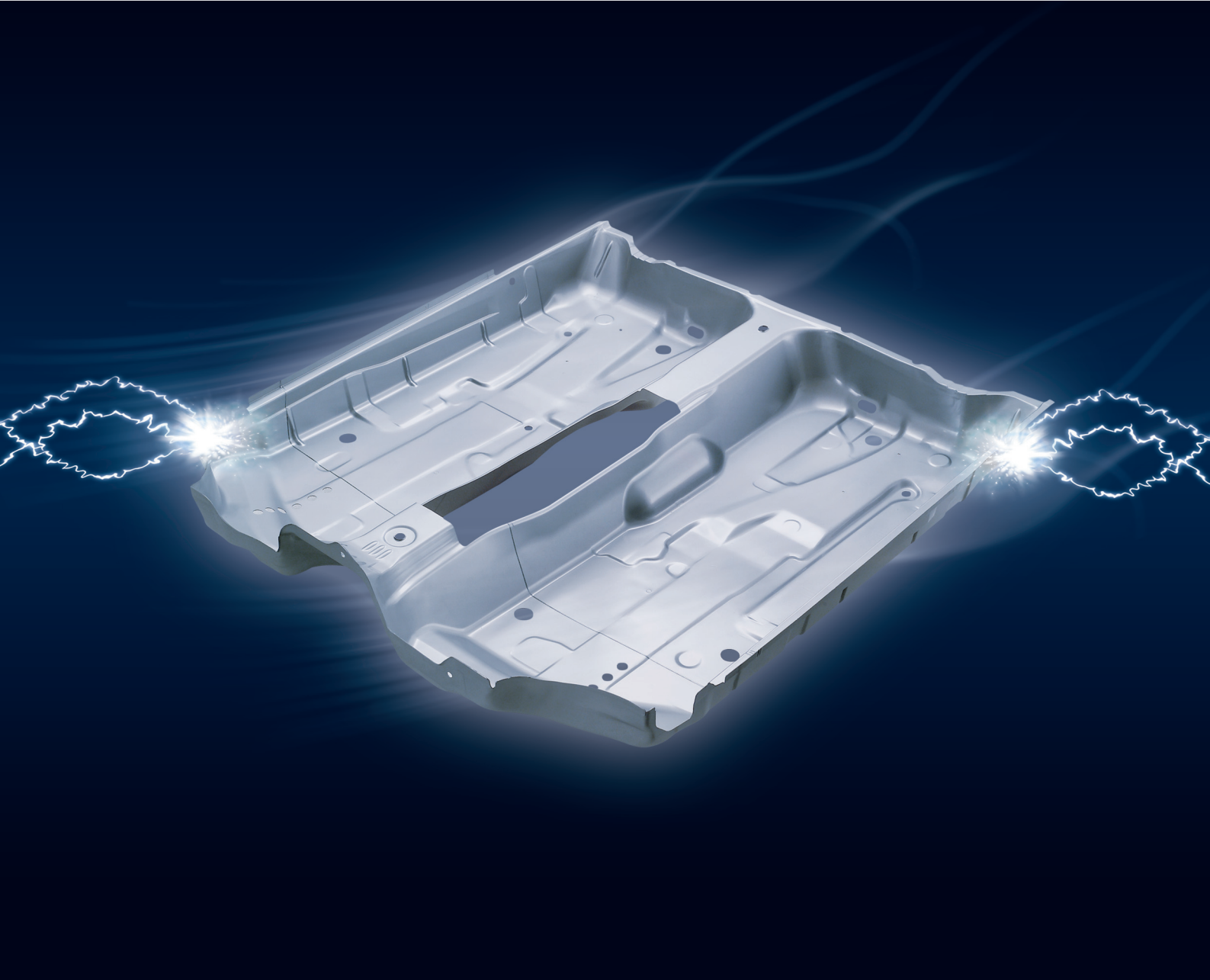


# ThyssenKrupp Tailored Blanks.



A ThyssenKrupp  
Steel  
company

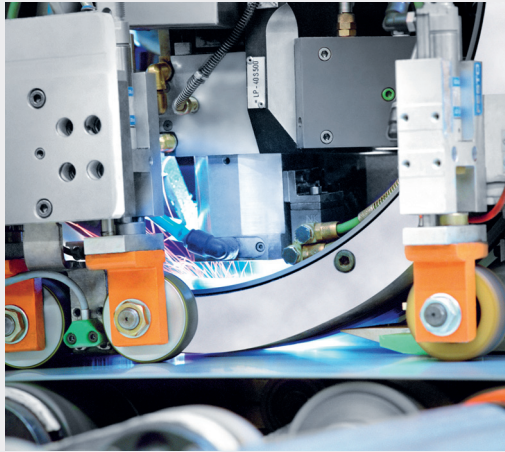
## ThyssenKrupp Tailored Blanks



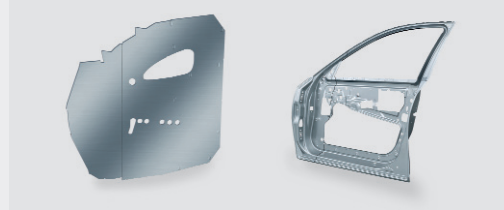
ThyssenKrupp

# ThyssenKrupp Tailored Blanks.

## Optimized sheet metal parts.



Laser beam  
welding



Example  
Door inner panel



Example  
Body side

### Made to fit.

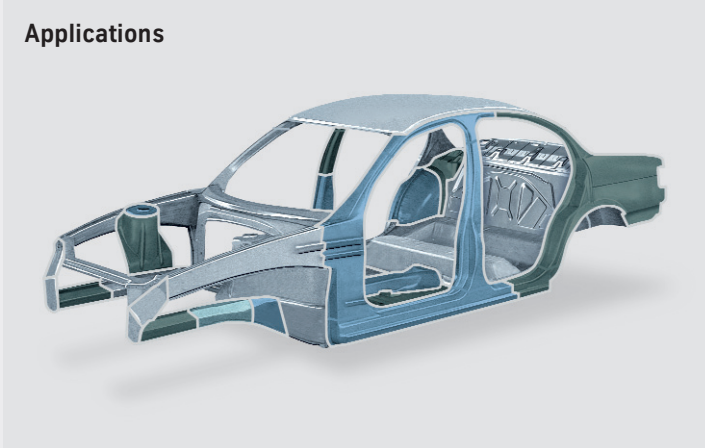
ThyssenKrupp Tailored Blanks are made from individual steel sheets of different thickness, strength and coating which are joined together by laser welding. These tailor-made products ensure that the finished part features the right steel in the right place. One advantage is reduced weight. In addition, the structural and crash performance of the vehicle body is improved: thicker or higher-strength materials can be used in highly stressed areas, while thinner sheets or softer deep-drawing grades can be used in other areas. This targeted use of materials also cuts costs. Expensive materials are only used where they are needed.

### Advantages at a glance

The targeted combination of different steel grades and thicknesses provides tailored products with their classic advantages:

- + lower weight
- + help in meeting CO<sub>2</sub> targets
- + reduced part costs
- + optimized crash performance through the use of high-strength materials
- + optimized material utilization
- + lower investment costs for tooling and assembly lines through reduction in number of parts
- + elimination of overlap joints improves corrosion behavior

## Applications



## Process

### Production of ThyssenKrupp Tailored Blanks: cutting and welding

We know how it's done – we've been making laser-welded blanks since 1985. Production starts with the cutting of the sheet metal blanks, which are then laser butt welded into tailored blanks. The individual blanks can be of different steel grade, coating and thickness.

### Laser welds display various positive properties:

- ▶ Low weld widths of around 1 mm
- ▶ Low weld convexity
- ▶ Weld has virtually no impact on forming behavior
- ▶ Cathodic protection of a zinc coating retained
- ▶ Low heat loads on base material during welding

## Product range

- |                   |   |   |
|-------------------|---|---|
| Sheet thicknesses | ▶ | 0.60–3.00 mm                            |
| Weld length       | ▶ | max. 2,800 mm                           |
| Steel grades      | ▶ | as per ThyssenKrupp Steel product range |

## Applications

At present, tailored blanks are mainly being used in the auto industry:

- |               |                |          |
|---------------|----------------|----------|
| ▶ Side panels | ▶ Wheel arches | ▶ Floors |
| ▶ Doors       | ▶ Side members |          |

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