

# ADDITIVE MANUFACTURING POST-PROCESSING SOLUTIONS AT A GLANCE



POLISHING AND SMOOTHING SUITABLE FOR ANY WORKPIECE

**3D printing has its own specific challenges: process complexity and stability, automation, and the additive surface structure itself. These include removing the support structures as well as reducing waviness and micro-roughness. Post-processing therefore plays a key role in the future of additive manufacturing across all sectors.**



More information

## Application areas

- Small and large ceramic, plastic and metal components weighing up to 200 kg
- Complex and bionic structures, whatever the printing process
- Optimising the look, feel and performance of surfaces (scratch and dirt resistant)
- Surface levelling and smoothing for a matt or high-gloss finish
- Tribological surface optimisation

## Advantages of the OTEC post-processing solutions

- Cost-effective solutions: minimise post-processing costs
- Efficient technology: reduces roughness and waviness in minimal time
- Customised processes: solutions for both functional components and high-tech applications
- All in one machine: deburring, removing waviness, reducing roughness and surface polishing
- Rationalise and automate post-processing
- Easy to integrate in existing process chains
- Ergonomic, all-in-one modular machine concepts designed for all applications from small batches to series production



## Examples of applications (before/after)



Titanium earmoulds



Calvaria in Ultem 9085 PEI (image: ARBURG)

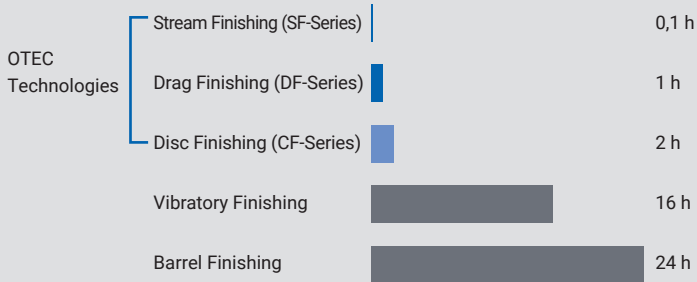


Titanium acetabular cup (Image: IMPLANTCAST)

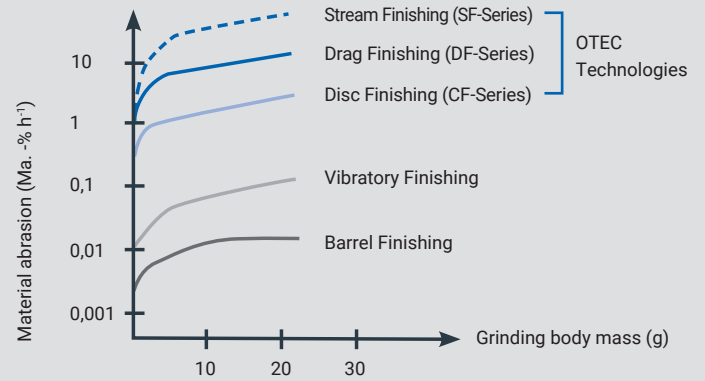


RPD's made of cobalt-chromium

## Process time comparison overview



## Efficiency of mass finishing technologies



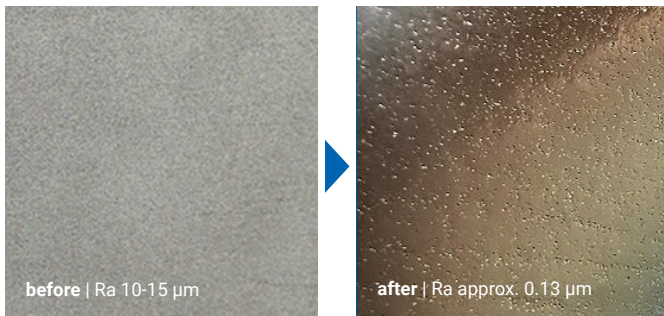
## Efficient technologies for your production needs

As a specialist in highly efficient surface finishing technologies, OTEC is constantly optimising its processes and machines. Consequently, they only take a fraction of the component processing time required by conventional technologies like barrel or vibratory finishing. OTEC machines are therefore synonymous with improved process efficiency, high availability and low maintenance.

## Processes optimised for individual components

OTEC develops perfectly customised process solutions. For subcontractors who work with a wide variety of components, this means cost-effective, versatile processes with consistent results. For industrial customers, our efficient, bespoke solutions are a key asset in high-volume series production. For OTEC customers, this means tailored, cost-effective solutions designed specifically for the geometric diversity of additive manufacturing.

## Aerospace turbine blade surface



**Finishing objective:** Improve aerodynamics by smoothing and polishing  
**OTEC post-processing:** Mass finishing with SF-Series (pre-grinding, fine-grinding, polishing)

## Smoothing and polishing plastic parts



**Finishing objective:** Improve the look and feel of design elements/visible components  
**OTEC post-processing:** Mass finishing with CF-Series

**Try our OTEC Finishing Center!**

**We develop custom solutions to suit your specific requirements.**



As a trusted global partner for perfect surfaces, OTEC builds innovative finishing machines which set high standards and achieve perfect process reliability. Revolutionising manual processing applications results in precise and consistent quality in the shortest possible process time.

Smooth surfaces every time, defined rounding results, the removal of burrs and a perfect sheen are decisive competitive advantages in almost all industrial sectors. In particular that means saving energy as well as extending the service life and increasing the durability of parts.

**OTEC machines with the "Made in Germany" seal of quality stand for dependable technology, high-quality workmanship, reliable operation and a long service life.**

**OTEC**  
PRECISION FINISHING SOLUTIONS

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