

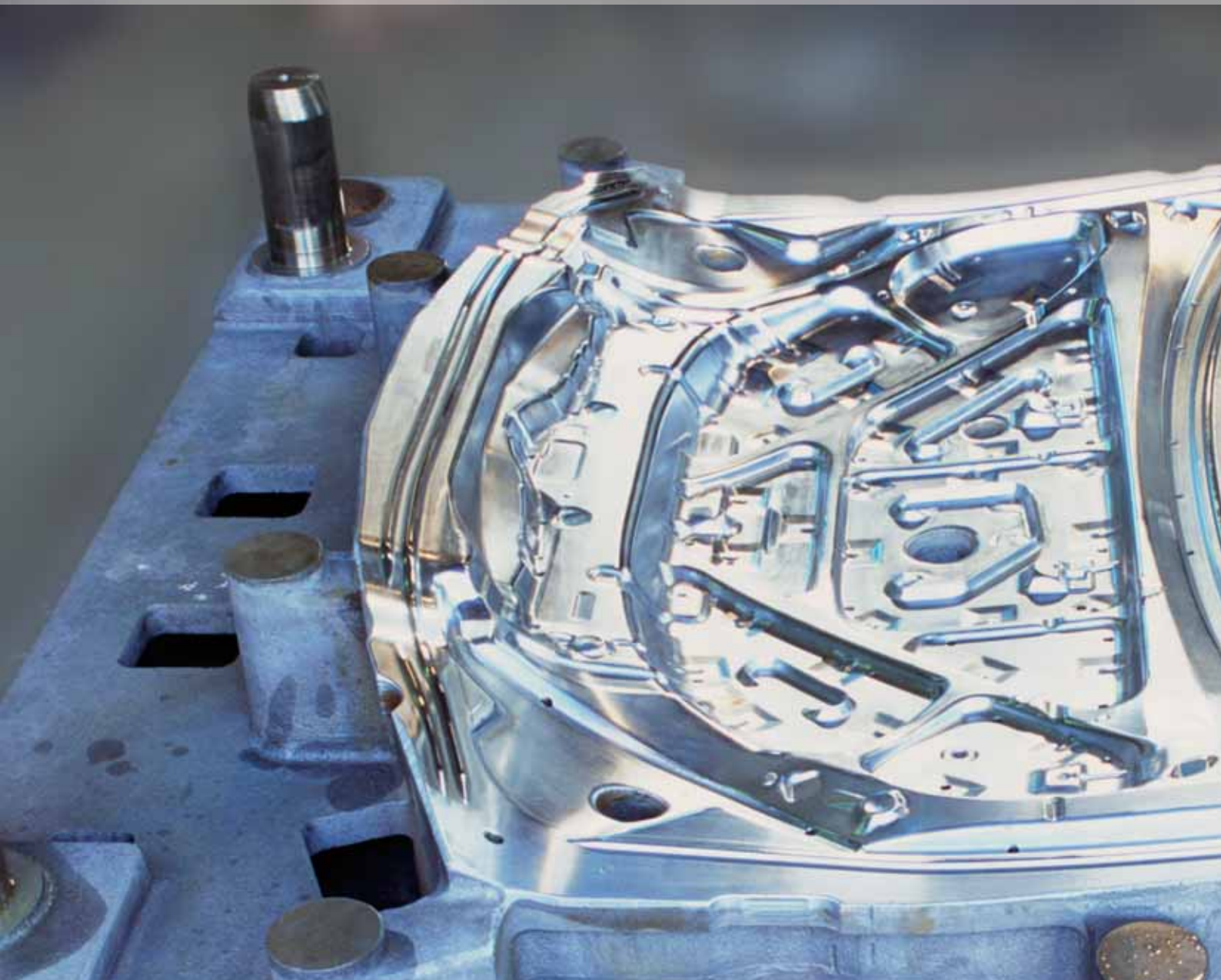


**STI  
Hartchrom**

*The precision company*

# Automotive Factors of Success

*surfaced by* **STI | Hartchrom**



# Unique Chrome Plating Technology



*The automotive industry sets high standards for performance, quality and design. The high-quality STI coating significantly contributes to improved vehicle designs.*

Many renowned car manufacturers also owe their attractive designs to the STI surface technology. The Hartchrom Teikuro procedure is one of the world's recognised and best surface treatment technologies for forming tools in the automotive industry.

## High surface functionality

The car manufacturers' tools need to be able to withstand strong forming forces and excessive wear. Hard chrome plating not only significantly improves wear resistance, but also the surface quality. The very fine and lubricious surface results in fewer scratches, cracks and deformations on the pressed and body parts. This high surface quality plays a crucial role in a more virtuous design of the body panels.

## Full service around the clock

The use of chrome plated deep-drawing and cutting tools significantly reduces your yield loss rate, lowers the maintenance costs and increases productivity many times over thanks to the shorter downtimes of the presses.

In order to reduce your production losses to a minimum, you can reach our customer service team around the clock seven days a week. On request, our experts will also train your employees and production teams on site in handling coated components and tools.

AUTOMOTIVE INDUSTRY

## Success Stories by STI | Hartchrom

International customers\*: Allgaier, Audi, Benteler, BMW, Daewoo, Daimler, Ford, GM, Honda, Hyundai, Karmann, KIA, L pple, Magnetto, Magna, Mazda, Mitsubishi, Nissan, Opel, Porsche, PSA, Renault, Saab, Subaru, Suzuki, ThyssenKrupp, Toyota, Volkswagen, Volvo.

*\* Teikuro: pioneer and world leader in chrome plating of deep-drawing and cutting tools for the automotive industry since 1965*

### The Hartchrom Teikuro procedure

At the STI Surface Centre in Sternenfels-Diefenbach, Germany, Hartchrom Teikuro Automotive GmbH offers a unique hard chrome plating technology. The Hartchrom Teikuro process involves applying a gauzy, low-friction hard chrome layer to the work surfaces of the deep-drawing and cutting tools. This protects the actual shape of the tools, while any friction effects are absorbed by the drawing process of the extremely smooth chrome surface. The shape of the tools, with filigree contours and numerous deep draws, therefore remains intact, even after the exposure to hundreds of thousands of press strokes. This results in higher quality components, increased productivity, improved process safety and lower costs throughout the whole manufacturing process.



Properties of the chrome plated cutting / pressing tools
Hardness HV 850 - 1100 (grey cast iron HV 200 – 300)
Coating thickness - surfaces: approximately 15 – 25 µm
Coating thickness - radiuses: approximately 35 – 55 µm
Low friction

### Your benefits

- Processing of your deep-drawing and cutting tools within 12 to 18 hours
- Coating of components with dimensions of up to 5,000 x 2700 x 1,500 mm (LxWxH) and weighing up to 20 tons
- Ensuring that form and geometry remain intact, even in case of multiple chrome plating and repairs (heat distortion is ruled out)
- Additional wear protection through thicker coatings on exposed sections
- Reduction of lubricant use by up to 90% due to the improved lubricity
- Reduction of scratching, cold welding, wave forms or tearing of the pressed parts due to the fine surface coating
- Comprehensive quality inspection including certificate
- Logistics service (on request)



*The coated deep-drawing tools result in a significant increase in productivity.*



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Individual Solutions	STI   Hartchrom offers you individual overall solutions – from comprehensive analyses and consulting, development and innovation to the actual treatment process, mechanical processing, the final quality check and transport.
Industrial Areas	Print, Paper, Marine Propulsion, Power Generation, Film, Foil, Food, Textile, Hydraulics, Tools, Automotive, Aeronautics, Defense Technology, General Industries, etc.
Technological Range	Hard chrome, triplex chrome, dispersion coatings, Nanochrom, chromium/PTFE, chrome ceramics, galvanic nickel, electroless nickel, nickel chrome, HVOF cadmium coating, dehydration, burnishing, stainless steel passivation, electropolishing, grinding, polishing, lathing/cutting, etc.
Quality and Precision	STI surface treatments stand for precision, functionality and quality. STI   Hartchrom guarantees the required process safety to achieve the narrowest tolerance ranges and create tailor-made, reproducible surfaces.
S to XXL Components	STI   Hartchrom develops innovative, tailor-made surface solutions for components up to 6,000 mm in diameter, up to 27,000 mm in length and up to 64 tons weight.
Complex Geometries	One of the core competencies of STI   Hartchrom is the coating of components with complex geometries. Our freeform surfaces are renowned for their optimised features, the highest level of quality and reproducibility.
Single Parts and Series	STI   Hartchrom is your specialist for customized surface technology for single parts as well as for series. Know-how, experience and state-of-the-art infrastructures ensure optimal results.
Research & Development	STI   Hartchrom carries out systematic application-oriented and pure research and development. Our focus is on high-performance, individually optimised surface solutions for you and your success.