

# Vistacon™ Industrial Boiler Controls

from an industry leader in steam generation



ENERGY | ENVIRONMENTAL

# B&W Vistacon™ Industrial Boiler Controls

Fully integrated industrial boiler control systems are available from Babcock & Wilcox (B&W), an industry leader in engineering and manufacturing robust, reliable steam generation systems for process or power applications.

Our Vistacon™ industrial boiler control system includes a burner management system (BMS), combustion control system (CCS), and all engineering drawings, diagrams and manuals. The BMS and CCS are available as a complete system or as separate stand-alone components. SIL-rated or TMR-based systems are available upon request.

Backed by engineering expertise and TUV safety-certified personnel in control system design and fabrication, Vistacon industrial boiler controls can be supplied with a variety of platforms depending on the application or customer requirements and can be utilized on any manufacturer's equipment.

Systems can be supplied for new boiler installations or to replace and upgrade an existing system, and offer a wide range of features and benefits not available with competing control packages.



## Primary Benefits

**Designed for Safety** – redundant safety circuits provide higher safety levels than industry standards

**User-friendly Interface** – provides ease of light-off, operation and troubleshooting; helps to reduce operator fatigue and error

**No Proprietary Components** – helps shorten downtime when replacement parts or upgrades are required

## Vistacon System Features Overview

A fully integrated control system with single-point control of both the BMS and CCS

SAMA logic for the CCS, binary logic for the BMS, and troubleshooting guides that detail alarms and other necessary information

Prompting and alarm messages (not just lights on a panel) provide operators with needed information to quickly assist with troubleshooting

Mobile device capability through a secure system

System logic and design exceed current standards for the NFPA 85 and Factory Mutual requirements

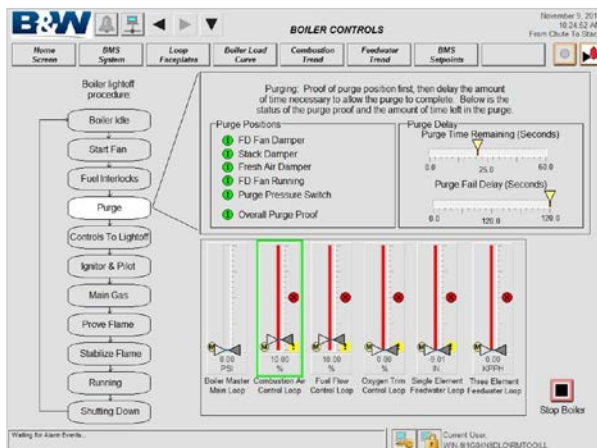
BMS and CCS are located in the same enclosure for ease of maintenance

Several HMI and DCS interface options provide flexibility

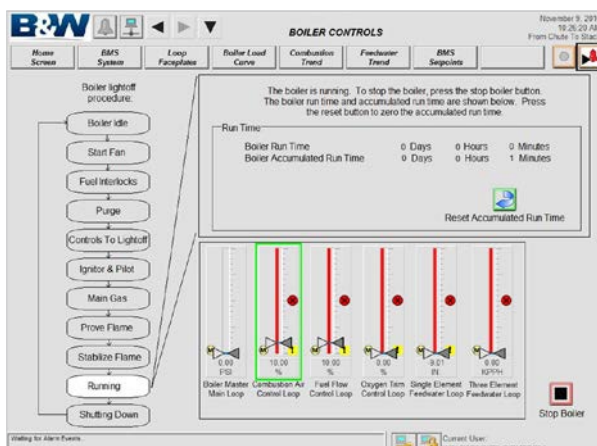
Redundant power supplies provide backup for critical systems

Secure system prevents unauthorized changes

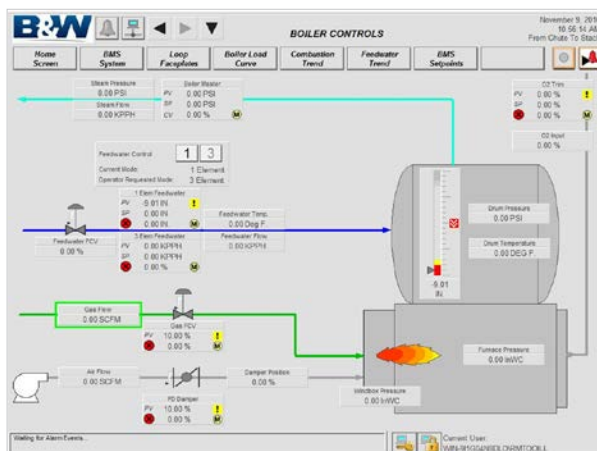
Simple operator interface screens provide ease of operation and troubleshooting information.



Burner management system main screen (purging)



Burner management system operating screen



Combustion control main screen

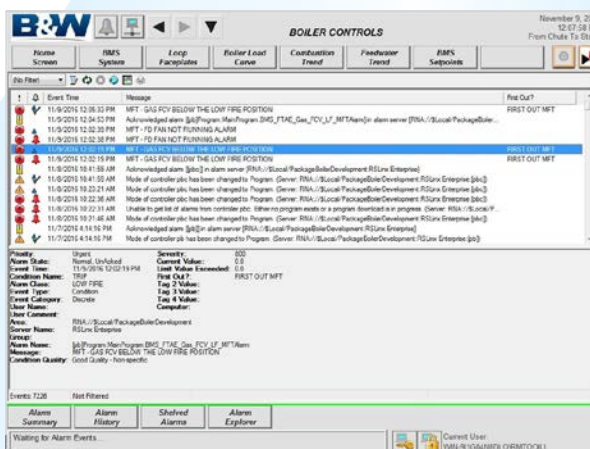
Our BMS and CCS are available as complete systems or as individual components.

## Burner Management System (BMS)

- Conforms to the latest NFPA 85 standards
- Designed so that no single point of failure will result in unsafe operation
- Safety-rated hardware is included where appropriate
- Redundant safety contactors used for the master fuel trip (MFT) relays
- Optional remote access (via VPN) for remote troubleshooting and tuning support

## Combustion Control System (CCS)

- Registers all critical set point changes, including boiler characterization, for historical trending
- Instrumentation range-scaling configured from the CCS screens
- Fully metered and cross-limited combustion control with O<sub>2</sub> trim
- Dynamic compensation of drum level measurement based on current drum temperature and pressure to account for steam density variation
- Feedwater control includes operator selection for single- or three-element control with auto switchover at appropriate maximum continuous rating (MCR)



Prompting and alarm messages (not just lights on a panel), including a full historian, provide maintenance personnel with needed information to quickly assist with troubleshooting.

B&W's line of Heros™ industrial water-tube boilers represents more than 150 years of ingenuity and experience, with more than 5000 manufactured and supplied for a wide range of industries and applications. Drawing on this engineering and operating experience, our functional safety engineers designed the Vistacon boiler control system to be **safe, reliable, flexible** and **simple to use**.

## Specification Comparison

	B&W Vistacon™	Typical Industry Standard
<b>Hardware</b>		
Termination of key safety inputs	Parallel	Serial
Safety relays used for all critical points	✓	–
Redundant power supplies	✓	–
Redundant MFT relays	✓	–
Dual contact E-stop	✓	–
Front panel absence voltage indicator	✓	–
Status lights	Light pole (Power, MFT, E-stop, General alarm)	Front panel (MFT, E-stop)
<b>Software</b>		
Screen size	15 in.	Up to 12 in.
Touchscreen	✓	✓
Customizable graphics	✓	Limited
High-performance graphics	✓	Limited
Light-off wizard (step-by-step, on-screen instructions)	✓	–
Live PID tuning screens	✓	Limited
On-screen alarm list	✓	Limited
On-screen user manual	✓	Limited
Historical trending of analog inputs	✓	Limited
Analog data/alarms/events storage/first-out storage	Full historian, capacity of years	Alarms only (1000 max)
System configuration	Stored/tracked in historian	Stored/tracked manually
Multi-boiler monitoring/control	Additional software required	Additional software required
<b>Connectivity</b>		
OPC connectivity	✓	–
Modbus connectivity	✓	✓
Mobile device support	✓	–
Emailing on alarms/events	✓	–
Remote connection/support	✓	Limited

### The Babcock & Wilcox Company

20 South Van Buren Avenue  
Barberton, Ohio, U.S.A. 44203  
Phone: +1 330.753.4511

[www.babcock.com](http://www.babcock.com)     

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