



SUBMITTAL DATA SHEET

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

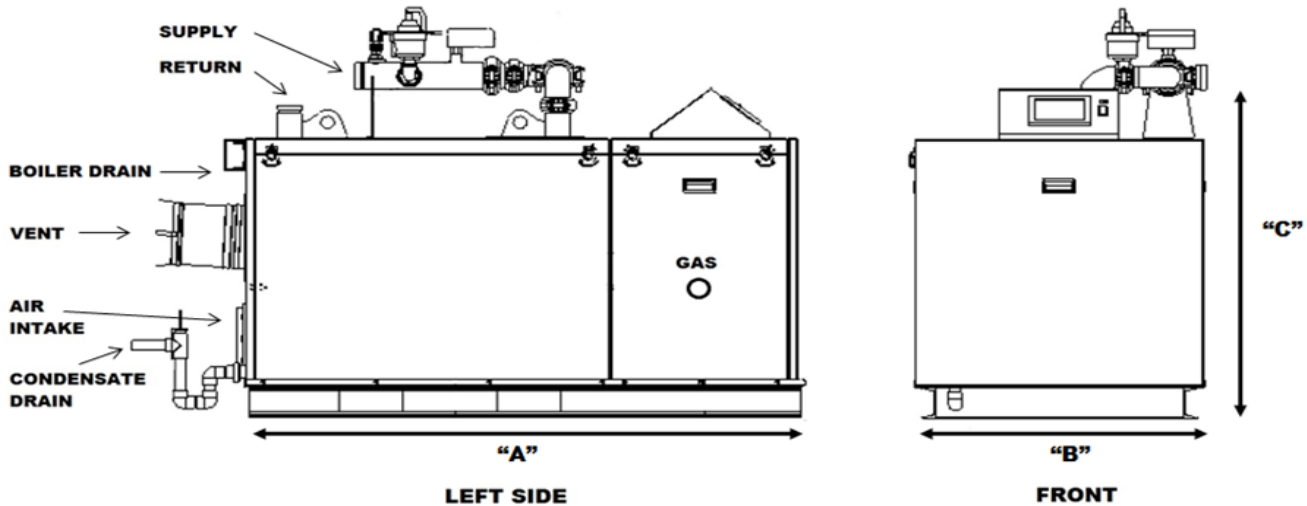


CHECK ONE: _____ REFERENCE (NOT FOR PRODUCTION)
 _____ APPROVED (IMMEDIATE PRODUCTION)
 _____ APPROVED WITH CHANGES NOTED (IMMEDIATE PRODUCTION)

RATINGS & TECHNICAL DATA

MODELS	INPUT		GROSS OUPUT (MBH)	THERMAL EFFICIENCY (%)	HEATING SURFACE (SQ/FT)	WATER CONTENT (GAL.)	FUEL		SHIPPING WEIGHT (LBS)
	MIN (MBH)	MAX (MBH)					NATURAL GAS MIN	NATURAL GAS MAX	
AMP-1000	200	1000	970	97.0%	91.6	10.96	4" wc	14" wc	780
AMP-1250	250	1250	1213	97.0%	91.6	10.96	4" wc	14" wc	780
AMP-1500	300	1500	1455	97.0%	109.8	12.97	4" wc	14" wc	1050
AMP-2000	400	2000	1940	97.0%	142.1	16.72	4" wc	14" wc	1150

DIMENSIONS



MODELS	"A" LENGTH (Inches)	"B" WIDTH (Inches)	"C" HEIGHT (Inches)	VENT / AIR INTAKE		GAS (Inches)	SUPPLY (Inches)	RETURN (Inches)
				SIZE (Inches)	EQUIV. LENGTH (Ft.)			
AMP-1000	45-1/2"	34-1/4"	42-3/4"	8	Up to 200	1 NPT	3	2-1/2
AMP-1250	45-1/2"	34-1/4"	42-3/4"	8	Up to 200	1 NPT	3	2-1/2
AMP-1500	66-1/8"	34-1/4"	42-3/4"	8	Up to 200	1-1/4 NPT	3	2-1/2
AMP-2000	66-1/8"	34-1/4"	42-3/4"	8	Up to 200	1-1/4 NPT	3	2-1/2

RECOMMENDED FLOW RATES / BOILER PRESSURE LOSS

Model Sizes	20°F Δ T		25°F Δ T		30°F Δ T		35°F Δ T		40°F Δ T		45°F Δ T		50°F Δ T		55°F Δ T	
	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)	Flow (GPM)	Δ P (Ft.Hd.)
AMP-1000	97	11.0	78	6.7	65	5.2	55	4.1	49	3.8	43	3.4	40	2.5	35	2.0
AMP-1250	121	16.0	97	11.0	81	7.2	69	6.1	61	5.2	54	3.8	50	3.0	44	2.8
AMP-1500	146	16.7	116	10.5	97	8.4	83	6.0	73	5.0	65	4.2	60	3.4	53	3.0
AMP-2000	194	19.0	155	13.4	129	10.0	111	8.3	97	6.7	86	5.0	80	4.2	71	4.0



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STANDARD EQUIPMENT

PRESSURE VESSEL DESIGN

Stainless Steel Heat Exchanger
 ASME Section IV Certified, "H" Stamp
 MAWP 160 PSIG & Max Temp 210°F
 Ten Year Limited Heat Exchanger Warranty

COMBUSTION DESIGN

Stainless Steel Pre-Mix Burner
 Low NOx Emissions (< 10 ppm)
 Full Modulation, 5:1 Turndown
 Natural Gas
 4" wc to 14" wc inlet gas pressure
 Direct Spark Ignition System with UV Scanner
 High/Low gas pressure switches, manual reset
 Zero governor gas valve
 Variable Speed Combustion Blower
 Air Proving Switch
 Blocked Vent Switch

VENTING

Category IV Individual Venting
 Category II with Engineered Common Vent System
 Vertical or Horizontal
 CPVC, PP or SS Venting *Materials Acceptable
 Combustion Air Intake - Sealed or Room
 Combined Venting Up to 200 Equivalent Feet

* 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™ Boiler 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
 Air Vent Valve
 Condensate trap
 Blocked Condensate Switch
 Pressure & Temperature Gauge
 ASME Safety Relief Valve
 (Available 30, 50, 60, 75,100, 125 or 150 psig)

ELECTRICAL DESIGN

120VAC/60HZ/1PH - High Voltage PCB
 (Optional 208 or 230VAC/60HZ/1PH)
 - 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

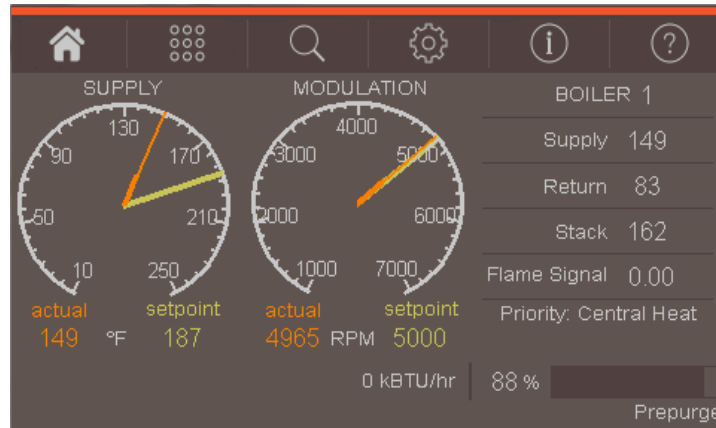
- _____ Hydronic Kit (Boiler Circulation Pump, Pump Flange Kit and Condensate Neutralizer)
- _____ External High Limit Temperature Control, Manual Reset
- _____ Condensate Neutralizer
- _____ Header Sensor, Direct Immersion
- _____ Header Sensor, Well Immersion (with Well)
- _____ EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA)
- _____ Motorized Isolation Valves
- _____ Alarm Buzzer with Silencing Switch
- _____ 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.



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CONCERT BOILER CONTROL FEATURES



Dashboard - Color Touchscreen Display, 4.3"

- 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 Isolation Valve, 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
- 4-20mA 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 Boilers
- Download Parameters for Troubleshooting
- Import Data into .CRV Formatted Files for Performance Analysis

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

* Unique to Thermal Solutions

