

EPAG-SMART T Electropolishing Unit



OTEC PRÄZISIONSFINISH

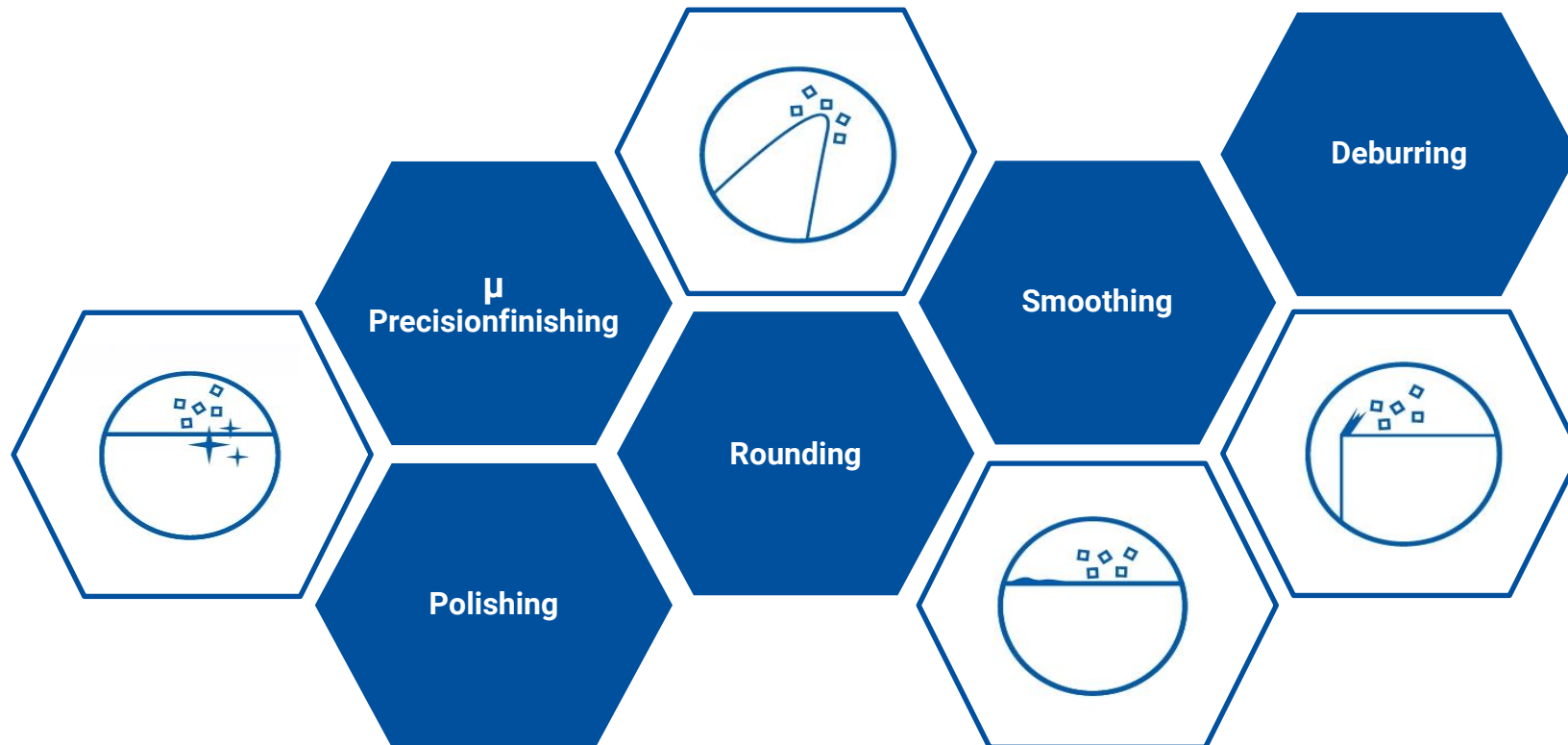
Constantly reinventing mass finishing!



- Targeted surface processing (e.g. deburring, rounding, grinding and polishing)
- Process development and machinery from a single source – tailored to your finishing requirements
- Acid-free, reliable, repeatable and rapid mechanical processing for workpieces

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Competences



EPAG-SMART



TECHNICAL FEATURES OF THE EPAG-SMART

Highest technological standards in a compact design



EPAG-SMART HIGHLIGHTS

Efficiency and digital progress for production

EFFICIENT



20 min Process Time



Process Steps

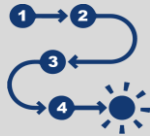


2 Workpieces

OPEN SYSTEM



Lifetime
Electrolyte



Individual
Processes



Process Library

CONNECTIVITY



LAN



Interoperability

INDUSTRY 4.0



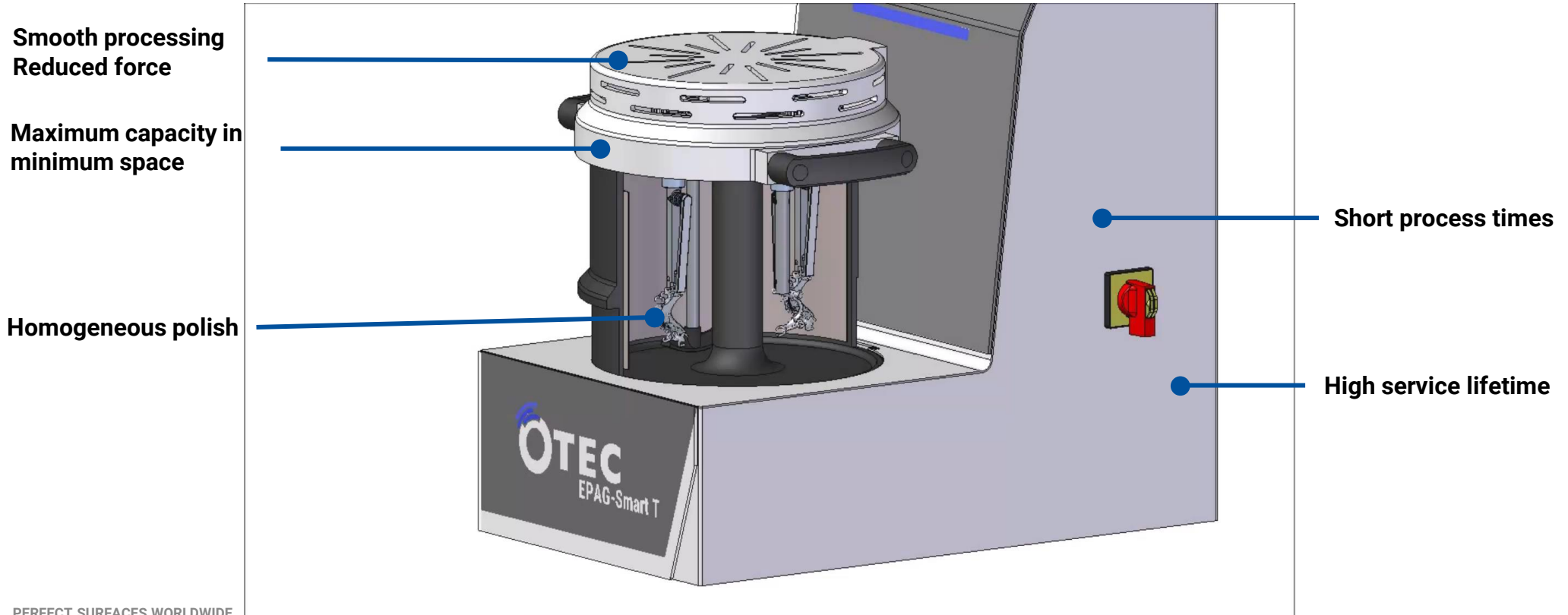
Web GUI



Remote Diagnosis

EPAG-SMART

Maximum capacity in minimum space



OPERATING THE EPAG-SMART

Intuitive control thanks to simple programming

The interface consists of a top status bar with a home icon, date/time (22/10/2021 09:16), help/question mark icon, back arrow icon, and a hamburger menu icon. Below this is a main menu with a header 'PROZESSSCHRITTE 1/1' and a large empty input field. The main menu has four columns, each with a label and a value field:

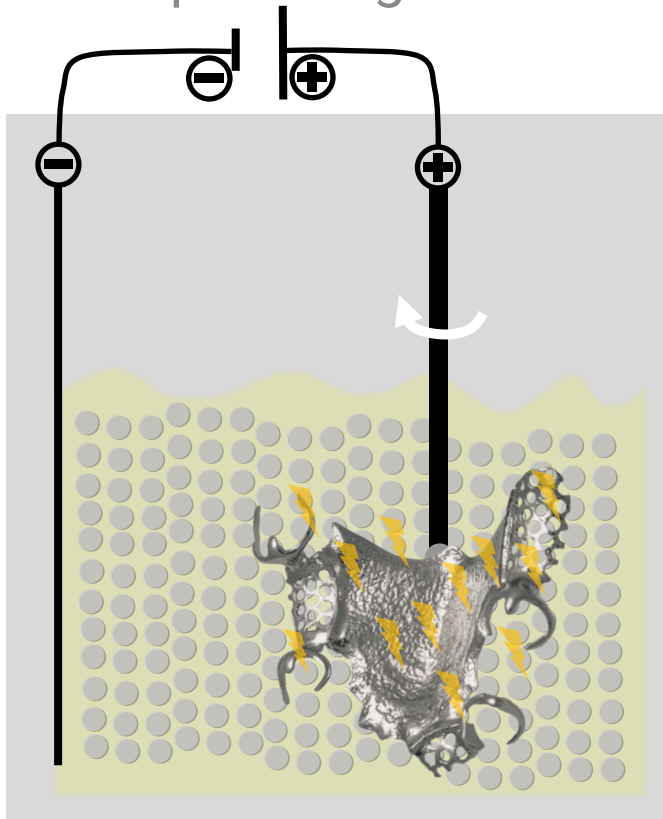
SPANNUNG	DREHZAHL	ZEIT	RAMPE
0.0 V	12 1/min	00:02	0 %

At the bottom are six navigation buttons: a checkmark, an up arrow, a plus sign, a minus sign, a save icon (floppy disk), and a right arrow.

- Reproducible quality
- Up to 128 programs storable
- Sample programs already preset
- End of process is indicated by acoustic signal
- Automatic process flows through multi-stage programming

WORKING PRINCIPLE OF THE EPAG-SMART

Electropolishing for homogeneous smoothing and polishing



Requirements

Voltage source | Process container | Cathode | Anode | Workpiece |
Electrolyte | Solid

Process

1. Applying voltage and current
2. Rotation of the workpiece
3. By electrochemical reaction: ions are dissolved out of the workpiece material
4. Solid absorbs these ions
Saturation of the solid material occurs
Solid material and electrolyte must be exchanged

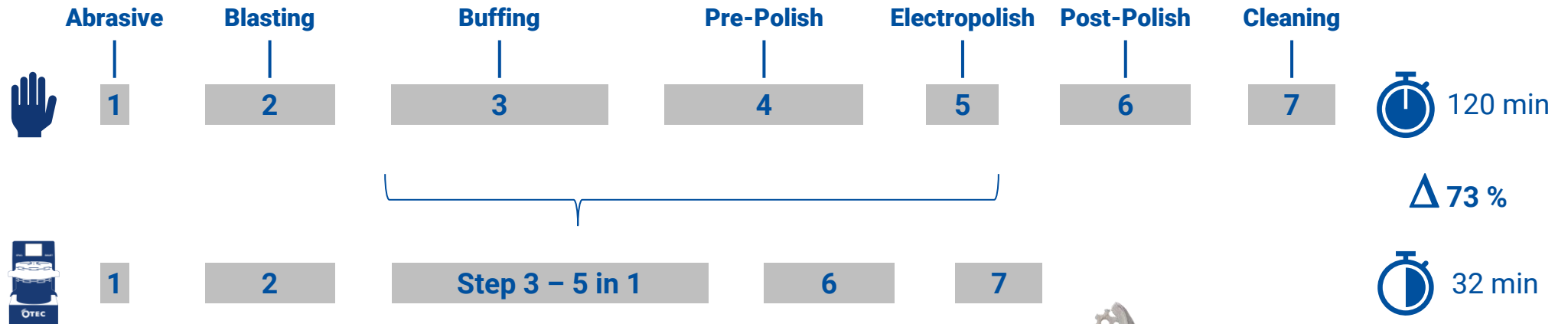
Advantages:

- Solid content slows down the reaction chain
 - Solid material provides ion exchange
 - Shielding effects are significantly reduced due to a flow around
- More homogenous process

PROCESS OPTIMIZATION THROUGH EPAG-SMART

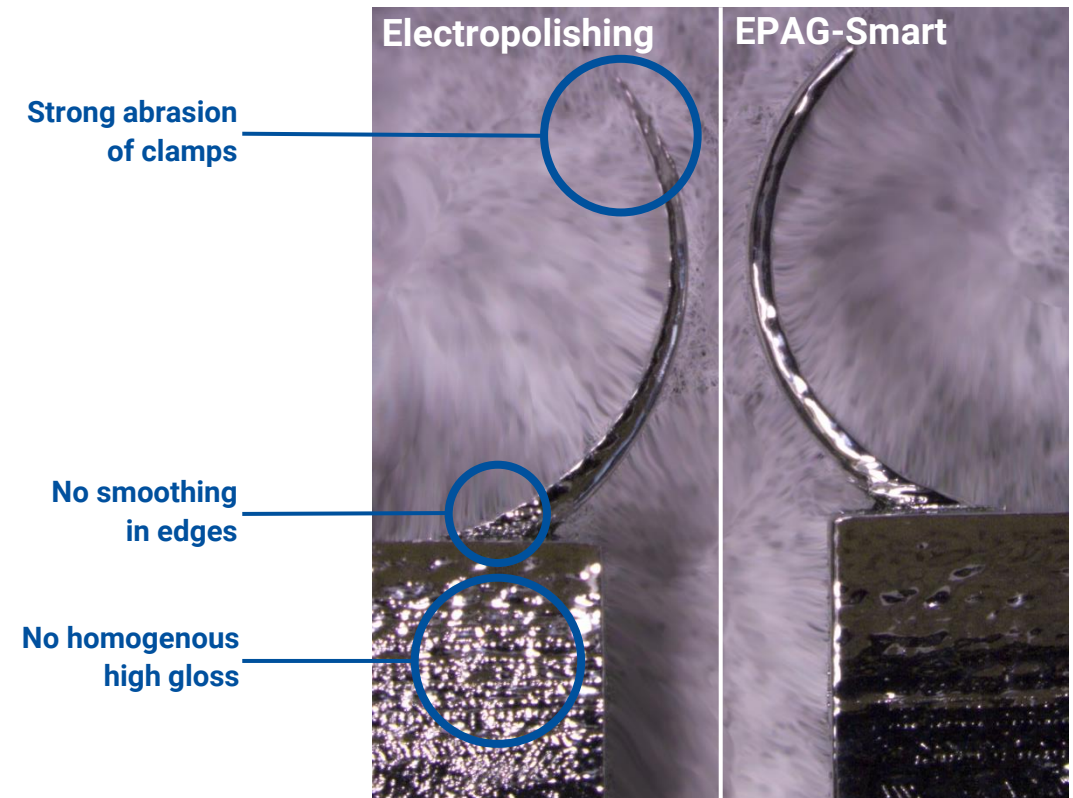
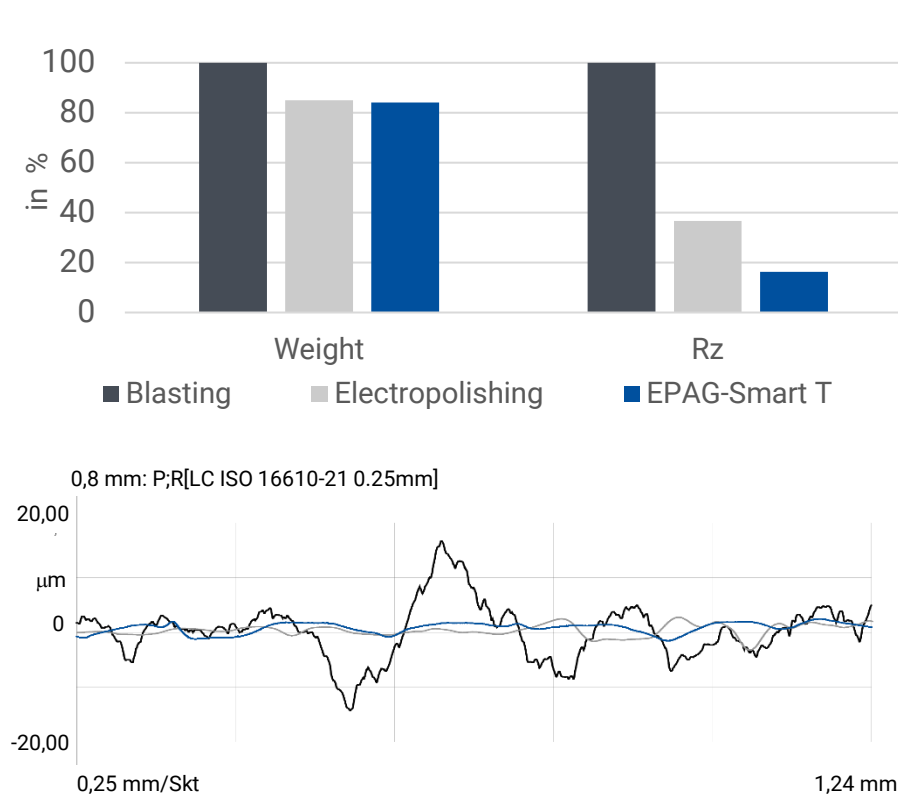
Up to a 70% reduction in process time

Process times for machining 2 clasp dentures:



COMPARISON: ELECTROPOLISHING AND EPAG-SMART

EPAG-Smart can smooth and polish homogeneously - the brightener cannot!



PARTIAL DENTURE: QUALITY ASPECTS

It has to fit and shine!

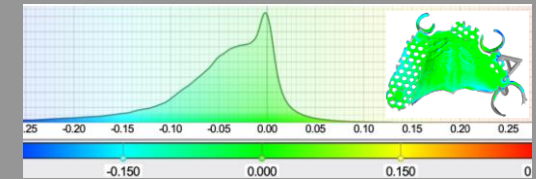


Qualitative Analysis



Quantitative Analysis

Fitting
|
Local Abrasion
|
Homogeneity



APPLICATION EXAMPLE

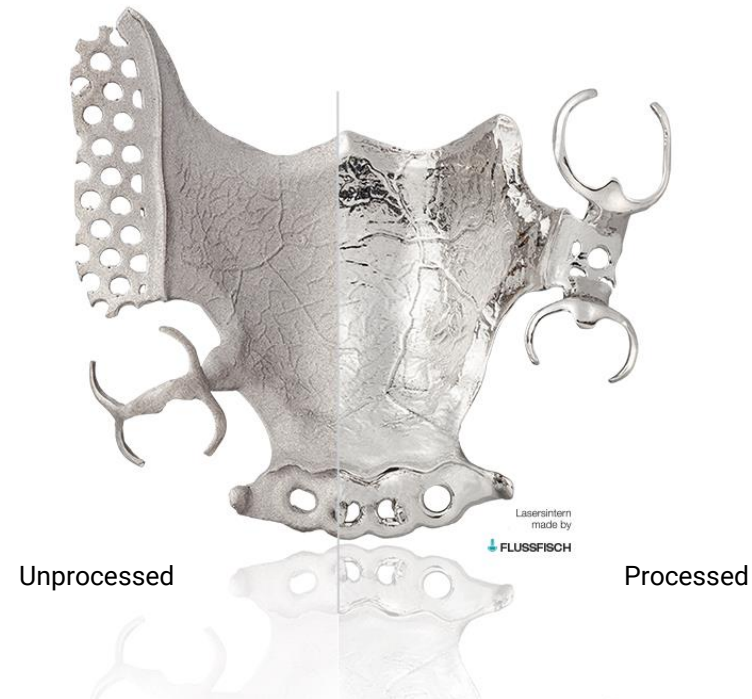
Denture clasps

Processing task

- Smoothing and polishing
- Aim: Homogeneous gloss without excessive removal of shape-critical elements (edge trim and brackets).

Your benefit:

- Geometries remain undamaged
- Manual effort is reduced to a minimum
- Processing of 3 dentures clasps in 20 - 30 minutes
- Reduction of unit costs
- Homogenous surface



THANK YOU FOR INTEREST!

STAY UP TO DATE - FOLLOW US.

