



Expertise, Talent, **People**



The UK's **leading** industrial  
aftercare provider



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# Company Profile

**JBC is the leading industrial aftercare provider to the United Kingdom's energy market.**

Formed in 1978 by John Bashall, JBC has grown to the success it is today through working partnerships with our customers. These same values are set to continue as Jamie Bashall now takes the helm, to continue the family business and take it forward to it's next phase.

The company was initially involved in the servicing and repair of industrial burners. From this independent position the company developed a strong reputation in the steam and combustion markets, expanding the range of services to include statutory boiler inspections, repairs, pipework and turn-key installations.

This winning formula was replicated in several regional offices allowing for national coverage of mobile service engineers, boiler maintenance teams and mechanical operatives.

Our technical knowledge of the steam sector, experience in the boiler house and proven industry ability strengthens our role as the leading industrial aftercare provider in the United Kingdom.



# Burner Service & Maintenance

JBC operates a network of mobile service engineers who maintain and repair industrial burners.

Effective from regional offices serving the UK mainland, service engineers offer technical knowledge on all burner manufacturer product ranges and are trained on the latest digital combustion controls.



Our experienced engineers have combined a vast technical knowledge of the major burner manufacturer products and respond to all burner applications. Each engineer is equipped with a laptop which includes the latest digital programming and combustion software, as well as access to our own database of schematic and electrical drawings, PDF data sheets and technical manuals for burners, level controls and valves.

**“Our experienced engineers have a vast amount of technical knowledge”**



Maintenance



## Emissions Monitoring

If you operate a process which requires a Local Authority or Environment Agency Permit this will usually require some monitoring of emissions. We can carry out this monitoring and advise you on actions required for compliance with your permit.

Specializing in flue gases from boilers (gas, oil or solid fuel), we can monitor most types of emissions as part of our ongoing contract agreement and coordinate the burner engineer to assist with combustion if required.

JBC provide MCERTS trained operatives (Environment Agency Monitoring Certificate Scheme) to monitor concentrations of manual stack emissions.

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## Spares

JBC service engineers carry commonly used spares for the main burner manufacturers.

A full range of boiler spares are readily available with regional stock centres offering gauge cock and sleeve packing to blowdown valves and pressure reducing stations.

# Boiler Maintenance

JBC's boiler maintenance teams operate nationally, carrying out preparations for statutory annual insurance inspection and non-destructive test on all types of shell boiler.

Detecting potential problems before the arrival of the insurance surveyor and early rectification saves the client downtime and cost. Our teams stay on site during the insurance examination in case of any additional repairs such as a tube end cap or d-patch repair by one of our ASMEIX coded welders. On completion of successful survey we reassemble the boiler, fill with water and complete a working pressure test to satisfy the surveyor.

Our local office will often coordinate the inspection or NDT with the client and liaise with the insurance company ensuring a smooth transition of works and administration.



## Specialist services:

- Free boiler house survey
- Shell and d-patch repairs
- Boiler re-tube
- Acid de-scale
- Refractory and brickwork repair and replacement
- Valve overhaul, testing and certification
- Spares and stock items





# Dedicated 24/7 emergency support

## Guaranteed 4hr response

JBC operates a fully comprehensive breakdown service for our valued contract clients. Engineers are on standby 24/7, 365 days a year via a manned call centre.

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## Reporting

On completion of a service visit, the service engineer supplies a report to include:

- Dynamic risk assessment
- Summary of work carried out
- Faults, leaks or damage found
- Setting of safety interlocks and control equipment
- Combustion data
- Emissions data

The engineer will offer ongoing continual assessment of plant as part of a detailed engineers report. Included in the ongoing service support, JBC will evaluate and recommend upgrade packages to support the life of the boiler and ancillary equipment.

# Service Maintenance Agreement

Supporting all types of boiler combustion equipment and ancillary plant, our focus is preventative maintenance and the efficient and reliable operation of a boiler through its life cycle.

Concentrating entirely on servicing clients needs, JBC provide a varied scale of contract maintenance specific to customer requirements. Such contracts range from one burner service per year, to daily boiler house checks and full product support over a five year fixed contract period.

Minimising the likelihood of breakdown and costly disruption to production by pinpointing potential component failure, we provide a cost effective reliable service to clients conscious of expensive outages and production losses by incorporating statutory annual inspection and non destructive test with the burner maintenance programme.



## Benefits:

- Programme of work to suit the client
- Contract client priority status
- Beneficial labour rates
- Technical support



**Expertise, Talent, People**







**Our people are at the heart  
of everything we do**



**Energy**





# Energy

JBC can reduce energy consumption and offer advice on energy efficiency upgrades for existing boilers and ancillary equipment. The reality is that there are no 'gimmicky', 'magical' or 'magnetic' solutions and results do not appear overnight.

What we offer our customers is proven, using tested methods of reducing consumption of fuel which over a period of time will provide excellent payback periods and considerable savings on the annual fuel bill, not to mention a reduced carbon footprint.

“Proved & tested  
methods of reducing  
CO<sub>2</sub>, energy and cost”



# Case study

Our client benefitted from the following energy savings by installing:

|   |           |
|---|-----------|
| <b>Retrofit digital combustion controls</b> | <b>5%</b> |
| <b>Variable speed drive to FD fan</b>       | <b>2%</b> |
| <b>Flue gas economiser</b>                  | <b>5%</b> |

Minor alterations were also made to the hotwell and condensate return. Some steam traps were replaced to assist in a further saving of 1%.

|                          |                   |
|--------------------------|-------------------|
| <b>Total saving</b>      | <b>13%</b>        |
| <b>Annual cost saved</b> | <b>£43,500</b>    |
| <b>CO2 saved (pa)</b>    | <b>537 Tonnes</b> |

Modifications to the boiler house can be substantial when the payback justifies the means: several areas can achieve realistic savings.



## Energy services

- Enhanced retrofit digital combustion controls
- Replacement digital burner technology
- Oxygen trim system
- Variable speed drive to fan applications
- Flue gas economiser
- Hotwell and deaerator upgrade and replacement
- Condensate heat recovery
- Steam trap survey
- Automatic blowdown
- Boiler sequencing
- Insulation
- Planned preventative maintenance

# Energy Efficiency

## Flue Gas Economiser

The hotter the water, the less fuel energy is required. Economisers transfer waste heat from the boiler flue gases into the incoming feedwater from the hotwell. Any water not going to the boiler is transferred back to the hotwell making it possible to shut off the hotwell steam heating and make additional savings between 5% - 8%.

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## Hotwell

The hotter the water the better, but pump cavitation can be a problem at higher temperatures. The hotwell mixes returning hot condensate with cold 'make up' water and steam injectors raise the temperature. Hotwells are individually designed, manufactured and installed.

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## Condensate Heat Recovery

Temperature and condensate returning back to the hotwell cause vibration and excessive flash steam emitting from the vent as pressure in the system collapses when the water boils. It is possible to transfer heat from the hot condensate into incoming feedwater in a process similar to flue gas economisers.

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## Steam Traps

Checking steam traps make operations more efficient. Leaking traps waste energy making the hotwell vibrate and jammed traps effect production.

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## Oxygen trim systems

An add on to the digital combustion controller, where a probe is installed in the flue exit, constantly sampling the gases for optimum oxygen content and 'trims' the air setting to ensure the burner fires at optimum efficiency. Additional savings of up to 2%.

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## Metering

Installation of fuel metering will give accurate forecasts of future savings.

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## Insulation

Fully insulated, heated vessels and pipework prevent heat loss.





## Variable Speed Drive (VSD)

A VSD fitted to the forced draught (FD) fan motor on a burner compliments digital combustion by enabling the turndown of the burner to **increase from 4-1 for a mechanical system to 8-1 with an electronically system.**

This allows the burner to fire on very low settings and eliminate stopping and starting during periods of low steam consumption. **Additional electrical savings of 50%** from a 20% turndown from VSD **and up to a further 6% on fuel.**

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## Ecosafe Digital Combustion Controls

Combustion components of a burner such as fuel, air and primary air are driven by individual actuators, allowing optimal combustion to be maintained with the minimal amount of fuel required.



- Reduce both your costs and emissions.
- Specifically designed for boiler retrofit applications as part of your burner control system.
- Improve the efficiency and productivity of your existing boiler without the need for new boiler investment.
- **Return on investment in 12 to 18 months max.**
- Free combustion energy audit – ‘let us show you how much you can save’.
- Full training and ongoing support.
- Eliminates existing hysteresis associated with mechanical systems.
- Improved efficiency by 1% on tighter fuel air ratio control and 67% increased turndown dependent on the load.
- Less breakdowns to save you downtime.
- Reduced maintenance costs.
- CO2 emission reduction of 1-2%
- Oxygen emission reduction of 1-2%

Mechanical



# Mechanical Services

**JBC projects provide a wide range of mechanical services, offering a wealth of experience and knowledge particularly to the industrial markets.**

Our team specialises in providing the highest levels of service for clients wishing to install a boiler plant, be it steam, hot water, thermal fluid or waste heat as part of a combined heat and power scheme.

Structured to senior management level and incorporating procedures for the review and monitoring of a project, we allow the client to realise timescale and monitor costs during the life of the project.

Performance is achieved by multi-disciplined managers responsible for each stage of the project from initial specification to implementation and final handover.

We program works through phases using design and consultation, pre-manufacture, installation and erection, commission and final handover.

We assure an effective and professional management service, ensuring that deadlines and budgets are met.



# Management

JBC's project team offers experienced and flexible managers to undertake contracts varying across a range of sectors

We have a wealth of experience in project management which includes the installation of all types of boiler plant and systems for leading blue chip clients in the public and private sector. Management work in partnership with the client and offer a fully resourced service with site offices and workshops equipped with the latest certified plant.



## Project delivery

Our team has a track record of over thirty years aligned with the energy and mechanical sectors. Providing a complete service as well as being able to offer a full fabrication and installation facility, we maintain an innovative, professional and flexible approach to the management of construction projects.



### Services to the mechanical sector:

- Installation and site management
- CDM project management
- Term maintenance contracts
- Reactive repairs & maintenance

**“We work in partnership with the client and offer a fully resourced service”**



# Pipework & Welding

**JBC provide in house capability and offsite fabrication and installation service for a variety of materials such as stainless steel, carbon steel, polypropylene socket and fusion, ABS & PVC.**

A full radiology service, cleaning, galvanising, painting and insulation service is offered as part of the project. We can provide guidance on material specifications and advice on design, supports and the implications and management of PED.

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## **Capabilities:**

- Welding BSEN27 (2004), 288 (1992), ASMEIX
- Welding services to class 1 and 3rd party approved in TIG, MIG, MMA, MGA
- Mild steel and stainless all grades, plastic and aluminium
- MPI, NDT, X-ray and dye-penetration
- Plant erection and installation
- Tanks, hotwells and deareators
- Skid design for chilled water, glycol, LTHW, assembly and testing

# Pre-fabrication

Our purpose built facility in Leeds allows us to pre-manufacture pipework or steel to the desired format.

In addition to general fabrication and pipework pre-manufacture, JBC is versatile enough to accommodate the manufacture of skid mounted plant and equipment, meeting our clients exact specifications. We have separate work areas for stainless and carbon pre-manufacture ensuring cross contamination is avoided.

At full capacity JBC can utilise thirty twin welding and fabrication bays, plus lay-down and prep areas allowing for stringent quality control.



JBC projects offers a full in-house capability to produce detailed CAD design. If P&ID is required a proven quality system controlling the workflow from P&ID to isometric drawing to (pre)fabrication and site install is utilised.

## Features:

- 17,000 square foot segregated workshop area
- 15 tonne overhead crane
- MIG, TIG, MMA, MGA welding
- Profiling and bending

## General fabrication:

- Pressurisation units
- Containerised boiler
- Structural work and stanchion





# Health & Safety

Our commitment to health and safety is part of our overall commitment as the leading independent service provider in the UK. The safety and well being of employees and those who work with us, is fundamental to the success of our business.

We are committed to health and safety and the strengthening of our workplace practices. Our safety performance is significantly better than the industry average.

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Our business operates an online health and safety management system controlling all aspects of safety management from consultation and policy review to specifying PPE and COSHH assessment.

Our structure makes use of CMIOSH consultants, NEBOSH certificated managers and IOSH managing safely qualified staff. Supporting our commitment levels further, our operational staff undertake dynamic risk assessments prior to every task.

JBC are accredited to OHAS:18001 which requires a high level of monitoring and regular audits identifying possible areas of improvement. JBC are proud to be meeting our safety key performance indicators and will continue to invest ensuring that the highest standards are both achieved and maintained.

# Training

We employ time served apprentice trained craftsman, allowing us to perform a range of multi- discipline mechanical engineering services. JBC continually invest in an ongoing programme ensuring staff are fully trained and safe.

## Operative training matrix: Health & safety

Dynamic risk assessment  
CCNSG safety passport  
Asbestos awareness  
IOSH Managing safely

Working safely

Confined space  
Manual handling  
Working at height  
Emergency first aid  
CSCS skills card  
PASMA mobile scaffold tower

Gas Safe – natural gas qualifications

### **TPCP1A**

Test and purge of downstream pipework

### **ICAE1LS**

Installation of commercial 1st fix appliance

### **ICPN1LS**

Installation of commercial 1st fix pipework

### **COCNPI1LS**

Core commercial

### **CBHP1**

Compressors and boosters

### **CIGA1**

Commission and repair indirect fired appliances



Investment in apprentices has proved successful

## Quality assurance

JBC are accredited to ISO9001: 2008 which is the internationally recognised Quality Management Standard.

The comprehensive inclusion of quality procedures and work instructions to meet the standard is managed on a continually improving basis.

As a result, our organisation is well managed, knows where it is going and has a plan to get there, meaning we are far more likely to succeed.

Training

# STEAM BOILER TRAINING

As an approved BOAS training provider with CEA accreditation, JBC provide workshop based training courses, as well as bespoke on-site boiler operator and management training to suit your boiler operation and staff needs.

## JBC Boiler Training Courses

### **Boiler Operative Accreditation Scheme (BOAS)**

This course is run over a five-day period, where candidates can achieve a level of competency required in the BG01 guidelines as an appropriate industry standard for those responsible for the operation and ownership of a steam raising plant. On completion of the course, candidates will receive either a certificate 'IBO' for operators or 'Dip.BOM' for managers.



### **Boiler Operative Accreditation Scheme Refresher Course**

To maintain your CEA accreditation, you are required to undergo both a refresher and re-assessment every five years.

### **Boiler Operative Safety & Health (BOSH)**

This course is run over one day and is site based. It is an introduction to risk assessment, identification of risks and hazards and finding an appropriate control hierarchy.

### **Safe Operation & Boiler Awareness (SOBA)**

This course is run over one day and is site based. It will give you a basic knowledge required by operators in order to qualify for the BOAS standard as mentioned in BG01.

### **Maintenance & Operation of Boiler (MOB)**

This course is run over two days and is site based. This is an intensive course, designed to provide boiler operators, maintenance staff, plant technicians and boiler engineers a thorough grounding in the everyday operation and maintenance of boilers, burners and boiler plant equipment. The course content also covers relevant Health & Safety issues, fault identification and emergency situations.

For more information, email, [enquiries@jbcboilertraining.co.uk](mailto:enquiries@jbcboilertraining.co.uk)



# Sustainability

JBC invests in the future of the industry and the skilled personnel operating in it. We have specific individual training matrices for existing employees and an apprentice recruitment programme funded exclusively by the company.

Apprentices either train to become pipefitter welders or combustion service engineers over a designated period of time and undertake professional qualifications whilst learning vital job skills.

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## Environment

JBC operates a policy ensuring that strict operational procedures are identified to give proper regard to the conservation of the environment. In implementing the policy, JBC fully recognise the importance of complying with local legislation and promote the appropriate measures to safeguard the environment at all times.

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## Corporate responsibility

JBC has taken a number of steps to ensure that the effect our business has on the environment is kept to a minimum.

We also consider economic factors, procurement hierarchy, employee welfare, customer needs and the community as part of our social corporate responsibilities.

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## Industry sectors

JBC operate in the following sectors:

- Food & drink
- Healthcare (public & private)
- Power generation
- Coal and nuclear
- Pharmaceutical
- Manufacturing
- Oil & gas
- Petrochemical
- Waste and water
- Paper and pulp
- Motor





# The Future

**The future of JBC is looking exciting as services continue to expand across the UK and into new regions.**

This expansion is down to the reputation of JBC and demand for expertise in a market where the breakdown of a boiler and problems at the plant can be detrimental to a customers business.

We have recently opened a branch in Birmingham which is already proving popular and extremely beneficial for customers requiring emergency call out around the Midlands area. This is the first new branch opened this year and we anticipate more to follow.

## Investing in Technology

Investing in energy saving technology and fuel efficiency continues to be at the forefront of our agenda, saving our customers thousands of pounds every year and considerably reducing the amount of CO2 generated.

JBC also have plans to launch new and innovative technology later this year that will revolutionise the boiler industry and set the standards for others to follow.



## JBC Branches

### Leeds (Head Office)

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Leeds LS27 0SW

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### Birmingham

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### Cramlington

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### Hull

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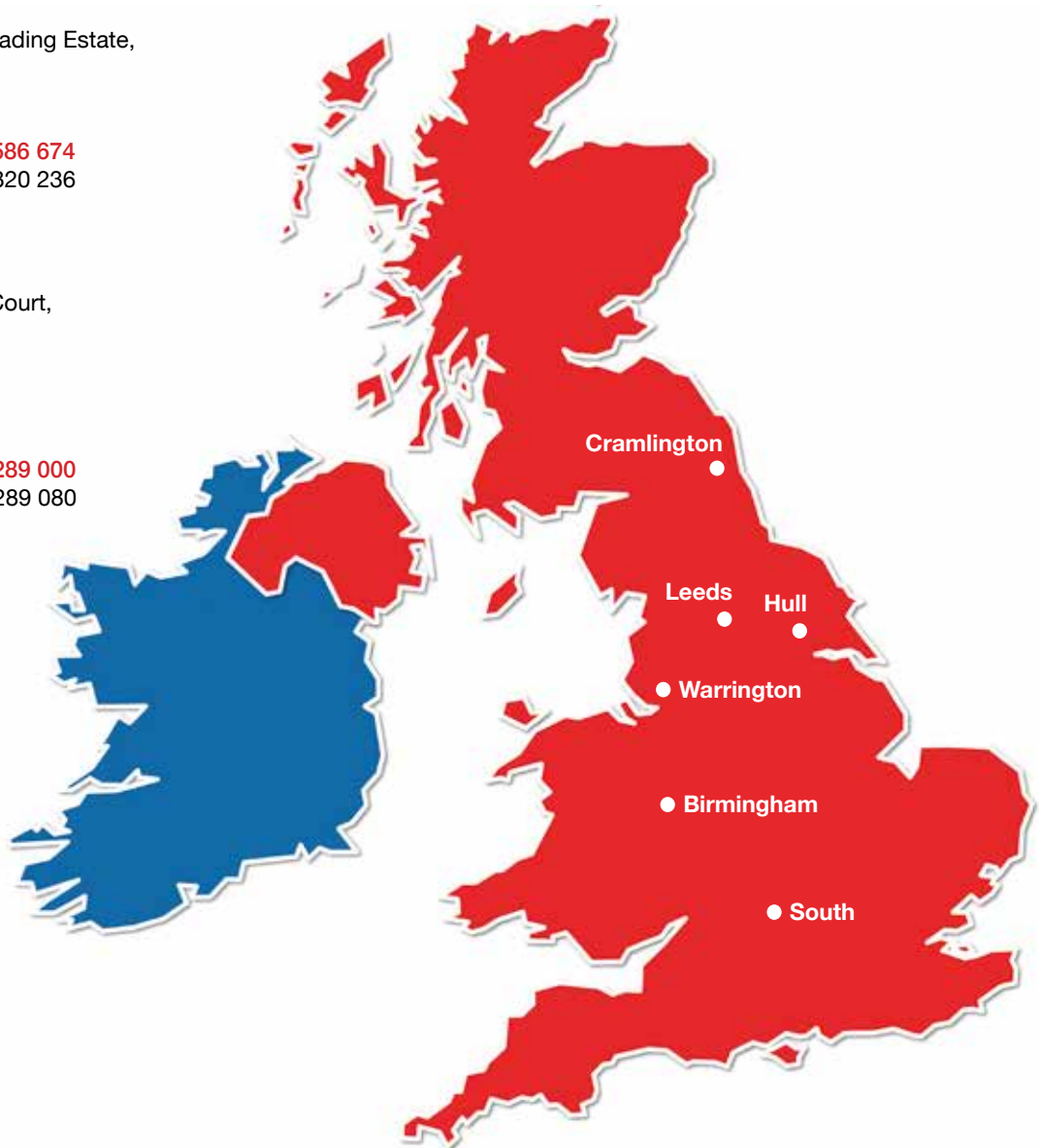
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## Accreditation







# Working in **Partnership**

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