

COMPANY
PROFILE
2025

COMBUSTION TECHNOLOGY

OUR MISSION:

To provide World-Class
Environmentally Friendly
Solutions to meet Combustion
and Heating Challenges

www.combustiontechnology.co.za



Market Leader in Oil, Gas Burner and Boiler Installations, Sales and Service throughout Africa

OVER THIRTY EIGHT YEARS OF EXPERIENCE, THIS FAMILY RUN BUSINESS IS THE LEADER IN PROFESSIONAL CRAFTSMANSHIP AND INNOVATION

We pride ourselves in guaranteeing the delivery of modern, proven and highly efficient solutions to the industry. As the Exclusive distributors for **Autoflame Combustion Management Systems, Limpfield Burners, Riello Burners, Unical Boilers, I.VAR Industry Boilers** and **Cannon Bono Energia Industrial Boilers**, we ensure a professional standard of product delivery - from pre-sales energy analysis and installations to after-sales service and spare parts support.

With offices in Cape Town and Johannesburg and an extensive dealer network throughout South Africa, we are well-positioned to service our large customer base, with projects spanning across Africa and the Indian Ocean Islands.

We have proudly supplied some of our clients exclusively for over 38 years. Our world-renowned products and superior technical expertise are the foundation of our rapid and consistent growth.

No matter how big or small the task, we are committed to providing outstanding service - wherever and whenever you need it.



LEADERSHIP FOR THE BOILER INDUSTRY

American Boiler Manufacturers Association



Southern African Gas Association

Safety Isn't Negotiable



Professional Craftmanship and Innovation Drive our Expertise

EXCLUSIVE WORLD RENOWNED BRANDS



Autoflame Engineering provides the widest range of Complete Burner and Boiler Controls, Sensors and Remote Management Tools for a wide variety of commercial, industrial and process applications.

- Digital Combustion controls suitable for all makes of Boilers and Burners.
- Emissions Monitoring and Management Equipment.



Cannon Bono Energia offer Design and Manufacturing of Large Industrial Boilers for standard and special applications

- Fire Tube Boilers.
- Water Tube Boilers.
- Superheated Water Boilers.
- Diathermic Oil Heaters.
- High Temperature Oil Heaters.



I.V.A.R. Industry produces quality Boilers and Steam Generators of various outputs and construction as well as custom-made on request.

- Steam Boilers.
- Hot Water Boilers.
- Thermal Oil Boilers.



Limpsfield high performance, Industrial Burners. Limpsfield is the only Burner Manufacturer who guarantees O2 levels of sub 3% and CO less than 10ppm across the entire Burner firing range.

Designed to maximise efficiency and reduce fuel usage and your carbon footprint.

Savings of 8-12% with a Money Back Guarantee!



We are the exclusive distributor of **Riello**, the world's largest Burner Manufacturer, for over 38 years. We offer a full range of Burners, suitable for the most popular fuels.

- Oil Burners (Light & Heavy Oil).
- Gas Burners (Natural Gas & LPG).
- Dual Fuel.
- Low NOx.
- Biomass Burners.
- Hydrogen Burners.



Unical produces a wide range of Boilers for the industrial, professional and domestic industries.

- Hot Water Boilers.
- Steam Boilers.
- Thermal Oil Burners.
- Steam Boiler Accessories.

Coal-to Gas Conversions

PROVEN EXCELLENCE FOR LARGE SCALE COAL-TO-GAS CONVERSIONS FOR A CLEANER, MORE EFFICIENT AND ENVIRONMENTALLY FRIENDLY BOILER PLANT

Many boiler plants with coal-fired equipment that have reached a retired state, are being repurposed or re-fueled. Re-purposing aging coal plants to run on natural gas is increasingly considered to move to reduce emissions, cut costs and move to a cleaner energy future.

The falling price of natural gas has played a large role in this trend.

We have managed countless coal-to-gas conversion projects over the last 38 years and are well experienced to provide working solutions for your boiler plant and energy issues.



PROJECT MANAGEMENT LEAVE IT TO THE EXPERTS!

Our Process:

- Equipment evaluation
- Energy / Emissions audits
- System design
- Boiler and Burner replacement
- Control retrofits
- Set Timeframes
- Project management
- Training
- Evaluation and measurement

Benefits of a Coal-to-Gas conversion by Combustion Technology:

- SAVE on Operating costs.
- REDUCE fuel consumption and emissions by 8 – 12%.
- GUARANTEED Oxygen levels of sub 3% on Natural Gas throughout the FULL burner firing range with a Money Back Guarantee.
- 24/7 Boiler Management Service.
- END-TO-END design and construction of your conversion project.
- Operational Readiness Program to meet your Boiler Plant's demands.
- Training Program with successful Operating and Maintenance Procedures.
- Compliance with SANS329 regulations to meet safety standards.
- Legislation and Environmental Compliance.

Natural Gas

For a more cost-effective, cleaner, efficient and reliable source of steam.

Combustion Technology are partnered with leading gas suppliers throughout Africa and Mauritius.

Specialised Services, Spare Parts and Repairs

**WE OFFER VARIOUS PLANNED MAINTENANCE OPTIONS, SLA'S
AND 24/7 BOILER MANAGEMENT SERVICE**

Our Focus

- Emissions Reduction.
- Increasing Efficiency.
- Operating Costs Reduction.
- Safety.
- 8 - 12% Reduced Fuel Consumption .
- Matching Load Requirements at Peak Operation.

System Overhauls

- Equipment Evaluations.
- Free Energy / Emissions Audits.
- Project Management.
- System Design.
- Burner Replacement.
- Boiler Replacement.
- Touchscreen Control Retrofits.

General Maintenance/Service

- Installations.
- Burner Tune-ups.
- Trouble Shooting.
- Refractory Work.
- Boiler Cleans.
- Emergency Breakdown Service.
- Complete Boiler House Management.
- DA Tanks & Pumps.

Timely and regularly scheduled servicing of your equipment ensures minimum downtime.

BURNER SERVICE

The frequency of a burner service depends on factors such as the type of fuel in use, type of operations and the operating conditions.

Services include:

- Overall burner condition inspection.
- Nozzle replacement as standard.
- Listing any possible parts wear and planning for replacement.
- Full recommissioning to achieve maximum fuel efficiency.

STEAM BOILER SERVICE

Annual and 3-yearly service and statutory inspections are mandatory as stated in SANS 347. Accredited AIA inspectors, all in accordance with OHASA as per SANS 347, inspect and sign-off the equipment for operation.

HOT WATER BOILER SERVICE

Hot water boilers are subject to SANS 347 if they fall within the category requiring annual AIA inspection and certification. Hot water boilers must be maintained in a similar way as that of steam boilers.



Specialised Services, Spare Parts and Repairs for all makes of Burners

SPARE PARTS

We are official stockists of:

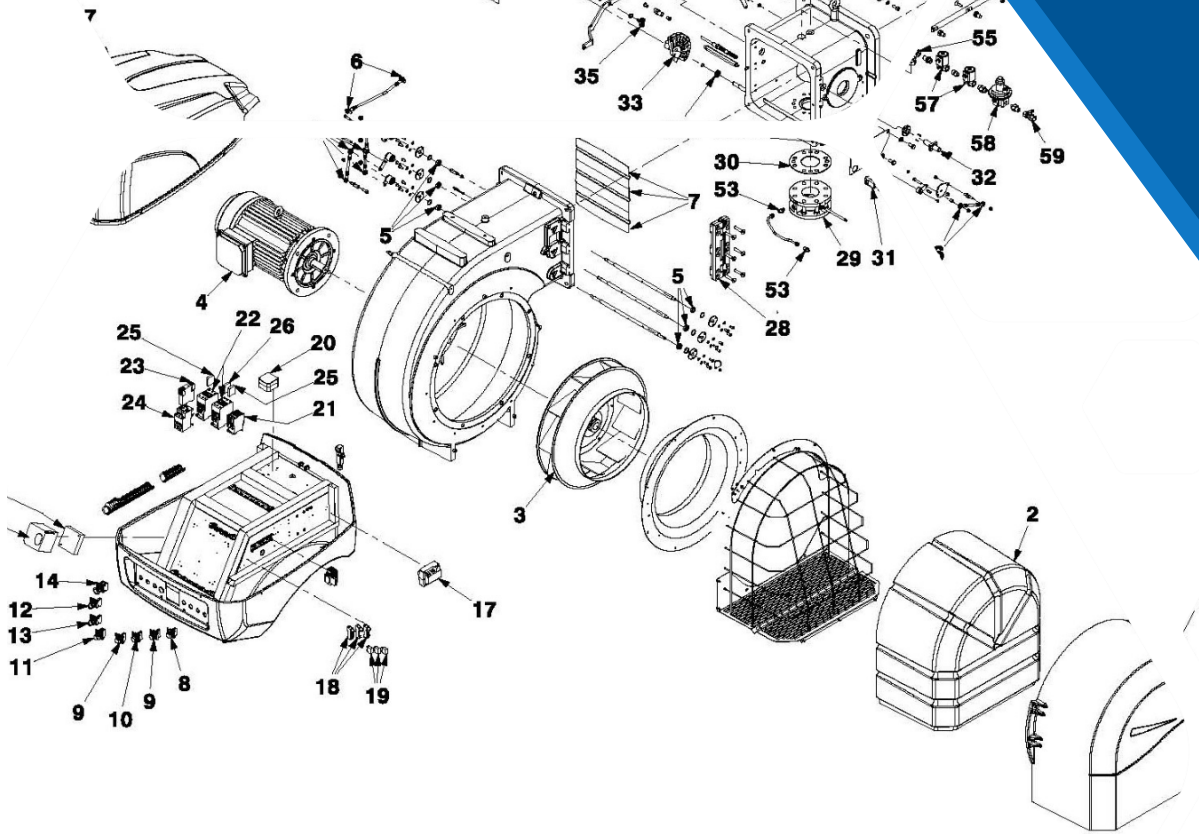
- HP Technik Pumps.
- Giuliani Anello Filters.
- Popular Nozzle brands.
- Bacharach Emissions testing.
- Suntec Pumps.
- Elbi Storage and Expansion Tanks.
- Autoflame Components.

OTHER PRODUCTS

- Cipriani stainless steel Plate Heat Exchangers.
- Diverse range of Oil or Gas Fired Air Heaters manufactured by Tecnoclima – for greenhouse heating, factory heating, drying applications, poultry farm heating.

WORLD CLASS, HIGHLY EFFICIENT, SUPPORT





WE OFFER VARIOUS PLANNED MAINTENANCE PLANS AND FIXED MAINTENANCE CONTRACTS

Service and Repair

Our carefully selected and qualified staff regularly attend training courses throughout the year, not only to upskill on the Company's primary products, but also to make themselves conversant in gas and electrical fields to enable the Company to issue CoC's on all work performed.

We not only work on Riello and Limpsfield Burners, but offer servicing, upgrades and repairs on all makes and types of burners, including rotary cup burners. Our team is competent on both steam and hot water boilers.

Our Experience and Success go back over 38 Years!

We network with the Technical Expertise of International Companies around the world!





Specialised Services

REDUCE FUEL CONSUMPTION AND EMISSIONS BY 8 - 12% WITH A MONEY BACK GUARANTEE

Fuel Efficiency Audits

Combustion Technology is committed to providing energy efficient solutions to all our customers. We respect our environment and devote our efforts in reduction of NO_x, CO and CO₂ emissions in order to safeguard our environment and comply with National and International regulations. We offer on-site Fuel Efficiency Audits to determine how well your plant is running.

A detailed report is drawn up to include recommendations for potential Energy Savings, from modern low NO_x burners to Automated Combustion Management Systems.

Our references confirm we can save you 8 – 12% off your Fuel Costs.

OPTIMISE YOUR BOILER PLANT WITH OUR ENERGY EFFICIENT SOLUTIONS



**MASSIVE
FUEL SAVINGS**



**LOWER
EMISSIONS**



**IMPROVED
EFFICIENCY**



**SAVE
MONEY**



LP BURNER RANGE

- Firing rates 0.75 MMBTU to 10 MMBTU.
- Fully modulating control system.
- Natural gas, LPG, Diesel, and dual fuel.
- Supplied fully wired for simple installation.
- Simple construction allows easy access to internal components for maintenance.
- Stainless steel diffuser and blast tube.
- Adjustable gas split to accommodate different gaseous fuels.
- Guaranteed 3% O₂ throughout the complete firing range (if we have room to add).
- Low NO_x solutions.



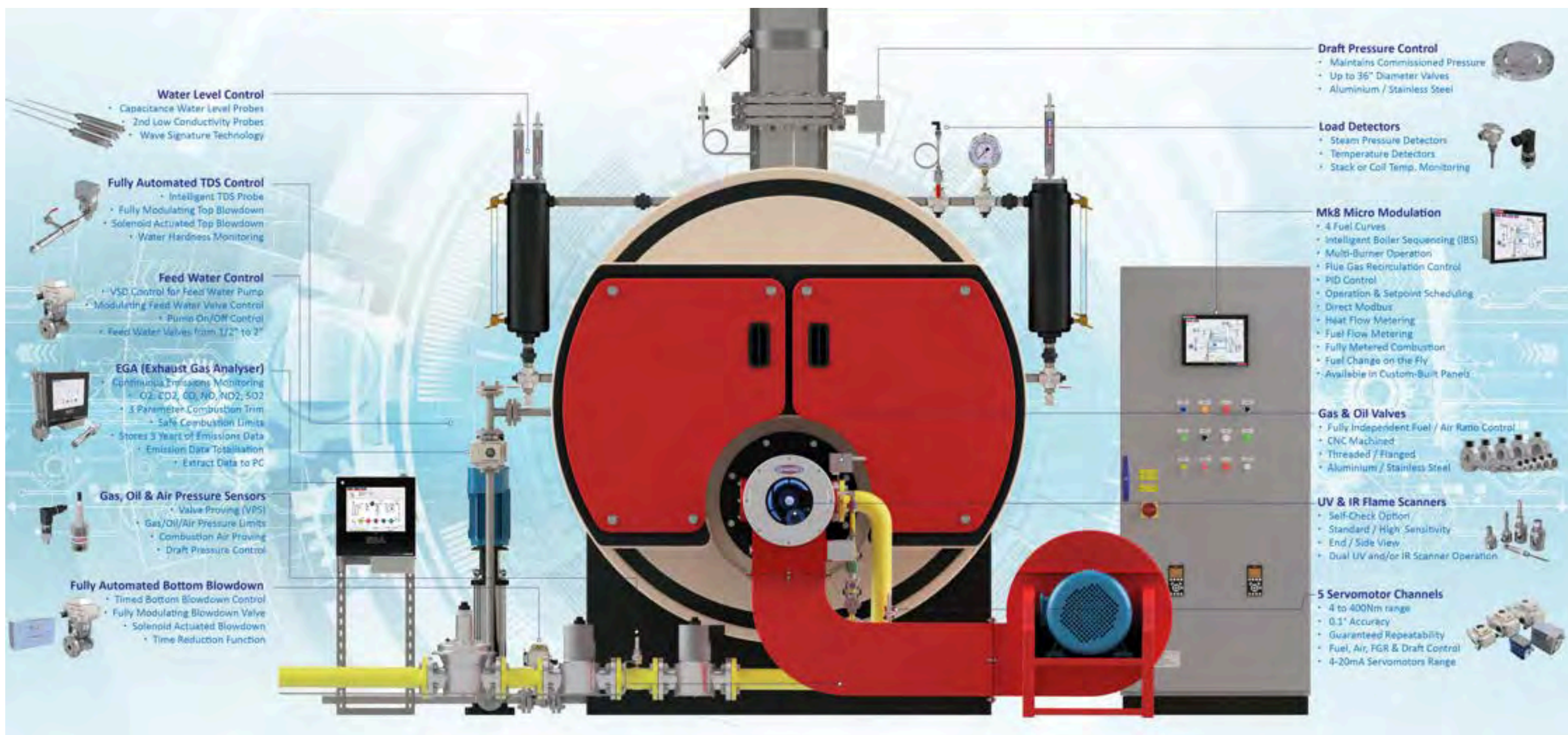
LC BURNER RANGE

- From 0.75 MMBTU to 220 MMBTU.
- Gas turndown from 6:1 up to 10:1.
- Oil turndown from 4:1 to 8:1.
- Low and ultra-low NO_x solutions.
- Fully modulating control system Various gaseous and liquid fuels Combustion air up to 482°F Guaranteed 3% O₂ throughout the complete firing range.
- Large rear flame viewing port, enabling a unique view of the combustion process.





A COMPLETE COMBUSTION MANAGEMENT SYSTEM



PRECISE AND INTELLIGENT CONTROL
GUARANTEED

THE WORLD'S FIRST AND MOST ADVANCED
COMBUSTION CONTROL SYSTEM

Boiler Management Service

INNOVATION, AUTOMATION AND CONTROL

Continuous Boiler Management 24/7

By installing Our Boiler Management System, we are able to log onto any site and monitor a Boiler running in real time.

Features such as: efficient functioning of your Boilers, fuel consumption vs steam generation, steam flow metering, fuel pressure sensor, water level control, ideal emissions (O₂, CO₂, CO) and many more are enabled and managed 24/7.

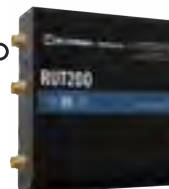
Reporting

- Diagnostics of Maintenance and performance issues on all Boilers.
- Efficiency reporting targeting Fuel Reduction.
- Expert opinion available 24/7.
- Monthly Performance Reports.
- Pre-emptive Maintenance
- Planned Maintenance
- Data History stored for 2 years.
- Alarms and lockout reviews and recommendations.



Boiler Plant

Boiler Management on Client's PC



4G LTE Router



Autoflame Boiler System Interface



Digital & Analogue Input/Output Module



**COMBUSTION
TECHNOLOGY
Control Centre**



What Our Customers Say

- ★ The overall **insights provided in the Boiler Management Report** regarding Boiler Functionality and Planned Maintenance are very useful”
Ernst Nortje – Upward Spiral, Johannesburg, SA
- ★ “The **response rate to logged calls** and support turnaround times of the Service Engineers are excellent. They display excellent **product and technical knowledge**”
Johan Hatting – Clover, Cape Town, SA
- ★ “Combustion Technology is an excellent partner and has helped us **reduce our annual fuel consumption** on our HFO fueled Boiler. Their **service levels** are top quality and I highly recommend them.”
Lawrence Lombard - MPACT Ltd, Kuilsrivier, SA
- ★ “Our business has benefited from the **monthly Boiler Management Service Reporting with key findings**. Features that stand out are water temperature alerts, burner service reminders, monitoring and reporting of all key sensor values i.e. stack temperatures and if cleaning is required.”
Antoine van Heerden – ButtaNutt, Paarl SA
- ★ “Combustion Technology’s **24/7 Boiler Management System** excellent; they are very quick to respond to **site deviations**”
Brian Richter – Johnson & Johnson, East London, SA
- ★ “I find the **Boiler Functionality and Planned Maintenance reporting** in terms of boiler and burner performance very useful”
Brian Taylor – Desert Diamond Fishing, Cape Town, SA



Specialised Services

**MOBILE BOILER SOLUTIONS FOR
EMERGENCIES
UNPLANNED MAINTENANCE
ANNUAL SHUTDOWNS**



TRY BEFORE YOU BUY OPTION AVAILABLE

****Terms and Conditions Apply**

EACH CONTAINERISED STEAM BOILER ROOM INCLUDES:

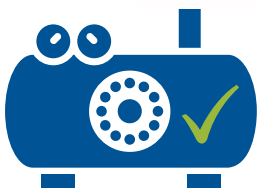


WE HAVE EVERYTHING YOU NEED TO MANAGE DOWNTIME

Is your Boiler Plant preparing for a long maintenance operation, seasonal production peak or approaching your annual inspection?

When you are looking to replace a Steam Boiler or purchase an additional Boiler, we offer to prove that our offering is far more efficient than your current Boiler setup or anything else on the market.

We will deliver our Containerised Boiler (2000kg/hr) to your site and will run our Boiler for 2-3 months prior to you making an informed decision on your next purchase. We are so confident that you will buy your next Boiler from us that we include a FREE 3 Year Service Level Agreement to Manage your Boiler 24/7.



**A COMPLETE
BOILER ROOM
SOLUTION**



**AVAILABLE ON
LOCATION 24/7**



**RAPID
INSTALLATION
BY EXPERTS**



CUSTOMISED AND FLEXIBLE BOILER RENTAL SOLUTIONS

If you are looking for new ways to manage your boiler house costs, it is time to leave it up to us.

Combustion Technology offer flexible and targeted solutions that are adaptable to emergency and unexpected situations. This Customer Focus is what sets us apart from our Competitors. We offer Boiler Rental solutions to Companies dealing with long maintenance operations or seasonal production peaks.

We offer our customers the options to outsource their steam production for short- or long-term periods on the Customer's site.

Operation and maintenance are done by our qualified team.

- Trailer-mounted up to 5 tons per hour.
- Containerised up to 2,5 tons per hour.

Why Rent a Boiler?

Speed and Supply

- No investment required, make rapid and non-binding decisions.

Energy Efficient

- Our Solutions consume 15% less fuel than any Competitor.

Transparency

- No nasty surprises, costs are certain, enable clear planning.

Prompt delivery

- Our boiler is available upon booking and ready for installation.

Guarantee

- Our boiler is certified and complies with regulations efficiency, emissions, fuel efficiency.

**We offer you a
Complete Boiler Room
in a transportable package.
Anywhere on the African continent!**



Now in Full Operation 5-ton 12 Bar Steam Boiler

Biomass Boiler Solution

**THE BEST GREEN ENERGY SOLUTION
FOR YOUR BUSINESS**

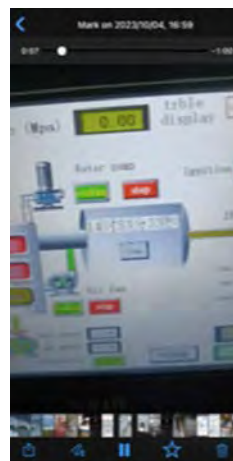


HUGE BENEFITS

- Lowest Cost to Generate Steam.
- Burns any form of Wood Waste/Fuel.
- Quick ROI.
- Up to 80% less expensive than Liquid Fuels on Energy Value.
- Best for the Environment.
- Up to 26% less expensive than COAL on Energy Value.
- HUGE Health and Environmental Benefits.

EXPERTS IN THE INDUSTRY

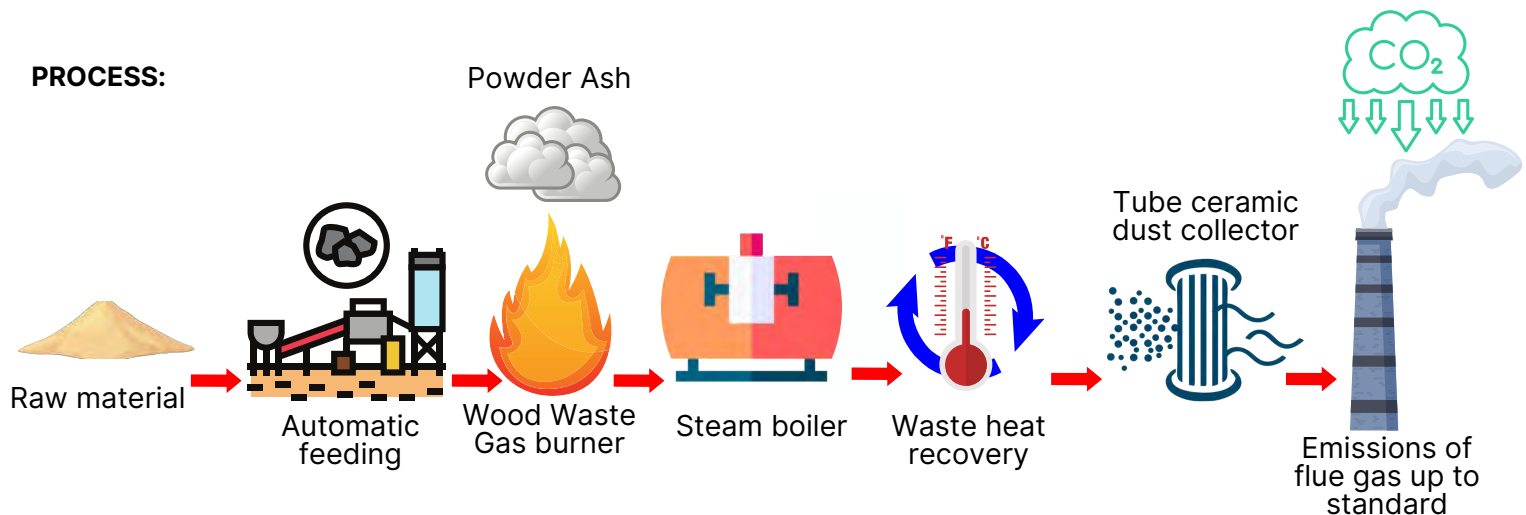
- Outright Turnkey Purchase.
- Lowered Maintenance.
- No Carcinogenic COAL ASH to deal with.
- Happy Staff.
- 24/7 Boiler House Management.
- Monthly in-depth reporting.
- No Frills Steam Supply Agreement.
- Short Term – 5 Year Contract.
- Min 5 Year Guarantee of Fuel Supply.
- Preventative Maintenance Planning.
- Pre-emptive and predictive operational planning.



BIOMASS STEAM SUPPLY



PROCESS:



ADVANTAGES

- The whole body is cast with first-grade high aluminum refractory material, the main Burner adopts 4 layers of protective measures, and the whole body is cooled by water.
- Professional refractory casting process, anchor nail reinforcement, expansion joint process.
- The top of the furnace is protected by 4 layers of American refractory material, and the top cover is water cooled and insulated.
- The Flame Nozzle is made of imported high aluminum material, resistant to scouring and high temperature.
- Outer refractory uses a water jacket protection, reducing the furnace surface temperature, while fully protecting the furnace body.
- The fuel cost of Wood Waste is 30% less than pellets.
- The main body has three layers of insulation, less heat loss, improve heat utilisation. High temperature cracking multi-stage eddy current aeration to ensure full combustion of raw materials, improves thermal efficiency.
- Suspension semi-gasification combustion, increases the contact area with oxygen, so that the fuel combustion is fully uniform, the overall thermal efficiency of up to 95%.

Boiler School, Tips & Training

**REALISE THE VALUE OF YOUR BOILER SYSTEM,
MAINTAIN IT PROPERLY AND SAVE FUTURE COSTS**

Training Courses

We offer on-site and off-site training for your employees in our Modern Mobile Boiler room.

Basic trouble shooting and problem solving is covered to empower them to better understand a boiler's operation.

We use industry best practices, available guidance documents and applicable standards and facilitation to help our customers with their unique circumstances and operation characteristics.

Certificates are issued upon completion of courses.



American Boiler Manufacturers Association



Safety Isn't Negotiable

2025 & 2026 TRAINING



INTRODUCTION TO AUTOFLAME SYSTEMS

- Boiler Operation & Maintenance with Burner Combustion.
- Fuel-Air Ratio Commissioning and Boiler Control.
- Combustion Principles and Emissions.
- Introduction to **Autoflame** and **Limpsfield**.
- Controller Overview.
- Hardware Updates.
- Software Updates.
- Previous Updates Overview.



SCAN TO BOOK/ENQUIRE



NAIROBI,
KENYA



CAPE TOWN,
SOUTH AFRICA



PORT LOUIS,
MAURITIUS

Coordination and facilitation by Experts.

Contact us to secure your 2025 /2026 Group Training in any of these cities.



Meet The Management Team



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LET'S WORK
TOGETHER



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