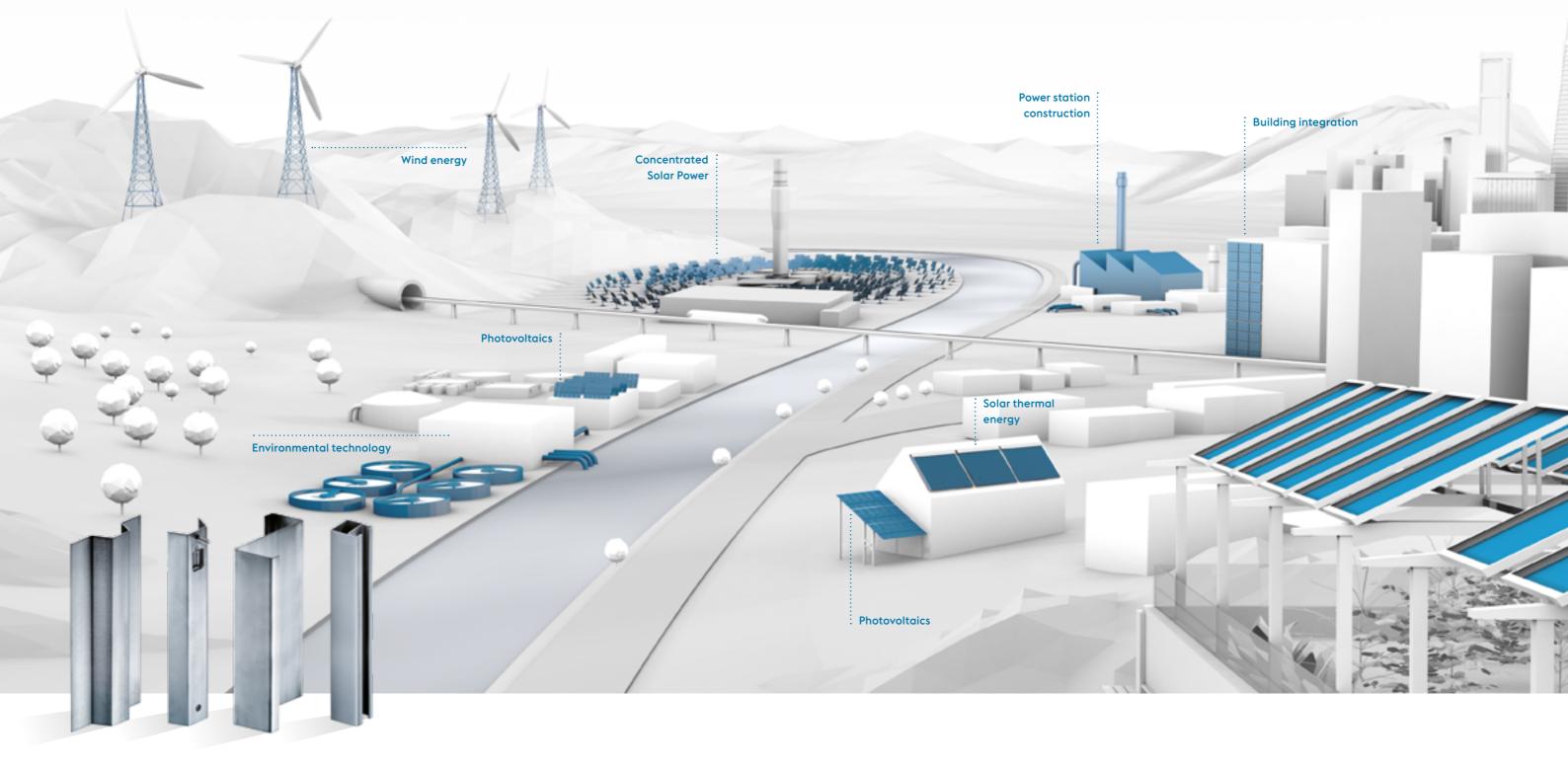
# CUSTOMIZED ADVANTAGE FOR EVERY KIND OF ENERGY

Roll-formed steel tubes and sections for the energy industry



voestalpine Krems GmbH www.voestalpine.com/krems



# YOUR DECISIVE DESIGN ADVANTAGE THANKS TO TAILORED TUBES AND SECTIONS.



Learn more about the diverse options for using customized special tubes and sections.

# THERE IS NO STANDARD SOLUTION FOR SUSTAINABILITY

Each project is unique and requires adaptations to the conditions at hand that are accurate in every detail.

Thanks to co-engineering and comprehensive support during the entire development phase, our solutions match your requirements to perfection. Your advantage: maximum cost-benefit efficiency with minimal development and installation time.

# **EFFICIENCY IS OUR MISSION**

As Europe's market leader in the manufacture of customized special tubes and sections of the very highest quality, voestalpine Krems offers you absolute flexibility at every stage of production.

Subsidiaries in all key markets and synergies around the globe provide sound expertise for every requirement. From the raw material and customized production to packaging and delivery we develop product-optimized solutions.

# OUR CUSTOMIZED COMPONENTS PRECISELY MEET YOUR REQUIREMENTS – TO GIVE YOU UNLIMITED OPTIONS!



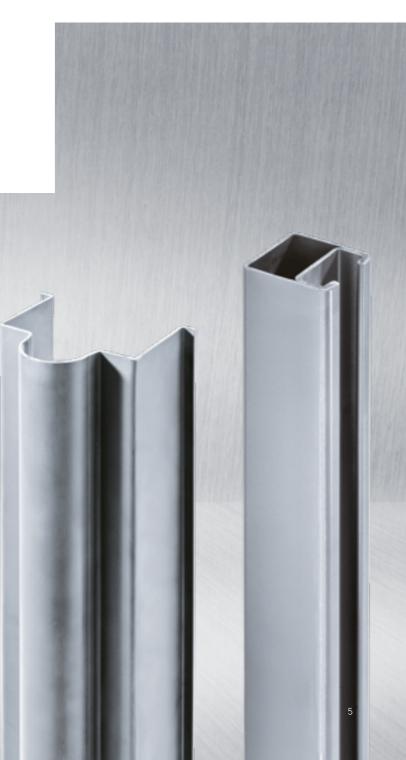
### Perfect cost-benefit ratio!

Off-the-shelf standard systems can only approach the ideal. We achieve it. Starting with your requirements and the prevailing conditions, we design customized components - no further add-on parts are necessary. Assembly times and weight are reduced to a minimum.

We support you as a strategic partner. From the raw material concept to the individual processing and pre-assembly, we work with you to develop the solution that precisely meets your requirements.

#### The benefits of customized tubes and sections:

- » fewer add-on parts
- » faster assembly
- » reduced weight
- » maximum corrosion protection
- » optimized transport prerequisites



# A LOT OF WORK IS INVOLVED IN TRANSFORMING THE RAW MATERIAL INTO THE FINISHED ELEMENT.

### **RELY ON THE SOLID BENEFITS OF STEEL:**

#### » Steel is ecological

Steel is 100 % recyclable with no loss of quality. The responsible and sustainable use of resources and the continuous reduction of emissions are also anchored in the ecological guidelines of the voestalpine Group.

#### » Steel is stable

Due to its strength, steel posses a high load-bearing capacity while having a low intrinsic weight: Designs with a large span or height can be realized with maximum efficiency in terms of area and volume.

#### » Steel is functional

Pre-finished and pre-assembled elements minimize the effort of installation and therefore noise and emissions on-site. Time savings and the associated reduction in assembly costs allow projects to profit from maximum efficiency in the execution phase.

#### » Steel is reasonably priced

Compared to other materials, steel can impress with a high price-benefit ratio: A price difference between aluminum and steel of up to 40 % is forecasted over the medium term. (Source: Statista)

# YOU DETERMINE THE ROUTE – WE BRING YOU SAFELY AND RELIABLY TO THE DESTINATION.

With voestalpine Krems at your side, you can rely on a consistent production and supply chain as well as maximum material quality.

Our high quality standards start with the purchasing of the raw materials and take the shortest route to on-time delivery.

The raw material The steel base Strip-galvanizing and order-specific coating The transport Longitudinal cutting of the coils Rollforming, in-line processing Quality assurance and initial acceptance Further processing Packaging

Logistics

Co-Designing

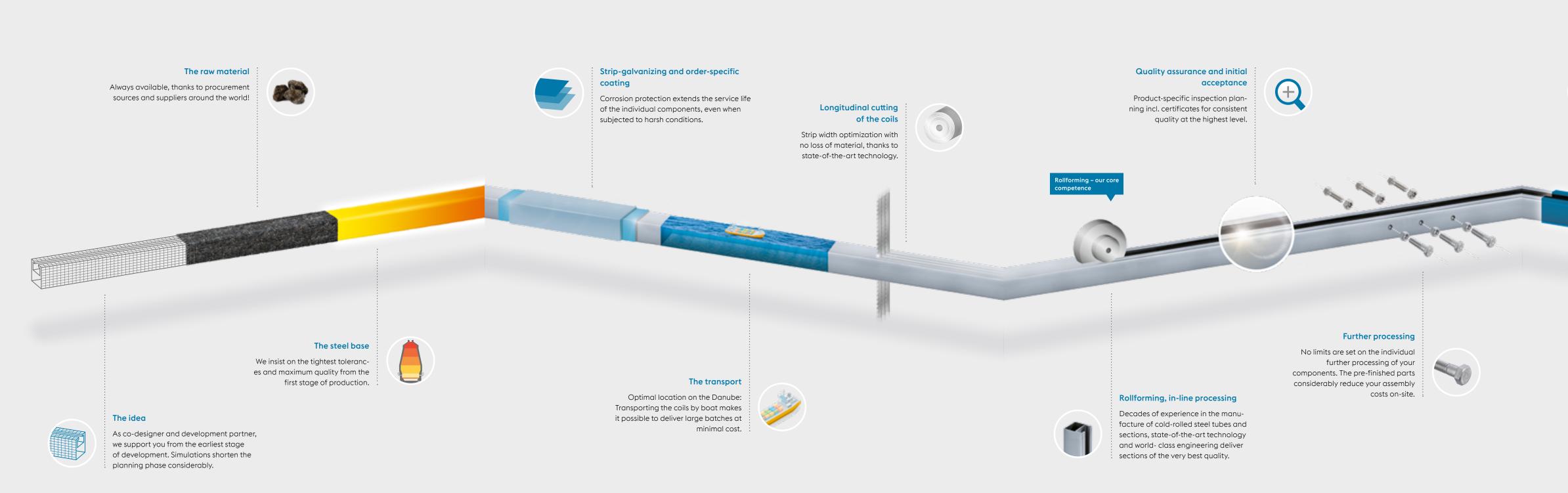
-Engineering /



# CO-DESIGN AND CO-ENGINEERING

# 

Co-design and co-engineering are available during each phase of development – selectively as required or throughout the entire production period.





#### Surface finishing

Additional all-round protection against corrosion increases the resilience and service life of the components, even in hard-to-reach places.

#### Logistics

Subsidiaries and delivery agreements around the globe facilitate delivery to your destination via the shortest route.



oestalpine

#### Packaging

We offer corrosion protection during storage and delivery, the utilization of maximum bundle sizes and weights as well as efficient container stowage.



# OUR EXPERTISE MAKES YOUR VISION A REALITY.

Co-design and co-engineering shorten your development time!

A dedicated voestalpine research and development team and 600 research partners in the global network work to constantly improve existing methods and develop new technologies. Our patented methods and the entire expertise of a large corporation assure you of consistent quality along the entire production chain.



# **CO-DESIGN**

### Do you want to optimize your steel components?

In close collaboration and coordination with our customers, we work in our capacity as co-designer to perfect all the properties of the individual components until all the requirements for the section have been met - right down to the last detail.

# **CO-ENGINEERING**

### Do you need support with the development and technical implementation of your project?

We develop your ideas with you – from the drawing board to the finished product. We deploy our extensive materials expertise and simulations during the planning phase to develop an optimal product in the shortest possible development period.

# CUSTOMIZED PROCESSING: LOWER PRODUCTION COSTS, FASTER ASSEMBLY.

Further processing and pre-assembly during production reduces your workload on-site.

By keeping transport distances short and adhering to the tightest of tolerances, we offer further processing of components in any form you require:

### WELDING INTO WELDED **ASSEMBLIES**

We weld individual components into pre-finished, welded assemblies on request. You profit from high stability as well as faster and easier assembly on-site.

### **PRE-ASSEMBLY**

We assemble individual components into prefinished assemblies during the production phase. You benefit from a reduction of work you need to do on-site and save additional storage and assembly costs.

# **3D LASER CUTTING**

We turn shaped tubes, hollow sections and lightweight steel sections quickly and flexibly into your chosen form. Adhering to the tightest tolerances is just as much a part of the process as achieving perfection with spatial cuts, miters, complex hole patterns and cutting templates, even on bent parts.

### **PERFORATING /** DRILLING

We provide tubes and sections with perforation patterns that precisely meet your required specifications.

# CUTTING

We deliver the best results with maximum precision and the optimal use of materials. At the same time, our high-perfor- mance processing technologies ensure you a maximum degree of production certainty.

# **BENDING**

We shape tubes and sections in accordance with your chosen radii while retaining all of the properties specific to the product and material.

### CLINCHING / **SPOT WELDING**

We join open sections rationally and permanently into ready-to-install parts as required.



### **BEAD PRESSING / INDENTATIONS / END RESHAPING**

We use product-specific pressing tools for the localized reshaping of tubes and sections in order to create components with additional integrated functions.



# WE DELIVER ON REQUEST: WHEN YOU WANT, WHERE YOU WANT AND HOW YOU WANT.

A global network of subsidiaries and internati- onal storage and transport agreements enables your components to be delivered in the sequence specified on your project schedule. Your storage and organizational costs on-site are therefore reduced to a minimum.

You receive your components via the shortest route. In the shortest time. Our global delivery agreements enable the on-time delivery of your components with maximum time and distance savings.

# TOP QUALITY IN PACKAGING AND TRANSPORT.

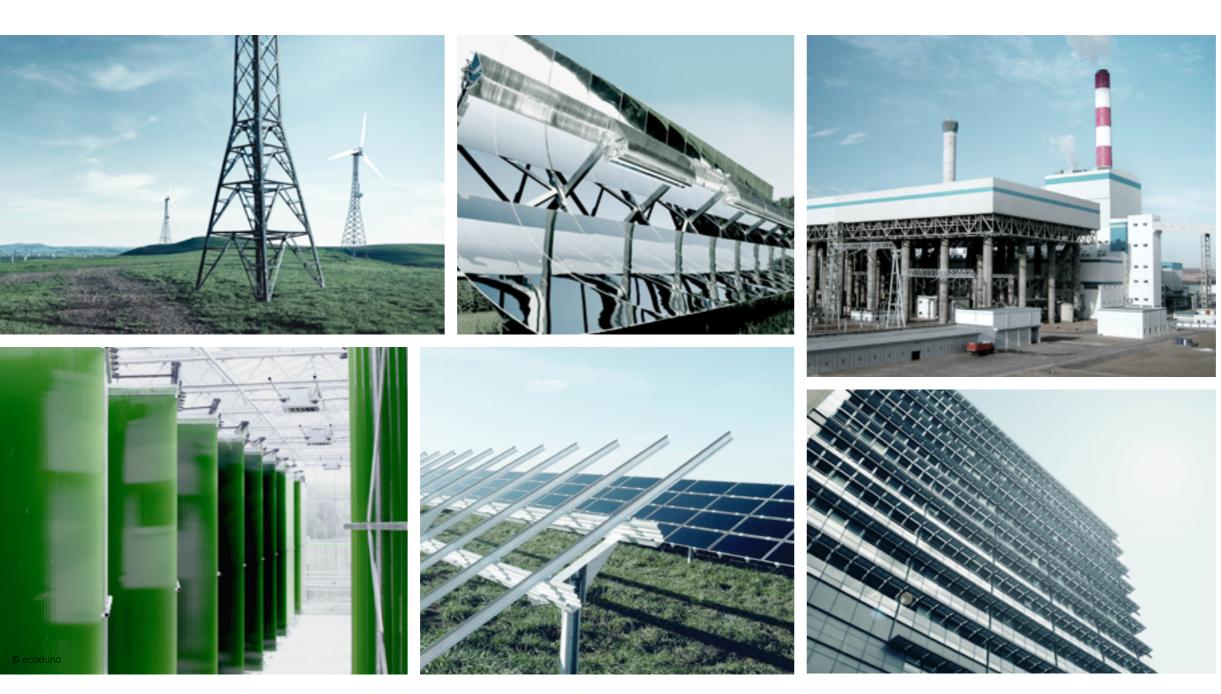
The ideal packaging completes the corrosion protection during storage and transport. Depending on the product and the route of transport we offer the perfect packaging. Precisely tuned to the terms of delivery, such as sea freight, the packaging shields your components from environmental influences.

The logistical advantage of individually-manufactured sections is the high efficiency of container or truck stowage as well as the transport-optimized packaging options. Your products are packaged with optimal bundle sizes and weights in mind. Nesting patterns and packaging materials are coordinated precisely to your needs and to the respective regulations governing the chosen mode of transport.



Your vision and our expertise are the best qualifications for lasting success. Our worldwide project success and the solid experience of a large corporation offer you a decisive edge.

Photovoltaics Roof-mounted systems Building integration Solar thermal energy Concentrated solar power Wind energy



### Bio-energy

- Heat exchangers
- Power station construction
- Geothermal energy
- Heating construction
- Environmental technology





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