

TOOLMAKER

ALSO KNOWN AS: **DIE MAKER** **JIG AND FIXTURE BUILDER** **PRECISION METAL WORKER**

MOULD AND SHAPE THE FUTURE OF MANUFACTURING.

Mould and shape the future of manufacturing. Create, maintain and repair precision tools and equipment crucial to producing cutting-edge products, as a Toolmaker. Your expertise in crafting intricate dies, moulds, and specialised equipment will be crucial in enabling efficient production processes across various industries, from automotive to aerospace and beyond.

KEY SKILLS

Skills which may benefit anyone considering a job as a toolmaker include:

- ☑ CNC proficiency
- ☑ Machinery operation
- ☑ Measurement skills
- ☑ Technical drawing skills
- ☑ Tool operation skills

CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Mechanical Engineering Supervisor
- Technical Manager
- Business Manager
- Quality Assurance Officer

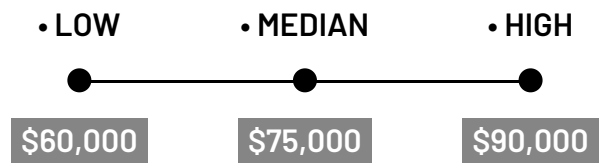
VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a toolmaker include:

- ☑ Analytical
- ☑ Precision
- ☑ Team Player
- ☑ Initiative
- ☑ Solutions-focused
- ☑ Artistic - "Creator"

SALARY EXPECTATION

The expected salary for a Toolmaker can vary across different areas of manufacturing and may vary as you become more experienced.



RELATED INDUSTRIES

▶ Aerospace and Defence ▶ General Manufacturing and Engineering ▶ Transport Equipment and Machinery

RECOMMENDED SCHOOL SUBJECTS

- Design
- Design and Technologies (7-10)
- Engineering

CORE SCHOOL SUBJECTS

- General Mathematics
- Essential English
- Engineering Skills

JOB OVERVIEW

Toolmakers create the essential tools and equipment that make mass production possible. They combine traditional craftsmanship with cutting-edge technology to design, fabricate, and maintain the precision instruments that form the backbone of modern manufacturing. This role requires a unique blend of mechanical aptitude, attention to detail, and problem-solving skills to create tools that meet exacting specifications.

In this dynamic field, you'll be responsible for the entire lifecycle of manufacturing tools – from initial concept and design to fabrication, testing, and ongoing maintenance. Your work will involve using a wide range of machinery, from manual lathes and mills to sophisticated CNC equipment and 3D printers. Toolmakers create a wide range of precision instruments essential for manufacturing processes, including dies, moulds, jigs, fixtures, gauges, and cutting tools.

As manufacturing technologies evolve, you'll continually update your skills, integrating new materials and techniques to improve tool performance and longevity. Your expertise will be critical in optimising production processes, reducing waste, and ensuring the highest quality standards in manufactured products.

WHAT WILL YOU DO?

Your role may include duties as follows:

1. Design and fabricate precision tools, dies, moulds, and fixtures
2. Use CNC machines for complex tool components
3. Undertake quality control inspections
4. Repair existing tools and production equipment
5. Collaborate with engineers and production teams to optimise tool designs

HOW TO BECOME A TOOLMAKER

Becoming a toolmaker offers an exciting entry and career in manufacturing.

1. You can become a toolmaker through an apprenticeship.
2. You may find it useful to undertake a Certificate II in Engineering Pathways (MEM20422) while you are at school or before commencing an apprenticeship. This course will give you a good introduction to manufacturing concepts and equipment used.
3. Research potential employers in your area via a search engine, social media or job site. Even if there are no jobs advertised with the employer you're interested in, it can be a good idea to send a cover letter with your resume expressing your interest.

VOCATIONAL EDUCATION & TRAINING

An apprenticeship with a manufacturer is the best pathway to gain employment as a toolmaker. You can undertake the following qualifications as apprenticeships:

- Certificate III in Engineering – Toolmaking Trade (MEM31519)

As an apprentice you will combine work with formal training, allowing you to gain practical skills and knowledge in a specific trade while earning a salary.

Duration: Apprenticeships typically last up to 4 years for full-time participants. Part-time apprenticeships may take longer, depending on the individual's work schedule and training progress.

Work and study combination: As an apprentice, you will work either full-time or part-time while receiving formal training from a Registered Training Organisation (RTO). School-based apprenticeships may be available.

Eligibility: Generally, apprenticeships do not require any formal qualifications to enter, making them accessible to a wide range of individuals, including if you are a school leaver or someone looking to change careers. There are minimum age requirements and there may be other eligibility criteria.

Completion: On completion you will receive a nationally recognised trade qualification, showcasing your skill and experience.

Skills, qualifications, accreditations and licences

A toolmaker may choose to pursue other training or certifications, licences and tickets. Qualifications and skills may be required to progress to supervisor or team leader positions.

Qualifications that may help you advance in your career include:

- Certificate IV in Engineering (MEM40119)
- Diploma of Engineering – Advanced Trade (MEM50119)
- Certificate IV in Leadership and Management (BSB40520)
- Certificate IV in Business (BSB40120)

UNIVERSITY & HIGHER EDUCATION

Holding a degree in manufacturing, human resources, finance, economics, marketing or management can be helpful if you are considering taking a step into leadership or a business ownership position.

Specialist higher education qualifications that may help you progress in this role include:

- Bachelor of Engineering