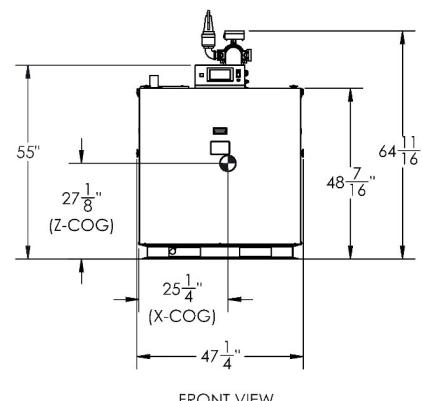
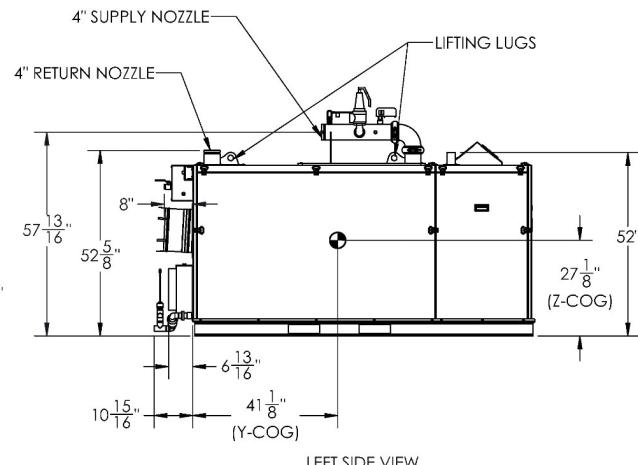
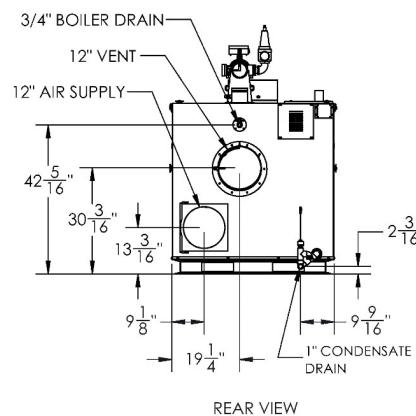
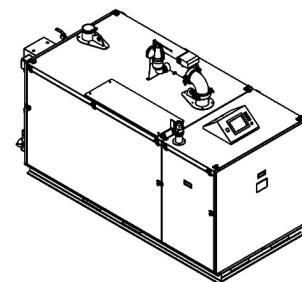
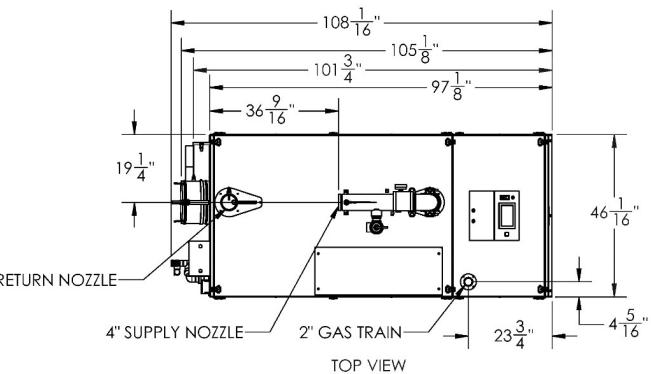
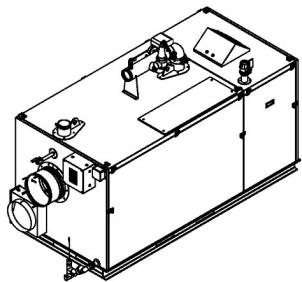




Water Heater (DHW) SUBMITTAL DATA SHEET



THERMAL
SOLUTIONS
Innovative Equipment for Hot Water Systems

PO BOX 3244 | LANCASTER, PA 17601

AMPW-4000

INNOVATIVE EQUIPMENT FOR
HOT WATER SYSTEMS
WWW.THERMALSOLUTIONS.COM

Updated 12/10/2025

ABCV-251202



Water Heater (DHW) SUBMITTAL DATA SHEET

RATINGS AND CAPACITIES		
Input - Low fire:	799,000	BTU/HR
Input - High Fire:	3,999,000	BTU/HR
Output - High Fire:	3,373,000	BTU/HR
Recovery Rate:	4,752	GPH
Thermal Efficiency %:	97	
Heating Surface:	403	Sq.Ft.
Water Vol. (gal)	47	Gallons
Fuel	Natural Gas or LP	
Firing Rate:	Full Modulation	
Burner Turndown:	5:1	
Low NOx Emissions:	<10 ppm	
Inlet Gas Pressure (NG):	4" (Min.) / 14" (Max.)	
Inlet Gas Pressure (LP):	8" (Min.) / 14" (Max.)	
Approx. Shipping Weight (lb)	2,485	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 HLW 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		

FLOWS AND PRESSURE DROPS			
Delta T	Flow (GPM)	Head Loss (ft)	Water Hardness (GPG)*
20°	392	18.4	12-15
25°	314	12.6	4-12

Electrical Requirements: (Appliance Only)				
Model	Voltage	Phase	Hz	Max. Amp Draw
2000-2500	120	1	60	13.5
	208			8.2
	240			7.7
	208	3	60	11
	240			9.9
	480			6.4
3000	208	1	60	14.1
	240			12.6
	208	3	60	9.9
	480			6.4
3500-4000	208	3	60	11
	240			9.9
	480			6.4

DIMENSIONS / CONNECTIONS		
Height:	55	(Note 1)
Width:	46	(Note 2)
Length:	97-1/8	(Note 3)
Water Outlet Pipe (FNPT):	4	
Water Inlet Pipe (MNPT):	4	
Vent Connection:	12	
Air Intake Connection:	12	
Condensate Drain (PVC):	1	
Drain Line Connection:	3/4	
Gas Inlet Connection (FPT):	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
4. Refer to manual for gas supply piping charts



Water Heater (DHW) SUBMITTAL DATA SHEET

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 ≤ 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 Zero governor gas valve
Low NOx Emissions (< 10 ppm) Variable Speed Combustion Blower
Full Modulation, 5:1 Turndown Air Proving Switch
Natural Gas, Propane or Dual Fuel (Gas/Gas) Blocked Vent Switch
4" wc (8" wc Propane) to 14" wc inlet gas pressure Manual fuel changeover switch (Dual Fuel Only)
High/Low gas pressure switches, manual reset Direct Spark Ignition System with UV Scanner

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

APPLIANCE EQUIPMENT

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

ELECTRICAL DESIGN

Models 2000-2500:

- 120-208-230VAC/60HZ/1PH - High Voltage
(2000 to 2500 - Optional 208-230-460VAC/60HZ/3PH)

Models 3000:

- 208-230-240VAC/60HZ/1PH - High Voltage
- 208-230-240-460VAC/60HZ/3PH - High Voltage

Models 3500-4000:

- 208-230-240-460VAC/60HZ/3PH - High Voltage
- 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

* 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.



Water Heater (DHW) SUBMITTAL DATA SHEET

OPTIONAL EQUIPMENT

- External High Limit Temperature Control, Manual Reset
- Condensate Neutralizer
- Supply Header Temperature Sensor:
- Direct Immersion
- Well Immersion (with Well)
- Outdoor Air Temperature Sensor (Wired)
- EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA)
- Motorized Isolation Valves
- Alarm Buzzer with Silencing Switch
- Gas Valve Proving Switch
- Vent Adapter - CPVC
- Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks)
- Stackable Rack
- 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

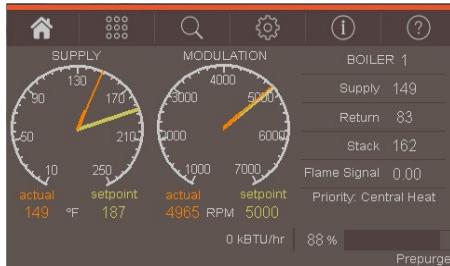
5-Year Parts/Labor

10-Year Parts/Labor



Water Heater (DHW) 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

(Enviracom 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 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

AntiCycling Technology

Multipler 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

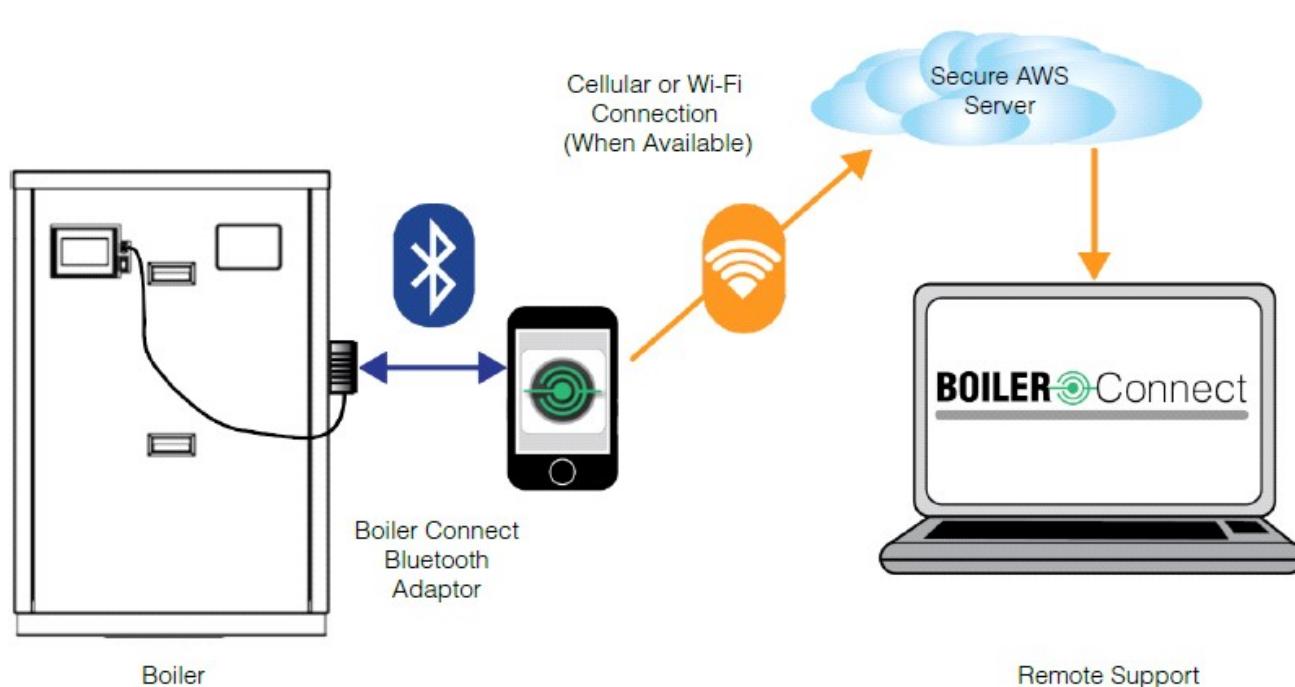
Proportional Integral Derivative (PID) Parameters for
Central Heat, DHS, Sequencer and Fan

Boiler Connect Compatible *

* Models 2000-4000 require Service Tool
PCB14 Kit (PN#113430-01) and one (1) Boiler
Connect Bluetooth Adapter Kit (PN#113329-
01) per install or cascade.



Water Heater (DHW) SUBMITTAL DATA SHEET



BOILER Connect

BOILER CONNECT FEATURES

Bluetooth adapter connects to the Boiler Connect App

English or Spanish language

Start-up, Troubleshooting Tips and Service Wizards

Data logs, Service and Status Reports sent to the cloud

Live Data Sharing (Cellular Service Required) with Technical Service Representative