

INSTRUMENTS & CONTROLS



PREFERRED
UTILITIES MFG CORPORATION



"People. Products. Results."



BurnerMate Universal Industrial® Controller



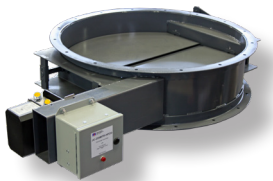
The BurnerMate Universal (BMU) is a total boiler control system designed for both firetube boilers and watertube boilers. Utilizing the latest technology in microprocessors to give you the highest quality in combustion control for your boiler room. Separate processors are used for flame safeguard and combustion control for NFPA 85 compliance. Configuration is done in the field using the LCD touchpad, the optional touch screen, or our exclusive BMU_Edit software running on your PC. The BurnerMate Universal is available for immediate delivery, requires no programming, and is U.L. recognized.

- Advanced flame safeguard control including first out annunciation
- Combustion control using up to ten servos and up to four Variable Speed Drives (VSDs)
- Feedwater and Draft Control
- Large 10" color touch screen available



Oxygen Sensor

The BMU uses the same ZP probe as the BurnerMate TS PCC III, and UtilitySaver. The ZP controller/amplifier is built into the BMU chassis. The BMU allows for stack oxygen indication, and oxygen trim depending on the parameter selections made during commissioning.



BMU E-Link Draft Damper Assembly

Model BMU-190388-xxHPCO

The Model BMU E-Link Draft Damper Assembly and BMU with expanded controller form a complete draft control package. A complete draft damper assembly saves installation time and cost by factory mounting actuator and draft transmitter with high-pressure cutout switch and 5-second time delay relay. The Model BMU E-Link draft damper assembly includes a pre-mounted BMU-SM series actuator and JC-22XMTR draft range transmitter assembly.



BMU-SM & BMU-UM Servos

BMU servos are available in output torques from 3 ft-lb to 720 ft-lbs. Each includes an actuator positioner board, and integral feedback potentiometer. The feedback potentiometer is used to prove servo position thereby eliminating the need for auxiliary proof of position switches. Servos can be used for the following control functions; natural gas, fuel oil and/or "other gas" flow control valve(s).



Flexfit Linkageless Control

Leveraging the industry leading BMU platform, the FlexFit can be used in new installations OR be easily retrofitted into existing jackshaft control panels that use supported common flame safe guards. Fuel savings is accomplished with parallel positioning combustion control with optional oxygen trim. Variable Speed Drive for the FD Fan allows for greater electricity savings. In addition to flame safeguard and combustion control, the FlexFit also includes optional draft control. The FlexFit communicates to Building Automation Systems by Modbus or optional Ethernet. Because it is microprocessor-based and pre-engineered, the FlexFit is an economical alternative to more expensive PLC-based boiler controllers. The parts are in stock for immediate delivery and require no programming.



Chief Dispatcher®

Modulating Lead/Lag Controller

This advanced boiler sequencing, monitoring, and communication system provides lead lag control for up to ten boilers. The Chief Dispatcher® plant master optimizes boiler plant performance and helps extend boiler life for cast iron sectional, finned-tube, firebox, flexible tube, or firetube boilers.



Feedwater Center

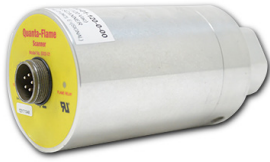
The Feedwater Center is designed to improve the control of boiler feedwater by modulating up to four feedwater pumps and three transfer pumps. Deaerator temperature, level, and chemical pumps are controlled to improve boiler quality.



Flame Safeguard Controller

Model 5004-890

The 5004-890 Flame Safeguard Controller is designed to directly replace the Honeywell RA890 F&G Controls. This controller sequences the burner through Ignition, Pilot Trial for Ignition, and Main Flame Trial for Ignition. The primary difference between the 5004-890 and the 5004-795 controller is the 890 series' lack of blower motor terminals. The 5004-890 controller monitors the burner flame and running interlocks, shutting down the burner in the event of flame failure.



Flame Scanner/ Flame Relay

Model 5002-01

The 5002 Series Flame Scanners are intended for monitoring all gas, oil and coal-fired burners. The control is the basis for industrial or commercial burner management systems using microprocessors, PLC or relay based hardware. The 5002-01 interfaces with Preferred, Fireye, Honeywell, and other PCI flame safeguard controllers. The 5002/C version has a 4 to 20mA output in addition to an on/off flame present output.



UV & IR Flame Scanners

Model 5004-01

The 5004-01-scanner is an ultraviolet (UV) sensor for monitoring gas or oil flames. The Quanta-Flame flame safeguard checks the scanner for proper operation at the beginning and end of each flame cycle. It comes with a 6 foot shielded flexible cable with a military style connector, which plugs into the scanner base for quick and easy servicing.



Flame Safeguard

Model 5004-M78

The controller is a microcomputer based primary safety burner management system. The 5004-M-78 uses the Cleaver Brooks or Honeywell sub-base and the existing UV, IR & FR sensors.



Model 5004-M110

The 5004-M-110 flame safeguard is a direct replacement for most E-110 flame safeguard controllers. It is specifically designed to mount into existing 60-1386-2 and 60-1466-2 wiring sub bases. The 5004-M-110 control includes an integrated program module and flame sensor amplifier.

Model 5004-M85

The Preferred 5004-M-85 has just one processor with a built-in amplifier that accepts UV, IR, and self-checking UV scanner inputs, as well as flame rod inputs. It can also accept two scanners simultaneously on separate inputs.



Draft Range Transmitter Assembly

Model JC-22XMTR

The Model JC-22XMTR Draft Transmitter Assembly is a field mountable furnace draft range transmitter and independent high pressure cut-out switch with 5 second time delay relay. The transmitter provides a 4-20 mADC signal for draft control and the time delay relay provides an isolated “high pressure cut-out” contact for use in the Flame Safeguard limit circuit. The time delay feature helps avoid nuisance burner shutdowns caused by momentary draft fluctuations.



Digital Process Monitor

Model JC-10D2

The JC-10D2 Process Indicator is a microprocessor based indicator alarm that can be field configured for a wide variety of applications. The instrument provides a color touchscreen with easy to understand bar graph, scaled numeric display, and front panel alarm messages.

Model JC-22-HDPCO-8

The JC-22-HDPCO-8 is a draft range differential pressure switch with red warning light and time delayed cutout relay contacts. The normally energized cutout relay contacts open when the differential pressure is higher than the setpoint for more than 8 seconds. The setpoint is field adjustable over the 0.05” to 9.0” wc range. The JC-22-HDPCO-8 is a direct replacement for the Hays Cleveland model # AFS-952-55-B.



Linear Actuator

Model JC-22-PL2-1006

JC-22-PL2-1006 is a linear actuator with an integral microprocessor-based draft controller and a solid state draft range pressure sensor. The JC22-PL2-1006 is housed in a durable metal enclosure with a removable cover. The JC22-PL2-1006 is a direct replacement for CDR model # 9502-1012-B-8. The JC22-PL2-1006 provides automatic modulation for any negative or positive draft application.



Flue Gas Temp Monitor

Model JC-15D2

The JC-15D2 Flue Gas Temperature Monitor is a micro-processor-based indicating instrument for use with a heavy duty thermocouple assembly. Flue gas temperature is continuously displayed using a color touch screen. An on screen bargraph display and alarm messages provide clear stack temperature status. Bargraph scaling, alarm setpoints, and time delays are all field selectable. All adjustments can be made directly from the faceplate of the instruments by scrolling through user friendly, English language menus.



Smoke Opacity Monitoring System

Model JC-30D2-EZ

The JC-30D2-EZ Smoke Opacity Monitoring System measures smoke emissions from boilers, incinerators, kilns, and other visible emissions and alarms when opacity exceeds the setpoint. Calibration is automated, no manual adjustments. During every Calibration, the lamp brightness is auto-adjusts to suit the soot/dust build-up, alignment changes, and stack width.



Draft Controller

Model JC-22D2

The JC-22D2 Draft Monitor and Controller is a microprocessor-based draft controller, indicating instrument, and alarm monitor. Uncontrolled stack draft can cause burner instability, unreliable ignition, and affect fuel-air ratio control repeatability. Burner manufacturers typically recommend draft controls be installed in applications when stack height exceeds 75 feet or multiple furnaces are connected to a single stack.



Fuel Sentry Tank Gauge & Leak Detection System

Model TG-EL-D4A

The U.L. Approved Fuel Sentry Model TG-EL-D4A Tank Gauge and Leak Detection System is a remote reading, microprocessor based, tank gauge, with six intrinsically safe sensor inputs that can monitor one or two tanks. The leak detection system is designed for use with double wall tanks, vaulted tanks, single wall tanks with spill basins, and double wall piping.



Multi-Tank Gauge & Leak-Detection System

Model TG-EL-D5

The Model TG-EL-D5 Multi-Tank Gauge and Leak-Detection System is a comprehensive tank-gauging and leak-detection system that can simultaneously monitor product levels and leaks.



Wire Float Level Sensor

Model TG-EL-WF

The TG-EL-WF Wire Float Level Sensor is extremely accurate, easy to install, and ideal for low "Head Room" installation applications. The float is connected via a flexible stainless steel cable to a multi-turn, take-up reel within the sensor head. The flexible cable and the flanged tank connection allow rapid installation, even in restricted spaces. An integral test mechanism permits high level alarm and full tank calibration checks without removing the sensor from the tank.



Model TG-EL-HLT

The TG-EL-HLT sensor transmits a 4-20 mA Head signal to a Preferred Instruments TG-EL-D4A or TG-EL-D5 tank gauge, or to a wide variety of PLC, BAS, SCADA and other similar systems.

Leak Detector



Model HD-A2-C

The Model HD-A2-C Leak Detector uses a combination electro-optic technology, which reliably distinguishes between water and oil. The detector contains an infrared optical liquid detector and a set of stainless steel conductivity rings. Oils are detected by the optical liquid detector and water is detected by both the optical liquid detector and the conductivity rings.



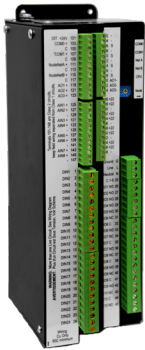
Multiple Loop Controller



Model PCC-IV & DCS-IV

This Model PCC-IV multiple loop process controller has large I/O quantity, integral oxygen sensor, highly visible front panel, intuitive “Blockware,” redundant memories, 4-20 mA DC input and outputs, 24 VDC transmitter power supply, and built-in industry standard communications, allowing the PCC-IV to integrate with complex systems while maintaining a minimum number of external components.

The DCS-IV Multiple Loop Controller can be supplied to provide draft and drum level control loops and balance of plant monitoring with up to 15 analog inputs, 6 analog outputs, 5 triac pair outputs, 6 relay outputs, 13 digital 120 VAC inputs or combinations of these.



Flexible System Controller

Model FSC-120

The FSC-120 is a general purpose programmable logic controller that is programmed with Function Block logic. A single FSC can be used to control a process, or multiple FSC's can be networked together for coordinated distributed control. The most common application of the FSC is to monitor and control emergency generator fuel oil supply puming and storage systems.



Plant Wide Controller

The Plant Wide Controller (PWC) is a sequencing, ease of operation, communication and expansion capabilities with boiler plant control application expertise. Off-the-shelf, standard applications for boiler modulating lead/lag, cooling towers and air compressors can be expanded to include additional monitoring or control additional pumps, variable speed drives and valves. The PWC is a complete plant monitoring, control and communication interface.



OIT Touchscreen

Model OIT-10

All of the control functions of the BurnerMate Universal can be accessed through the LCD key pad. 10" and 15" color touch screen display are available for enhanced graphics and communications. Supported communication protocols include; 10/100 Base Ethernet, Modbus TCP/IP, Modbus RTU, SCADA/BAS connection, and BMU connection.

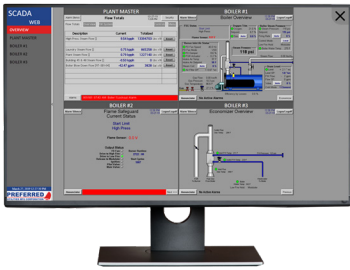


Servo Actuator

Model SM & UM

The Model UM Servo Actuator provides directly connected and precise modulating control of fuel valves and combustion air & flue gas control dampers. The actuator opens, modulates, and closes the valves and/or dampers in accordance with the integrated combustion control and burner management system programs.

SCADA



Distributed Control

This system's architecture allows integration of multiple boiler plant systems, including high and low pressure steam generators, high and low temperature hot water generators, chilled water plants, and municipal service facilities.

SCADAWeb	SCADAFlex	SmartSCADA
Multiple OIT Control screens brought to your desk	SCADAWeb features, Plus:	SCADAFlex features, Plus:
Data from multiple sources on single screen	Interface to other equipment at site	Computer analysis of incoming data
Process monitoring	Records data	Energy management
Alarm alerting	Process visualization (HMI)	Optimize operational performance
Remote control monitoring	Local or remote operating modes	Increase uptime reliability
No Internet Needed	Historical Trending	Remembers/Compares data/efficiency
Quick Installation	Alarm Management and printing	Identify problems before they occur
Simple Configuration	Develop software allows continu development on site	Alerts sent to service
Synchronized Updates		Company and Plant Manager
Fast Bootup		
Optional Reporting		



Increase a facility's "up" time.



Reliability reduces costly outages.



Easy to troubleshoot from any Node.



Redundant dual communication network.

designed for

Mission Critical Systems
Data Centers
Government
Hospitals
Banks
and more...



Custom Solutions from our Engineers



Burner Management and Combustion Control Systems

Engineered to your specifications in PLC, Microprocessor, Multiloop, or Combination Platforms. Control systems available in Class 1 Div 2 and Safety Integrated level designs.

Full System Integration

The capabilities of Preferred Instruments extend beyond boiler controls. We know how to integrate boiler controls into complex systems. Our expertise has given our engineers a wealth of experience designing thousands of complete boiler plant control systems.

Quality Assurance Compliance

Before we release any product, it must pass our rigorous standard assurance testing program. Our extensive testing and real-life simulation program provides you with a line of accessories that will eliminate the need for start-up experiments.

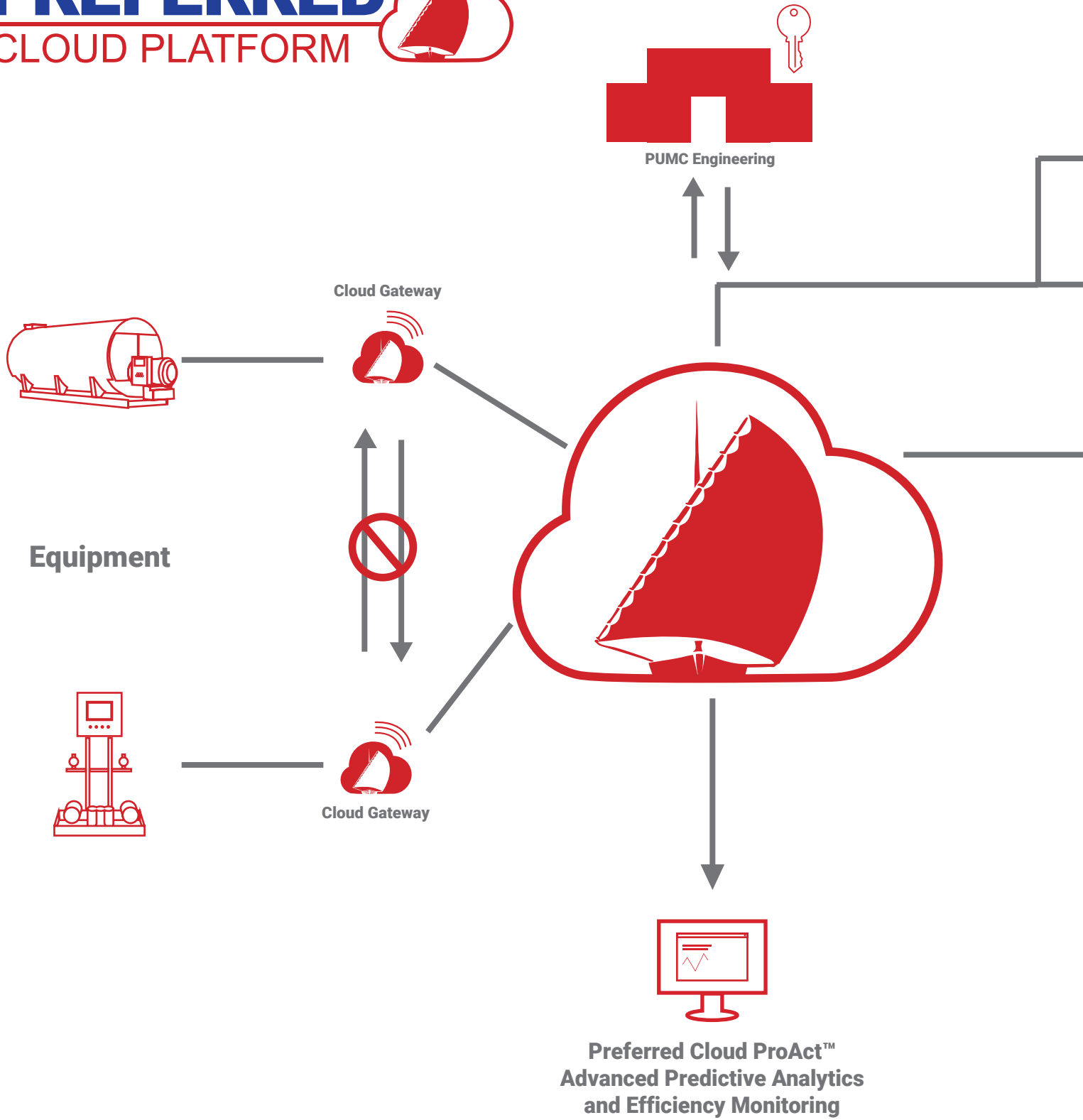
Free Product Training

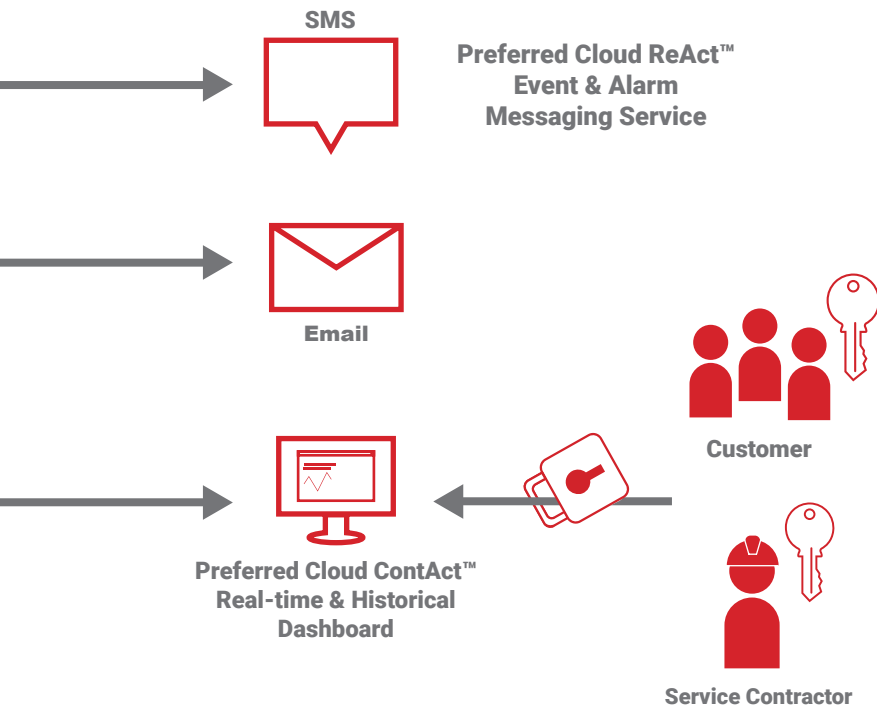
Preferred offers regular technical and product training sessions at our Danbury, Connecticut headquarters.

In addition to standard training, we also provide “upon-request” sessions throughout North America. Technical and product training helps save time and money. Please visit our web site preferred-mfg.com for the latest training schedule.

PREFERRED

CLOUD PLATFORM 





Encrypted

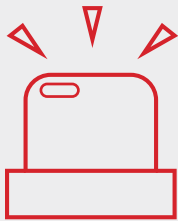
All communications—internal and external—to the Preferred Cloud are secured and encrypted. Both parties in any network transaction are validated before data is transmitted. All databases and backups are encrypted to ensure data is secure at every point.

Secure & Isolated Network

The gateways are connected to the cloud via an isolated and secure private network. It is not accessible through the internet or a wifi network.

Continual Monitoring & Updates

Our team of engineers work hard to make sure all components of the platform stay secure and up to date. All systems are built on a fault-tolerant infrastructure to ensure that you always have access to your equipment.



REACT

Be the first to know when your equipment requires attention. Automatic notifications and alerts will allow you or your service contractor to respond to issues with your equipment the instant an issue is detected.



CONTACT

Have access to your equipment from anywhere in the world. View the status of all your equipment in real-time, on our easy-to-use web dashboard. Compile data from multiple facilities for central monitoring and control.



PROACT

Our years of industry knowledge packaged into pre-built analytics that present actionable reports to help you make your boiler plant operate more efficiently and reduce unplanned downtime.



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