

	Mechanical Engineering Contract Work	Type: Contract / Full-Time Pay: \$27–\$44/hr Location: 9-402 Harmony Rd., Ayr, ON Start: May 2026 (or sooner)
Job Posting		

Job Description

We are seeking a motivated and talented **Mechanical Engineer / Mechanical Engineering Technologist / Technician** to join our team. You will work closely with our mechanical engineering team on projects involving the design, manufacturing, and support of scientific balloon-borne gondolas and a small satellite technology demonstrator. These projects are contracted through NASA and other leading institutions, offering a unique opportunity to contribute to the future of space exploration. StarSpec Technologies offers the unique opportunity to bring value to any number of state-of-the-art space-based applications in a fast-paced and exceptional team-driven environment. Applicants who have experience with some or all of the listed tasks and qualifications are encouraged to apply.

This position is on a **Contract Basis** beginning in **May 2026 (or sooner)** at **10 to 30 hours per week**, assigned weekly based on company and projects' needs. This position is applicable for transition to Full-Time based on performance and company needs. Compensation is competitive, ranging from **\$27/hr** to **\$44/hr**, commensurate with experience and range of technical skills offered.

About StarSpec Technologies

StarSpec Technologies is a pioneering space-based solutions company dedicated to bridging the gap between advanced concepts and flight-ready reality. Our mission is to lower the barrier to space access by developing high-precision pointing systems and versatile satellite platforms. From stratospheric balloon-borne astronomy to rapid-response orbital technologies, we provide the critical infrastructure that enables next-generation scientific discovery and technology demonstration. We don't just build hardware; we accelerate the timeline from the lab to the stars.

Position tasks — Applicants must be capable of performing most of the following tasks:

- **Space vehicle and payload design**
 - Creating part models, assemblies, BOMs, and manufacturing drawings with GD&T
 - High level to detailed development using CAD tools such as Onshape as well as high level to detailed simulation work using simulation tools including Altair products (SimSolid, Inspire, HyperMesh)
 - Quasi-static elastic (linear & non-linear)
 - Modal
 - Dynamic (random vibration, shock, harmonic)
 - Topology optimization & generative design
 - Collaborate with machine shops, manufacturers, and suppliers to oversee part fabrication, sourcing COTS, trade studies and ensuring quality standards
 - Conduct occasional small-scale machining or prototyping tasks to support rapid iteration and troubleshooting
 - Document and update technical procedures to hand-off to assembly, integration, and testing phases.

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- Reviewing / presenting designs to various stakeholders such as customers, vendors, and other team members
- Involvement in the specification of electromechanical systems, including motors, sensors, cameras, optical assemblies, and power systems
- **Assembly, Integration, and Testing (AI&T)**
 - Produce assembly drawings for internal and external use
 - Referencing CAD and interfacing with designers to effectively execute on the assembly of space-based vehicles and payloads, from small 12U satellites to LDB-class balloon-borne gondolas
 - Provide feedback and suggestions for integration of mechanical, electromechanical, and other payload subsystems based on assembly
 - Take part in providing solutions to potential issues in integration and testing, interacting with payload and electromechanical specialists as needed
 - Day-to-day shop tasks in assembling large structure, including the use of hand-tools and basic machining equipment
 - Potential prototyping and testing of new technologies or design approaches
 - Potential implementation of lightweight structures with methodologies for scaling designs and delegating lower-level tasks

General Qualifications

Must-Haves:

- Bachelor's or Master's degree in Mechanical Engineering, Engineering Science, Engineering Physics, Aerospace Engineering, or a related field
- Proficiency in creating manufacturing drawings with precision tolerancing and GD&T for low volume manufacturing (laser, waterjet, brake press, mill, lathe, router, etc.)
- Experience with mechanical simulations and the ability to learn new FEA solvers
- Ability to work independently with minimal supervision in a remote setting
- Strong communication skills for interacting with clients, team members, and external partners
- Willingness to travel occasionally for testing and flight campaigns

Nice-to-Haves:

- Experience with SolidWorks, Onshape, and Altair simulation products (SimSolid, Inspire, HyperMesh)
- Engineer In Training (EIT) or Professional Engineer (P.Eng.) designation
- Experience in aerospace, harsh environment design, or design for vacuum
- Familiarity with composite material design and simulation
- Experience in project management, including schedule development and risk assessment
- Interest in long-term career growth in the aerospace industry

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Screening Questions

Please provide short answers to the following questions in your application:

- Are you a citizen or a permanent resident of Canada?
- Are you available for on-site work in Ayr, ON for 10–30 hours per week?
- What is your preferred software in making CAD drawings and why do you like it?
- What do you find most challenging in running a mechanical simulation analysis pipeline?
- How did you hear about us?

Why Join StarSpec?

At StarSpec Technologies, we value **collaboration**, **innovation**, and **efficiency**. As a **Mechanical Engineer Technologist**, you will have the opportunity to engage with truly exceptional space-based engineering concepts and people, directly contributing to mission success on a number of state-of-the-art projects. For highly qualified applicants that demonstrate excellent performance in this role, we would be happy to consider you for a Full-Time position that has many more opportunities to engage directly with the space industry in Canada and around the world.

If you're ready to contribute to cutting-edge space technology initiatives while developing your professional skills in a dynamic environment, we'd love to have you on our team.

How to Apply?

Email your résumé and cover letter to hr+network@starspectech.com with the subject "**Mechanical Engineering Technologist Application – [Your Name]**" with your answers to the screening questions in the body of the email.

Disclaimer

This is a publicly advertised job posting. Artificial intelligence may be used to assist in the screening and assessment of applications to ensure an efficient and fair review process.