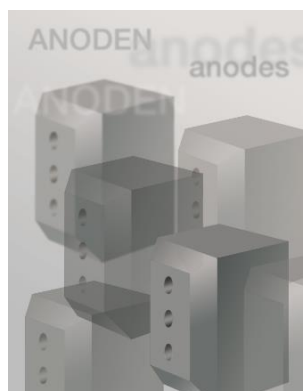


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# CARBON BAKING TECHNOLOGY



**RING PIT FURNACE – CLOSED TYPE  
FOR BAKING OF**



**RIEDHAMMER**  
CARBON BAKING TECHNOLOGY

## COMPANY PROFILE

In 1924 Ludwig Riedhammer decided to start his own company for the development and construction of industrial furnaces for manufactured carbon. The furnaces were soon accepted throughout the world, and were the basis for the success of the company.



First Riedhammer Baking Furnace

Nowadays Riedhammer GmbH (RH), located in Nuremberg Germany, is the leading manufacturer of industrial kiln plants worldwide and offers innovative technologies for Advanced Materials, besides its traditional business areas like ceramics and sanitary ware.

For the Carbon Industry, Riedhammer is presently the only independent supplier worldwide being able to deliver complete solutions and its proven furnace technologies for baking anodes, cathodes and electrodes, supplemented with solutions specifically tailored for the production of special carbon products.

More than 90 years of experience and know-how guarantee a high economic efficiency and reliability of the plants.

Riedhammer provides various solutions from revamping up to new turn-key plants based on the most advanced technology and proven reliability. Tradition and experience are conjoining here as best with state of the art development, engineering, construction and commissioning to a new generation of furnaces including all required auxiliary equipment.



Riedhammer main office in Nuremberg

A worldwide net of representatives guarantees a most effective customer service and professional support whenever and wherever required.

Engineers and technicians of the Riedhammer team are trained to optimize projects progresses in the sense of the client. That results in minimized project run-times, minimized costs and maximized return on investment.



Closed Type Carbon Baking Furnace

## FURNACE DESCRIPTION

The Riedhammer Closed Type Ring Pit Furnace is used for baking high-quality electrodes, cathodes and other amorphous materials. The Closed Type furnace is characterized by the following special features:

- Installation as a new plant or possibility of retrofitting/modernizing existing furnaces
- Proven refractory design with minimum number of different brick shapes
- Compliance with the strictest environmental standards
- High performance: benchmarking productivity figures
- Robust refractory design: extended lifetime and low maintenance
- Excellent baking profile controllability and temperature homogeneity ensuring outstanding final product quality
- Reference in the industry for low CAPEX and OPEX

## ADVANTAGES

Our advanced furnace design offers the following advantages:

- Proven refractory design
- Extended brickwork lifetime
- Low fuel consumption
- Flexible design
- RH lifetime maintenance concept
- Low operation costs

## PROJECT EXECUTION

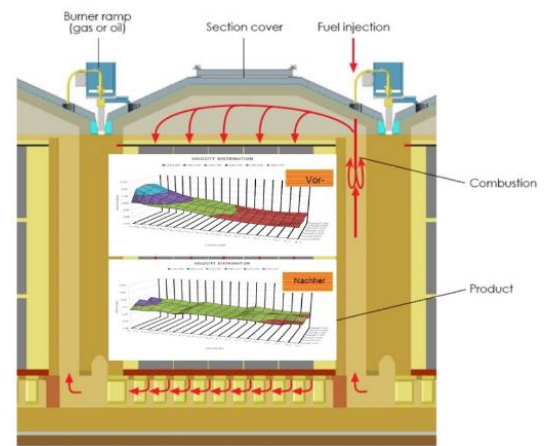
From the supply of engineering packages up to the execution of "turnkey" projects worldwide:

- Design & Engineering
- Procurement & supply
- Quality control (QA/QC)
- Project administration
- HSE management
- Construction services and job site management
- Start-up & commissioning

## ENGINEERING & SERVICES

Our team of specialists provides you with the most suitable technical and economical solutions for specific requirements such as:

- Customized solutions for the industry worldwide
- Conceptual analysis and feasibility studies
- Retrofit and modernization of existing plants
- Design and engineering of baking furnaces and baking facilities
- Supply of complete baking facilities including equipment
- CFD Modelling



## TEMPERATURE PROFILE IN THE SECTIONS

- Excellent temperature distribution
- Reduced consumption figures
- Optimized temperature profiles
- Maximum burnout of volatile matter – reduced level of emissions
- High operative safety aspects

## TECHNICAL SERVICE & SUPPORT

Our after-sales service network provides support for existing equipment and processes, and keeps customers informed about recent developments and improvements.

- After-sales service and customer support
- Optimization of baking processes
- Plant audits
- Furnace inspections
- Maintenance strategies
- Operation & maintenance training

## FURNACE CHARACTERISTICS

Number of fire groups	1-4	nos.
Sections per fire	14-24	nos.
Pits per section	4-8	nos.
Fuel consumption	< 3,0	GJ/tbp
Packing material consumption	40	kg/tbp
Refractory & insulation material (maintenance figures in the first 10 years)	5-6	kg/tbp
Fluewall lifetime	> 250	cycles
Substructure lifetime	> 350	cycles

## REFERENCES – Ring Pit Furnace Closed Type

During the last 10 years the Ring Pit Furnace Closed Type technology has been further developed by Riedhammer and has become a very successful product in the market.

Project	Location	Year	Type	Product	Sections
HEG Ltd	India	2003	New construction	Electrodes	24
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CVG - Venalum	Venezuela	2003	Revamping	Anodes	32
Graphite India Ltd.	India	2003	New construction	Electrodes	24
CVG - Venalum	Venezuela	2004	Revamping	Anodes	48
Graphite India Ltd.	India	2004	New construction	Electrodes	16
OAO Ukrainskij Grafit	Ukraine	2005	New construction	Electrodes	34
Valesul Alumínio S.A.	Brazil	2006	Modernization	Anodes	48
Graphite India Ltd.	India	2006	New construction	Electrodes	24
PT Indonesia Asahan Aluminium	Indonesia	2007	Modernization	Anodes	30
SEC Corporation/MKK	Japan	2007	New construction	Electrodes/SC	22
Nippon Carbon Co. Ltd./MKK	Japan	2008	New construction	Electrodes/SC	26
PT Indonesia Asahan Aluminium	Indonesia	2008	Modernization	Anodes	30
SGL - Carbon	Malaysia	2008	New construction	Cathodes	22
SEC Corporation/MKK	Japan	2009	New construction	Cathodes/SC	22
HEG Ltd.	India	2010	Modernization	Electrodes	24
Inalum	Indonesia	2012	Revamping	Anodes	16
Showa Denko/MKK	Japan	2013	New construction	Electrodes	24
UNDISCLOSED	India	2014	New construction	Electrodes	24
Inalum	Indonesia	2016	Revamping	Anodes	30

## CONTACT

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