



WAGE DATA

Rate Type / Statistical Type	Entry level	Mean	Experienced
Annual wage or salary	\$22,229	\$35,827	\$42,626
Hourly wage	\$10.69	\$17.22	\$20.49

JOB DESCRIPTION

Set up, operate, or tend drilling machines to drill, bore, ream, mill, or countersink metal or plastic work pieces.

DUTIES

- Verify conformance of machined work to specifications, using measuring instruments, such as calipers, micrometers, or fixed or telescoping gauges.
- Study machining instructions, job orders, or blueprints to determine dimensional or finish specifications, sequences of operations, setups, or tooling requirements.
- Change worn cutting tools, using wrenches.
- Select and set cutting speeds, feed rates, depths of cuts, and cutting tools, according to machining instructions or knowledge of metal properties.
- Install tools in spindles.
- Move machine controls to lower tools to work pieces and to engage automatic feeds.
- Establish zero reference points on work pieces such as at the intersections of two edges or over hole locations.
- Position and secure work pieces on tables, using bolts, jigs, clamps, shims, or other holding devices.
- Observe drilling or boring machine operations to detect any problems.
- Lift work pieces onto work tables either manually or with hoists or direct crane operators to lift and position work pieces.

TOOLS and TECHNOLOGY

Tools used in this occupation:

Boring machines — Boring tools, Computerized numerical control CNC boring machines, Horizontal boring mills, Jig boring machines

Double ended stud — Shims

Drill press or radial drill — Computerized numerical control CNC drill presses, Multiple spindle drill presses, Radial drill presses, Single spindle drill presses

Gage block set — Gauge blocks, Precision gauges

Mainframe console or dumb terminals — Computer terminals

Micrometers — Digital micrometers

Technology used in this occupation:

Industrial control software — Computerized numerical control CNC software

Inventory management software — Automated inventory software

Spreadsheet software — Microsoft Excel

Word processing software — Microsoft Word

KNOWLEDGE

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

SKILLS

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Operation and Control — Controlling operations of equipment or systems.

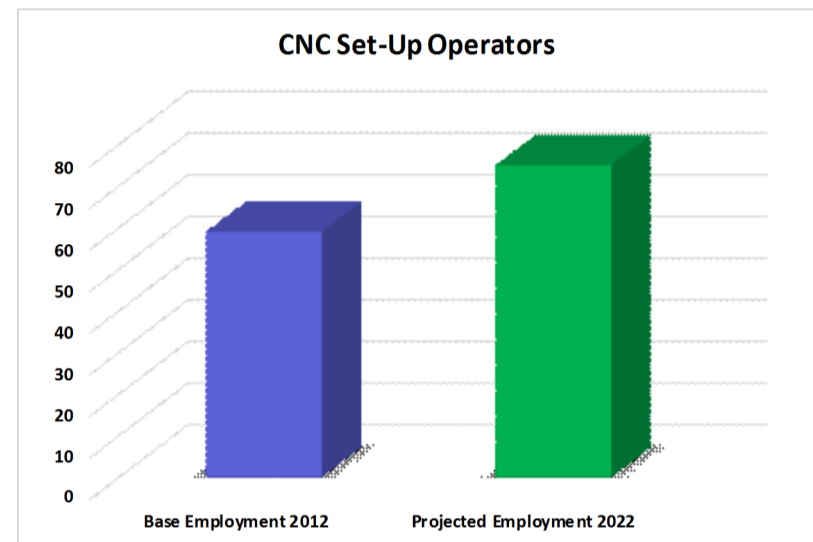
Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Speaking — Talking to others to convey information effectively

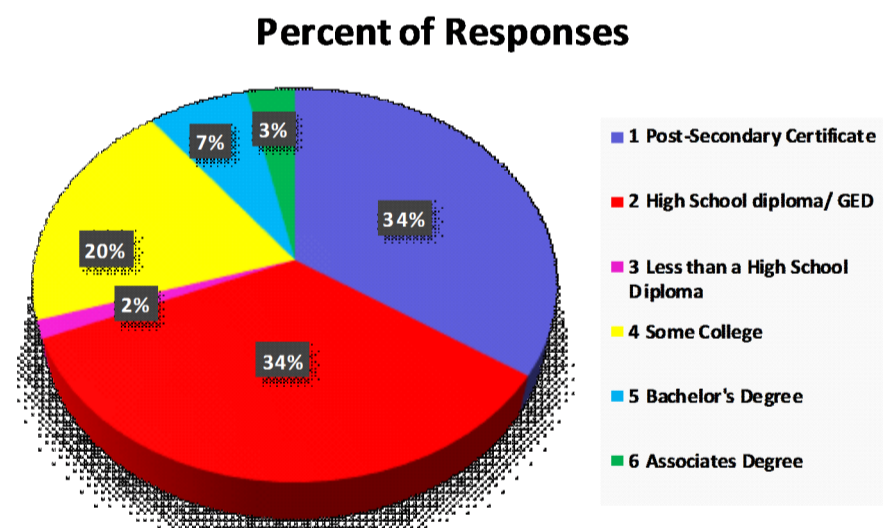
EMPLOYMENT PROJECTION



This information is based on LMI Gateway Data

EDUCATION

The graph below shows the results of a national survey listing the most common required level of education for CNC Set-Up Operators.



EDUCATION FOR THIS JOB

- 2014 Catalogue of Colorado Advanced Manufacturing Program and Skill Resources
<http://www.coloradomanufacturingcareers.com/>
- Approved Colorado Community College Manufacturing Cluster education programs
<http://www.coloradocommunitycolleges.com/go/programs/skilled-trades-technical-sciences/>
<http://www.coloradocommunitycolleges.com/go/>
- Colorado Four Year Colleges and Universities
<http://higher.ed.colorado.gov/academics/colleges/public4year.asp>
- Locations to Get Manufacturing Certificates
<http://www.coloradomanufacturingcareers.com/>

