

# B850 Boilerhouse Energy Monitor



*First for Steam Solutions*

EXPERTISE | SOLUTIONS | SUSTAINABILITY

**spirax**  
**sarco**

# UPGRADE YOUR BOILER PLANT'S ENERGY MONITORING CAPABILITY



## Monitor, understand and optimise

The B850 offers a flexible solution for monitoring energy transfer throughout the Boilerhouse.

Often overlooked, the efficiency of your boiler represents a financially attractive opportunity to make substantial energy savings and reductions in CO<sub>2</sub> emissions. Even a small improvement in boiler efficiency can realise significant savings over your boiler's operational lifetime.



## Why choose the B850?

### Monitor

The continuous collation of boiler plant performance data using the real time monitoring capability of the B850 helps to quickly identify any performance issues that may occur. For example manual blowdown is unpredictable, causing carry over if it is insufficient and increase fuel energy costs if excessive. The B850 will monitor and log the amount of water that is blowdown from our recommended automated blowdown systems that will protect against carryover and save 2 to 3% off a boiler's energy bill.

### Understand

Understand your fuel consumption, feedwater usage, steam production, condensate return and blowdown volumes using historical trending data. The B850 gives a tangible statistical picture of multiple aspects of your boilerhouse performance, identifying peaks and troughs in efficiency characteristics of individual plant functions.

The B850 will log the amount of condensate being returned to the boiler's feedwater system enabling you to accurately manage your water treatment plant output and identify potential opportunities to increase fuel efficiency.

### Optimise

The Boilerhouse offers many potential efficiency saving opportunities, but predicting the biggest potential return is often difficult. The B850 cannot only highlight the efficiency of a boiler but potential areas for improvement, allowing accurate allocation of maintenance budgets and detailed analysis of return on investment.



**A FLEXIBLE SOLUTION**

The B850 offers a cost effective solution for existing Boilerhouse that do not have a boiler energy monitoring facility.

**EASILY COMMISSIONED**

This B850 is easily commissioned via a PC based software using a multi lingual setup wizard. You can setup the software without being connected to any particular B850, save the file on your PC and insert a USB into the B850 you want to commission. With set up, there is no downtime.

**ACCESSIBLE**

The B850 can be installed wherever is convenient in the Boilerhouse. The wall or panel mounted versions available, allow you to place your unit in the most convenient and accessible area. This, along with a graphical colour display makes reading information an easy task.

**COMPATIBLE**

The B850 is compatible with a wide range of flowmeters and sensors, allowing you to easily link your existing network. The B850 has also been pre-configured to work with Spirax Sarco's own range of industry leading flowmeters making commissioning even easier.

# Don't miss your opportunity to save

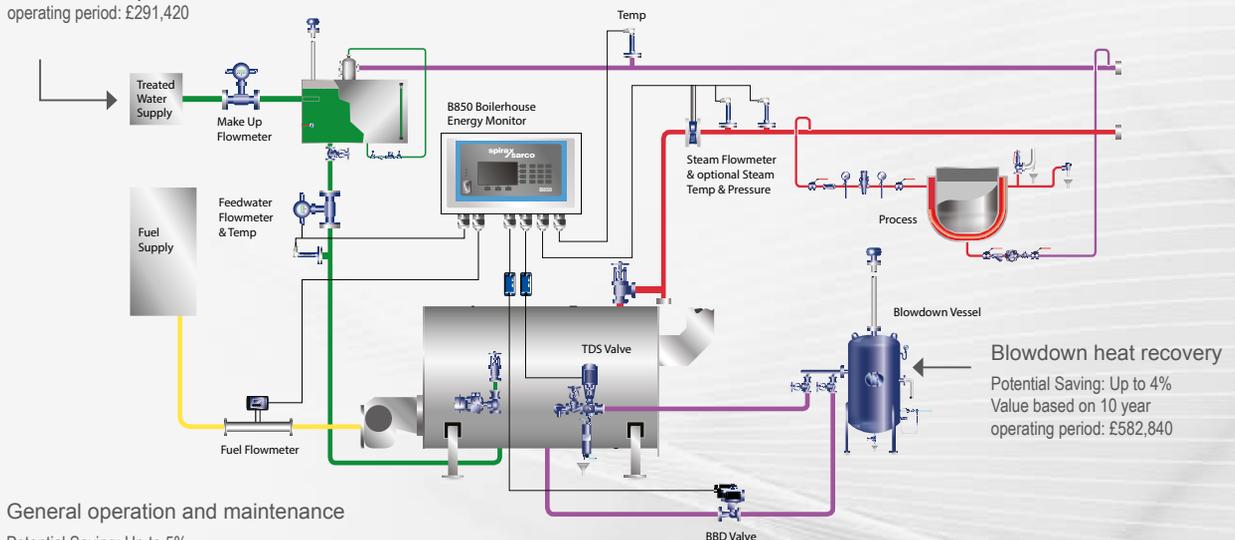
Over a typical 10 year operating period of a boiler, a misunderstanding of boiler efficiency can accumulate to represent over £2.5 million of missed potential savings.

	Assumed	Actual	Difference
Boiler Energy Efficiency:	85%	70%	-15%
Cost per hour:	£200	£242.85	£42.85
Cost per year:	£1,200,00	£1,457,100	£257,100

Calculations based on 10 tonne boiler, operating at 10 bar g, feedwater at 80°C, operating for 6000 hours per year, Natural Gas at £3.79/kWh (based on average Gas price in 2013 according to International Energy Agency publication representing 29 member states).

The B850 helps Boilerhouse Managers to see the overall performance of their boiler plant and target areas for appropriate improvements, examples of which are shown below. Users accurately monitor efficiency improvements to monitor and maximise any return on investment.

Potential Saving: Up to 2%  
Value based on 10 year operating period: £291,420



Blowdown heat recovery  
Potential Saving: Up to 4%  
Value based on 10 year operating period: £582,840

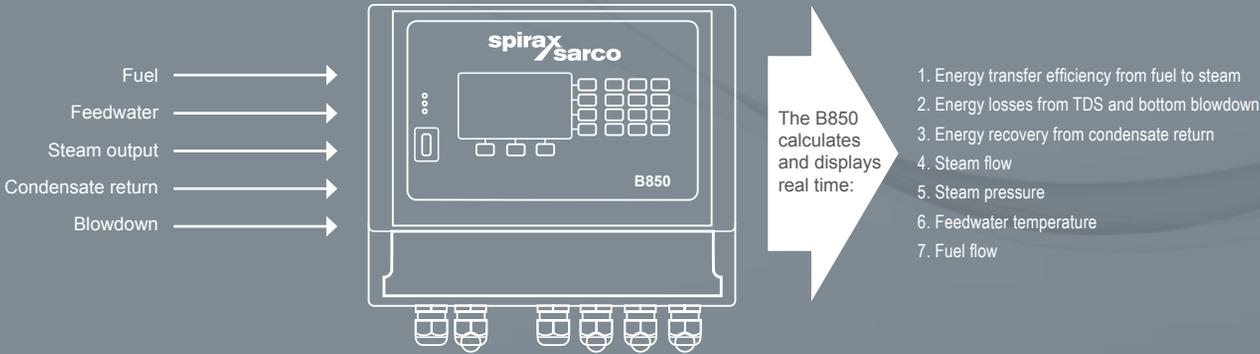
**General operation and maintenance**

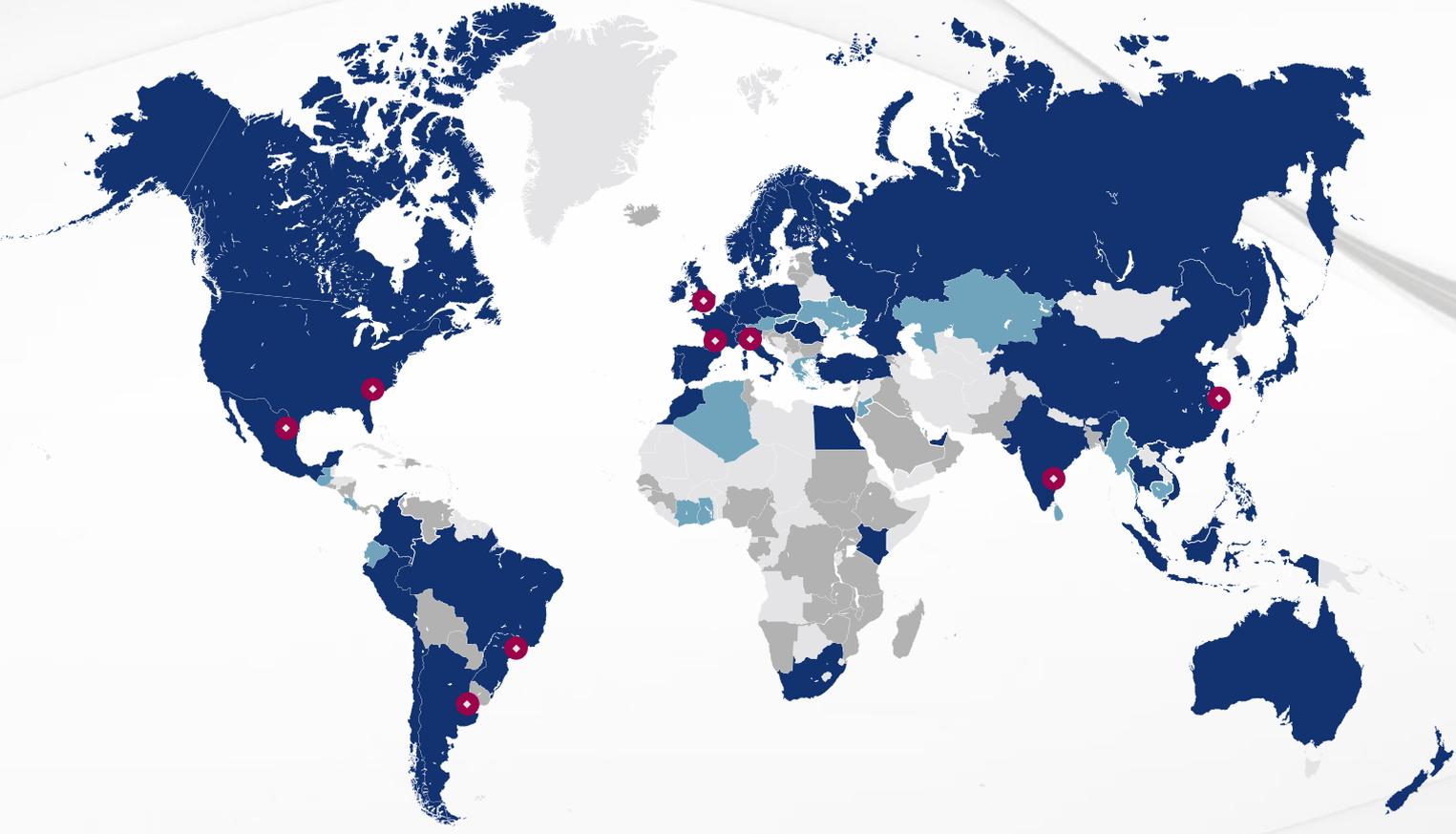
Potential Saving: Up to 5%  
Value based on 10 year operating period: £728,550

# The technical section

The B850 is compatible with our range of industry leading flowmeters

Options	Wall mounted	Panel mounted
<b>Communications protocols</b>	EIA485 port Modbus RTU BACnet RJ45 Ethernet port for Modbus TCP/IP USB port Hosted secure HTTP web inter-face	
<b>Available inputs</b>	6 x 4-20mA 3 x Pulse 3 x RTD 4 wire (3 wire compatible)	
<b>Available outputs</b>	4 x relay digital output 2 x 4-20mA	
<b>Standards</b>	Complies with EC Directives and is CE marked cULus approved	
<b>Mounting &amp; enclosure dimensions</b>	Polycarbonate H216 x W260 x D125mm (8.5 x 10.2 x 5 in)	Lexan resin 920. H96 x W192 x D63.5 mm (3.8 x 7.5 x 2.5 in)





Operating Companies

Manufacturing Sites

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