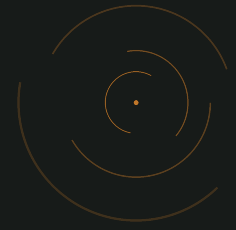


STIMITA MOTION CONTROL

PRECISION MOTION SYSTEMS FOR DEFENCE · PUNE, INDIA

Principal R&D & Design Engineer

HEAD OF MECHANICAL ENGINEERING DEPARTMENT



LOCATION	Pune, Maharashtra — On-site
REPORTS TO	Founder / CEO
TEAM	Leads a complete Mechanical Engineering team
EXPERIENCE	12–15+ years
ACCOUNTABILITY	Full responsibility of every mechanical design — success and failure alike
EMPLOYMENT TYPE	Full-time, permanent

ABOUT STIMITA

Stimita designs and manufactures custom actuators, servo drives, motion controllers, encoders, gearboxes, slip rings and hand-grip systems for defence and industrial platforms — from aircraft gimbals and remote control weapon system to unmanned ground vehicles. We're a small, engineering-led team building precision hardware end-to-end, from prototype to production, for customers including DRDO, BARC, HAL, BEL, and Bharat Forge.

ABOUT THE ROLE

We're hiring a Principal R&D & Design Engineer to head the complete Mechanical Engineering department at Stimita — leading a team of engineers to own every single mechanical design that comes out of this company, without exception. Whatever ships carries your name: if a design succeeds in the field, that's a reflection on you; if a design fails, that responsibility sits with you too, not with whoever on the team executed the drawing. You'll report directly to the founder and be the final technical authority on mechanical engineering — nothing mechanical ships without having passed through you.

KEY RESPONSIBILITIES

Department ,responsibility & Accountability

- Lead a complete Mechanical Engineering team — every mechanical design that ships from Stimita is under your responsibility , with no exceptions carved out for designs you didn't personally draft.
- Carry full accountability for outcomes: a design that performs well in the field reflects on you, and a design that fails in the field is your responsibility to own and correct, not any individual team member's alone.
- Directly manage the team's workload, priorities, and technical decisions — their designs are reviewed and ultimately backed or overruled by you.
- Sign off on every mechanical design before it moves to production — this is a hard gate, not a courtesy review.
- Grow and structure the team, hiring and onboarding future mechanical engineers.

Research & Development

- Lead R&D on new mechanical systems and concepts — actuators, gearboxes, positioners, gimbals — ahead of formal product development.
- Evaluate new materials, mechanisms, and design approaches against defence and precision-engineering requirements.
- Own feasibility studies and early-stage concept validation before a design moves into detailed development.

Design & Engineering Analysis

- Own mechanical design and the full engineering analysis behind it — every design must be calculated and justified, not just drawn.
- Stress analysis — tensile, compressive, shear, and bending stresses checked against material yield/ultimate strength, with an explicit factor of safety on every load-bearing component.
- Fatigue analysis — expected life under repeated cyclic loading for parts that move continuously (actuators, gimbals), not just static load checks.
- Bearing life (L10) calculations for all rotating and load-bearing interfaces.
- Torque and power sizing — determining the torque an actuator or gearbox must deliver and the motor/power that requires.
- Gear design calculations — gear ratio, tooth stress (Lewis equation/AGMA standards), efficiency, and backlash for all gearbox designs.
- Deflection and stiffness analysis — confirming components won't flex beyond acceptable limits under load.
- Tolerance stack-up analysis — verifying that assembled part tolerances don't cause interference or excessive play across a full assembly.
- Vibration and natural frequency analysis — avoiding resonance, particularly for gimbals subject to in vehicle vibration.
- Center of gravity and mass-property calculations — minimizing CG offset in gimbals and positioners, since any imbalance forces the actuator to work harder and lose precision.
- Shaft and coupling alignment analysis — accounting for parallel and angular offset between mating shafts, and its effect on stress, wear, and vibration.
- Validate every design through calculation and FEA simulation before committing to physical prototyping — prototyping confirms the analysis, it doesn't replace it.
- Make and defend the toughest design trade-off decisions in the company, with the analytical rigor and calculations to back them.

Production Readiness

- Take designs from R&D and detailed development through to fully production-ready — manufacturable, documented, and repeatable at volume.
- Work with the Mechanical Design Engineers and shop floor to resolve design & manufacturability issues before they hit delivery timelines.
- Set the technical standard for design documentation (drawings, BOMs, tolerances, analysis reports) across the mechanical function.

Technical Leadership

- Serve as the most senior mechanical engineering authority at Stimita, guiding the Mechanical Design Engineer and any future hires on the toughest technical calls.
- Coordinate with electronics/controls engineering on integrated systems (servo drives, motion controllers) where mechanical and electronic design intersect.
- Support technical scoping for client proposals and tenders where deep engineering credibility matters to winning the bid.

WHAT WE'RE LOOKING FOR

- 12–15+ years of mechanical engineering experience with real R&D and design-analysis depth, not just detailed design execution.
- Strong analytical foundation — comfortable running stress, fatigue, bearing-life, torque/power, gear-design, deflection, tolerance-stack-up, vibration, and CG/mass-property calculations by hand and in FEA, not just CAD proficiency.
- Track record of taking a concept from early R&D through to a production-ready, shipped design.
- Experience in precision engineering or defence systems strongly preferred.
- Comfortable being the final technical authority on mechanical engineering decisions — this is the most senior mechanical voice in the company.
- Willing to take personal accountability for department-wide outcomes, including designs you didn't personally draft.
- Prior experience leading or managing a mechanical engineering team, not just working as a senior individual contributor.
- Experience with actuators, gearboxes, or positioning/gimbal systems specifically is a strong plus.

WHAT WE OFFER

- The most senior mechanical engineering role at Stimita — real responsibility of R&D direction, not just execution.
- Direct access to and regular working contact with the founder/CEO.
- A front-row seat in a growing defence-engineering company building hardware that ships to DRDO, BARC, HAL, BEL, and Bharat Forge.
- Competitive compensation, commensurate with experience.

HOW TO APPLY

Send your resume and a portfolio or work samples to career@stimitamc.com with the subject line “Principal R&D & Design Engineer — Pune.”