

Make the business case for capital investment in surface finishing technology

How medical device manufacturers can differentiate their products and increase revenue

The McKinsey Center for Government reports that medical device revenues are rising 9-percent annually. So are adverse events that compromise revenues, such as patient injuries from faulty equipment. Couple this with increased media scrutiny on medical device quality, and the business case for quality control and enhancement becomes obvious.¹

Finishing operations are ripe for improvement. Not only is the industry experiencing a renaissance in quality and control, but excellent finishing equipment – now attainable by even modest-sized companies – can generate a fast return on investment. This kind of investment can also help manufacturers adapt to new regulations, alleviate risk, and avoid supplier logjams – allowing them to operate more nimbly.²

Why capital investment in surface finishes works

Smart finishing choices can result in exponential increases in device durability and longevity, but many manufacturers don't realize that achieving these results using current outsourcing methods can be complex and costly. By contrast, investing in proven surface finish technologies can alleviate risk, meet growing regulatory demands, and create profit-driving efficiencies.

By adding a Vapor Tech finishing system to the supply chain, manufacturers can eliminate the hidden costs of outsourcing, improve quality, optimize manufacturing processes, and protect revenue.

Surface finishing equipment is a serious, long-term investment – but one that produces lasting benefits:

/ Maintenance improvements: Running a single, familiar coating setup streamlines and controls

maintenance. Vapor Tech's service program means expert support is just a phone call away.

/ Margin enhancements: Consolidated supply leads to fewer labor and inspection costs, and Vapor Tech surface finishes efficiently use raw materials. As little as one micron thick, these finishes deliver hardness, chemical and wear resistance, and durable color without waste.

/ Reduced production risk: The human variables of production are reduced and productivity increases; learning curves are shortened.³ Further, moving away from hexavalent chromium plating processes averts notable environmental and regulatory risks.

Refining the supply chain

Traditional outsourcing approaches introduce surprising vulnerabilities and hidden costs. Among these are those incurred from shipping, transportation delays, and miscommunication. Quality control is a problem, too, since offsite manufacturing is innately more difficult to assess, and quality corrections have to filter through several bureaucratic layers. Finally, proliferating third-party specialists and the costs of rework further diminish the business value of this approach.

Vapor Tech surface finishing solutions give manufacturers vastly increased quality and product

¹ McKinsey Center for Government. "The Business Case for Medical Device Quality." McKinsey & Company, 2013.

² Tony Crivella and Joe Zuzula. "Expanding Opportunities with a Simplified Supply Chain." Orchid Orthopedics, 2014.

³ Sean Fenske, Editor. "Capital Investments." Orthopedic Design & Technology Magazine. May/June 2016.

Why choose Vapor Tech?

Capability	Benefit
Three superior deposition systems available	Keep pace with real-world requirements
Several surface finishing technologies in a single system	Embrace lean manufacturing and save resources
Wide scalability in batch size and throughput	Adapt to varying needs and optimize uptime
Intuitive user interfaces and minimal training required	Lower labor and training costs, and accelerate time-to-value

consistency, lower long-term costs, and stability in ever-changing regulatory environments. As the anchor of an onsite surface finishing process, Vapor Tech equipment empowers manufacturers with the innovative technology that helps differentiate them in the marketplace.

With Vapor Tech equipment as long-term capital investments, manufacturers can house and control the application of stable, precise, and reliable surface finishes to a variety of part sizes, geometries, and substrates. These enhancements harden a surface while still remaining tougher than typical anodized hardening methods, and these colorfast finishes do not wear off or fade, even as they are run through autoclave and gamma sterilization processes.⁴ This also means that lower-cost base materials (plastics, ceramics, metals, and other polymers) can be used without sacrificing part integrity or longevity.

A sustainable choice

Alongside improved quality and processes, any capital expenditure should be sustainable over time and come with necessary personnel and technology support. That's why Vapor Tech stands out – Vapor Tech's surface finishing systems and experts help medical device

manufacturers provide continuity and dependability (another advantage of consolidated supply), enabling them to produce products worthy of their brands.

Make products look great, last longer, and perform better

Medical manufacturers face a churning market environment and, in many cases, a precarious future. Because of this, some recognize that developing more durable products and optimizing supply chains are keys to sustainable profit. And few parts of the manufacturing process offer as much promise as surface finishes.

By partnering with Vapor Tech, manufacturers can meet the needs and high-yield requirements of today's environment; satisfy demand; and ensure their products best represent their brands. Plus, Vapor Tech helps protect and extend the life of the investment. Our skilled service and engineering teams provide responsive support to keep systems running at optimum productivity levels, and help optimize surface finishes to meet market demands. From installation to prompt troubleshooting to training programs, Vapor Tech helps medical device manufacturers achieve high-quality, durable surface finishes – easily, consistently, and cost-effectively.

⁴ Mark Pellman. "PVD Coatings for Medical Device Applications." Products Finishing, July 1, 2000.



About Vapor Tech

For more than 25 years, companies in a variety of industries have relied on Vapor Tech's industry-leading coating technologies to ensure their products feature premium surface finishes and functional surface finishes. Vapor Tech is a subsidiary of Masco Corporation.

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