



The ISF Process: Reduce Cost and Improve Surface Finish

The ISF® Process

Quality and process reliability are of the utmost importance in the medical industry—after all, lives are at stake. Medically implanted devices often have complex geometries and utilize difficult to machine alloys such as titanium and stainless steels. Smooth surfaces are desired for corrosion resistance, sterility, and reduced wear. However, traditional, abrasive processing techniques (tumbling, drag finishing) can fall short in achieving the desired surface finish, or result in long cycle times and have the risk of component contamination from abrasive particles.

The isotropic surface achieved by REM's ISF® Process offers many critical advantages to the medical industry by reducing both cycle time and component shape alteration, as well as eliminating the use of abrasive particles in the finishing process. The ISF Process has been shown to reduce wear as a result of friction, reduce the risk of crevice corrosion and fretting, increase bending/dynamic fatigue life, improve component sterility, and reduce hemolysis and thrombosis in blood contacting devices. These benefits ultimately improve patient outcomes and quality of life.

REM can process titanium, stainless steel, and other high-end alloys to produce a low Ra surface ($Ra < 2 \mu\text{in}$). In addition to the above referenced benefits, the ISF Process is machine controlled and therefore a more robust technology than hand buffing; the ISF Process's inherent flexibility doesn't require highly part specific processing setups as are common with electropolishing.

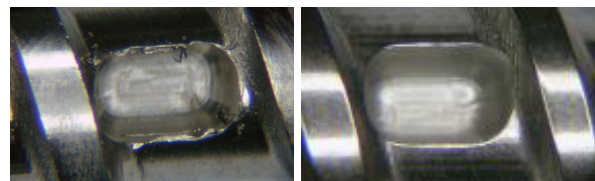
Contact REM today to initiate a surface finishing project to improve your medical components.

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Part Performance Benefits:

- Reduce Hemolysis and Thrombosis
- Reduce Fretting and Corrosion
- Reduce Wear
- Increase Bending Fatigue Resistance
- Increase Cleanliness and Sterility



Medical Applications:

- Blood Contact Parts
- Bone Screws and Plates
- Artificial Knee and Hip Implants
- Surgical and Dental Instruments

**Available via install or
outsourced processing**



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REM QMS is certified to ISO 9001:2015 & AS9100:2016 Rev D

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