

SURFACE FINISHING OF MEDICAL PARTS

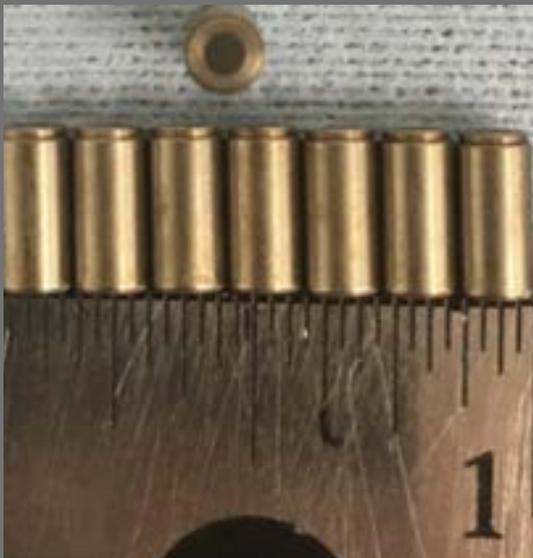


World Leader in Superabrasive
Finishing Systems

Diamond Lapping Advantages

- Allows water based process
 - Parts are easy to clean
 - Avoid incompatibilities with oil
- Minimal lapping waste
- One step processing
- High throughput
- Consistent, predictable performance

Stainless Steel Plungers
filled with Rubber or Silicone
(~ 0.15" OD x 0.25" height)



Lapping of Stainless Steel Parts filled with Rubber & Silicone for Ventilators

The quality of sealing surfaces in medical devices, such as ventilators, is critical to reliable performance. It is important to precisely control the surface roughness and overall dimensions.

This can be a challenge when the surface is comprised of dissimilar materials, such as stainless steel and rubber or silicone. Engis has developed a precision lapping process to address these needs.

Lapping Machine Options



For Large Scale Manufacturing
Engis FastLap machine
with pneumatics



**For Development of Small-Scale
Manufacturing**
FastLap FL-15 Lapping Machine

Consumables & Accessories

Hyprez S4889 Diamond Slurry

- Water Based
- Easy to clean

Hyprez C250 Lap Plate

- Stable Performance
- High volume

Hyprez Accessories

- Ceramic rings with custom fixtures
- Diamond plated conditioning rings
- Minimiser Slurry Dispenser
- Auto Stirrer

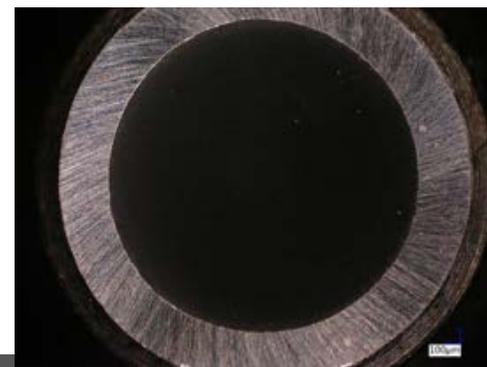
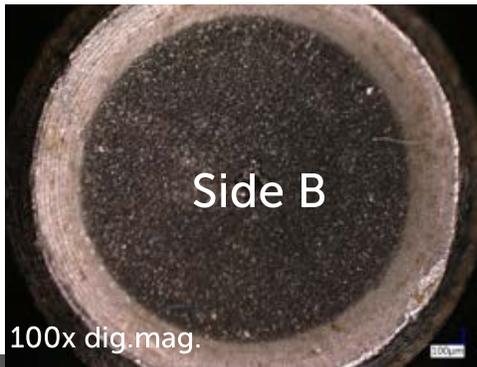
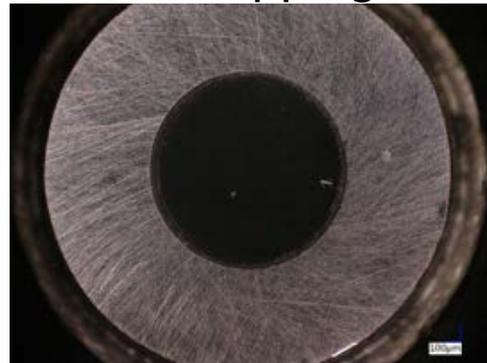
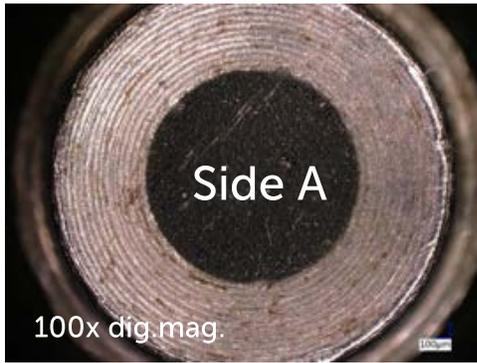


Surface Finish Improvements

Plungers filled with Silicone

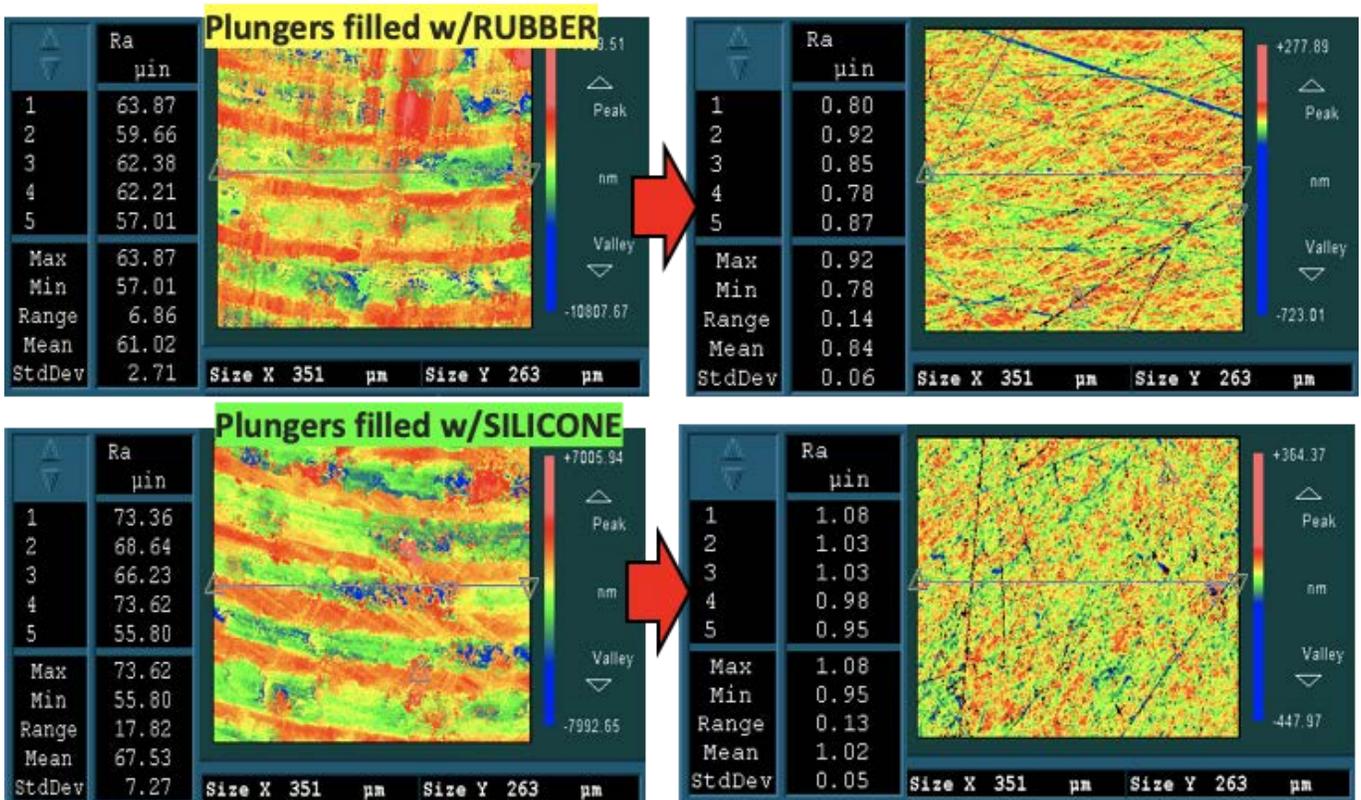
Before

After Lapping



Surface Roughness Before & After Lapping

AS RECEIVED (Stainless Steel Measurements)



CASE STUDY SUMMARY



World Leader in Superabrasive Finishing Systems

AS RECEIVED

matte, rough
55 - 75 min
n/a
n/a

AFTER DIAMOND LAPPING

semi-reflective, smooth
0.8 - 1.0 min
≤ 0.00015 in
30-40 min/side

Surface Finish
Surface Roughness (Ra)
Flatness (PV)
Lapping time

Material
Removal Rate

n/a

Plungers filled w/RUBBER: »1um/min (0.00004"/min)
Plungers filled w/SILICONE: »2um/min (0.0008"/min)

Contact Us

At ENGIS, we engineer a tailored solution for your lapping and polishing applications, utilizing our in-depth knowledge of superabrasives, our process development laboratories, and our end-to-end full systems approach.

**TO PURCHASE OUR PRODUCTS
CALL OR EMAIL US.**

info@engis.com

105 West Hintz Rd.

Wheeling, IL 60090

Phone: +1-847-808-9400 or

800-993-6447

Fax: +1-847-808-9430

**CONTACT ENGIS
www.engis.com**

ENGIS The Complete Systems Approach

Powders, Slurries, Machine Tools, Plates & Pads, Accessories

Engis is in a unique position to offer a full systems approach to your superfinishing challenges. Not only do we supply slurries and machines, our three process development laboratories offer you efficient turnkey systems to achieve your manufacturing objectives.

We have the expertise to understand your process needs and technical know-how to work with your engineers to map your objectives and challenges. We analyze your needs, creating a customized, complete systems approach for you.

Engis can formulate slurries, lubricants, and cleaners specifically for your applications. Our engineering team can design the accessories, fixturing or plates, specifically to your application.