

# John King III

Mechanical Engineer | [Waldo120@gmail.com](mailto:Waldo120@gmail.com)

## What can I offer you?

I'm a Mechanical Engineer with 10 years of experience (6 years in medical device). Some of my top skills and experience I can offer are:

- Extensive hands on and machine shop experience throughout my career.
- High proficiency in SolidWorks / CAD.
- Minitab experience with extensive Minitab statistical training.
- Design Control
  - Internal auditor for ISO 13485 (ISO 9001 for medical devices).
  - CAPA, ECO, NCA, DHR, Design Review, NCR's, BOM, dFMEA, and pFMEA.
- Cadence Project Management Certification.
- Writing process instructions and training operators.
- Programming languages include Assembly, PLC's, LabVIEW, 2-axis encoder (see skills for more).
- UDI labeling.
- Marking laser on plastics and metals.
- All stages of product lifecycle.

## What am I looking for?

- Full time, W2 employment, but open to contract.
- Continue living in Santa Clara, CA. Willing to travel about 1 week per quarter.
- While my recent experience has been in medical device, I am open to other industries.
- I am open to: Mechanical, NPI, Manufacturing, Design, R & D, Development Engineer, or similar positions.

## Skills

### Plastic Processes:

- RF Tipping, RF Compression Molding, Embedded Marker Band, Micro Molding, Threading, Coils, Kink Resistant Tubing, Flaring, Shaped Tubing, Core Drilling, Bonding, Joining, Spiral Cutting, Medical Grade Adhesives, Disposables, Laser Marker

### Materials:

- **Plastics:** Pebax, PVC, Polyurethane, Peek, Polycarbonate, PTFE / Teflon, Silicone
- **Metals:** Nitinol, S-7, H-13, W-1, SST 303/304, 6061, MIC 6, sheet metal
- **Coatings:** Teflon , Magnaplate, Anodization, and Alodine

### Machine Shop:

- Mill, Lathe, Grinders, Spade Drill, Polishing, Laser Marker, 3D Printer, Casting, Rapid Prototype Machine

### Design Control:

- ISO 13485, CAPA, ECO, NCA, DHF, DR's, NCR, BOM, Validation, and pFMEA

### Software:

- Solidworks with EPDM and GD&T, AutoCAD, Ansys FEA Analysis, Minitab, FileMaker, ProjectLibre, IQMS, Bartender

### Programming:

- Quicksilver Controls (2-axis encoder programming), LabVIEW, HC12 Micro controller in Assembly, g-code, Fortran, PLC's; Moeller, Twido, Allen Bradley

### Electrical wiring and controls:

- LVDT's, Strain Gages, String Pots, Relays, and Contactors

### Labeling:

- UDI Labeling, MicroScan Label Verification, Zebra thermal transfer printers

### Misc.:

- Pneumatics, Hydraulics, Pull / Tensile Test, Bend Test, Tolerance Stack Up, Project management, Thermal Camera, Tappi, Various IT / Computer Skills, Statistics, EFD Dispensers, Automated Wire Stripper.

## **Professional Experience**

### **MedPlast / Viant**

Medical Device | Manufacturing Engineer 2/16 – 07/18 (2.5 years)

#### **Responsibilities**

Worked on a stem cell separation device and sub-assemblies for surgical robots. Develop processes and fixtures for medical device assembly and secondary processes. I took projects from proof of concept through sustaining. Implemented cost saving ideas.

#### **Accomplishments**

- Ramped up manufacturing of cord blood stem cell separation disposable. Up to 10 operators on the production line with a customer demand of up to 6,000 devices per month on the packaged device level.
- Defined visual standards.
- Troubleshoot Keyence laser system, Komax wire stripper, and performed DOE on Belco Tray Sealer.
- Wrote protocol, report, and performed validation on new oven.
- Internal auditor to assure ISO 13485 compliance.
- Implemented UDI labeling projects.

### **Modified Polymer Components**

Medical Device | Development / NPI Manufacturing Engineer 4/12 – 2/15 (3 years)

#### **Responsibilities**

Responsible for taking projects from proof-of-concept to transfer. Duties included planning, designing, making initial samples, developing & documenting process, troubleshooting, pFMEA's, managing BOM's, validation, and ultimately transferring. Worked on components whose end use was; eurostimulation, endoscopy, surgical robots, cancer treatment devices, peripheral arterial disease, atrial fibrillation, catheter, stomach bypass, renal denervation treatments, and acoustic domes.

Used Solid Works on a nearly daily basis to design dies, tooling, fixtures, etc. Beta tester for Solid Works EPDM implementation. Ensured tolerance stack up wasn't an issue between tooling and material. Frequently used PLC's to control timing in the semi-automated manufacturing processes. Used machine shop to make fixtures and die's. Suggested DFM changes to customers. Used customer requirements to implement inspection and testing procedures like pull/tensile test, bend test, and proof test. Used Minitab to show process capability (Cpk, Ppk), suggest tolerance intervals to customers, and analyze/run DOE results. Used many coatings and materials. Some exposure to geometric tolerancing. Internal auditor to assure ISO 13485 compliance.

#### **Accomplishments**

- Brought in fiber LED system to allow inspection of internal features and defects without the expense of an x-ray scanner.
- Increased yield and visual quality by replacing a clamping system with a screw system.
- Made a dual layered tapered OD and ID catheter possible by re-evaluating tolerance stack up.
- Created generic spiral cut rig and drawing that was used by fellow engineers to do their spiral cut jobs.
- Improved safety, upgraded, and fixed old Wraptor to work similar to new Wraptor.
- Became go to guy for Minitab questions and issues. Created flow chart for all employees to easily track down their desired command.

## **ConXtech**

Construction Automation | R & D Engineer, Detail Manager 1/06 – 2/12 (6 years)

### **Responsibilities**

Worked on electro-mechanical manufacturing and test fixturing. Managed and organized structural drawing standards. Maintained and improved ConXtech's IT infrastructure.

### **Accomplishments**

- Synchronous lifting hydraulic controls: Designed, fabricated, and programmed PLC controls for the synchronous hydraulic lifting mechanism on the ConXL robot weld system (inexpensive alternatives were not available in the market).
- DAQ and controls: Designed, fabricated, and programmed DAQ and controls using LabView for the ConXL test frame. This allowed in-house testing of the ConXL Frame.
- FARO Arm: Used a robotic arm to compare completed parts to their CAD model.
- SX Drawings: Organized and fixed a full set of best-known methods for structural drawings in AutoCAD to provide structural engineers with a standard to design from using ConXtech's system.

## **Education**

### **UCSC - University of Santa Cruz**

Medical Device Verification and Validation

### **ASQ Silicon Valley Biomedical Division**

FDA Notified Body and Internal Auditing  
DOE (Design of Experiment)  
Design Control

### **Cadence**

Project Management Certificate

### **Minitab Training**

DMAIC (internal training at MPC) and 20-hour online Minitab course which together included: DOE, Response Optimization, Gage R&R, t-test, f-test, Confidence Intervals, Process Capability (Cpk, Ppk), ANOVA, Correlation, poka yoke

### **Cal Poly University, San Luis Obispo**

Bachelor of Science in Mechanical Engineering  
Concentration in Mechatronics  
Minor in Mathematics