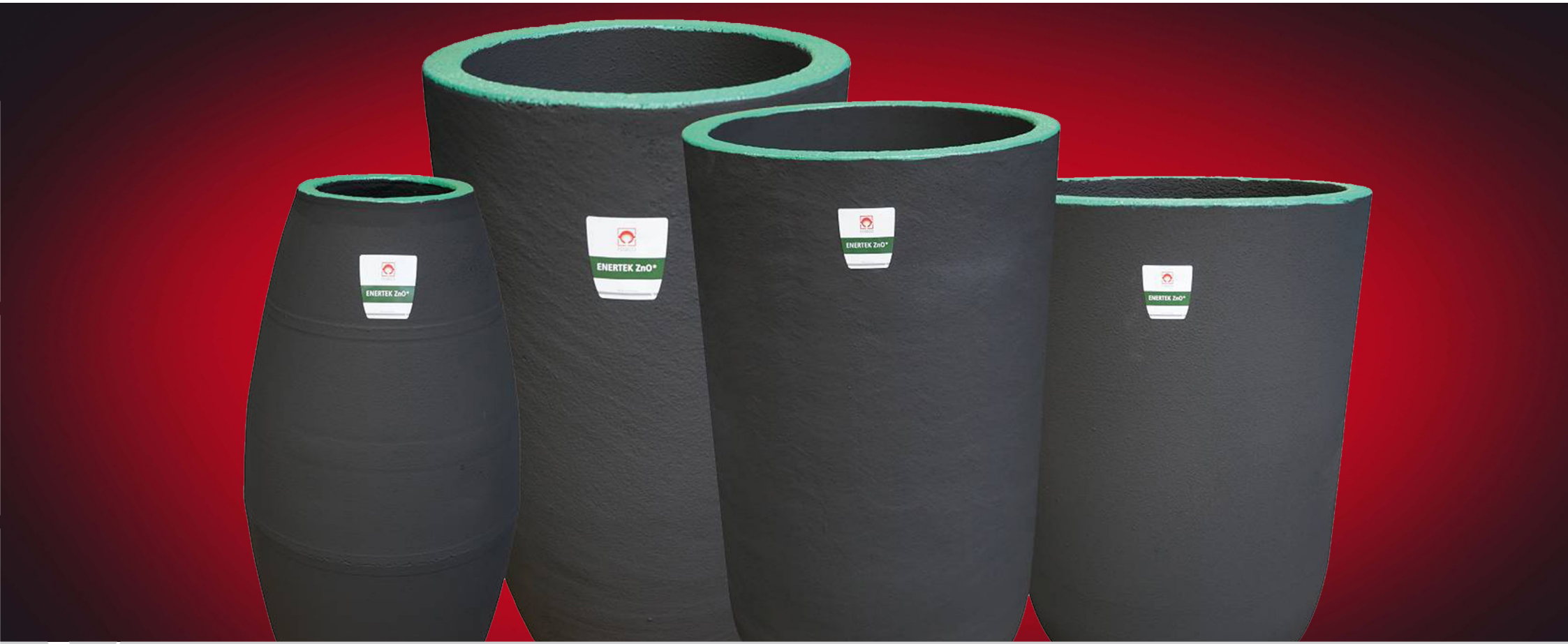


ENERTEK* ZnO

PREMIUM CRUCIBLES AND RETORTS FOR NON-FERROUS APPLICATIONS

+ Improved productivity
+ Reduced energy consumption
+ Lower manufacturing costs
+ Significant carbon footprint reduction

FOSECO

ENERTEK ZnO Crucibles

For Flame Fired Furnaces used in Zinc Oxide Production

The majority of the zinc oxide manufactured in the world is via the indirect or French process where metallic zinc is melted in a crucible or retort and vaporised at temperatures around 1000 °C, at which point the zinc vapour reacts with oxygen in the air to form zinc oxide.

In this process, energy consumption and production rate both have a major impact on operational profitability and can be influenced by the producer themselves. The associated production of greenhouse gases during the process is also an extremely important concern for industry today and will increase in importance in the future.

By increasing the thermal conductivity of the crucible or retort, it is possible to both reduce energy consumption and increase productivity. ENERTEK ZnO crucibles have been developed to meet these customer requirements.

Performance compared to the existing crucible practice will vary according to the quality and application concerned but savings of more than 30% have already been measured in the field.

The value to the operation of these reductions in energy consumption will again vary in line with local energy costs, but for typical flame fired furnace applications, significant savings are achievable, far greater than the original cost of the crucible itself.

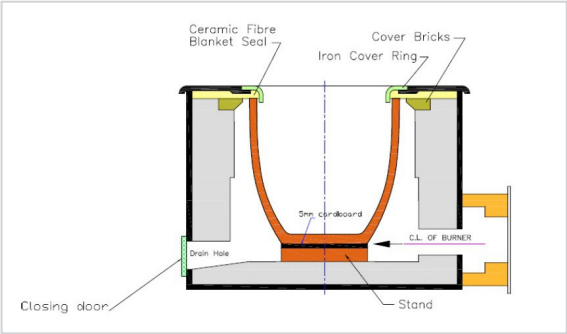
ENERTEK ZnO crucibles are available in most standard shapes and capacities and can be fitted to the majority of crucible furnaces without any changes to current practice. ENERTEK ZnO crucibles are suited to both zinc oxide and zinc dust production applications.

High temperature alloy melting in flame fired furnaces

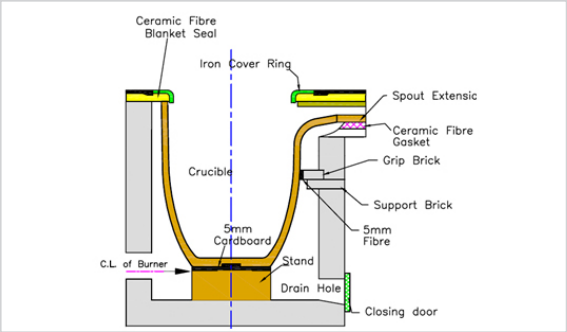
Significant heat loss can occur during melting at the elevated temperatures involved with alloys such as zinc.

ENERTEK ZnO crucibles can significantly reduce energy costs and melting times in both tilting and static furnaces due to higher thermal efficiency.

Static Furnace

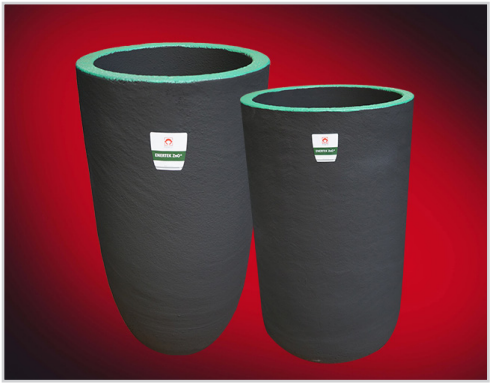


Tiltable Furnace



KEY BENEFITS

+ High thermal conductivity
+ Ideally suited for the French Process
+ Faster production cycle and improved metal yield
+ Significant reduction in energy usage
+ Fast melting and heat transfer
+ Reduced emissions and CO2 generation
+ Potential savings in excess of the initial crucible cost.



Quality is assured

Higher quality and lower costs

Application advice

Our technical experts have many years of experience in the application of crucibles and refractory products across a broad spectrum of metallurgical industries and are on hand to assist you with:

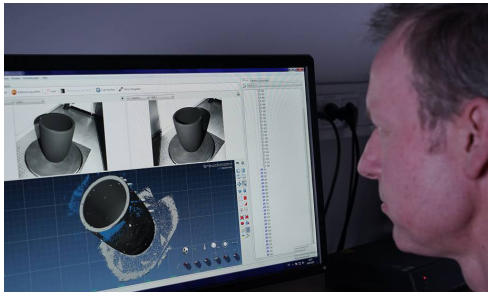
+ the selection of the most appropriate crucible products; design of metal transfer refractory components
+ the application of suitable components to optimise your melt quality and transport
+ optimising heat transfer and thermal conductivity characteristics to improve productivity and reduce costs

Quality and consistency

Accredited quality assurance systems ensure optimal testing of finished crucibles, and provides a framework for continual improvement and further process optimisation.

Research and development

Dedicated R&D teams located in development centres across the world strive to constantly improve the performance of all Foseco crucibles, by developing new and novel recipes. optimising design and improving manufacturing processes.



Latest 3D scanning system

Quality testing in our R&D crucible lab

Understanding our customer needs

FOSECO

COMMITTED TO FOUNDRIES

Foseco International Limited
Drayton Manor Business Park,
Tamworth, Staffordshire,
England B78 3TL
Phone: +44 1827 262021
Fax: +44 1827 283725
www.foseco.com
Please contact your local Foseco team

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