About Portal Instruments

Portal Instruments is redefining how advanced injectable therapies are delivered.

Founded on MIT research, we are building a next-generation drug delivery platform that enables high-volume, high-viscosity biologics to move from IV infusion to subcutaneous injection, unlocking a new generation of at-home therapies.

Our lead platform, PRIME Nexus™, combines reusable hardware with software-tunable delivery to enable therapies that were previously not feasible outside the clinic.

We have secured development partnerships with leading biotech companies and are now entering the most critical phase of the company: scaling from advanced engineering to clinical-ready and manufacturable systems

Role Information

Title: Staff NPI / Industrialization Engineer
Reports to: VP, Engineering
Location: Boston/Cambridge, MA (on-site presence required)

Position Overview

This role is a critical part of Portal's mission to advance PRIME Nexus® toward commercialization. You will work cross-functionally with engineering, quality, regulatory, manufacturing, and external partners to ensure that Portal's designs translate into scalable, manufacturable products. Embedded within the engineering team, this role brings manufacturing, industrialization, and assembly into considerations into the design process from the earliest stage.

As Staff NPI Engineer you will design, build, test, and improve mechanical and electromechanical devices, equipment, and systems made by Portal Instruments for manufacturing and assembly. You will also design and build test and assembly fixtures for use in verification and manufacturing assemblies of drug delivery systems.

You will partner closely with design engineering and the Head of Industrialization to ensure that what is designed can be built, scaled, and delivered reliably. The goal of your work will be to eliminate late-stage surprises and accelerate the path to clinical and commercial readiness.

This role is critical to eliminating the traditional "design-to-manufacturing gap" and enabling a tightly integrated development and industrialization process.

What You'll Do

Your Role in our Operating Model

- Embedded within engineering, reporting to VP Engineering
- Partners closely with Industrialization / Manufacturing leadership
- Responsible for integrating manufacturability, assembly, and test considerations into product design
- Acts as a bridge between design engineering and manufacturing execution
- Provides early validation of design decisions against manufacturing and scalability constraints

Your Impact

- Contribute directly to the development, validation, and commercialization of Portal's drug-delivery platforms
- Collaborate across disciplines to solve complex technical and operational challenges
- Help ensure solutions are scalable, compliant, and grounded in real-world use

Key Responsibilities

- Drive early integration of DFM/DFA principles into product design, in partnership with engineering
- Evaluate and challenge designs for manufacturability, scalability, and assembly efficiency
- Identify and mitigate manufacturing risks early in development
- Collaborate with industrialization and external manufacturing partners (e.g., CDMOs) to ensure design feasibility
- Support design transfer by validating build readiness and resolving manufacturability gaps
- Partner with industrialization and manufacturing teams to ensure designs are ready for transfer and scalable production
- Design, develop, maintain, and verify mechanical components and assemblies for Portal's drug delivery systems to medical device standards as necessary
- Produce rigorous documentation: including CAD & 2D design specifications, tolerance analysis, verification test plans, project schedules and change orders associated with Portal devices
  Be involved in the mechanical aspects for design verification and validation activities, as well as data collection and documentation for submission to regulatory agencies
- Design, build, and debug experimental test instrumentation
- Design and implement test methods for analysis and characterization of electro-mechanical components and sub-systems
- Design and implement device assembly work instructions and procedures
- Perform all duties in compliance with Portal's quality system regulations and GLP standards

What We're Looking For

Required Qualifications

- 10 years of experience with a BS or MS in mechanical (or bio-engineering equivalent) engineering discipline
- 6 years of experience in medical devices, biotech, pharma, or a regulated industry
- Proficiency in SolidWorks
- Experience working within quality systems (e.g., ISO 13485, design controls)
- Ability to work effectively in a fast-paced, collaborative environment

Strongly Preferred Qualifications

- Experience bridging engineering and manufacturing in NPI or industrialization roles
- Experience working with external manufacturing partners / CDMOs
- Demonstrated ability to influence design decisions based on manufacturability
- Experience in data analysis tools, such as MATLAB and Minitab
- Machining experience such as manual machine tools and CNC machining
- Experience with drug-device combination products
- Exposure to human factors engineering, usability, or patient centric design
- Experience supporting products through development, validation, or commercialization
- Strong communication skills and comfort working cross-functionally

Working at Portal Instruments

Portal offers the opportunity to work on meaningful technology with real patient impact, alongside a highly collaborative and mission-driven team. We value innovation, accountability, transparency, and thoughtful problem-solving—and we believe great work happens when people feel supported and empowered.

Compensation

Salary Range (Massachusetts):

The expected base salary range for this role in Massachusetts is $130,000 – $160,000, subject to confirmation with HR based on market benchmarking and internal equity.

Compensation for candidates in other U.S. locations may vary based on geographic market factors. This role may also be eligible for additional compensation and benefits.

Benefits & Perks

Health & Wellness

- Medical plan options including PPO HSA and HMO HSA eligible plans
- Competitive dental, orthodontic, vision, and accident insurance
- Flexible Spending Accounts (medical, dependent care, commuter)
- Employee Assistance Program with counseling, financial tools, and legal resources

Financial & Protection

- Stock options
- 401(k) with Roth and traditional options
- 100% company-paid short- and long-term disability
- Company paid life and AD&D insurance
- Paid Family and Medical Leave

Rest & Recharge

- 20 days of vacation annually (encouraged to use)
- 13 company observed holidays
- Periodic company-wide holiday shutdowns
- Sick time separate from vacation

Additional Perks

- Daily lunch (Cambridge office)
- Casual dress code
- On site bike room, lockers, and showers (subject to availability)
- Happy hours and company sponsored events
- Annual volunteer opportunities and donation match program

Inclusion & Equal Opportunity

Portal Instruments

At Portal, we believe all employees should feel they belong, contribute, and thrive. We know that diverse teams create better solutions for diverse patients, and we encourage applicants from all backgrounds to apply.

Portal Instruments is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, ethnicity or national origin, sexual orientation, gender identity or expression, genetics, military service, age, family status, or disability.

How to Apply

Please submit a resume (and cover letter if applicable) to careers@portalinstruments.com. Candidates will be contacted if their background aligns with Portal's needs.