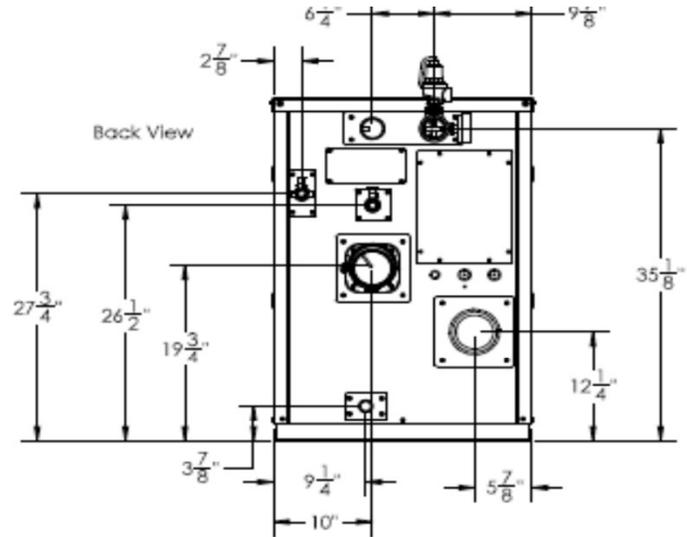
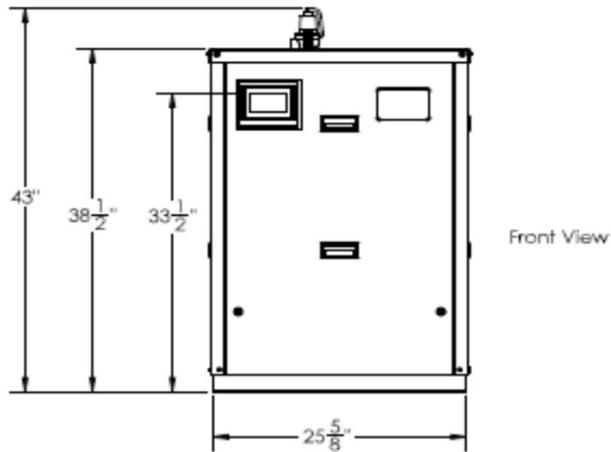
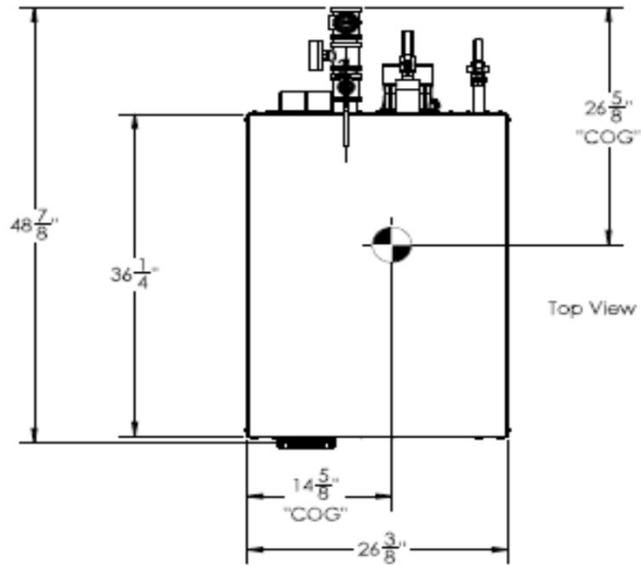


AMP-L CONDENSING BOILERS - SUBMITTAL DATA SHEET



400-500 Boiler Dimensional

AMP-L CONDENSING BOILERS - SUBMITTAL DATA SHEET

RATINGS AND CAPACITIES		
Input - Low fire:	50,000	BTU/HR
Input - High Fire:	500,000	BTU/HR
Output - High Fire:	485,000	BTU/HR
Boiler Horsepower:	14.5	BHP
Thermal Efficiency:	97%	
Heating Surface:	39.1	Sq.Ft.
Water Content:	4.3	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:	470	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:	36-1/2"	(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	49	13.7
30°F Δ T	32	6.7
40°F Δ T	24	4.1

- 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
NOTE: PVC venting requires CPVC Vent kit; Consult I&O Manual.
 Includes built-in vent gas sensor test port
 Combustion Air Intake - Sealed or Room

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.

NOTE: OUTDOOR APPLIANCES CANNOT BE STACKED!

* 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

- | | | | |
|--------------------------|---|---|---|
| <input type="checkbox"/> | Hydronic Kit (Boiler Circulation Pump, Pump Flange Kit and Condensate Neutralizer) | | |
| <input type="checkbox"/> | External High Limit Temperature Control, Manual Reset | | |
| <input type="checkbox"/> | Condensate Neutralizer | | |
| <input type="checkbox"/> | Supply Header Temperature Sensor: | <input type="checkbox"/> Direct Immersion | <input type="checkbox"/> Well Immersion (with Well) |
| <input type="checkbox"/> | Outdoor Air Temperature Sensor: | <input type="checkbox"/> Wired | <input type="checkbox"/> Wireless |
| <input type="checkbox"/> | EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA) | | |
| <input type="checkbox"/> | Motorized Isolation Valves | | |
| <input type="checkbox"/> | Alarm Buzzer with Silencing Switch | | |
| <input type="checkbox"/> | PVC /CPVC Vent Kit | <input type="checkbox"/> PN# 111569-02, Sizes 650-1000L | <input type="checkbox"/> PN# 111569-02, Sizes 650-1000L |
| <input type="checkbox"/> | Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks) | | |
| <input type="checkbox"/> | Conductor Sequencing Panel | | |

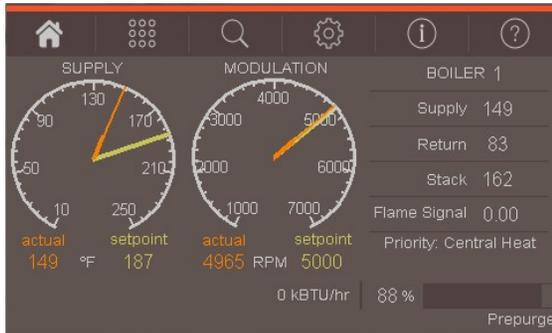
The Conductor manages multiple condensing & non-condensing, small & large heat output, new and/or existing boilers (full modulation or on-off), and steam or hot water applications. It helps improve system efficiency by selecting and modulating the right boiler to match operating conditions. The Conductor 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

- | | | | | |
|---------------------------------------|---------------------------------------|--|---|--|
| <input type="checkbox"/> 3-Year Parts | <input type="checkbox"/> 5-Year Parts | <input type="checkbox"/> 10-Year Parts | <input type="checkbox"/> 5-Year Parts/Labor | <input type="checkbox"/> 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, DHW, Sequencer and Fan