

# General Metal Finishing

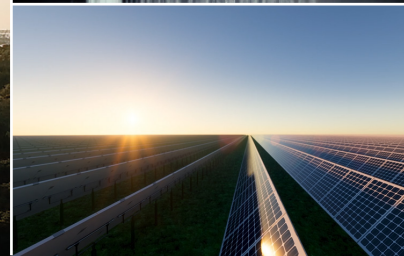
The right finish for every requirement

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General Metal Finishing

Product portfolio

atotech.com



# General metal finishing at a glance



Global market leader in electroplating and surface finishing technologies



A constant investment in R&D helps us and our customers to stay at the forefront of new technologies

>58%

of our R&D projects are devoted to green technologies



Automotive competence underlined by a unique automotive industry approach



Present in more than **40** countries serving around **6,400** customers worldwide



**13** GMF TechCenters worldwide provide the best local service



Our outstanding team of highly qualified surface finishing experts is dedicated to ensuring that our customers achieve their goals



We collaborate heavily with the entire value chain to seek new paths and set benchmarks for the development of innovative processes

767

registered active patents underline our technological leadership



# Leading surface finishing solutions

We are dedicated to supplying the total package of plating chemicals, production technology and comprehensive services to the electroplating and surface finishing industries.

In our world of surface finishing, functionality and design are key. But we don't believe in making our customers choose one over the other – it is our mission to ensure that they get the best of both worlds. Our decorative and functional surface finishing solutions are the result of unceasing research and development efforts. A highly skilled team of experts, working in an inspiring professional environment, is committed to ensuring that our technologies perform to the utmost. In addition to offering high quality products, we believe that customer proximity is an essential part of creating lasting partnerships. We provide best local service in more than 40 countries worldwide and always put our customers first – wherever they may be.

## **Sustainability is at the heart of our work**

We are a dedicated partner to both our customers and society at large, offering a sustainable product portfolio that uses water, energy, and raw materials efficiently. Both our portfolio of chemical solutions and our production technology prove that cost-effectiveness and technological advancement can go hand-in-hand with environmental consciousness.





# What we strive for every day



## **Best local service**

One factor that sets us apart from competitors is our global network. Sales and service in more than 40 countries enable us to provide efficient customer support worldwide. With an exceptional infrastructure, our unique TechCenter network allows us to offer an unmatched spectrum of services. This ranges from pilot production, chemical and materials science investigations, and process qualification to train customers and partners. The TechCenters also strengthen our research and development efforts, helping us develop sustainable solutions for tomorrow.



## **Automotive competence**

We have a thorough understanding of the needs and significant process know-how of the automotive industry. With an OEM team strategically located in various countries, we are only a heartbeat away from major OEMs/Tiers worldwide. This allows us to tailor products and features to their needs and demands. Our leading position as a partner of the automotive industry is reflected in our growing list of automotive development cooperations.



### Leading technologies

True to the long-standing Atotech history, we are determined to develop new ways to address significant challenges facing the plating industry. We collaborate heavily with the entire value chain – suppliers, customers, communities, and government bodies alike – to seek new paths and set benchmarks for the development of innovative plating processes. A constant investment in research and development helps us and our customers stay at the forefront of new technologies for the next generation and sustainable technologies.



### Sustainable solutions

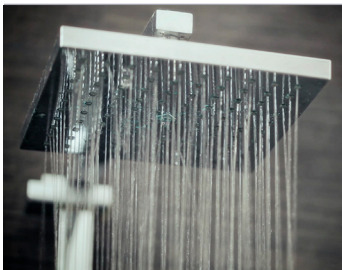
With our commitment to sustainable solutions we are making a difference. We strongly believe in serving the world's current demand for technologies and chemicals while contributing to a more sustainable plating industry. We do so by carefully selecting and using less hazardous chemicals whenever possible. We continue to bolster our environmental platform and are well-positioned to support our customers in perfectly fulfilling environmental laws and regulations for their manufacturing processes.





# Our chemicals product portfolio

We offer perfectly matched processes for each and every step of the entire spectrum of decorative and functional surface finishing applications – from pretreatment to final sealing. As a supplier we are an invaluable partner for countless industries that expect the right finish for every surface.



## Decorative coatings and plating on plastics

Processes: Pretreatment and plastics pretreatment, copper/nickel/chrome, alloys and precious metal plating

Applications: Interior and exterior vehicle decorative components (e.g. trims, grills, handles, emblems, rims), battery lead tabs, EMI shielding on plastic housing parts, sanitary fittings, taps, faucets, fashion, jewelry, cosmetics, solar cells, consumer electronics



## Corrosion protection coatings

Processes: Electroplating: Pretreatment, zinc, zinc alloys, post-treatment (passivates, sealers)  
Zinc flake coating: Pretreatment, base coats, lubricated and non-lubricated organic/inorganic top coats

Applications: Various fasteners (e.g. electrically conductive fasteners, screws, bolts, clamps, clips, nuts, springs), brake components, stamping parts, chassis components, battery housings and covers, tubes, construction parts



## Wear resistant coatings

Processes: Hard chrome: Hard chrome coatings, including a trivalent chromium alternative to hexavalent hard chrome plating, fume suppressants, pre- and post-treatment  
Electroless nickel: Pretreatment, electroless nickel, composite coatings, post-treatment

Applications: Piston rods (shock absorbers), hydraulic systems, piston rings, fuel delivery systems, plug connector housings, scroll compressors, bus bars, valves, heat sinks coating for electronic components, bi-polar plates (hydrogen)



## Paint support technology

Processes: Paint pretreatment, paint stripping, paint overspray treatment

Applications: Pretreatment for white goods/consumer appliances, aluminum wheels, battery housings and battery collectors, automotive/motorcycle components as well as furniture, paint stripping for wiper arms, car carriers, and automotive final assembly fixtures, paint overspray treatment for automotive body and bumpers



# Our production solutions

A perfect finish is based on the right plating system. We offer equipment perfectly adapted to our chemistry processes. Our systems approach is characterized by an optimally coordinated interplay of leading electroplating equipment, advanced chemical processes, and unparalleled service. It ensures the compatibility of chemical processes and plating lines resulting in high productivity, optimum process performance and consistently high quality.

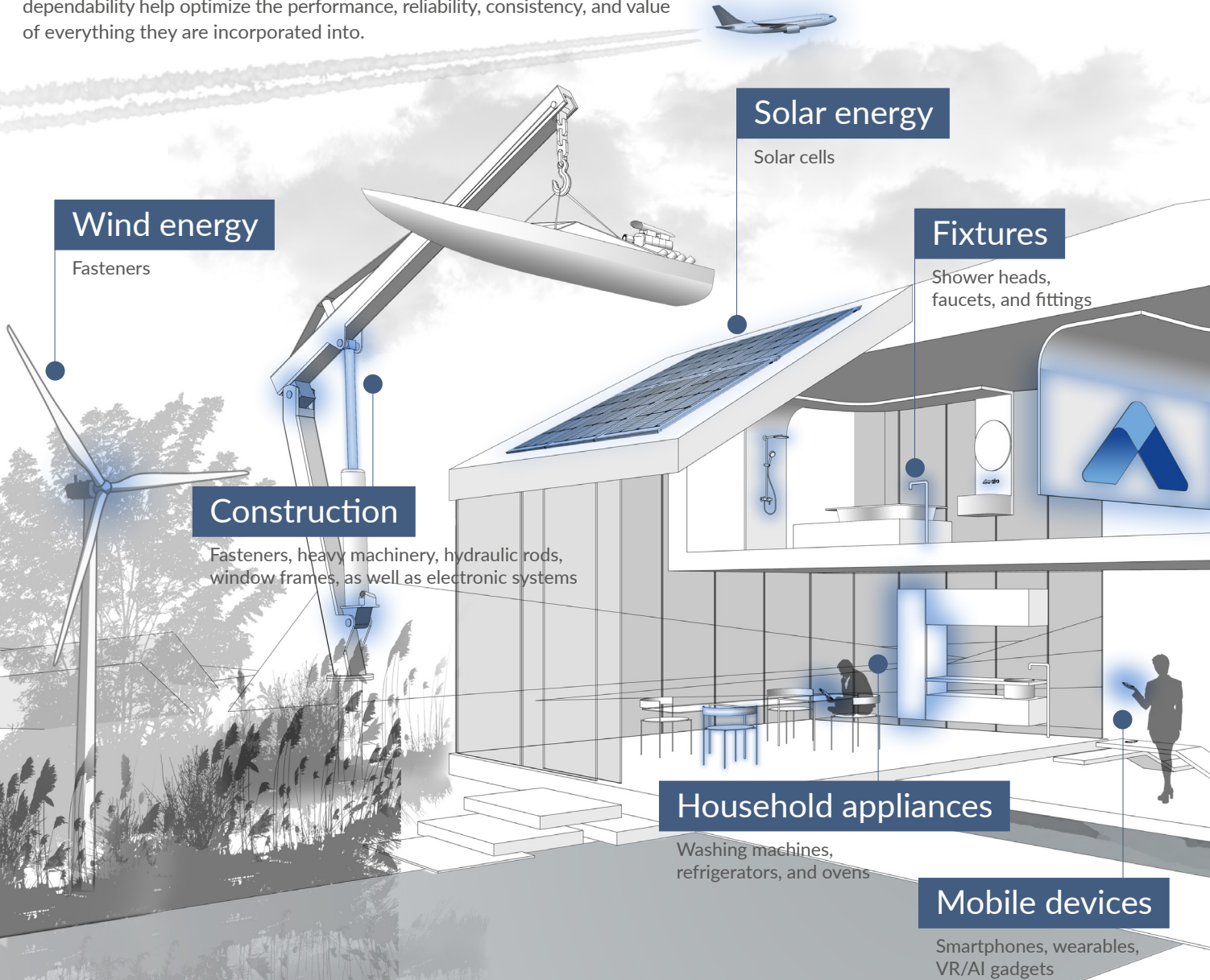
Our versatile plating systems allow high plating throughput rates for our functional and decorative plating technologies and are designed for barrel and rack applications. Our highly efficient DynaPlus® plating lines are tailor-made and developed according to the specific requirements of our customers while our modular, compact DynaSmart® plating line for bulk treatment achieves higher plating throughput with a lower environmental footprint. With the DynaChrome® Plus line, we offer a worldwide unique system for hard chrome plating of shock absorber rods, which increases worker safety while minimizing chemical and energy consumption as well as wastewater generation.

Our unique range of Atotech auxiliary equipment supports sustainable production goals by reducing resource and chemical consumption, decreasing wastewater generation, and extending bath life. They improve plating quality and consistency, and maximize operating efficiency resulting in both, reduced environmental impact and costs.



# We add value with innovation

Today our products can be found everywhere in daily life. Whether used within the automotive industry or in countless other applications, their quality and dependability help optimize the performance, reliability, consistency, and value of everything they are incorporated into.





## Consumer electronics

TVs, smart home systems,  
audio/visual entertainment

## Furniture

Chairs, table legs,  
and lamps

## Communication infrastructure

Servers, data centers, 5G base stations,  
cloud computing, big data applications

## Computing

Laptops, PCs, tablets,  
displays, game consoles

## Automotive electronics

Engine control unit, ICE powertrain,  
info/entertainment, assisted driving (ADAS),  
electronic powertrain

## Batteries

EV and electronics batteries,  
energy storage

## Automotive surface finishing

Front grills, door handles, emblems, decorative  
trim components, brake calipers, fasteners,  
shock absorber rods, valve systems

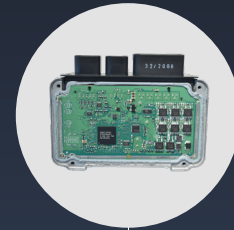
# MKS' automotive solutions

Our portfolio for the automotive industry includes solutions for the entire spectrum of decorative and functional surface treatment for all drive technologies.

Many of our Atotech processes fulfill the requirements of a substantial number of OEM specifications and are approved by numerous automotive manufacturers worldwide.



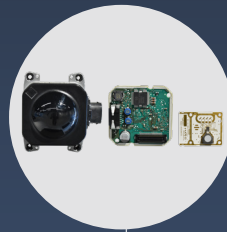
Connectors



ECU



Fasteners and fixings



Radars



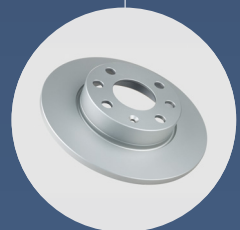
Front finishers



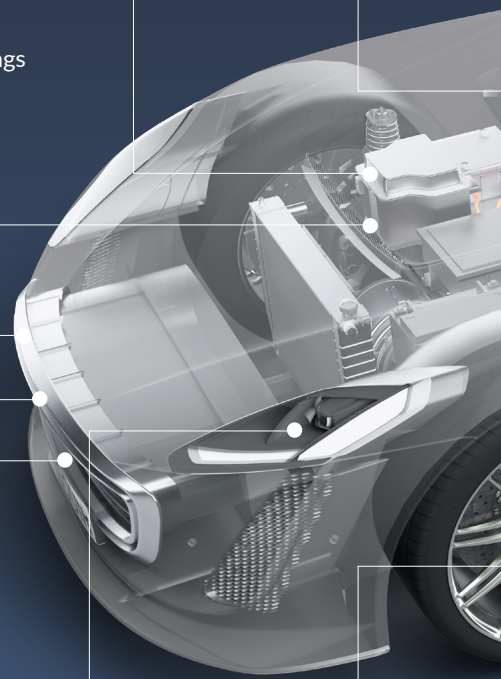
Lidar



LED/ lights



Brake discs



## Decorative coatings

Plastic pretreatment  
Copper/nickel/chrome coatings

## Wear resistant coatings

Functional chrome coatings  
Electroless nickel coatings

## Corrosion protection coatings

Zinc and zinc alloy coatings  
Zinc flake coatings

## Paint support technologies

Paint overspray treatment,  
pretreatment, stripping

## Electronics

Wet chemicals and production technologies  
for printed circuit boards, semiconductors  
and functional electronics





# End markets and industries MKS serves



Automotive



Sanitary



Heavy machinery



Construction



Household appliances



Energy

