# Manufacturing

## World-Class Manufacturing for Life-Critical Implants

### Raw Material

Ti-6Al-4V ELI and 316L SS sourced exclusively from certified aerospace/medical mills. Each billet arrives with a Mill Test Certificate; our incoming inspection team performs independent hardness and spectroscopic verification before any material enters machining.

### CNC Machining

28 five-axis CNC centres with on-machine probing for real-time dimensional feedback. Toolpaths generated from validated CAM programmes under document control. Critical features held to <=0.01 mm tolerance.

### Surface Treatment

- **Electropolishing** — Ra <=0.05 m on articulating surfaces
- **Type III Hard Anodising** — HV 600–800 for titanium implants
- **HA Plasma Spray** — 50–75 m coating, >=98% crystallinity (XRD verified)
- **Passivation** — ASTM A967 nitric acid for stainless steel

### Cleanroom Packaging & Sterilisation

Assembly and packaging in ISO 14644 Class 7 cleanrooms. ETO sterilised with biological indicator confirmation. Shelf life validated to 5 years from manufacture date.

## Contact


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