

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.

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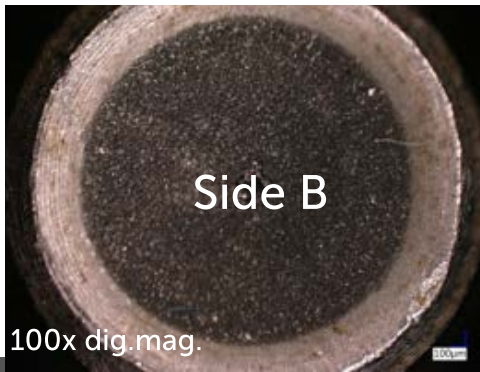
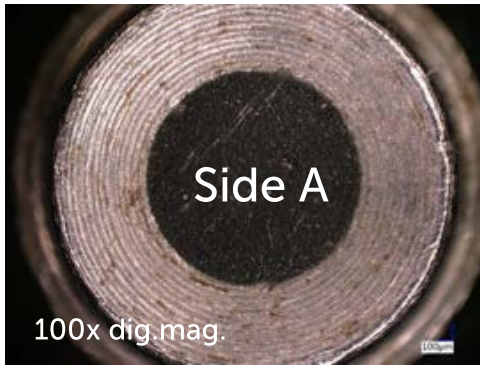
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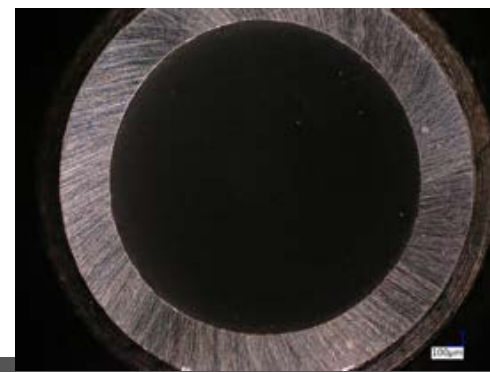
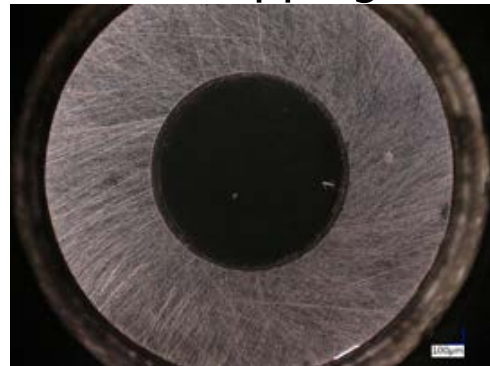
Surface Finish Improvements

Plungers filled with Silicone

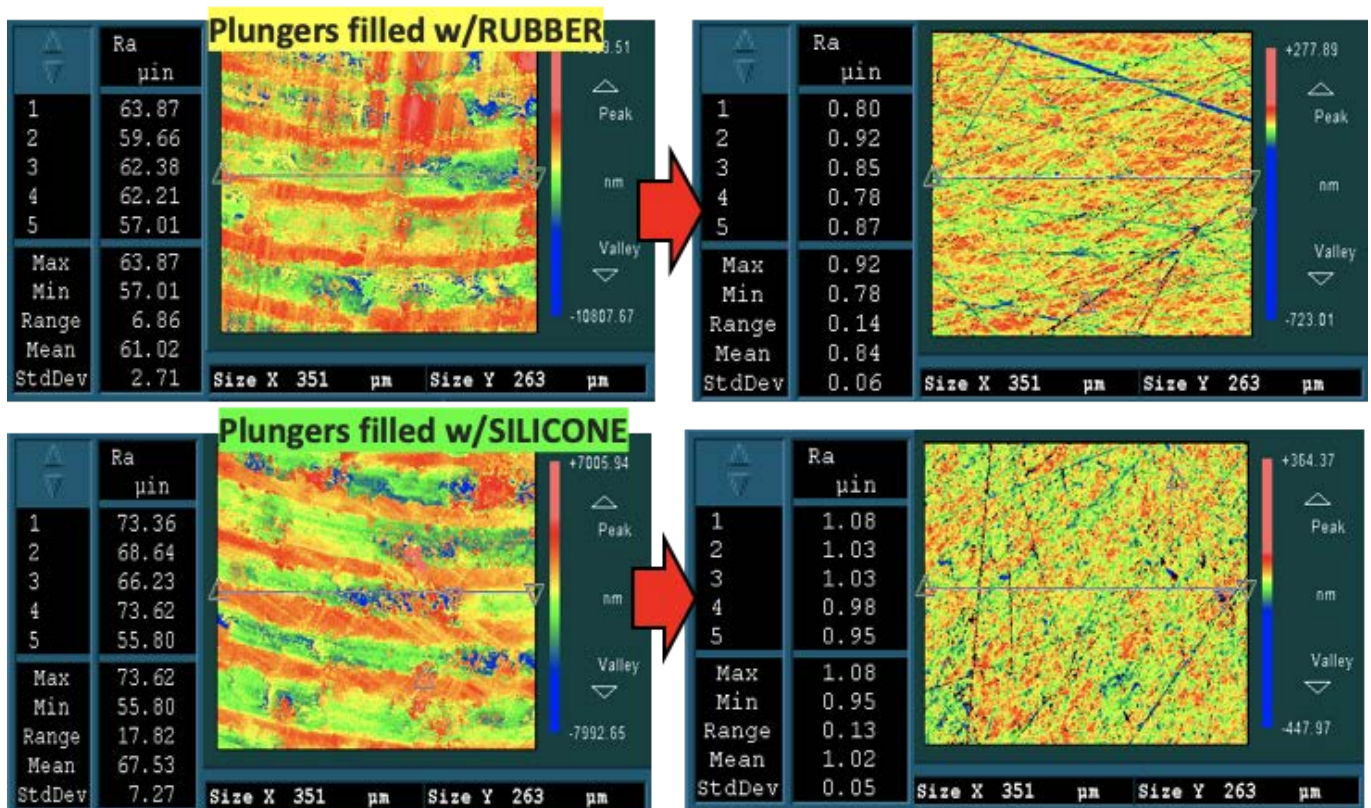
Before



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.**

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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.

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