

FULL Integration

When describing **Cochran Synergy** as 'fully integrated' that's exactly what we mean!... Connectivity doesn't simply stop at the boiler panel; the core system has been developed to enable multiple boilers and external equipment to be networked into a single highly effective system using industry standard protocols.

Cochran Synergy's strikingly simple operation is fully supported by clear, logical on-screen help and guidance, and is backed-up by a generic Operators' Manual that provides a comprehensive guide to operation and all the functions and buttons.

Optimised Schedule Control

Reduce energy consumption and boiler house manning by utilising the flexible setpoint control feature. **Cochran Synergy** allows the user to define setpoint profiles for a full day. Up to four different setpoints per day can then be allocated to the days of the week.

Optimised Plant Loading

Sequencing and integration of all the boilers and ancillary equipment is possible using the **Cochran Synergy**. Using the options offered it is possible to monitor and control all aspects of the boiler house plant room and optimise their operation, thus ensuring running costs are minimised and plant life is maximised.

Real-time Access

Cochran Synergy allows local and remote real time access which provides on-site operators and remote managers the opportunity to monitor and optimise plant settings, as well as instant access of current reports and trends.

Boiler House and Process Improvements

By utilising the **Cochran Synergy** report and trending functions managers can analyse the operation of their boiler house, as well as how it responds to events and changes in their operational processes. Costs and efficiency can be reliably evaluated and managed using process and operational data collated using the **Synergy** system.

Reduced Downtime

Through the **Cochran Synergy** fault logging system it is possible to quickly identify the causes of any problem and therefore repair and get back online.

Remote Monitoring

The **Synergy** interface allows remote diagnostics from off-site, including from **Cochran** engineering staff (with the appropriate service package) which allows quicker identification and repair of problems. It is also possible for **Cochran** engineers to review the data and trends of equipment in the boiler house and to provide a report on suggested improvements to optimise performance; saving money on energy costs and lengthening plant life.

Pre-emptive Alarms

Through its monitoring functions **Cochran Synergy** allows you to set pre-emptive alarms so that minor issues are addressed before they become serious problems.

In short using Cochran Synergy is a powerful tool to assist in reducing your plant energy costs, reducing downtime and extending plant life

Key Technical Features

- 19" Touchscreen
- Powerful Intel Processor
- Substantial expandable memory
- Industrial Ethernet Backbone
- Standard Interface for RS232/485, MODBUS (Serial and TCP/IP)
- Optional Interfaces to BACNET, PROFIBUS, PROFINET, ETHERNET/IP, FIELDBUS
- Secure, reliable, expandable and future-proof
- 24 V DC Power Supply
- Operating climate -25°C to +60°C



Synergy Integrated Boiler Control



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Synergy: The interaction of multiple elements in a system to produce a greater combined effect.

- Intuitive Touchscreen Interface and Controls
- Boiler Analogue Signal Monitoring and Logging
- Combustion Control
- Water Level Control
- Automatic Duty Cycling of Multiple Pumps
- Close control of VSD Feed Pump and FD Fan
- TDS and Timed Bottom Blowdown Control
- Automated Start Sequence with 'At Boiler' Presence Verification
- Flexible Communications options to Building Management Systems or SCADA, with Remote Access and Diagnostics
 - System Health Status Indication and On-Screen Help
 - Password Protected Access
 - Daily and Weekly Setpoint Profile Scheduling
 - BG01 Compatible

The result of extensive research and development, 'Synergy' takes all the boiler and combustion control functions and integrates them seamlessly into a single cutting edge control centre.

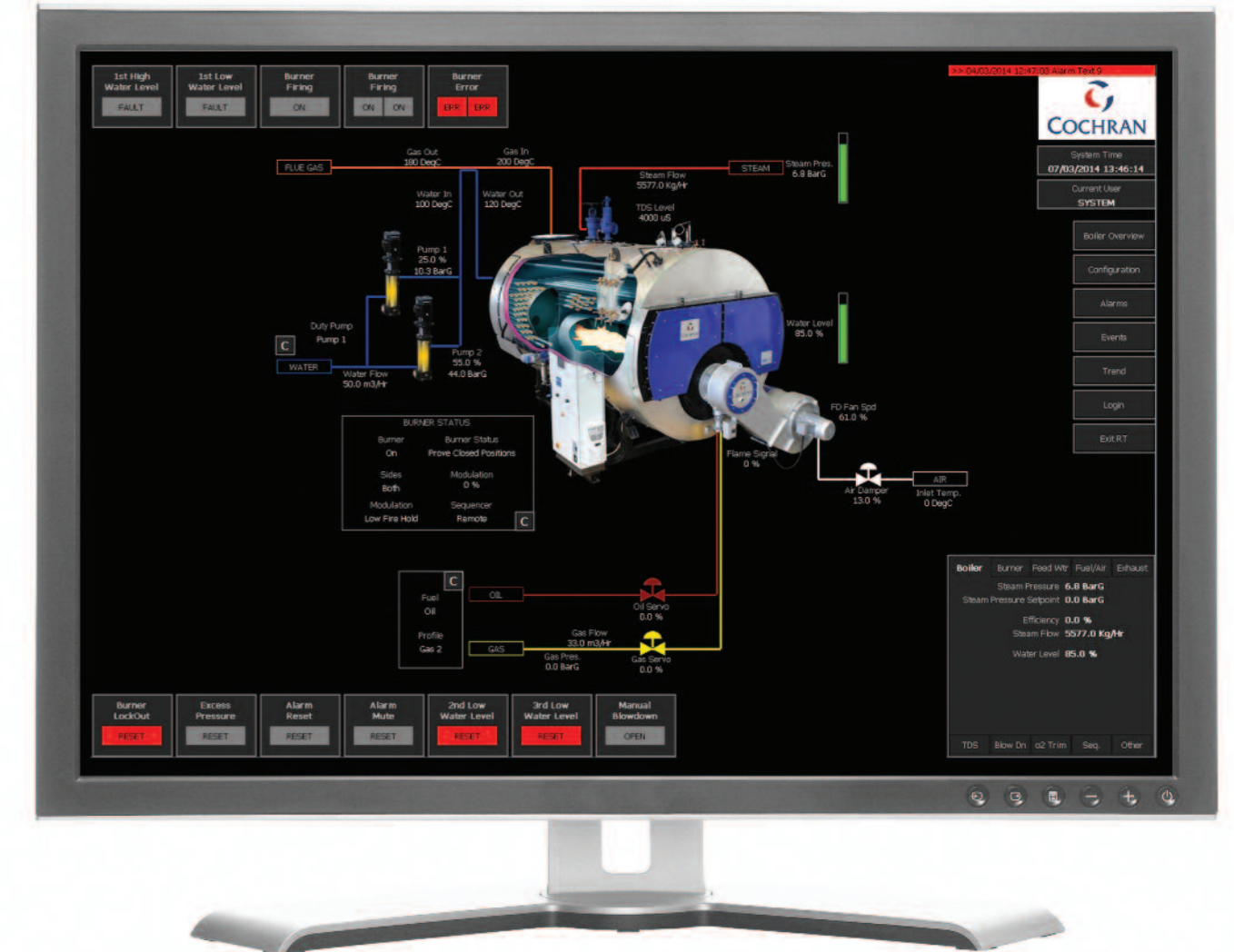
The easily navigable, robust 19 inch touchscreen at the heart of the system allows access to accurate real-time control and monitoring, as well as fault and status diagnostics, either remotely or via a PC, tablet or Smartphone. Synergy has the flexibility to communicate with any commercially available BMS or SCADA system. The simple operation is supported by clear, logical on-screen help and guidance.

Alongside optimising control and monitoring of all key boiler components; combustion; water level; blowdown; pump and fan VSD; Synergy can also sequence boilers and integrate all other boiler house balance of plant, such as water treatment, steam, emission monitoring, fuel and water metering - taking boiler control to the next level.

As well as total control of the plant, Synergy enables full monitoring and logging of all the boiler house variables you would wish to monitor. These variables can be measured, trended and plotted as well as being downloaded for analysis. Having access to this data can help the plant engineer to identify areas for improvement in the operation and efficiency of the process as well as within the boiler house.

Synergy can monitor and trend the status of any of the key components in the plant: Efficiency; steam output and pressure; burner modulation; photocell and oxygen trim; burner and fan servo motors and speed; fuel flows; boiler water level; feed water flow rate and temperature; feed water pump speeds and pressure; blowdown conditions; emissions; and temperature. This is an extensive list but by no means exhaustive; if we can take a signal we can monitor and trend

...Put simply, Cochran Synergy takes boiler control and monitoring to the next level.



The many indicator lights and numerous controls that are so often an over-complicated feature of traditional control panels, have all been streamlined into Synergy's strikingly simply interface. Meanwhile automated event logging, secure remote operation via Smartphone, Tablet or PC and re-transmission of data provide ease and flexibility in operation.

Touchscreen Controls

- Feed Pump Control
- Burner Control
- Alarm Fault
- Firing Rate Selection
- Water Level Control
- Fuel Selection
- Feed Pump Selection
- TDS and Timed Bottom Blowdown

Touchscreen Status Indicators

- High Water
- Low Water
- Second and Third Low Water
- Excess Pressure
- Burner Firing
- Burner Lockout/Error
- Hours Run
- FD Fan Running
- FD Fan Tripped
- Oil Pump Running
- Oil Pump Tripped
- Feed Pump 1 Running
- Feed Pump 1 Tripped
- Feed Pump 2 Running
- Feed Pump 2 Tripped
- TDS Blowdown
- Intermittent Bottom Blowdown