



# SUBMITTAL DATA SHEET

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

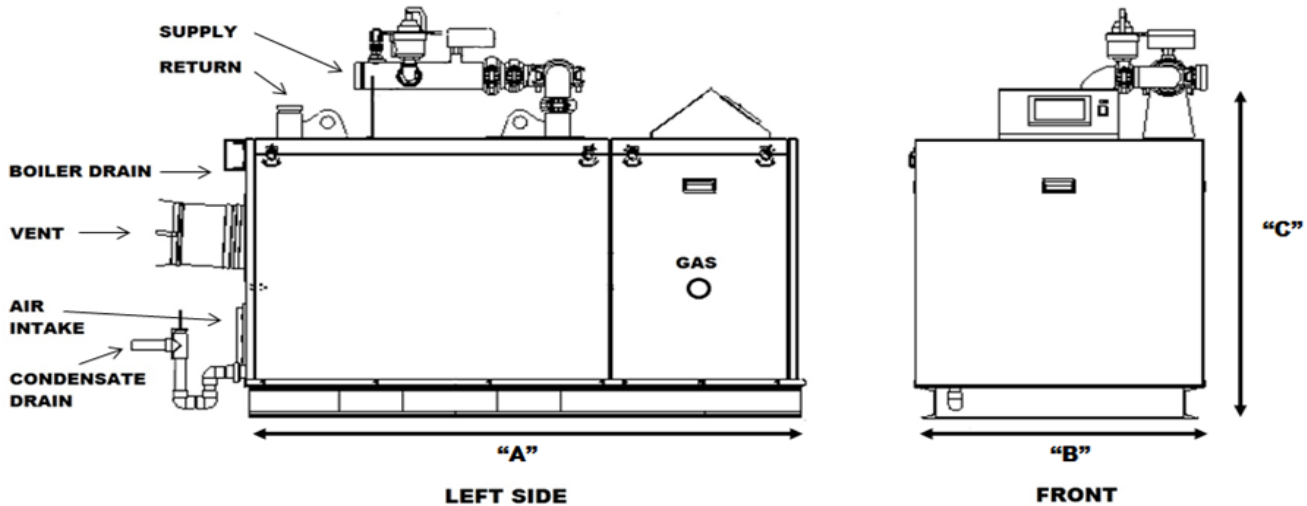


CHECK ONE: \_\_\_\_\_ REFERENCE (NOT FOR PRODUCTION)  
 \_\_\_\_\_ APPROVED (IMMEDIATE PRODUCTION)  
 \_\_\_\_\_ APPROVED WITH CHANGES NOTED (IMMEDIATE PRODUCTION)

## 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	
BFIT-1000	200	1000	970	97.0%	91.6	10.96	4" wc	14" wc	780
BFIT-1250	250	1250	1213	97.0%	91.6	10.96	4" wc	14" wc	780
BFIT-1500	300	1500	1455	97.0%	109.8	12.97	4" wc	14" wc	1050
BFIT-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.)			
BFIT-1000	45-1/2"	34-1/4"	42-3/4"	8	Up to 200	1 NPT	3	2-1/2
BFIT-1250	45-1/2"	34-1/4"	42-3/4"	8	Up to 200	1 NPT	3	2-1/2
BFIT-1500	66-1/8"	34-1/4"	42-3/4"	8	Up to 200	1-1/4 NPT	3	2-1/2
BFIT-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.)
BFIT-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
BFIT-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
BFIT-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
BFIT-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

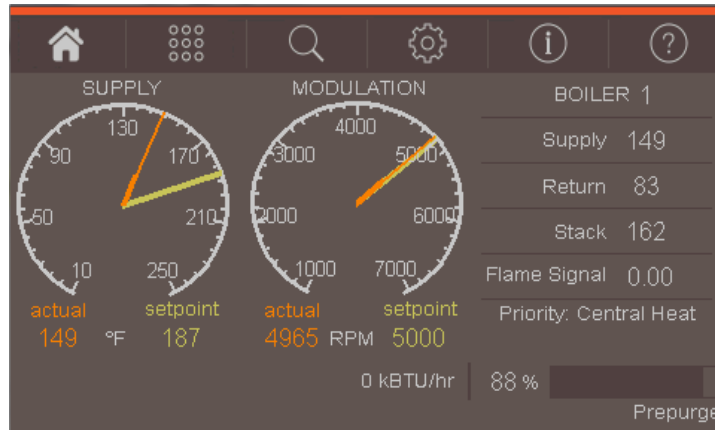
120VAC/60HZ/1PH - High Voltage PCB  
 (Optional 208 or 230VAC/60HZ/1PH)  
 - PCB (Printed Circuit Board) Fused Connections  
 24VAC/5VDC - Low Voltage PCB  
 - EMS Communications  
 (Dual RJ45 Jacks for Peer-To-Peer or ModBus)  
 - Boiler Options (Sensors)  
 - Pumps (Boiler, DHW, System) & Auxiliary 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.

## 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

\* Unique to Bryan Steam

### 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

