

# BENJAMIN WIEGANDT

**Mechanical Engineer | Product Development & Manufacturing**

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## SUMMARY

Mechanical/product development engineer with hands-on hardware design, prototyping, testing, and DFM/assembly experience, backed by strong mechanical fundamentals and startup execution exposure. Interested in applying these capabilities to marine hardware and field-deployable systems for exploration, testing, and ocean operations.

## EXPERIENCE

**Senior Product Development Engineer** — Integra LifeSciences (Codman) **Mansfield, MA · Aug 2024–Present**

- SME for cranial perforators (high-volume; ~250k units/year), leading design remediation (CTQs, test methods, V&V, DHF) and providing support for sustaining and design changes driven by regulatory/field needs.
- Mechanical design lead for introducing CereLink ICP sensors to new China manufacturing facility, establishing mechanical design requirements, CTQs, and test methods supporting NMPA approval and pilot builds.
- Sustaining and design engineer for neurosurgical ICP sensors and accessories, driving design inputs/outputs and remediation for newer platforms (EU MDR & NMPA) and supporting sustaining and field across legacy SKUs.

**Manufacturing Engineer II** — Integra LifeSciences (Codman)

**Mansfield, MA · Jan 2021–Aug 2024**

**Manufacturing Engineer I** — Johnson & Johnson (DePuy Synthes / Codman)

**Raynham, MA · May 2019–Jan 2021**

- Perforator manufacturing SME across assembly, test, inspection, and machining/finishing workflows.
- Co-led a perforator lean/multi-lot flow redesign (↑throughput 75%, ↓cycle 10%, ↓labor 30%), achieving safety stock for the first time.
- Designed ultrasonic cleaning fixtures for perforators to eliminate staining/nicking defects (scrap ↓ >85%, yield ↑ >5%) and a repair pathway recapturing >\$750k/year.
- Led sustaining engineering & manufacturing across multiple neurosurgical products (assembly, cleaning, ultrasonic welding, molding troubleshooting, in-process functional testing, and materials/Surgical Patties), executing IQ/OQ/PQ validations & doc updates and acting as de-facto SME for additional product lines.
- Key technical role in a ~275 neurosurgical SKU transfer (J&J→Integra) and the greenfield startup of Mansfield plant, driving IQ/OQ/PQ, equipment qual, pilot builds, test methods, docs, and operator training.

## CO-OP EXPERIENCE

**Manufacturing Engineering Co-Op** — Alta Motors

**Brisbane, CA · Jul 2018–Oct 2018**

- Designed SolidWorks fixtures for battery/electronics assembly and test of electric motorcycles and ran 3D-printing supporting rapid iteration across hardware and R&D teams.

**Engineering Co-Op** — Johnson & Johnson (DePuy Synthes / Codman)

**Raynham, MA · Jun 2017–Jan 2018**

- Supported fixture design and validation work; later rehired into Manufacturing Engineering roles.

## SKILLS

Skills: SolidWorks (CSWA), additive/3DP, fixture design, GD&T (DFM-level), DFM/DFA, integration (mech/elec/controls), machining familiarity (manual/CNC), DC power familiarity, PLC troubleshooting & ladder logic familiarity, build-test-iterate workflows; validation & root-cause analysis; basic field/bench testing  
Technical Literacy: comfortable reading/modifying Python/C++ code; MATLAB exposure for data analysis

## EDUCATION

**B.S. Mechanical Engineering** — Northeastern University

**Boston, MA · 2019**

Minor: Environmental Science; Study abroad: Thessaloniki, Greece (NU-in)

## ADDITIONAL / ACTIVITIES

Volunteer Aquarist/Educator (Save the Bay Aquarium); German (bilingual), US/EU citizen; marine/environmental interests; boating/fishing; surfing

**Personal project:** offshore vessel refit — electrical rebuild, NMEA 2000 integration, custom fabrication, engine repair.