

CHRISTOPHER SOHLBERG

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PROFESSIONAL SUMMARY

Product Design / Mechanical Design Engineer with 10+ years delivering end-to-end hardware from concept → CAD → prototype builds → DFM/DFA → supplier execution → test/validation → manufacturing ramp in fast-paced, cross-functional environments (manufacturing, research, regulated medical). Advanced Siemens NX + Teamcenter/PLM background with strong fundamentals in GD&T, functional parametric dimensioning, and tolerance-driven design, plus hands-on prototyping across injection/compression molded, machined, sheet metal, and 3D-printed components. Experienced packaging electronics (PCBs/LCD/fans), integrating sensors/connectors, and producing clear technical documentation and operator instructions to deliver high-volume-ready hardware.

SKILLS

- **Mechanical Design Ownership:** component/system ownership, requirements-to-design, design reviews, risk tracking/closure, configuration control
- **DFM/DFA & Tolerance:** GD&T, functional dimensioning, tolerance stack-ups (statistical/hand calc), assembly sequencing, serviceability/reliability
- **Materials & Processes:** plastics, metals, adhesives/epoxies; injection molding, compression molding, machining, sheet metal, welding design specification, stamping principles, 3D printing
- **Prototyping & Test:** model-build-test-refine, characterization fixtures, FEA, DOE, Gage R&R; Python, LabVIEW, JMP
- **International Supply Chain & Vendors:** Led supplier scouting/selection and prototype/manufacturing coordination with vendors in **China, Switzerland, and Korea**, including RFQs, DFM feedback loops, and schedule/quality alignment.
- **Documentation & Configuration Control:** Authored operator work instructions, operating manuals, requirements/specs, technical drawing packages (2D/3D, GD&T), BOMs, and technical analysis reports summarizing DOE/statistical test data; produced proposal documentation for CapEx/funding approval; supported FDA/ISO 13485 environments; managed PDM/PLM release workflows, revision control, and change/ECO traceability.
- **CAD/PLM:** Siemens NX, Teamcenter; SolidWorks, CATIA V5, Creo/ProE

WORK HISTORY

- 2024 to Current **Sr. GSE Engineer, Tool Design**
Amazon Project Kuiper (Contract) – Kirkland, WA
- Lead mechanical design in NX + Teamcenter for complex tooling and electromechanical systems to improve manufacturing efficiency.
 - Own lifecycle delivery: rapid prototyping, vendor coordination, fabrication/assembly, validation, and documentation to meet tight schedules.
 - Perform FEA to verify fixture/tool integrity; communicate status, risks, and recommendations to cross-functional stakeholders.
- 2022 to 2024 **Sr. Product Development Engineer**
Ondine Biomedical – Bothell, WA
- Developed automated mechanical systems reducing bio-lab testing cycle times by 60% (Gage R&R and 95% repeatability confidence).
 - Drove supplier execution for injection molding tooling/parts, reducing COGS by 50% through DFM and Asian manufacturing partnerships.
 - Built integrated electro-mechanical test solutions; developed test methods/validations and authored reports for QMS/FDA submissions.
- 2017 to 2022 **Prototype Design Engineer (Lead)**
Ventec Life Systems – Bothell, WA
- Designed Production sheet metal, injection/compression molded, and machined components of Complex Medical Devices to scale manufacturing by 80x during COVID ramp.
 - Designed/optimized electromechanical test systems improving production yields by 30–40%.
 - Reduced COGS 15–20% through manufacturing method selection, Asian Supply Chain, fabrication/operations coordination, and waste reduction (DFM/A).
- 2013 to 2018 **Product Development Engineer (Lead)**
Proto-Design Inc. – Redmond, WA
- Released multiple products from prototype to manufacturing; developed processes and managed hardware configuration of complex assemblies.
 - Improved machining cycle time up to 40%; created operator work instructions and established inspection capability.

EDUCATION

B.S.: Mechanical Engineering, Mathematics Minor
University of Washington
GPA: 3.86

- **Electronics packaging:** designed low-profile enclosure packaging **2 PCBs, LCD display, fans**, and cable routing; thermal ducting, service access, and assembly constraints.
- **Connector & sensor feature:** designed locking mechanism with sensors to detect connector removal and enable controlled unlocking for manufacturing process transitions.
- **System cabling:** modeled and routed full device cabling to verify fit/clearance and create repeatable operator instructions (routing paths, retention points, sequencing).
- **Verification electronics:** designed a PCB using mechanical relays as a custom **go/no-go** check to verify correct component installation on a sub-assembly.
- **Propeller Dyno Tester (freelance):** Test structure, Motor selection, Propeller design, sealed/waterproof enclosure integrating electronics for load cell, current sensor, and microphones. Programmed Motor ramp and hold sequence with Arduino/Python DAQ/control outputting Force vs Current plots.
- **Rapid prototype housings:** multiple 3D-printed PCBA enclosures with captive connector retention, cooling provisions, USB power ports, LED/status windows, and reset-actuation access.