High-Quality Tool Steel
Made in Germany
We Are Driven by Precision and Perfectionism

Saarschmiede GmbH Freiformschmiede is specialized on the manufacture of high-quality forgings of various dimensions. We take a leading position in the field of forging technology and are one of the world’s top suppliers of power generation machinery, special alloys, general machinery and tool steel.

**PRODUCTION FACILITIES**
- 2 forging presses up to 120 MN
- One of the world’s largest electro-slag remelting facilities (ESR)
- Various annealing facilities
- Extensive machinery – for workpieces up to a maximum of 330,693 lbs. finished weight and 85.3 ft. in length

**SERVICES / PRODUCTS**
- Tailored solutions following customer requests
- Specialized expertise
- Competent technical advice
- Cutting of material with bandsawing machines (cutting range of max. Ø 129.9 in.)

Multiblocks are a special product of our company. These are hot-work steels, made by the ESR-route, with large cross-sections offering identical property values of the highest level in all directions (isotropy). These permit production of desired square or flat dimensions through saw cutting as needed.

Our specialty: Multiblocks in large dimensions up to 62.9 in. x 23.6 in. x 196.8 in.
Our Facilities Are a Guarantee for State-of-the-Art Technology
Our Daily Routine: Melting and Forging

Saarschmiede has the complete production line at its disposal – from melting, forging and heat treatment through to machining on CNC-controlled equipment. We thus have the ideal basis for controlled and reproducible quality, starting from the raw material and ending with the finished product.

The broad range of facilities and the processing techniques for producing various steel grades are outstanding. Additionally, we are constantly investing in our facilities, guaranteeing our customers state-of-the-art technology. VIM, VAR and ESR qualities as well as triple melting qualities form the basis of our cutting edge materials.

Our Melting Facilities

**ELECTRO-SLAG REMELTING FACILITIES (ESR)**
- Ingot format sliding crucible
  - max. ø 94.5 in.
  - min. ø 39.3 in.
- Ingot format stationary crucible
  - max. ø 51.2 in.
  - min. sq. 13.8 in.
- Ingot weight
  - max. 485,017 lbs.
- Year of construction / modernization
  - 2010

**ELECTRIC ARC FURNACE (EAF)**
- Primary extraction
  - approx. 3,531,466.7 ft³/h
- Secondary extraction
  - approx. 2,118,880 ft³/h
- Ingot weight max.
  - 507,063 lbs.

**VACUUM INDUCTION FURNACE (VIM)**
- Tap weight
  - 17,637 lbs. or 35,274 lbs. (2 crucibles)
- Melting performance
  - max. 3,000 kWh
- Pressure
  - <0.000725 psi
- Year of construction
  - 2001

**VACUUM ARC REMELTING FURNACES (VAR)**
- VL 2
  - max. ø 23.6 in.
  - Remelting weight
  - max. 12,125 lbs.
  - Year of construction
  - 1992
  - Modernization of the steering
  - 2009
- VL 3
  - max. ø 50.2 in.
  - Remelting weight
  - max. 66,139 lbs.
  - Year of construction
  - 2008
Our Tool Steel Grades Will Meet Your Requirements

<table>
<thead>
<tr>
<th>GRADE</th>
<th>NO. (AISI)</th>
<th>SHORT NAME</th>
<th>C</th>
<th>SI</th>
<th>MN</th>
<th>CR</th>
<th>MO</th>
<th>NI</th>
<th>V</th>
<th>CU</th>
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<tbody>
<tr>
<td>Collex</td>
<td>1.2083 (420)</td>
<td>X40Cr14</td>
<td>0.40</td>
<td>0.40</td>
<td>0.35</td>
<td>13.00</td>
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<td>Collex HQ</td>
<td>1.2083 ESR (420)</td>
<td>X40Cr14</td>
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<td>0.35</td>
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<td>0.35</td>
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<tr>
<td>BP 42 Sonder</td>
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<td>X33CrS16</td>
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<td>0.30</td>
<td>16.00</td>
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<tr>
<td>BP 42 Sonder HQ</td>
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<td>MFR</td>
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Further steel grades available on request

**DIMENSIONS**

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<tr>
<th>FLAT BARS</th>
<th>ROUND BARS</th>
<th>SQUARE BARS</th>
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<tbody>
<tr>
<td>Width from approx. 23.6 in. up to 137.8 in.</td>
<td>Ø from approx. 23.6 in. up to 59 in.</td>
<td>From approx. 19.7 in. up to 59 in.</td>
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<tr>
<td>Thickness from approx. 7.9 in. up to 59 in.</td>
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<tr>
<td>(Ratio width : thickness = max. 10 : 1)</td>
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</tr>
</tbody>
</table>

Further dimensions available on request
For more than 100 years Saarschmiede GmbH Freiformschmiede has been successfully meeting demanding challenges associated with high-quality forgings for various applications. Our technical expertise enables us to manufacture innovative products economically and conserve resources.

In order to constantly improve its processes and products Saarschmiede introduced a quality management system early on, which has gradually been supplemented by a safety management as well as an environmental and energy management system.

Our current integrated management system (IMS) is certified by independent external bodies, which regularly review and confirm our compliance with the standards ISO 9001, ISO 14001 and ISO 50001. Furthermore, there are customer and industry-specific approvals, confirming the conformity of our IMS with the relevant requirements.

You cannot find your line of business or industry sector in this brochure?
Your applications are not shown?
You have some questions or would like to discuss your requirements with us?

You can obtain further information at www.saarschmiede.com

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