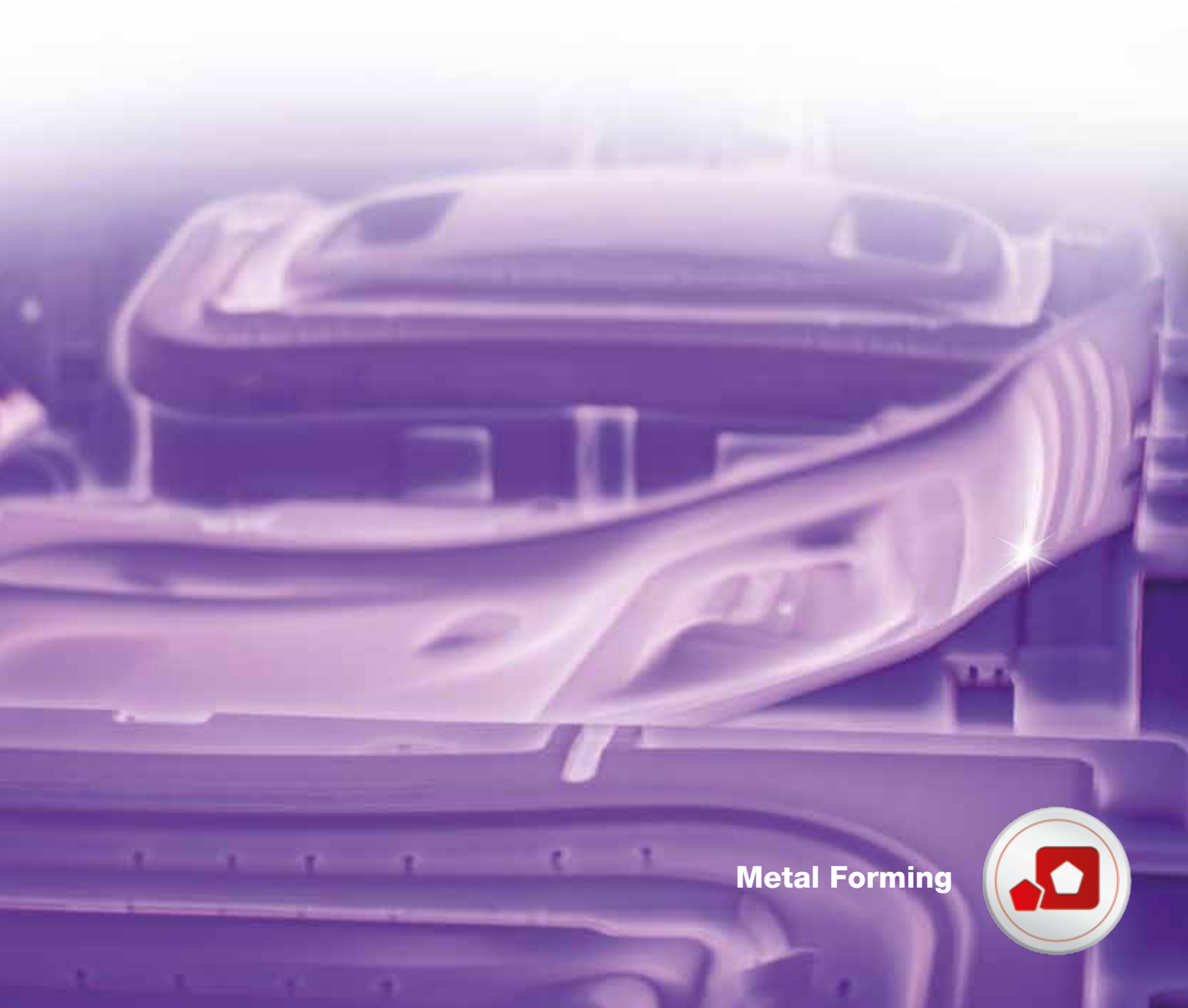


# **BALITHERM PPD**

## **Future-oriented**

Pulsed-plasma diffusion for efficient,  
environmentally friendly treatment of  
large forming tool surfaces



Metal Forming



# Maximise the productivity with BALITHERM PPD



Surface treatments for production of 1 million skin parts

Hard chrome plating:  
up to 10 times



BALITHERM PPD:  
1x

Treat only once  
Save up to **65%**  
And help protect the environment



## Take the lead – with BALITHERM PPD from Oerlikon Balzers

Until now, hard chrome plating has been the standard method employed for treating large forming tool surfaces. But, there is a highly-efficient and environmentally-friendly alternative: Pulsed-Plasma Diffusion (PPD®) from Oerlikon Balzers. With this forward-looking technology, the tools used for the manufacture of car body skin parts, for

example, only need to be treated one single time over their entire service life, while with hard chrome plating, up to ten treatments are required. Moreover, no harmful chemicals are used. Opt for BALITHERM® PPD from Oerlikon Balzers and profit from powerful advantages, first and foremost in the automotive industry, but also in heavy industry.

### **Diffusion process with easy maintenance**

Creates hard, wear resistant forming surfaces

Surfaces treated with PPD® can still be modified and repaired

### **Ecologically sound technology**

No poisonous gases or chemicals are used

### **High degree of automation**

For increased efficiency and energy savings in the entire process cycle

### **Tool cleaning integrated in process**

No elaborate preliminary bakeout of dirty or oily tools required

**Considerably longer tool life through one-time PPD® surface treatment – good for the entire service life of the tool**

**Reduces tooling and production costs through significantly higher surface quality that requires notably less rework**

**Decrease in machine downtimes and corrective maintenance costs through low-maintenance PPD® surfaces**

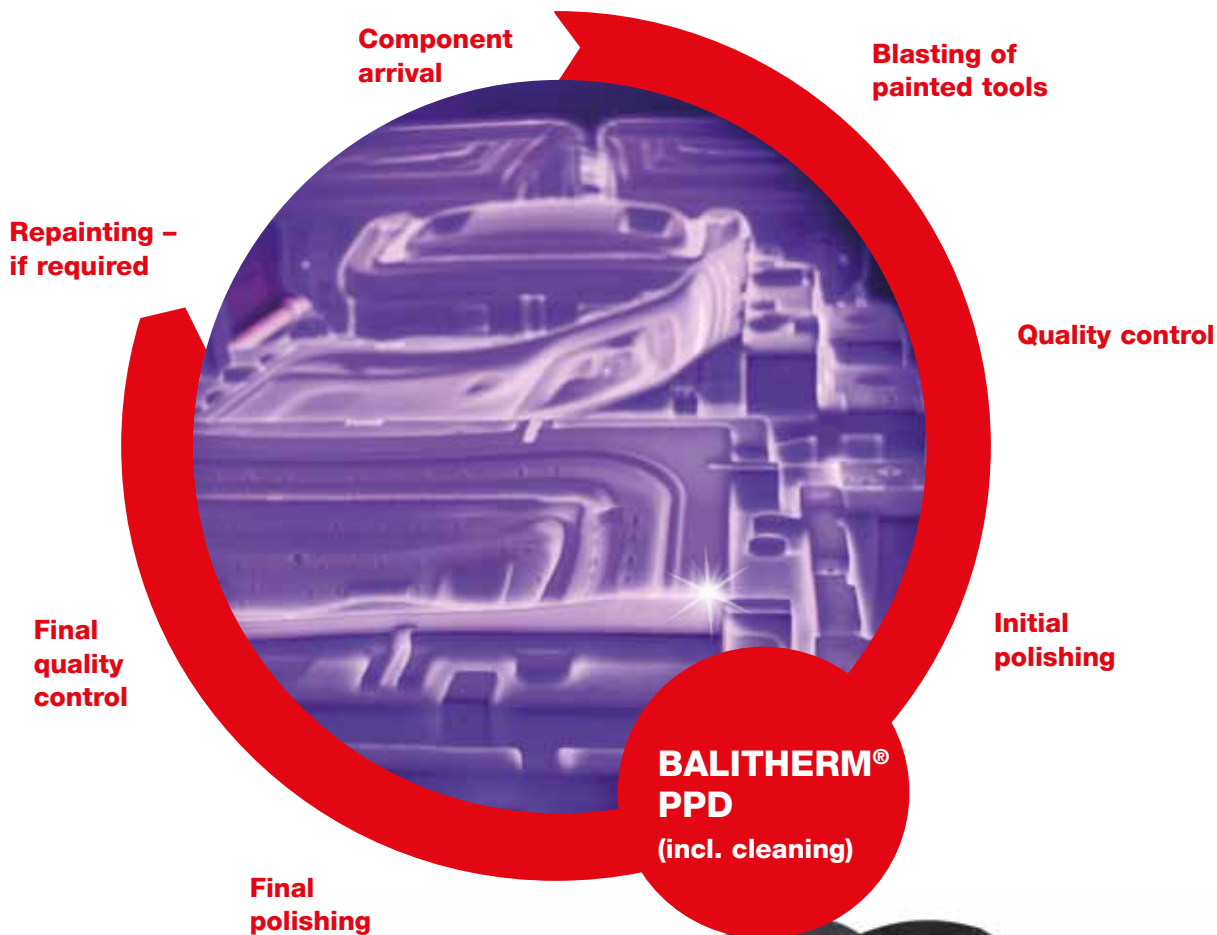
**BALITHERM® PPD: Improved productivity and manufacturing process reliability as well as conservation of resources**



# Step by step towards more efficiency: The BALITHERM PPD Service Process

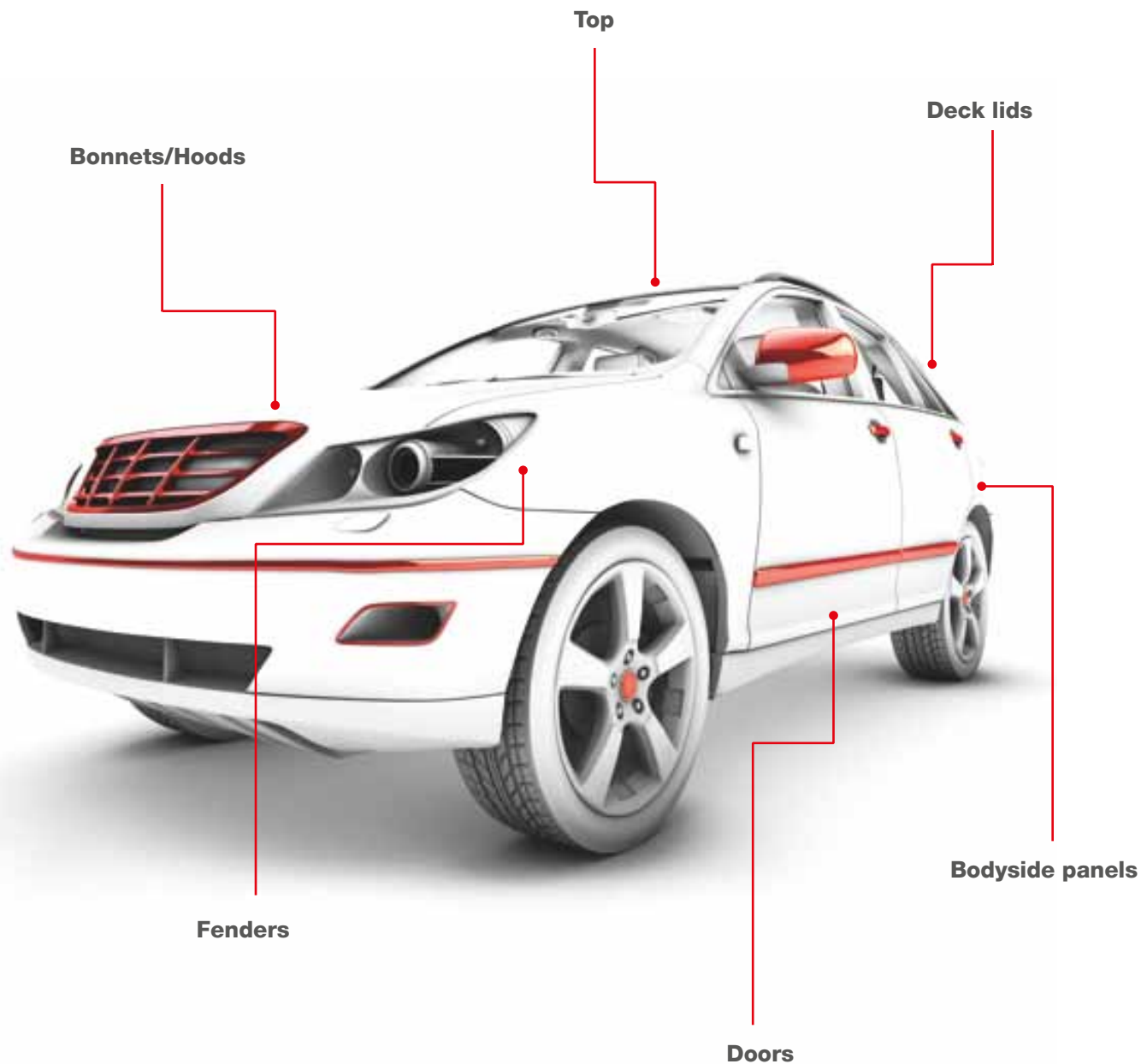
Oerlikon Balzers offers you a decisive advantage:  
In contrast to hard chrome plating, cleaning of the

component surfaces is already integrated into  
the PPD® process.



BALITHERM® PPD is applied using the INAURA coating system which has a loading capacity of 10 x 3 metres (32 x 9.5 ft.) and 40 tonnes. The fully automated PPD® process ensures a stable and controlled wear-protection coating. Thanks to the combination of hydrogen, nitrogen and electricity, PPD® operates entirely without the use of toxic gases and chemicals.

# BALITHERM PPD treatment of stamping tools for car body panels



## APPLICATION RECOMMENDATIONS

### GOOD TO KNOW!

In addition to BALITHERM® PPD, Oerlikon Balzers also offers plasma-enhanced diffusion processes for other applications:

**BALITHERM® IONIT for heavy industry:** e.g. large machine parts, windmill gearboxes, steel-forming rolls, construction machinery

**BALITHERM® PRIMEFORM for plastics processing:** e.g. large containers, automotive interiors and exteriors, household appliances

## **Benefit from the efficient and environmentally friendly BALITHERM PPD Service Contact us now!**

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