

Lapping, Honing and Polishing Solutions for High-Performance Ceramics



COMPREHENSIVE PROCESS SOLUTIONS

- Higher process stability
- Reproducible surface finishes
- Reduced material removal
- Shorter processing times
- Consistent material removal

Al_2O_3
Alumina

ZrO_2
Zirconia

Si_3N_4
Silicon Nitride

SiC
Silicon Carbide

AlN
Aluminum Nitride

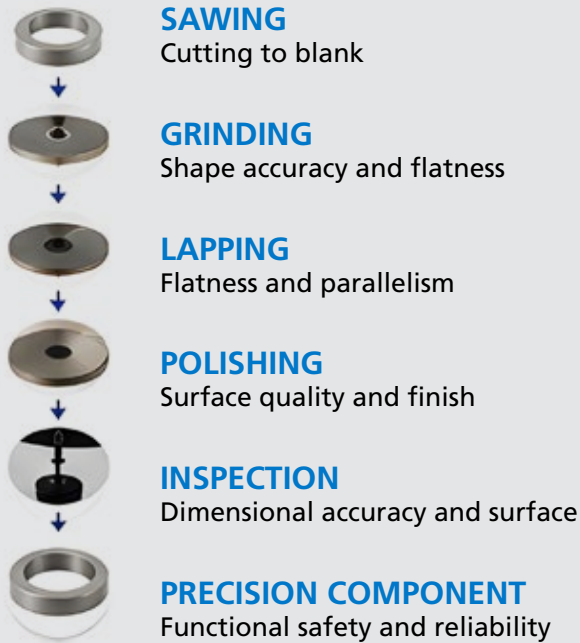
PZT
Piezoceramics

Macor[®]
Glass Ceramic

Cordierite
Cordierite

WHY DOES THE FINISH MAKE THE DIFFERENCE?

The Process Chain



Each Step Influences

- Planarity
- Parallelism
- Surface finish
- Dimensional accuracy
- Functional reliability
- Service life

ENGIS DEVELOPS AND OPTIMIZES EVERY COMPONENT AS A COMPLETE SYSTEM.



MACHINES
Precision and
Process Capability



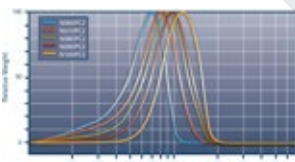
DIAMOND TOOLS
Tailored Tools
for Your Application



DIAMOND MEDIA
Slurries and
Polishing Media



LAPPING PLATES
For All Processes
and Materials



PROCESS DEVELOPMENT
Optimized Parameters
and Workflows



LABORATORY
Testing, Analysis,
Feasibility Studies



GLOBAL SUPPORT
Worldwide Support
Where You Are

Only when all components work together perfectly do you achieve reproducible results.

TYPICAL APPLICATIONS



SEMICONDUCTOR

- Substrates and Carriers
- Contamination Control
- Highest Flatness



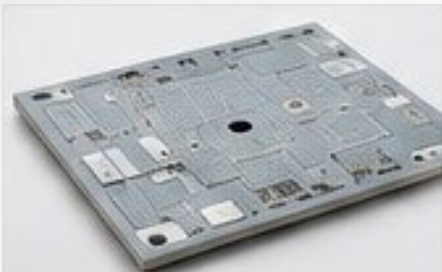
MECHANICAL SEALS

- Highest Tightness
- Parallelism
- Leak Prevention



MEDICAL TECHNOLOGY

- Ceramic Implants
- Wear Resistance
- Surface Quality



ELECTRONICS

- Substrates and Circuits
- Thin-Film Ceramics
- Dimensional Stability



PUMP COMPONENTS

- SiC, Al₂O₃, ZrO₂
- Bearings, Bushings, Seals
- Corrosion and Wear Resistance



HIGH-PERFORMANCE CERAMICS

- Valves, Nozzles, Guides
- Precision Components
- Advanced Ceramics

Engis Supports You

- Process Development
- Tooling Solutions
- Machines
- Diamond Tools and Lapping Plates
- Laboratory Testing and Analysis

Practical Examples

- Alumina Substrates
- Silicon Nitride Seals
- Semiconductor Components
- Electrical Ceramics
- Ceramic Bearings
- Precision Components

SURFACE ENGINEERING THROUGH DIAMOND EXPERTISE



Hyprez Lapping & Polishing Complete Systems



Engis designs and manufactures complete end-to-end solutions capable of achieving ultra-precise tolerances and finishes. We're more than just a supplier of products and machines.

Through our process development laboratories, we can offer efficient turnkey systems custom-tailored to achieve the most challenging manufacturing goals and objectives.

WHY ENGIS

- Complete System Expertise from a Single Source
- Decades of Experience in Ceramic Finishing
- Advanced Diamond Technology and Custom Tooling
- Process Development Laboratories
- Customer-Specific Process Development
- Support from Prototype to Volume Production
- Global References and Customer Focus

We develop ceramic precision components.
We support you in mastering the final finishing process - REPRODUCIBLY.



World Leader in Superabrasive Finishing Systems

ENGIS CORPORATION

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ISO9001
CERTIFIED QUALITY
MANAGEMENT SYSTEM