



**Thin Film Materials  
Rapid Hot Pressing Services  
R&D Solutions**



SOLUTION PROVIDER IN POWDER TECHNOLOGY AND HOT PRESSING





## RHP-Technology GmbH & Co. KG

solution provider in powder technology and hot pressing

### Thin Film Materials

Sputtering Targets & Targets on demand

We offer customized target materials tailored to your specific needs. our production facilities allow short lead times for small and medium series, individual material compositions and special geometries.

### R&D Solutions

New Materials & Technology development

Our team has 15 years of R&D experience in powder technology and hot pressing. Using this knowledge we offer support and fast solutions for your specific problem. We are ready to challenge the toughest nuts.

### RHP Services

Rapid Hot Pressing & Material Analysis

The RHP technology-center is well equipped with various hot pressing technologies, sintering and sinter HIP furnaces as well as for material characterization, powder treatment, machining, EDM cutting and thermal annealing.

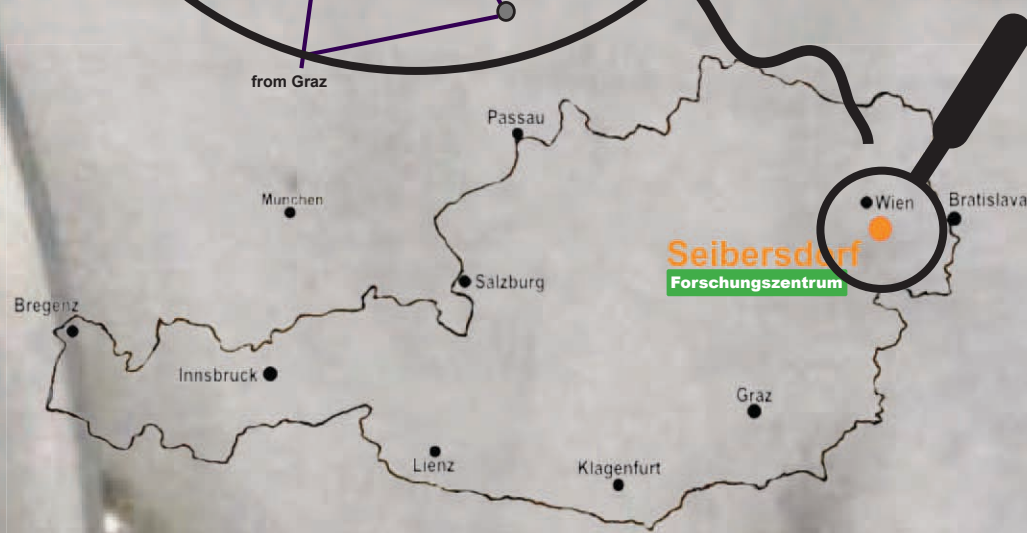
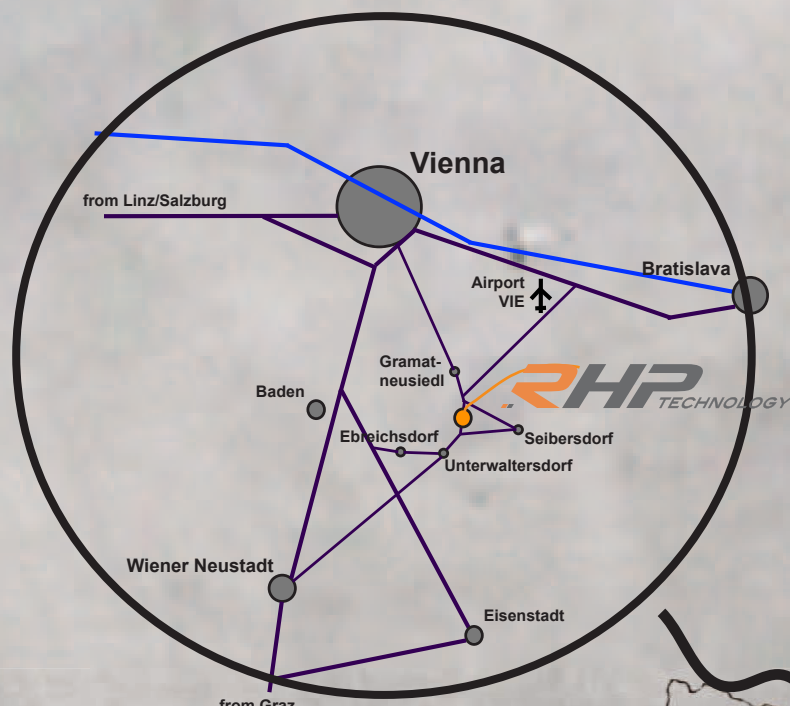
## 15 years of experience in powder technology

In 1996 the first conventional hot press and sintering furnaces were installed at the Austrian Research Centers in Seibersdorf. Since then our team focuses on the development of new materials and has collected extensive experience in the hot pressing technology. Tree years ago our processing capacities were extended by a rapid hot pressing machine which allows very high heating rates of typically 100-300 K/min and maximum temperatures of 2400°C.

In October 2010 our team formed a new company as a spin-off from the AIT Austrian Institute of Technology (former Austrian Research Center - ARC Seibersdorf)

RHP-Technology offers its know-how and manufacturing capacities to companies and partners. This includes production of innovative materials as well as technology development and transfer.

As an international demonstration centre for hot pressing technologies RHP-Technology is currently exploiting rapid single sinter pressing as an innovative future technology, also for manufacturing temperatures above 1000°C.





# Our products include

## Sputtering Targets & Targets On Demand

We offer in-house produced targets with your specific composition and geometries. The variety covers pure metals to ceramics including precious metals, oxides, nitrides, carbides, borides, sulfides, ....

## DiaCOOL Diamond Composites

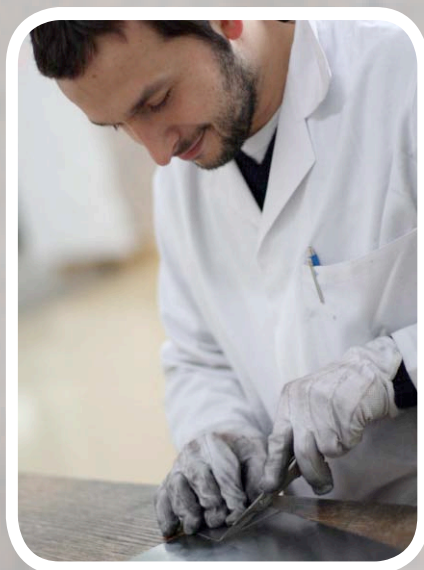
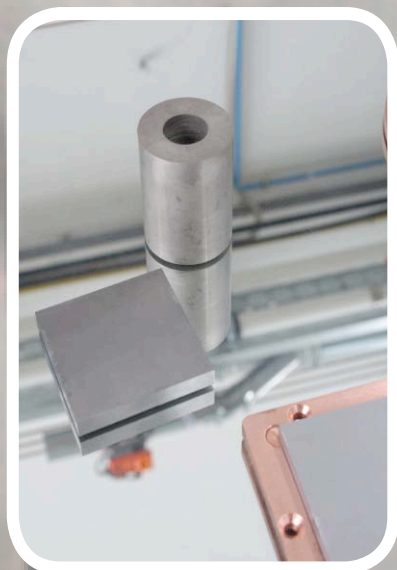
High performance cooling material (heatsink, heatspreader) with 6-8 ppm/K thermal expansion (CTE matched) and high thermal conductivity of 350-500 W/mK. Main applications are power electronics, opto electronics and laser systems.

## New Materials & Advanced Ceramics

RHP-Technology develops and produces ceramic materials for special applications. This includes ceramics like  $B_4C$ , also using special isotope powders (e.g.  $B^{10}$  and  $B^{11}$  enriched), alternative cutting materials, self lubricating composites and many others.

## R&D Services and Technology Transfer

Development of new materials  
Rapid Hot Pressing Services  
Process development and transfer  
Industrial research and feasibility studies



# Processing technologies

## Rapid Hot Pressing

direct heated: up to 400K/min and 2400°C  
conventional heated: up to 20K/min and 2200°C  
inductive heated (lab scale): up to 300K/min and 1800°C

## Sintering

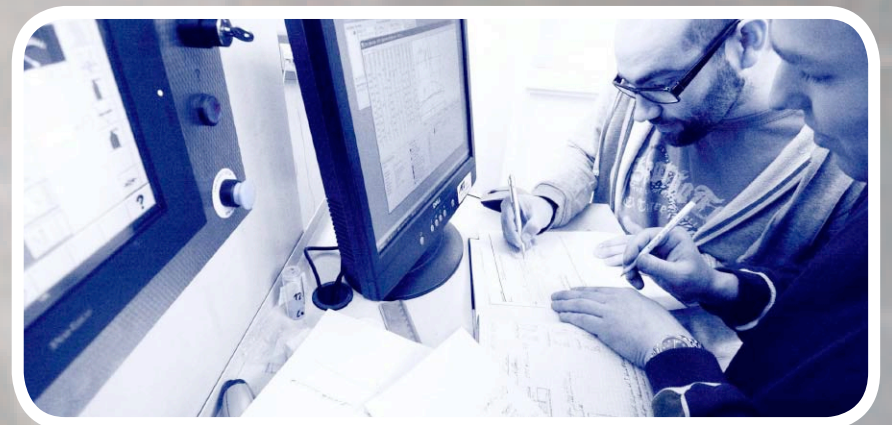
Debinding & Sintering under  $H_2$ ,  $N_2$ , Ar, high vacuum  
Sinter HIP up to 100 bar, 2200°C

## Powder treatment

Milling and Mixing devices  
Glovebox under inert atmosphere

## Finishing and Analysis

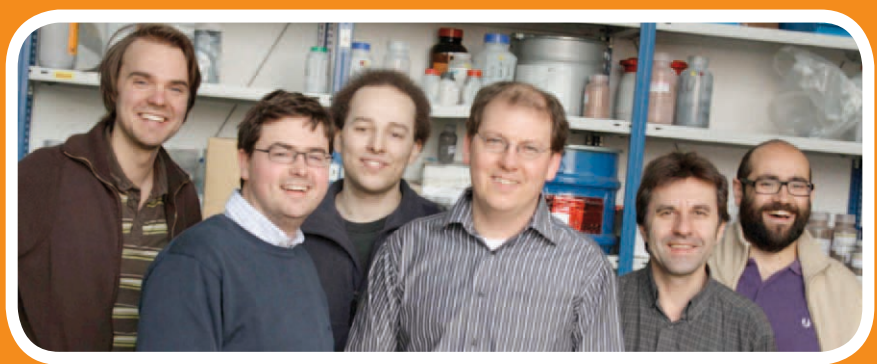
Furnaces for thermal treatments  
Sample preparation, Metallography  
Microscopy and element analysis  
Physical property analysis  
EDM machining, flat and circular grinding



dia  
cool

targets  
on demand

products by **RHP** TECHNOLOGY



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