

People good with their hands excel in manufacturing

By Rachel Vigoda
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The assembly line has changed. Companies have modernized their processes to lower costs, increase production, incorporate new technologies and create a safer work environment for employees.

Chances are that when Henry Ford borrowed the assembly-line concept from the meatpacking industry, applying a streamlined version to car production, he didn't know he was about to turn manufacturing on its head.

The assembly line took off, quickly becoming — and remaining — an industry mainstay. For people who like working with their hands and who want the chance to see a finished product they helped create, manufacturing is a great career choice. And because extensive education and training is rarely required, assembly can be one of the easiest areas to break into.

Modern Industry

"Assembly line" may conjure up old-fashioned images of weary workers in front of a conveyor belt as endless widgets ride by, but manufacturing has changed dramatically over the years. Companies have modernized their processes, with an eye toward lowering costs, increasing production, incorporating new technologies and creating a safer environment for employees.

One of the most noticeable changes is the widespread introduction of computers, which contributes a new level of precision to the industry and demands a different kind of skill set. "A lot of the equipment now is computer-controlled," says Rocky DeCarlo, president of Philadelphia Carbide, a machine-part, die and metal-component manufacturer. "If you're running 100 or 1,000 parts, a computer makes them all exactly the same, as long as you don't screw up putting in the information," says DeCarlo. But, he adds, "It's a downfall for the industry, too. Young people today don't learn how to do things with their hands. They don't do anything manually: they just hit a button and go."

Since computer technologies lend themselves to large-scale

production, if you're looking for manual work you'd do better to stick with a smaller business, like Philadelphia Carbide, where much of the process is done by hand. "With a computer, you have to have a volume of work, not one or two pieces. Because by the time you set up the software, the job's done," DeCarlo says.

Team Work

In the larger companies, employees are commonly grouped into teams that build entire products or components. Each team member rotates through different tasks, rather than performs the exact same task over and over — a method that not only saves a company money by creating flexibility among employees (one can substitute for another, if a team member is absent), but also enables an employee to learn diverse skills and enjoy some one-the-job variety.

Team assemblers frequently have input in the production process, according to the Occupational Outlook Handbook compiled by the U.S. Department of Labor's Bureau of Labor Statistics. "Workers collaborate to decide how to best perform assembly tasks," reads the handbook. "Team assemblers are often consulted during the design phase of production, to make sure that the product is easy to assemble."

And more good news: conditions vary depending on the plant and the industry, but "increasingly improved working conditions" are a consistent trend, according to the Bureau of Labor Statistics. For example, "physically difficult tasks, such as manually tightening massive bolts or moving heavy parts in position, have been made much easier through the use of hydraulic and electromechanical equipment," reads the Handbook. "Most factories today are generally clean, well-lit and well-ventilated, and depending on

what type of work is being performed, they may also need to be dirt and dust-free."

Moving Up

As motivated entry-level assemblers gain experience, they might earn more responsibility and higher wages. Someone who's acquired a good grasp of the construction of a product might become a product repairer or move into a supervisory position. Some assemblers even join research and development teams, according to the Occupational Outlook Handbook, "working with engineers and other project designers to design, develop and build prototypes, and test new product models."

Craig Horsley of the recruiting firm The Judge Group primarily seeks candidates for the food and beverage industry, where, he says, there are always job openings: "It's a pretty stable industry — people always need to eat and drink."

The manufacturing positions that come across his desk are usually in maintenance and mechanics, where Horsley sees a salary range of about \$16 to \$24 per hour. For assembly jobs, which demand less skill, median salaries in 2004 were anywhere from \$8.66 to \$22.45 an hour, according to the Bureau of Labor Statistics.

Demonstrated talent can lead to a job that requires more skill and garners more pay, but level of education rarely comes into play. "If we're hiring, we're looking for someone with a work ethic, who can use their hands," says DeCarlo of Philadelphia Carbide. "It doesn't matter if they were an auto mechanic, in construction — just mechanically inclined. Education is secondary."



Because jobs in manufacturing rarely require extensive education or training, the field can be one of the easiest to enter.

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