



## TOOL & DIE MAKER

**Duties:** Tool and die makers typically do the following:

- Read blueprints, sketches, specifications, or CAD and CAM files for making tools and dies
- Compute and verify dimensions, sizes, shapes, and tolerances of workpieces
- Set up, operate, and disassemble conventional, manual, and CNC machine tools
- File, grind, and adjust parts so that they fit together properly
- Test completed tools and dies to ensure that they meet specifications
- Smooth and polish the surfaces of tools and dies

*(See reverse for more information.)*

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**Toolmakers** craft precision tools that are used to cut, shape, and form metal and other materials. They also produce jigs and fixtures—devices that hold metal while it is bored, stamped, or drilled—and gauges and other measuring devices.

**Die makers** construct metal forms, called dies, that are used to shape metal in stamping and forging operations. They also make metal molds for die casting and for molding plastics, ceramics, and composite materials.

Many tool and die makers use CAD to develop products and parts. Designs are entered into computer programs that produce blueprints for the required tools and dies. Computer-numeric control programmers convert CAD designs into CAM programs that contain instructions for a sequence of cutting tool operations. Once these programs are developed, CNC machines follow the set of instructions contained in the program to produce the part. Machinists normally operate CNC machines, but tool and die makers often are trained to both operate CNC machines and write CNC programs and thus may do either task.

### Quick Facts: Tool & Die Makers

2016 Median Pay	\$51,060 per year
On-the-job Training	Long-term on-the-job training
Job Outlook, 2014-24	Increase of 6%

*Data obtained from the US Bureau of Labor Statistics, published: October, 2017*