



PACKAGE BOILER PROFILE

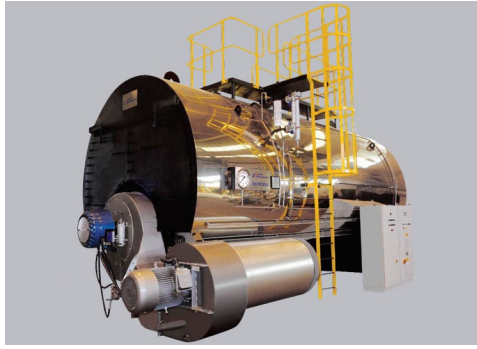


ACTOM

PACKAGE BOILERS PROFILE



EUROPAC coal - fired boiler



ENVIROPAC oil & gas fired boiler



REDIPAC oil & gas fired boiler

Package Boilers

The JOHN THOMPSON Package Boiler Business Unit is led by a dedicated team of highly experienced engineers with many years in the steam industry. The business is based on internationally competitive technology, price and delivery and is dedicated to provide the full spectrum of steam services to their customers in South Africa and many export markets, as outlined in this profile. In addition to their range of trademarked boilers JT also buy, remanufacture and sell used boilers to a standard that carries the John Thompson guarantee.

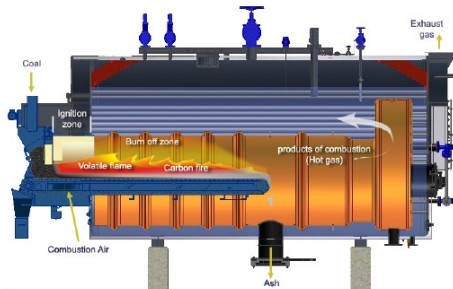
Services

- Consultation and advice
- Manufacture and sale of package boilers
- Re-manufacture and sale of used boilers
- Repair and refurbishment
- Turnkey installation
- Coal/oil conversions
- Preparation for inspections
- 24-hour spares and emergency service
- Country-wide support network
- Operator training
- Boilerplant management
- Outsourcing of steam supply
- Contract personnel for boiler operation and maintenance

New boilers

Firetube boiler designs include coal-fired boilers with chaingrate stokers, wood-fired boilers with fixed grates, oil/gas-fired boilers, as well as custom-designed waste heat boilers. All firetube boilers are designed and manufacture to latest European Standard, EN12953 for a design pressure of 1100 kPa (Designs also available up to 2 000 kPa). With the exception of the Redipac range, all boilers are of three-pass conventional firetube wetback design with spiral

tubes in both tube passes. Flanged end-plates in place of flat end-plates are features on selected boilers to eliminate tee-butt weld joints. This will reduce susceptibility to corrosion fatigue and extend boiler life. Latest spiral-tube technology is used throughout the boiler ranges. With heat transfer up to 100% greater than normal plain tubes this feature reduces gas outlet temperature to only 15 deg C above steam saturation temperature offering a thermal efficiency of 85% with NCV 26 500 kJ/kg and providing 10 kg steam per kg coal in the case of coal-fired boilers. The latest John Thompson MICROPAC energy management system to increase efficiency is a feature on coal-fired boilers reducing operating and maintenance costs significantly.



Boiler development

The development of firetube shell boilers and associated equipment is carried out at the Cape Town head office. This covers oil, gas, coal and wood-fired boilers and low and high voltage electrode boilers.

Exports

As a world-class, internationally competitive industrial boiler manufacturer in the export market JOHN THOMPSON is a major player in the globalisation of the South African industry. A network of agents and offices throughout South America, the Middle East and sub-Saharan Africa and Asia supports this export programme.

Electrode Boilers

JT electrode boilers are available from 30 kg/h to 3000 kg/h. Robust design and construction ensures long life and the total package incorporates feed water tank, controls and all necessary valves and fittings. The full range of support services includes turnkey boilerhouse supply, installation and project management, international commissioning and maintenance service and full spares availability.

Advantages of electrode boilers:

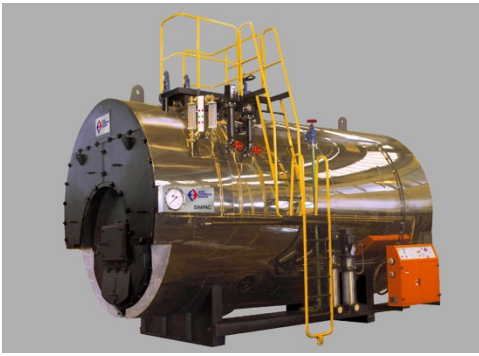
- Full steam pressure in ten minutes
- Fully automatic
- No pollution or fire risks
- No boilerhouse, chimney or fuel store required
- Quick, clean environment



Upgrades

For improved boilerplant efficiency either through increased steam output or a reduction in fuel usage, JT offers customers on-site advice and upgrading programmes. JT can install new John Thompson spiral tubes, new stokers, improved grit arresters, new fans and whatever else is required to improve boiler performance. John Thompson boilers are designed to facilitate conversions where the customer wishes to change his boilerplant fuel – to oil, gas or a mixture. Engineered solutions are offered and the necessary conversion carried out on site with minimum downtime.

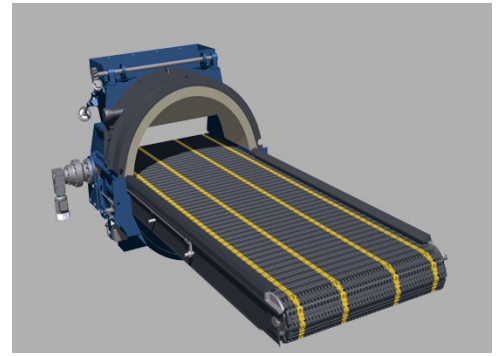
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SIMPAC wood fired boiler



ELECTROPAC electrode boiler



THOMPSONTRIUMPH chaingrate stoker

Re-manufactured boilers

The Package Boiler Business Unit purchases used John Thompson boilers from industries which are installing new boilerplant, have excess capacity or are closing down. As the original equipment manufacturer, John Thompson then carries out a full engineering programme on the used boilers which allows for replacement of all combustion equipment and components as well as upgrading where the latest technologies can be utilised. Original drawings and certificates are held at Bellville for all boilers manufactured by John Thompson, ensuring that on completion of remanufacturing the boiler is as good as new. On this basis John Thompson provides its standard guarantee.

Stringent quality control under the ISO 9001 quality management system ensures that a John Thompson remanufactured boiler will provide many more years of safe, reliable operation.



Metallurgical services

Extensive facilities are available for metallurgical evaluation of materials and failure analysis for both in-plant and on-site investigations. The facilities, directed by a staff metallurgist, range from hardness inspections and thickness checks to detailed metallographic examination using replication techniques. Replication techniques involve on-site non-destructive examination of metal structures and are indispensable tools in the life assessment of equipment and subsequent decisions on extending that life.

Materials testing facilities at the Bellville Works enable detailed failure analysis to be carried out using the latest laboratory techniques, which can pin-point micro defects in materials which cannot otherwise be detected.



Sale of Steam

As South Africa's top steam professionals JT offers customers the ultimate option in outsourcing: "You run your core business – we will supply the steam". The cost-efficient supply of steam can be applied to existing or new boilerplant through a choice of contract options, such as:

- The supply of steam on a rands per ton basis using the customer-owned boilerhouse, where John Thompson assumes full responsibility for the purchase of material, management and the supply of steam.
- The supply of steam on a rands per ton basis using a new financed boilerhouse with full John Thompson responsibility for plant erection and operation.
- The supply of competent boiler operators.
- The supply of competent boiler operators and maintenance personnel.

The sale of steam service also offers steam utilisation surveys and feasibility studies.

Training

The Boiler Development & Training Centre at the Bellville Works provides the skills required for the efficient operation of modern boilerplant. The following courses are available:

- A two-week training course for boiler attendants, boilerhouse supervisors and stand-by or emergency personnel
- A one-week course for boilerhouse supervisors, fitters, electricians and instrument mechanics, maintenance supervisors and engineers
- A four-day inspection course for maintenance engineers, maintenance foremen or experienced boilerhouse fitters
- A refresher course combining the elements of either two or three of the courses
- An on-site course for customers who want specific training on their own plant.

