

# GURLAL SINGH MANN

Mechanical / Product Design Engineer

**Full Australian Work Rights – Subclass 491 (Provisional Skilled Worker) | No Sponsorship Required**

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**MIEAust (Member of Engineers Australia) | ID: 8407112**

## PROFESSIONAL SUMMARY

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Mechanical / Product Design Engineer with 10 years of experience designing and delivering manufactured equipment, machines, and engineered products from concept through production. Strong background in SolidWorks-based design, DFMA, large assemblies, engineering calculations, and hands-on manufacturing support.

Proven ability to reduce assembly time, improve manufacturability, and deliver production-ready designs in OEM, fabrication, and regulated environments. Known for ownership, practicality, and close collaboration with production teams and suppliers. Open to roles across regional Australia.

## CORE SKILLS

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**Design & Engineering:** SolidWorks (Advanced) – Large Assemblies, Fabrication Drawings, BOMs | Mechanical Product & Equipment Design | DFMA | Engineering Calculations & Basic FEA | Precision Components & Assemblies

**Manufacturing & Delivery:** Manufacturing & Production Support | Prototype Build, Testing & Optimisation | Equipment Commissioning & Validation | Supplier & Fabrication Collaboration

**Project & Contract Management:** Project Planning & Delivery | SOW & Functional Spec Development | Vendor & Contract Management | Stakeholder Coordination

**Tools & Systems:** SolidWorks, AutoCAD, Solid Edge, PTC Creo, Inventor | VBA / Excel Automation | MS Office (Advanced) | MS Project, MS Visio | ERP / PLM / PDM Exposure (Autodesk Vault, Microsoft NAV)

## PROFESSIONAL EXPERIENCE

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### Senior Advisor – Checkpoint Design & Optimisation

**Canadian Air Transport Security Authority (CATSA)** | Ottawa, Canada | Jul 2025 – Present

- Provide design and optimisation advisory support across checkpoint infrastructure initiatives in safety-critical, regulated environments.
- Review checkpoint layouts and equipment integration constraints; conduct options analysis and provide design recommendations aligned with regulatory and operational requirements.
- Improved decision quality and helped de-risk design choices across multiple checkpoint upgrade programs.

### Officer, Mechanical Equipment Technologies

**Canada Post** | Ottawa, Canada | Mar 2022 – Jul 2025

- Led end-to-end delivery of a \$500K+ scan tunnel equipment upgrade project across multiple processing sites, from functional specification and SOW development through to installation, certification, and commissioning – delivered on schedule and within budget.
- Managed multiple vendor technical support contracts; monitored deliverables, managed vendor relationships, and supported issue resolution – improved vendor response times by ~20% and reduced repeat equipment faults.
- Produced CAD drawings, technical specifications, procurement documents, maintenance manuals, and technical bulletins for new and modified equipment.
- Supported proposal evaluations and provided technical recommendations for acceptance or rejection – reduced commissioning and handover issues by 60%.
- Coordinated with internal and external stakeholders including vendors and governmental organisations for successful equipment certification and implementation.

### Mechanical Designer

**Techo-Bloc** | Brossard, QC, Canada | Jun 2021 – Feb 2022

- Supported R&D team in designing and optimising production-line equipment, creating 3D CAD models and detailed shop drawings in SolidWorks.
- Designed a new lift-and-turn mechanism to optimise an existing production line, from initial concept through stakeholder review to shop-ready detailed drawings.
- Performed tolerance testing of mechanical parts and assemblies; supported troubleshooting and parts procurement.
- Contributed to production equipment improvements that reduced unplanned downtime by approximately 10–15%.

### Technical Department Lead

**Accordex** | Montreal, QC, Canada | Jan 2019 – Jun 2021

- Managed the technical department; created project management processes, workload delegation templates, and KPI frameworks at departmental and organisational levels.
- Reviewed and verified drawings for company standards compliance and ensured projects remained within quoted scope and cost.
- Conducted cost-benefit analysis for selection and implementation of a new PDM/PLM software solution, establishing a foundation for scalable engineering data control.
- Drove process capturing and re-engineering initiatives to introduce standard processes across the organisation.
- Improved delivery consistency and reduced rework through stronger standards and review discipline.

### Mechanical Designer

**Bronswerk Marine** | Brossard, QC, Canada | Jun 2018 – Dec 2018

- Designed and modelled HVAC equipment for military and commercial marine environments using Inventor and AutoCAD.
- Worked closely with suppliers to ensure Design for Manufacture (DFM) and optimum part cost.
- Contributed to file naming standardisation and PDM implementation, improving drawing and data management practices.

### Technical Designer

**Accordex** | Montreal, QC, Canada | May 2017 – Jun 2018

- Developed VBA tooling to link Microsoft Excel and Solid Edge ST9, automating the 3D modelling process for standard assemblies and significantly reducing repetitive design time.
- Developed and implemented standard drafting procedures, drawing templates, and a standard parts database/library.

### Industrial Designer

**Mediagraph** | Montreal, QC, Canada | Sep 2016 – May 2017

- Conceived and developed an in-house semi-automatic pneumatic assembly machine, reducing part assembly time and improving production rate.
- Carried out extensive R&D to create new lighting products using SolidWorks.
- Coordinated with local and international component suppliers to ensure part conformity and quality.

## EDUCATION

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### Master of Engineering (Mechanical)

Concordia University, Montreal, Canada (2015 – 2016)

### Bachelor of Technology (Mechanical Engineering)

Punjab Technical University, Jalandhar, India

## CERTIFICATIONS & PROFESSIONAL MEMBERSHIPS

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- MIEAust – Member of Engineers Australia (ID: 8407112)
- Certified SolidWorks Professional (CSWP) – Dassault Systèmes (C-Y6S48NQWBN)
- Certified SolidWorks Associate (CSWA) – Dassault Systèmes (C-TDB2U6LYSU)
- Professional Engineer (P.Eng) Ontario, Canada (ID: 100575552)

## ADDITIONAL INFORMATION

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- Australian Work Rights: Skilled Work Regional (Subclass 491) – no sponsorship required
- Open to regional roles across Australia
- Strong interest in Project Engineering, OEM equipment, manufacturing, product and industrial design roles

## REFEREES

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### **Timothy Policarpio**

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