



Design Engineer

Term: 1 Year with possibility for extension based on performance and need

Location: San Francisco, CA

About D-Rev

At [D-Rev](#) we believe good health is a human right. The need for quality healthcare spans the economic spectrum. Regardless of where you are from and what you do, health is critical to well-being, productivity, and autonomy. We exist to design and deliver medical technologies that close the quality healthcare gap for underserved populations.

We are a portfolio design company that prioritizes the user in the development of products, and have been recognized by Fast Company as one of the World's Most Innovative organizations and the World Economic Forum as a Technology Pioneer. The scaling of our first product, Brilliance, is monumental in global health – it is one of the earliest examples of a nonprofit-developed global health product scaling and impacting the world's poorest patients. Nearly 90% of the [600,000](#) patients treated with our Brilliance Phototherapy product would not have otherwise received effective treatment.

Our New Product Development work is focused in the neonatal respiratory and nutrition health areas for the treatment of at-risk, low birth weight newborns. We plan to accelerate portfolio expansion to close ten globally critical health gaps by 2030--the target year for the UN's Sustainable Development Goals.

About the Problem

Respiratory distress syndrome (RDS) is responsible for the majority of the 1 million babies that die each year from prematurity related causes. Over 3 million newborns each year need help getting oxygen to their body through respiratory support devices like CPAP (Continuous Positive Airway Pressure).

Current medical equipment is designed for US healthcare settings, assuming sufficient staffing and resources. Thus, even when equipment is available in low resource settings, it often goes unused given lack of training, staffing, or other resources. In these settings, staff are overburdened and need tools that are easy to learn and easy to use. Another major challenge is cost. Unaffordable devices lead clinicians in low resource settings to fashion their own "Bubble CPAP" devices with a bottle and straw. These devices seem simple to use but lack key features required for safe treatment. We aim to end newborn deaths from RDS by designing context-appropriate CPAP equipment ([additional information](#)).

About the "Smart" CPAP Project

We are creating an effective and safe CPAP that is affordable for our target facilities. It must also be simple to setup and monitor for our overburdened users to achieve large scale social impact.



About the Position

We are seeking a Design Engineer to play a key role in taking our neonatal CPAP device from a prototype to its first production lot for field trials.

This individual will bring thoughtful, hands-on prototyping and detailed technical design to D-Rev's quantitative and qualitative test engineering workstreams. Independent, dynamic individuals that are capable of executing all facets of test engineering to get products to market will excel in this role.

Primary responsibilities

Lead the design of testing processes and equipment at any stage of the design process, including conceptual development, prototyping, proof of concept, manufacturing transfer, validation testing, and verification testing.

- Brainstorm, design, and build electromechanical test setups to test key design requirements.
- Develop test protocols with proper statistical considerations, write test reports, analyze testing data, and advise on changes to the device design.
- Draft and manage mechanical models using Autodesk Fusion and Mechanical Simulation CAD/FEA package.
- Support electrical and firmware development of our CPAP device.

Our ideal candidate will have the following

- Bachelors of Engineering
- Minimum of 3 years' experience in design or test engineering
- Experience in the design, building, and operation of electromechanical test fixtures
 - Experience with rapid electrical prototyping such as Arduino and development boards. Familiarity with PCB design.
 - Experience with physical prototyping equipment such as 3D printers, 80/20, mill, etc.
- Familiarity with clinical regulatory submissions and clinical testing
- Independent thinker with a history of taking initiative and a bias towards action

TO APPLY, submit the following to info@d-rev.org July 16, 2019:

- Resume (no longer than 1 page)
- Cover letter briefly explaining why you're a fit and why you're interested
- Optional: Simple portfolio highlighting examples of your test engineering work (please specify your specific role on any team projects showcased)

D-Rev is an equal opportunity employer. We value a diverse workforce and an inclusive culture. D-Rev encourages applications from all qualified individuals without regard to race, color, religion, gender, sexual orientation, age, national origin, marital status, citizenship, disability, or veteran status.