voestalpine Steel Division
www.voestalpine.com/steel

voestalpine
ONE STEP AHEAD.

As a partner of many years to renowned manufacturers, we supply higher strength, lighter weight and better corrosion resistance to the automotive industry.

What we have to offer

Customer-oriented partnerships and tailored solutions in the automotive industry

Our high-strength steel grades and corrosion-resistant coating systems set standards with their high surface quality and best processability. Cost-efficient solutions, industry-specific material and manufacturing expertise coupled with reliability and relationships based on trust make us a center of competence for the European automotive industry.

We provide a high level of quality and problem-solving expertise:

- Development of innovative steel grades tailored to the automotive industry
- Customer-specific product solutions and development partnerships
- Competent contact persons with industry and material expertise
- Customized services
- Powerful logistics and just-in-time delivery
- Sales offices near customer locations
- Global availability of high-quality products

Customized solutions and time-tested products in voestalpine quality

Our high-strength steel grades, corrosion-resistant coating systems and industry-specific solutions provide a sure foundation for efficient light-weight design. The excellent forming properties and highest surface qualities of our steels guarantee optimized manufacturing. Our unique service package rounds off our portfolio for the automotive industry.

phs-ultraform®

The press-hardening steel benchmark

- Extreme strength of up to 1800 MPa
- Excellent cathodic corrosion protection
- Complex component geometries
- Suitable for both indirect and direct processes

corrender

A new perspective

- Best workability
  - Increased process reliability and excellent processing properties
  - Reduced abrasion in component manufacturing
- Improved corrosion protection
- Thinner coating results in increased processing reliability during laser and arc welding

isovac®

Electrical steel for highest energy efficiency

- Best electromagnetic properties
- Best workability
- Environmentally compatible and perfectly safe insulation systems
- Customer-oriented product development

Ultra-high-strength steels

AHSS (advanced high-strength steels)

- Ultra-high strength of more than 1200 MPa
- Galvanized surface for best corrosion protection
- High-strength complex components for efficient lightweight design
- AHSS high ductility for improved formability

Customized solutions for the automotive industry

- phs-ultraform®
- corrender
- isovac®
- Ultra-high-strength steels

You will find our entire product range, including a large number of innovative steel grades and coatings, on the Internet at www.voestalpine.com/steel.

Hot-dip galvanized steel strip

- Excellent surface quality for shell applications
- Wide range of grades for the most demanding forming requirements

Electrogalvanized steel strip

- Excellent surface quality for high-quality shell components
- Comprehensive range of materials galvanized on one or both sides

Functional coatings

- Broad and targeted spectrum of high-quality surface systems
- Wide range of properties that meet the requirements of a variety of applications

Cold-rolled steel strip

- Universal use, even in applications with high surface demands
- Highly uniform mechanical properties

Hot-rolled steel strip

- Highest product quality and best workability
- Broad spectrum of application-specific and optimized grades

phs-ultraform®

phs-ultraform®

The press-hardening steel benchmark

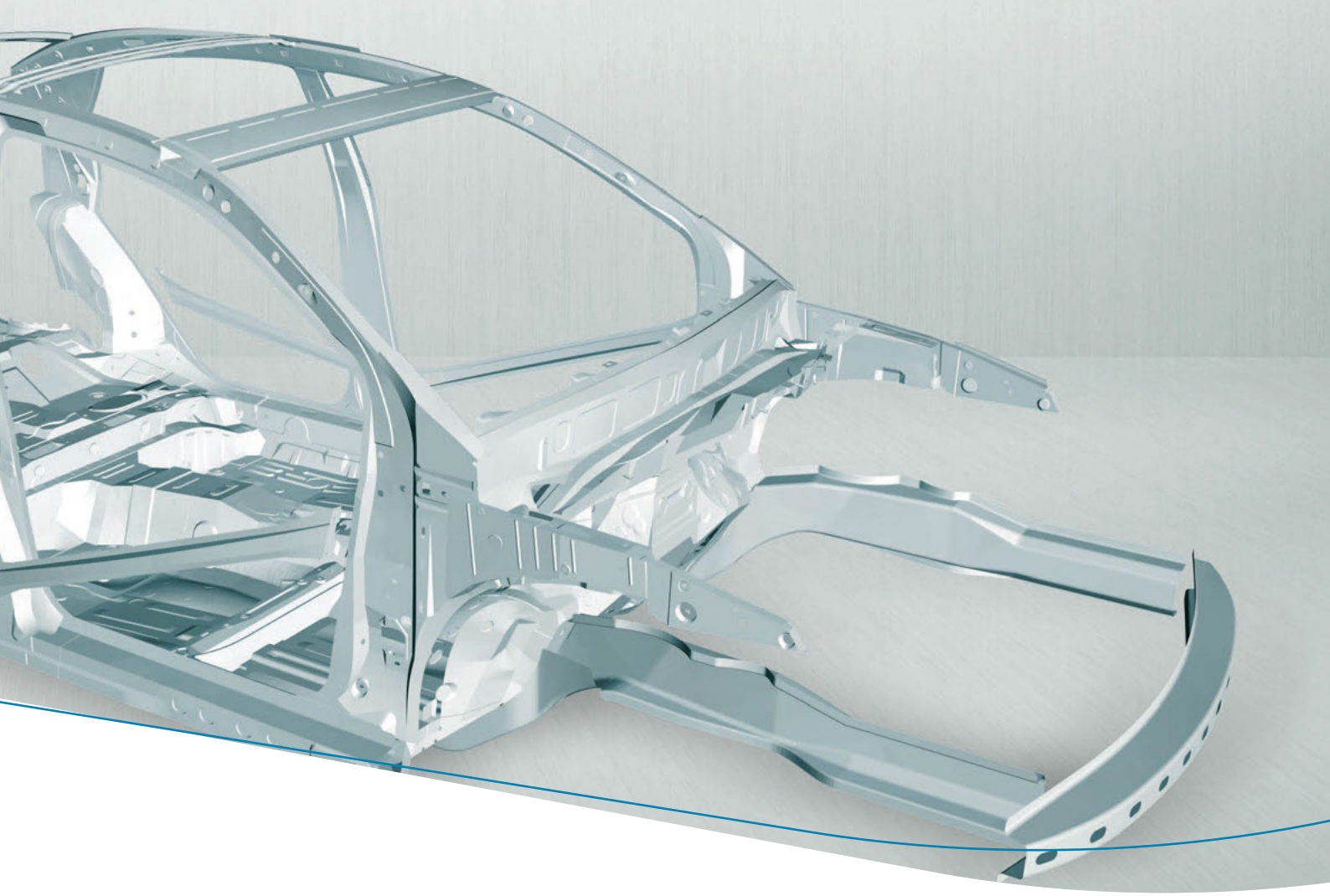
Highest strength and corrosion resistance

An innovation of voestalpine, phs-ultraform® combines the benefits of press-hardened components with the high-quality corrosion resistance of hot-dip galvanized strip. The phs-ultraform® technology developed and patented by voestalpine combines in a unique way our conventional heat treatable-steels with innovative zinc coating. voestalpine developed the phs-ultraform® technology by means of simulations across the entire process chain and achieves highest-quality final component properties. voestalpine is your partner from development to the serially produced component.

Lightweight components of the future

phs-ultraform® permits lightweight construction of a new dimension with regard to freedom of design, dimensional accuracy and process security and is the future-oriented solution for safety-relevant components that are subject to heavy corrosion, such as A and B pillars, sills, side walls, tunnel reinforcements, doors and hatches. phs-ultraform® makes a valuable contribution to the achievement of lightweight design and is therefore highly relevant to electromobility applications.

Highest freedom of design



Indirect process

The indirect process provides a high level of freedom of design with highest dimensional accuracy. In indirect processing, blanks made of phs-ultraform® are formed and cut to final geometries using conventional cold-forming technologies. After being annealed in the furnace, the component is hardened and the geometry finalized through coolingin the press.

Direct process

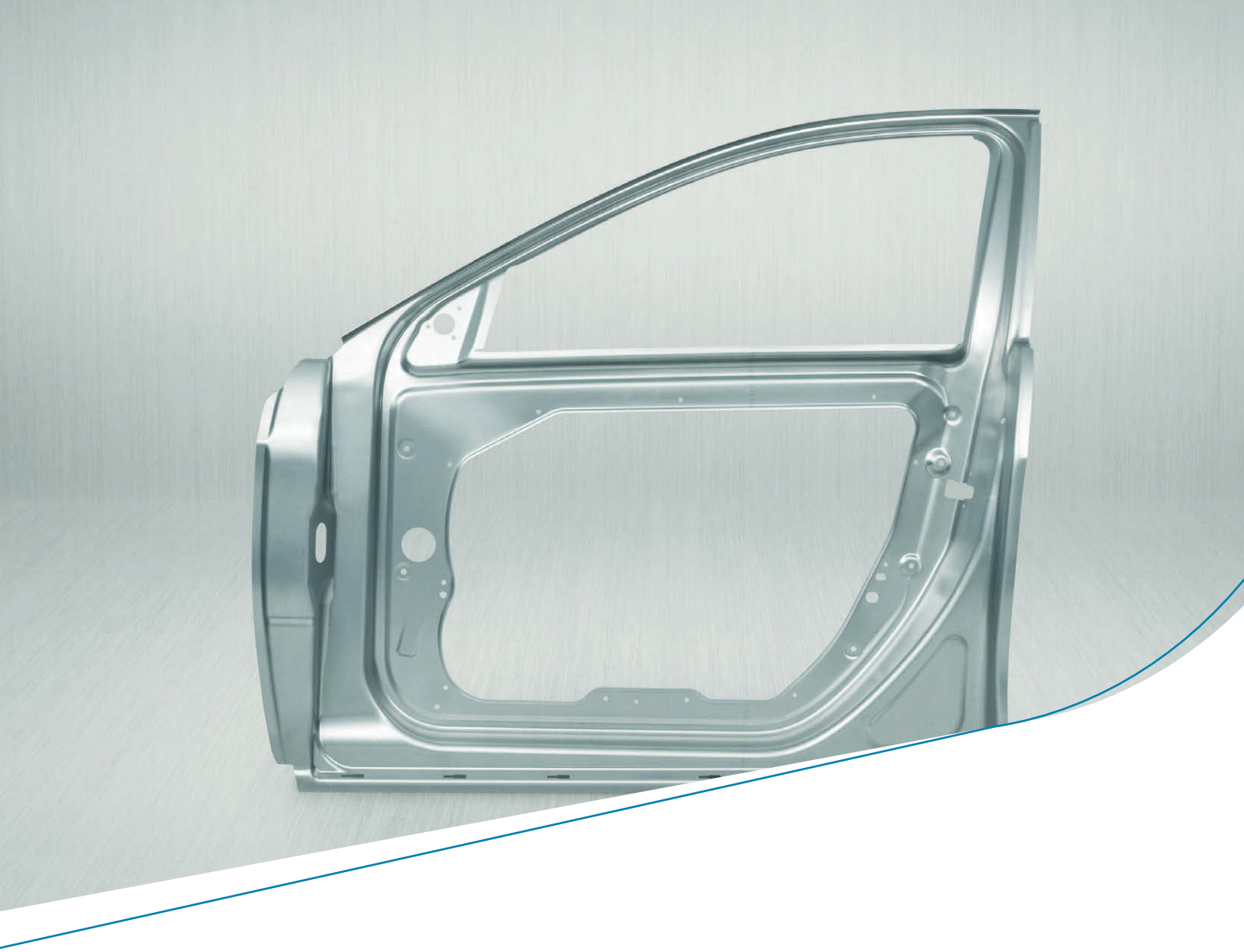
Without undergoing a cold-forming process, blanks made of phs-ultraform® are hot-formed in the direct process to final geometry and hardened in a single step.

For function-optimized components

phs-ultraform® can be formed in the direct as well as indirect process into components with optimized crash performance. Special heat treatment or cooling processes following forming as well as using tailor-welded blanks can be used to produce complex geometries with special strength properties. Application-specific component integration makes it possible to reduce the number of required crash-absorbing components and results in enormous lightweight savings.

Convincing advantages

- Extreme strength of up to 1800 MPa
- Excellent cathodic corrosion protection
- Complex components possible, even as tailored-property parts
- Large components possible as a result of furnace technology
- Minimum tool wear even with high unit numbers
- Processing of blanks in a variety of strength and thickness combinations (tailor-welded blanks)
- Simulation of the entire process chain, including component properties



correnderr

correnderr

Hot-dip galvanized steel strip: A new perspective

A convincing alternative

correnderr is the next evolutionary step in hot-dip metal-coated products. A powerful protective layer with numerous advantages is created through alloying small amounts of magnesium and aluminum in the zinc bath.

Best workability

correnderr provides excellent processing properties. Low zinc abrasion improves the surface quality and minimizes post-processing steps. Low adhesive tool wear (galling) reduces the time required for tool cleaning.

Best deep-drawing properties increase process reliability in the press shop, especially in parts subjected to extensive forming.

correnderr in the automotive industry opens new potential for more efficient and thus more cost-effective production.

Efficient corrosion protection

correnderr ensures improved protection against perforation and cosmetic corrosion, including a lower degree of creepage at the cut edge and significantly reduced paint infiltration in scratches.

isovac®

Electrical steel for highest energy efficiency

isovac® stands for full-finished and semi-finished electrical steel with the best electromagnetic properties for highest energy efficiency in the automotive industry.

- Low core loss
- High magnetic polarization and permeability
- Low anisotropy of the magnetic properties
- High thermal conductivity, no magnetic ageing

The isovac® grades are characterized by best punchability, low wear in punching tools, environmentally friendly manufacturing and sustainable insulation systems. isovac® meets all the material requirements of today's automobile industry with regard to sustainability and low processing costs.

isovac® grades with additionally optimized and application-specific properties are now available for increasing demands in the area of compact engine design and high efficiency.

High-strength electrical steel

isovac® high-strength

isovac® high-strength meets the most stringent mechanical and electromagnetic requirements.

- Best electromagnetic properties with higher strength
- Increased efficiency through increased rotational speeds in electrical machinery
- Allows reduction of rotor ridge width

Highly permeable electrical steel

isovac® high-perm

isovac® high-perm is an electrical steel with the highest degree of permeability for additional energy-efficient performance.

- Highest permeability
- Highest energy efficiency
- Smaller component sizes possible

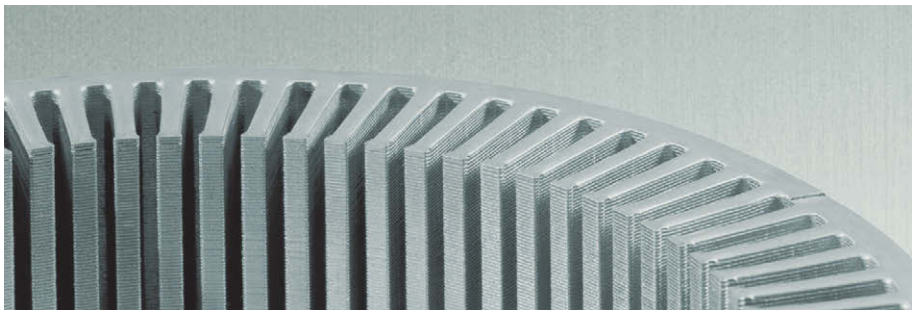
Blued electrical steel

isovac® blue

isovac blue is final-annealed and blued electrical steel with an insulating surface that replaces an additional coating.

- World's most environmentally compatible insulation system
- Minimization of eddy-current losses
- Final annealing not required

Highest performance guaranteed



Ultra-high-strength steels

Advanced high-strength steels

The application of advanced high-strength multi-phase steels (dual-phase, complex-phase and TRIP grades) in the automotive industry contributes to lighter component weights and improved crash performance.

AHSS

Advanced high-strength steels are characterized by strengths of more than 1200 MPa and achieve weight reductions of up to 20 percent in comparison with previously used steels. Galvanized surfaces provide the best corrosion protection, and selected grades are also available for exposed applications.

AHSS HD

Our most recent development, advanced high-strength, high-ductility steels, are characterized by remarkably improved formability when compared to conventional dual-phase and complex-phase grades. These steels allow manufacture of the most complex high-strength components and are therefore especially suited to safety-related components.

Efficient lightweight construction

Dual-phase steels

Dual-phase steels are especially suitable for sophisticated deep-drawn parts. Low yield strength, high tensile strength and high elongation values are characteristic properties of this steel grade.

Complex-phase steels

Complex-phase steels are characterized by excellent bending properties, a high yield ratio and high resistance to cracks from punched edges. They are especially suited to the manufacturing of bent and folded components and roll-formed parts.

TRIP steels

TRIP steels are characterized by extraordinarily high work-hardening, resulting in outstanding deep drawability in combination with their high strength value. These grades are especially suited to complex deep-drawing applications that require high strength levels.

Complex parts

Hot-dip galvanized steel strip

As varied as its applications

Hot-dip galvanized steel strip made by voestalpine is characterized by high corrosion resistance, excellent working properties and a wide spectrum of applications. Our comprehensive portfolio of materials and best surface characteristics result in excellent quality in components, outer skin applications and parts with complex forming requirements. Hot-dip galvanized steel strip can be supplied with classical zinc, zinc-iron (Galvannealed) and correnderr (zinc-magnesium coatings).

Electrogalvanized steel strip

Best surface

Electrogalvanized steel strip made by voestalpine is characterized by the highest surface quality, excellent workability and optimum forming properties. The optimum material mix is specially designed for frame components in the automotive industry. Our comprehensive range of materials and the option of galvanization on one or both sides opens up a wide variety of applications.

Functional coatings

Solutions for a wide variety of demands

Functional coatings supplied by voestalpine cover a comprehensive range of high-quality surface systems for a broad spectrum of demands. In the automotive industry, the improved forming properties of the materials have no adverse influence on other desirable characteristics. Permanent corrosion protection can be provided in combination with excellent welding properties.

Cold-rolled steel strip

As flexible as our customers

Excellent surface quality, best deep-drawing properties, high level of consistency in mechanical properties and perfect welding results make cold-rolled steel strip a universal product in the automotive industry and allow complex designs. Thanks to modern texturing techniques, surface roughness can be optimized across the entire strip. This provides the perfect foundation for subsequent coating and painting operations.

Hot-rolled steel strip

Broad range of steel grades

Hot-rolled steel strip made by voestalpine is designed to meet every customer requirement. Tailored to your specific requirements, the product portfolio ranges from mild steels to ultra-high-strength steels with strengths of up to 1400 MPa. Hot-rolled steel strip is supplied in either pickled or non-pickled condition upon request. A number of alloying and rolling strategies make it possible for us to supply steel customized to your individual specifications. Because of their extreme strength, our case-hardening and heat-treatable steels are the grades of choice for engine components. Depending on specific customer demands, the material properties can be adjusted through hardening or annealing.


voestalpine Steel Division
We lead the way,
so our partners will be one step ahead.

We talk solutions

That is why we will never be satisfied with excellent product quality alone. Comprehensive services and unlimited dedication to the challenges of our customers are at the core of our philosophy.

Highly specialized and closely linked, the companies of the voestalpine Steel Division have one common goal: Providing our customers with optimized and individualized packages of benefits in the automotive and automobile component supplier industries.

Development advantages

- Joint developments
- Fast development of custom-designed solutions
- In-house research and development center
- Technical consulting and support in application issues
- Networking with international research institutions and universities
- Innovative technologies for efficient lightweight design

Precisely tailored to your needs

- Precision cutting: High-quality slit strips and cut shapes
- Short manufacturing times and individualized production planning

Individualized and punctual

- Customized packaging
- Tailored logistics and just-in-time delivery

Always close to you

- Processing close to the customer: Steel service centers in Austria, Poland, Romania and Italy
- Competent contacts directly on site: Sales organizations and offices in more than 20 countries
- Global availability of high-quality products

A strong partnership

- Close collaboration with our Group companies in order to create unique expertise and the technological leadership of our products in the automotive sector.
- You will find more detailed information about additional products made by voestalpine for the automotive industry here:
  voestalpine Metal Forming Division (www.voestalpine.com/metalforming)

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Technically more advanced. Successful together.

voestalpine Steel Division – the partner you can trust.

High-quality materials are the basis for our products. We strive to be the best partner for our customers and want to provide them with the best-possible solutions. We focus our expertise on two aspects:
The personal aspect, with dedicated and highly competent employees
The technical aspect, with high-quality methods, products and services

The companies in the voestalpine Steel Division and their employees understand partnership to be the following:

- Understanding for their customers' business
- Expertise and reliability
- Responsibility for satisfactory project completion
- Partnerships based on trust

Many years of successful partnerships with our customers prove our point.

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