

A large military tank is shown in a factory setting, with its turret and main gun barrel visible. The tank is positioned in the foreground, and the background features a complex industrial structure with steel beams and scaffolding. The lighting is dramatic, with bright spots and shadows, suggesting an indoor industrial environment.

Your mission  
deserves a  
**reliable** supply

Precision in steel,  
aluminum, and titanium

# More than materials - it's about **operational readiness**

Your individual protection requirements are our focus. We provide you with access to a mill-independent selection of high-quality safety materials from leading manufacturers. In addition, you benefit from a comprehensive processing portfolio that provides you with assembly components - precisely tailored to your specifications. This allows you to save valuable time, reduce complexity in your processes, and increase your process reliability.



## Approved for the highest protection requirements

Kloeckner Metals Germany and Ambo Stahl are approved for armor materials in accordance with TL 2350-0000 and also meet the requirements of TL 2350-0003 for their qualified processing. Welding work is carried out by appropriately certified partner companies.

Our production sites are certified for laser, plasma, and waterjet cutting, fulfilling all Bundeswehr requirements for protective materials. For you, this translates into: utmost process reliability, assured quality, and a trusted partner in defense projects.

## Sheet metal processing technology

### Flatbed laser system

for cutting and engraving metals

- Up to 30 kW laser power
- Material thickness: Steel up to 50 mm, stainless steel up to 50 mm
- Sheet sizes up to 2,500 x 6,000 mm
- German BW-TL approval for cutting ballistic materials

### Waterjet system

- Material thickness: Steel up to 150 mm, stainless steel up to 150 mm
- Sheet sizes up to 2,500 x 8,000 mm
- Bevel cutting
- German BW-TL approval for cutting ballistic materials

### Plasma cutting systems

- Plasma cutting & Plasma marking
- Material thickness 3 - 40 mm
- Cutting table 3,100 x 24,000 mm
- German BW-TL approval for cutting ballistic materials



### Robotic cutting systems

Production of all types of bevel and weld seam preparations

### Deslagging and deburring system

- Material thickness 0,8 - 80 mm
- Pass-through width 1,300 mm
- Double-sided processing

### Processing robot

- Descaling
- Deburring and grinding
- Edge rounding
- Component weight up to 750 kg
- Component size up to 1,200 x 1,600 mm

### Bevel grinding machine

- Double-sided beveling
- Material thickness 5 - 80 mm
- Processing up to 8 m in length

### Precision straightening machine

- Material thickness up to 45 mm
- Pass-through width up to 2,000 mm
- Straightening accuracy approx. +/- 0,5 mm per meter

### Metal bending machines and press brakes

- Press force up to 4,000 kN (400 t)
- Machining length up to 4 m

## Mechanical processing

### Milling

- 3- and 5-axis machining
- Machining range up to 3,000 x 900 mm

## Manufacturing & assembly

- Manual/robotic welding in accordance with manufacturer qualification DIN 2303-Q2 and -Q3
- Mechanical and electrical assembly

## Certifications

Our sites are certified according to:

- ISO 45001:2018, ISO 9001:2015 and ISO 50001:2018
- DIN EN 1090 (coming soon)
- German BW-TL approval for laser, plasma, and waterjet cutting at two sites

## Profile laser cutting technology

Laser	
<b>Bystronic</b>	<ul style="list-style-type: none"> <li>▪ FL130 2D 2kW Fiber</li> <li>▪ FL170 3D 3kW Fiber</li> <li>▪ FL300 3D 4kW CO<sub>2</sub></li> <li>▪ FL400 3D 4kW CO<sub>2</sub></li> </ul>
<b>BLM Adige</b>	<ul style="list-style-type: none"> <li>▪ LT13 5kW Fiber</li> <li>▪ LT12 4kW CO<sub>2</sub></li> </ul>
<b>Trumpf</b>	<ul style="list-style-type: none"> <li>▪ 7000 3D 6kW Fiber</li> <li>▪ 5000 3D 4kW Fiber</li> <li>▪ 3000 2D 2kW Fiber</li> </ul>
ISO 9013-542 Tol.kl. 2	
<b>Integrated mechanical processing</b>	<ul style="list-style-type: none"> <li>▪ Thread tapping</li> <li>▪ Flow drilling</li> <li>▪ Countersinking, reaming</li> </ul>



## Applications

Our solutions deliver safety, reliability, and performance across diverse fields of use:

- **Defense & Security:** Heavy tracked and wheeled vehicles as well as armored transport and security vehicles for maximum protection.
- **Civil Mobility:** Passenger and utility vehicles for aid organizations and government agencies – robust, reliable, and mission-ready.
- **Buildings & Infrastructure:** Facades, security doors, and protective shelters for embassies, authorities, banks, industrial facilities, and private homes. Complemented by shooting ranges, bullet traps, and mobile security walls for uncompromising safety.
- **Naval Engineering:** Naval shipbuilding and submarines – precision and protection at the highest level.

## Tailored solutions for your demands

Our expert **Ambo Stahl** delivers wear-resistant, high-strength safety materials – reliable, flexible, and precisely made to measure. With our own innovative cutting technology center, certified processes, and a broad mill-independent portfolio, you benefit from maximum precision, efficiency, and a highly specialized range of services.

Whether oxy-fuel, plasma, laser or waterjet cutting, sandblasting, bending technology, machining, or innovative fiber-robot technology – you get everything from a single source. This shortens lead times, increases planning reliability, and optimizes your costs.



**No business card available?**

Contact us by email at  
[defence@kloeckner.com](mailto:defence@kloeckner.com) –  
we look forward to hearing from you!



kloeckner metals Defence

# Expertise. **Excellence.** Reliability.

Our expert team brings decades of industry experience in the world of ballistic protection. With extensive knowledge in products, processing, and assemblies, we provide you with competent and tailored consulting. Get in touch – we're here to support your projects with precision and reliability.

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