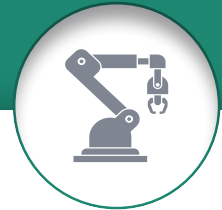


Machinist

Advanced Manufacturing
Series



Company Overview:

<Please insert a short paragraph talking about your company and what makes it unique. Include details that capture the core values, culture, and mission of your company, so job seekers clearly understand the environment in which they will be working.>

Job Summary and Responsibilities:

Machinists set up and operate a variety of machine tools to produce precision parts and instruments. Machinists review blueprints and other instructions to determine operational methods or sequences. Machinists may also fabricate and modify parts to make or repair machine tools, using welding equipment, grinding equipment and cutting equipment. Applicants must demonstrate knowledge of mechanics, mathematics, metal properties, layout and machining procedures.

<Add any additional responsibilities or changes relevant to this role at your company.>

Required Competencies:

OCCUPATIONAL COMPETENCIES

- **Machine Tools:** Proficiency with machine tools such as power grinders, milling cutters, drill presses, lathes, calipers, tool dies and their dial indicators
- **Mathematics:** Solve problems with trigonometry (largely triangles, rectangles and cylinders) and visualize problems in 3D when needed
- **Hand Tools:** Safely use ballpeen hammers, dead-fall hammers, screwdrivers, torque wrenches, Allen wrenches, mill bastard files, and other hand tools



FOUNDATIONAL COMPETENCIES

- **Equipment Selection:** Identify and operate key machinist tools (e.g., mills, lathes, grinders, saws, drill presses); able to operate, with some supervision, the saw and drill press, to demonstrate needed abilities and to serve as a building block for using other, more advanced tools
 - **Active Listening:** Pay attention to what other people are saying (e.g., co-worker, supervisor); understand occupation-specific terms and their practical meaning (e.g., “turn” means use a lathe; “square them up” means use a mill); recognize that listening is essential to safety and know when to ask questions
 - **Critical Thinking:** Understand that most products can be made in multiple ways and identify the most efficient way to make a given piece (e.g., use a mill to prepare a piece and then a grinder to finish it); select the right tool to use given the piece being made, the material and the requirements (e.g., finishing, tolerance)
 - **Quality Control Analysis:** Create and safely operate products that meet specifications (e.g., tolerance, finish, dimensions) with an acceptable success rate (measure twice, cut once), demonstrate a quality mindset – every piece matters
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Preferred Competencies:

OCCUPATIONAL COMPETENCIES

Manufacturing Processes: Awareness of key production processes (e.g., milling and drilling) and ability to measure and document incoming components to validate parameters and qualities to ensure high quality

FOUNDATIONAL COMPETENCIES

- **Complex Problem Solving:** See and understand process from start to finish, take initiative to identify problems and efficiently solve them (e.g., minimize waste, check feasibility); able to operate independently with decreasing supervision over time and proactively maintain tools (e.g., sharpen dulling tools)
- **Operation and Control:** Follow all rules and parameters; use tools and machines safely and efficiently in a way that does not waste material; monitor machines, process and output to ensure high quality delivery

Find additional competencies for this role using Skillful's occupation deep dive at www.skillful.com/employers.



Example Activities:

- Set up, adjust and operate basic or specialized machine tools used to perform precision machining operations.
- Measure, examine and test completed units to check for defects and ensure specifications, using precision instruments (e.g., micrometers)
- Monitor the feed and speed of the machines during the machining process and check the work pieces to ensure that they are properly lubricated
- Study sample parts, blueprints and engineering information to determine the best method or sequences of operations needed to fabricate products

Required Certifications

<Note: Insert Required Certifications *but only if truly required.*>

Job Details:

- Location
- Department
- Job ID
- Classification
- Insert additional details of this position if applicable