**EBNER hotPHASE® furnaces.**

Technology for press hardening.

» Roller-hearth furnaces in various configurations.
» Multi-level batch-type furnaces for high performance in a small space.
» Fully-automatable furnaces for small-scale testing.

Perfect technology for unique solutions.

MADE BY EBNER.

www.ebner.cc
Roller-hearth furnace with gas-fired radiant tubes.

Thanks to the use of cost-effective natural gas to provide energy, the production costs for heating press hardening blanks in this furnace are kept to a minimum.

The roller rotation monitoring system allows preventative maintenance to be carried out and malfunctions to be remedied.

Double-decker roller-hearth furnace.

A compact solution. This hotPHASE® furnace has the throughput of two furnaces in half the space.

The furnace can be heated either with a gas combustion system, a hybrid gas and electric system or electric only.

The furnace is also designed for tailored tempering. Braun CarTec uses differential heating in their tailor tempering process.

Roller-hearth furnace with hybrid heating.

Hardenable steel blanks of the correct size, with thicknesses around 1.5 mm are heated in the hotPHASE® roller-hearth furnace to about 930 °C, moved out of the furnace and centered extremely quickly before being taken from the decharging roller table by a robot (or feeder), placed in the press hardening die and pressed immediately.

EBNER’s hybrid heating system keeps investment and running costs low.
EBNER hotPHASE® furnaces.

Only the most modern technology meets automotive suppliers’ high quality standards. **EBNER hotPHASE®** furnaces are efficient, precise, and durable.

Complex structural parts with a tensile strength in excess of 1500 MPa set new standards in lightweight automotive engineering and enhanced crash test performance. **EBNER hotPHASE®** press hardening furnaces offer impressive flexibility and precision in process atmosphere and temperature control, the tightest temperature tolerances within the heated blanks, highest availability thanks to rugged construction and very straightforward maintenance. Several heating systems are available: gas-fired radiant tubes, hybrid systems combining gas-fired radiant tubes and electric heating elements, and 100% electric heating systems with or without radiant tubes and elements. We can help our customers choose the most economical heating system for their facility.

Multi-level batch-type furnace.

The biggest advantage of multi-level furnaces is their compact size. Strong blank supports without hearth rollers allow galvanized blanks to be processed, too. Uncoated blanks cannot be heat treated in process atmosphere using this type of furnace.

The furnace is also designed for tailored tempering, which is achieved by means of differential cooling.

Multi-level batch-type furnace for tailored tempering.

**EBNER advantages.**

» SISIC radiant tube heating above and below the rollers for uniform temperature distribution to the blanks.

» Long service life without bearing cooling system.

» Double roller seal for a low workload space dewpoint.

» Blank handling system with simple, quick settings to precisely position the blanks, ensuring flexible, trouble-free operation.

» Fully-automatic valve stand.

» COS and analyzers supervise the furnace atmosphere, guaranteeing the highest level of safety and best quality.

» Dewpoint control system ensures constant dewpoint and optimizes consumption data.

» Tailored tempering mode available since 2010 for coated and uncoated blanks.
EBNER hotPHASE® FURNACES.

EBNER hotPHASE® furnaces are modular and can be expanded at any time. The modules for gas, hybrid or electric heating systems are identical for higher flexibility. We have the right furnace size for your application!

Standard sizes.

<table>
<thead>
<tr>
<th></th>
<th>RO 190</th>
<th>10</th>
<th>1528</th>
</tr>
</thead>
<tbody>
<tr>
<td>roller-hearth furnace</td>
<td>clear inside width (cm)</td>
<td>clear inside height (cm)</td>
<td>heated length (cm)</td>
</tr>
<tr>
<td>RO 190/10/1528</td>
<td>RO 190/10/2292</td>
<td>RO 190/10/3056</td>
<td>RO 190/10/3820</td>
</tr>
<tr>
<td>RO 250/10/1528</td>
<td>RO 250/10/2292</td>
<td>RO 250/10/3056</td>
<td>RO 250/10/3820</td>
</tr>
</tbody>
</table>

Custom lengths and widths are also available upon request!

EBNER. Perfect technology.

» Modern furnace and automation technology.
» Simple, robust components.
» Modular design.
» Highest production throughputs.
» Best availability.
» Flexible solutions.
» Everything from one source.
» Continued product development.
» Global presence and support.
» Best total cost of ownership.

Have we sparked your interest?

EBNER AUSTRIA
EBNER Industriefenbau GmbH
Ebner-Platz 1
4060 Leonding
AUSTRIA
Tel: (+43) 732 6868 0
Fax: (+43) 732 6868 1000
sales@ebner.cc

EBNER USA
EBNER Furnaces, Inc.
224 Quadral Drive
Wadsworth, Ohio 44281
USA
Tel: (+1) 330 335 1600
Fax: (+1) 330 335 1605
sales@ebnerfurnaces.com

EBNER CHINA
EBNER Industrial Furnaces (Taicang) Co., Ltd.
Beijing East Road 82
215400 Taicang, Jiangsu
CHINA
Tel: (+86) 512 5357 6868
Fax: (+86) 512 5357 6867
sales@ebner.cn

EBNER INDIA
EBNER India Pvt. Ltd.
A/310-311 Dynasty Business Park,
J B Nagar, Andheri-Kurla Road,
Andheri East, Mumbai - 400059
INDIA
Tel: (+91) 22 6139 3333
Fax: (+91) 22 6139 3311
office-ei@ebner.cc

Please contact us at one of our addresses.

We look forward to hearing from you!

EBNER hotPHASE®

Perfect technology for unique solutions.
MADE BY EBNER.
www.ebner.cc