



Commercial Condensing **WATER HEATER**



400 - 1000 MBH



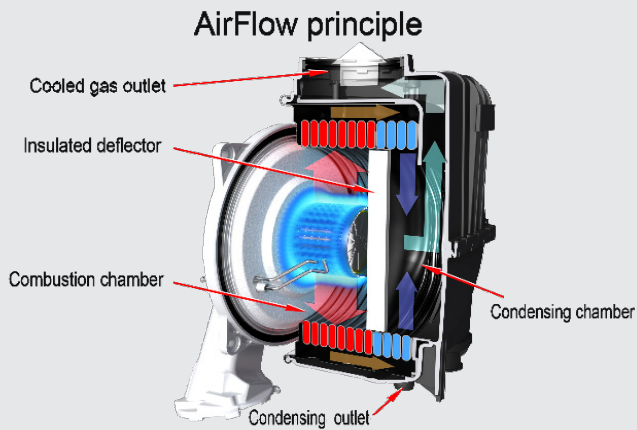
BRYANTM BOILERS[®]

BIG OUTPUT DESIGNED TO FIT

The BFIT Condensing Water Heater Series (BFITW) from Bryan Boilers delivers efficiency with unprecedented space saving innovation in a service friendly design. Now available in 400, 500, 650, 800, and 1000 MBH input levels, all models are up to 98% Thermal Efficiency. The 316L stainless steel heat exchanger features cavernous internal circuits with commercially sized tubes that minimize pressure drop and proactively reduce pump sizing, saving on install and electrical operations.

WATER HEATER ADVANCEMENT

Commercial grade tubes, nearly twice the size of competitive models, promote self-cleaning and flushing of particulates.



SERVICEABLE

Leave it to a century old boiler company to make maintenance and service part of a water heater design. Why wasn't this done before? Gas burns clean, but fireside contaminants can form on tubes diminishing heat transfer and efficiency. All BFITW models come with supported swing-out door providing complete access to burner and combustion chamber. Service, inspections, and cleanings can be completed with ease, ensuring new, out of the box efficiency and performance for the life of the product.



10:1 TURNDOWN

Reliability is our cornerstone and that means answering each and every call for more domestic hot water. We take additional measures, so you don't have any missteps. Extensive 50+ mile per hour wind tests at our vent outlet ensure the reliability of this Thermal Solutions product.

VENTING

Cat II or IV venting for either individual or common (engineered) venting systems. Capable of up to 200 equivalent feet of vent in stainless steel, polypropylene or CPVC.

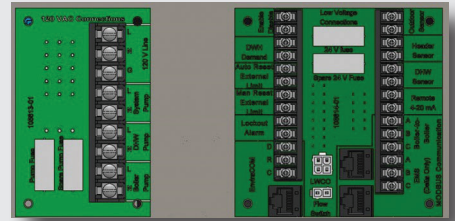
SPACE SAVING INNOVATION

We moved the burner from the traditional bottom to the side and reduced required install height by 46%. Models 400-1000L fit through standard doorways and are compact for easy maneuvering. All models can be Field Knock Down, with dimensions and instructions for disassembling and re-assembling on site if required. Designed to fit, BFITW 400-1000L models can be stacked on their respective sizes with mounting brackets only (no racking needed). Outdoor models are available on BFITW 400-1000L sizes. Outdoor models can be stacked or set up with zero clearance on one side.



SIMPLIFIED WIRING AND SERVICEABILITY

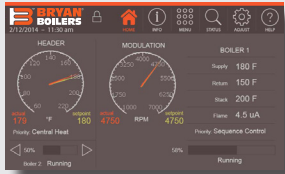
Low and high voltage fused printed circuit boards (PCB) simplifies wiring, enhances serviceability & troubleshooting with easy to read labeling, and provides electrical protection (spare fuses located on PCB for quick replacement). Other connections include: 120/1/60 voltage and pumps (system & domestic hot water); alarm; auto & manual reset external limits; enable/disable; DHW demand; 4-20mA remote; sensors (outdoor, remote and DHW); EnviraCOM thermostat; low water cutoff; and flow switch.



ADVANCED CONTROL PLATFORM – CONCERT™ CONTROL

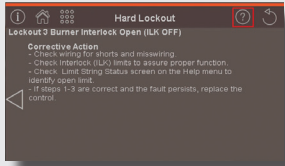
Intuitive Icon Navigation

“Touch” and move through our control menus effortlessly. Whether it be commissioning with the “Quick Setup” menu, pinpointing fault codes with corrective actions in seconds or seamlessly connecting to an EMS. Extensive data archives with graphical displays are available to evaluate performance and make value-added adjustments to maximize heater efficiency.



Self-Guiding Diagnostics

Troubleshooting issues has never been this easy! The industry-leading fault identification and correction feature allows the service technician to quickly drill down on the issue, with cause and corrective measures.



Unmatched Archives

With the largest collection of stored operational data (4 months), no stone is left unturned when it comes to evaluating a heater's performance and pinpointing adjustment for improvement. The heater's onboard energy management system is a true step above all others!



USB Data Sharing

Make room on the tool belt for a flash drive as the USB data sharing port has become another important device to have in commissioning (upload/download settings from one boiler to the next), servicing (download data and email file to factory for assistance) and analyzing operation (historical info can be downloaded & saved in .CRV formatted files).

Peer-To-Peer Sequencing

Unique control logic uses both temperature and firing rate of the connected heaters to sequence up to eight units in unison to optimize system efficiency. Included dual RJ45 connections make peer-to-peer and/or simultaneous EMS communications (ModBus Standard / Other Protocols Optional) a snap without the need of a separate splitter.

TANKS & PACKAGING

BFIT Water Heaters are commonly paired with hot water storage tanks. Tanks are available to suit all applications: vertical or horizontal orientation; glass, epoxy or cement-lined; metal jacketing with insulation, sprayed foam insulation or bare exterior; and in various shell materials (i.e. stainless steel). Shipped separately for field installation or skid mounted as a factory package.



BFITW STANDARD EQUIPMENT

- PRESSURE VESSEL DESIGN**
 Watertube stainless steel heat exchanger
 ASME Section IV-certified, "HLW" Stamp
 MAWP 160 PSIG & design temp 210°F
 Five Year limited heat exchanger warranty
 Ten year limited pressure vessel warranty
 One year parts and burner warranty
- COMBUSTION DESIGN**
 Stainless steel pre-mix burner
 Low NOx emissions (<10 ppm);
 Full modulation, 10:1 turndown
 Natural gas or LP gas
 4" wc to 14" wc inlet gas pressure
 8" wc LP min
 Direct spark ignition system
 High/low gas pressure switches w/ manual reset
 Combustion air switch
 Modulating gas valve
 Variable speed combustion blower
 Air proving switch
 Blocked vent switch
- VENTING**
 CPVC, polypropylene or stainless steel materials acceptable
 Air intake - sealed combustion or room air
 Category II or IV venting
 Individual or common (engineered) venting systems
- EQUIPMENT**
 Concert Control™
 High limit w/ manual reset safety temperature control
- Low water cutoff w/ manual reset
 Water flow switch
 Supply, return & DHW temperature sensors
 Flue gas temperature sensor
 Condensate trap
 Blocked condensate switch
 Pressure & temperature gauge
 ASME safety temperature & pressure relief valve
 Water circulation pump
- ELECTRICAL DESIGN**
High voltage printed circuit board (PCB)
 BFITW400-1000L: 120 VAC / 60 Hz / 1PH power supply
 120 VAC manual reset external limit contacts
 Three sets of pump contacts
 PCB fused connections
- Printed Circuit Board (PCB)
 24 VAC enable/disable sensor contacts
 24 to 120 VAC proving switch or auto reset external limit contacts
 24 to 120 VAC lockout alarm contacts
 24 VAC EnviraCom thermostat contacts
 DHW demand contacts
 Remote header sensor contacts
 DHW tank sensor contacts
 Peer-to-peer communication contacts
 EMS interface contacts
 Remote 4-20mA contacts

BFITW OPTIONAL EQUIPMENT

- External high limit w/ manual reset safety switch
- Extended Warranty
- Alarm buzzer w/ silencing switch

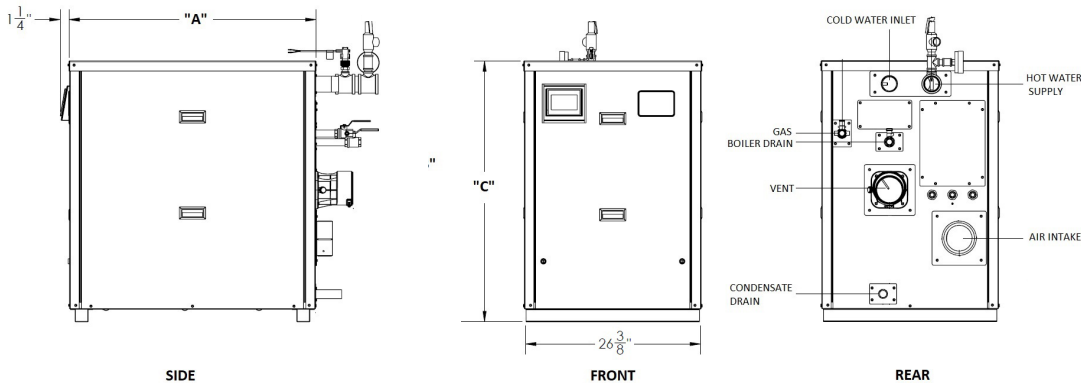
CONCERT CONTROL

- Dashboard - color touch screen display, 4.3"**
 - Intuitive icon navigation
 - "Quick" setup menus
 - "Real time" BTU/H display*
- Temperature demand input**
 - Time of day setback capability (EnviraCom thermostat must be installed)
- Three (3) pump control**
 - DHW pump with On/Off or variable speed control
 - 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 communications**
 - Multiple size unit sequencing; up to 8 units
 - Lead unit automatic rotation
- Energy management system (EMS) interface**
 - Firing rate and water temperature based algorithms for multiple units; loss of EMS signal defaults to local settings*
 - 4-20mAdc input/output
 - ModBus Input/Output
 - Simultaneous interface with peer-to-peer
- USB data port transfer***
 - Upload settings between units
 - Download parameters for troubleshooting
 - Import data into .CRV formatted files for performance analysis
- Energy efficiency enhancer**
 - Anti-cycling technology
 - Multiple unit base load common rate
 - 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 of data
 - Event history - up to 3,000 alarms, lockouts, and cycle & run times
 - Alarm - limit string faults, holds, lockouts & others
 - Cycle & run time - water heaters & pumps
 - Resettable
- Domestic hot water priority**
 - DHW tank piped with priority in the loop
 - DHW tank piped as a zone in the system with the pumps controlled by the Concert Control
- Other features**
 - Factory default settings*
 - Three level password security
 - Frost protection
 - Contractor contacts (up to 3)
 - Low water flow control & indication
 - Proportion integral derivative (PID) parameters for DHW, sequencer and fan
 - Built-in brown-out protection

* Unique to Concert Control

CONCERT CONTROL OPTIONS

- Communications gateway - BACnet, LonWorks, Metasys N2 or ModBus TCP/IP compatible
- Header sensor, direct immersion
- Header sensor, well mounted (with well)
- 0-10v signal converter



SPECIFICATIONS, DIMENSIONS, & RATINGS

Models	Input		Gross Output (MBH)	DHW Recovery (GPH)*	"A" Length (Inches)	Width (Inches)	"C" Height (Inches)	Gas/LP Conn. (Inches)	Supply Grooved Conn (Inches)	Return Grooved Conn (Inches)	Air Intake/Vent Size (Inches)	Approx Shipping Weight (Lbs)
	Min (MBH)	Max (MBH)										
BFITW-400	40	400	388	470	37-3/4	26-3/8	38-1/2	3/4 NPT	2	2	4	250
BFITW-500	50	500	485	588	37-3/4	26-3/8	38-1/2	3/4 NPT	2	2	4	260
BFITW-650	65	650	631	764	53-7/8	26-3/8	38-1/2	1 NPT	2	2	6	280
BFITW-800	80	800	776	941	53-7/8	26-3/8	38-1/2	1 NPT	2	2	6	310
BFITW-1000L	100	1000	970	1176	53-7/8	26-3/8	38-1/2	1 NPT	2	2	6	350

* Based on 40° F to 140° F temperature rise