



## **Machinist**

### ***Job Description***

Machinists set up and operate a variety of machine tools to produce precision parts and instruments. Include precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures.

### ***Working Conditions***

Today, many machine shops are relatively clean, well lit, and ventilated. Computer-controlled machines often are partially or totally enclosed, minimizing the exposure of workers to noise, debris, and the lubricants used to cool workpieces during machining. Nevertheless, working around machine tools presents certain dangers, and workers must follow safety precautions. Machinists wear protective equipment, such as safety glasses to shield against bits of flying metal, and earplugs to dampen machinery noise. They also must exercise caution when handling hazardous coolants and lubricants, although many common water-based lubricants present little hazard. The job requires stamina, because machinists stand most of the day and, at times, may need to lift moderately heavy workpieces. Modern factories use autoloaders and overhead cranes to reduce heavy lifting.

### ***Training***

Machine operators can gain skills through vocational schools, technical colleges or community college programs, or apprenticeships. Typically, it takes 4–5 years of combined education and on-the-job training to become fully trained. To excel, machine operators need many years of experience and must show aptitude for math, problem-solving and computer skills. Certification is available.

### ***Wages (Average, State of Oregon, 2018)***

- **Hourly:** \$23.64
- **Annual:** \$49,175