

Hudson Technologies' Green Manufacturing Practices



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As manufacturers around the world ramp up production to meet the population's growing demand for goods and services, the environment suffers the consequences of industrial waste, excessive energy consumption, and competition for inexpensive, quickly obtained raw materials. Responsible manufacturers recognize their impact on the forest, water, air, and available resources, and they adopt green manufacturing practices to help protect the environment while delivering high-quality products to the people who need them. Hudson Technologies is proud to make sustainability part of our business model for the good of our clients, our employees, and our community at large.



Overview of Green Manufacturing

Green manufacturing encompasses several practices designed to reduce the negative environmental impact of conventional production. Traditional manufacturing processes, which may be used in everything from metal drawing and machining to labeling and painting, require enormous amounts of energy and produce a lot of waste. Many processes require the use of chemicals and cleaners, and runoff and other waste materials may pollute the soil, water, or air.

Green manufacturing seeks to reduce energy consumption, conserve resources, and limit waste and pollution. Along with the movement toward eco-friendly processes to meet those goals, there's a growing demand for manufacturers to produce eco-friendly products. Many consumers want to know their products were made from renewable resources to help them do their part in reducing energy consumption and minimizing waste.



How Manufacturers Can “Go Green”

Adopting sustainable practices means addressing the major environmental concerns posed by conventional manufacturing processes. These concerns include:

- **Energy Usage.** Manufacturing requires a lot of power, and companies can go green by using renewable energy sources like wind or solar to run the facility. You can also reduce your energy consumption by using LED lights, shutting down equipment that is not in use, keeping the building properly insulated to reduce heating/cooling requirements, installing a smart thermostat, and keeping equipment well-maintained to avoid leaks and other energy-wasting issues.
- **Raw Materials.** This may include sourcing renewable or recycled/recyclable materials or choosing a synthetic option over a natural one. For example, synthetic gypsum (a waste product produced at many power plants) can be used instead of natural gypsum, which must be mined in a process that can cause erosion and pollute the water.
- **Process Materials.** Cleaners, lubricants, and other materials used in the production process often contain harsh chemicals that not only pollute the environment, but they pose a hazard for the employees who must work with them. Replacing these materials with environmentally friendly options creates a safer workplace while reducing chemical waste.
- **Waste.** Liquid, solid, chemical, and toxic industrial waste poses an enormous risk to plants, animals, and people—both your employees and members of the community. This waste should be reduced wherever possible, and waste that can't be eliminated should be properly collected and disposed of. Waste like scrap metal and cardboard or packaging materials can be recycled. Partner with companies that produce byproducts you need, and with those that can put your byproducts to use. You can also reduce waste by reducing errors: utilize automation to create more precise components and lower your risk of producing defective products that end up in the trash.

Going green comes with big benefits—and not only for the planet we all share. Sustainability attracts top talent, enabling you to build an industry-leading team that's with you for the long-term, so you can focus more on innovation and less on hiring and onboarding. This helps you create community and bolster the local economy. In the midst of it all, your company saves money on energy, water, and waste disposal.



Eco-Friendly Cleaning Processes and Lubricants

Traditional manufacturing lubricants are petroleum-based, and they're often improperly disposed of—either accidentally or intentionally. The result is essentially an oil spill, which is devastating to the ecosystem. Traditional cleaning products are no better, as they typically contain many potentially harmful ingredients, including:

- **Volatile organic compounds (VOCs)** contribute to poor indoor air quality and pose a potential hazard to anyone breathing that air; they can also contribute to smog and poor outdoor air quality.
- **Nonylphenol ethoxylates (NPEs)** work their way from your factory into the water supply, and they're highly toxic to aquatic life.
- **1,4-dioxane**, which is often found in paint strippers, grease, deicing fluids, and more, is considered "likely to be carcinogenic to humans." It seeps quickly into groundwater. The fumes may be inhaled when working with a product that contains 1,4-dioxane, and any type of exposure may cause nausea, headaches, throat or eye irritation, or even kidney damage.

Fortunately, there are alternatives to products containing those types of harmful ingredients. Companies have several options when it comes to greening their cleaning and lubrication processes. These options include:

- **Water-Based.** A water-based cleaner uses water as the main solvent, which means you're using smaller amounts of detergents and chemical solvents. Depending on the application, plain water may be an extremely effective cleaning solution via power washing or steam cleaning.
- **Biodegradable.** You can measure primary or secondary biodegradability (a substance's ability to break down when confronted by bacteria), most commonly via methods outlined by the Coordinating European Council and the Organization for Economic Cooperation and Development. Choose a lubricant that is 80% or more biodegradable according to the CEC L-33-93 method of measurement, or above 60% biodegradable according to the OECD 301B method.
- **Efficient Processes.** By streamlining your manufacturing processes, you can reduce your use of lubricants and cleaners, no matter what type of products you're choosing. Maintain equipment properly to avoid leaks, ensure your team is trained on how to safely and efficiently use cleaning/lubrication products, and store your lubricants securely to prevent contamination or spillage.



Hudson Technologies' Green Manufacturing Processes

It took two years and \$2 million, but Hudson Technologies was able to convert our 115,000-square-foot facility to a water-based cleaning system—a worthwhile investment for our company, our employees, and the environment. We've also replaced chlorinated lubricants with biodegradable alternatives that contain no trichloroethylene (TCE). Since 2008, Hudson Technologies has completely eliminated trichloroethylene (TCE) from all of their manufacturing processes.



While many other deep draw stamping companies still rely on hazardous solvents and cleaners, we're proud to be a leader in green manufacturing. Nothing else about our proven processes has changed: we still manufacture the same high-quality solutions we always have, but now we do it in a safer, healthier, more responsible way.

Partner with Hudson Technologies

Sustainability is here to stay as more companies realize the positive impact they can have by making a few changes within their organizations. Not only do they nurture the environment, but sustainable practices are a smart business move that can help companies save money while creating a safer workplace for their employees.

Hudson Technologies is committed to sustainability for the long term, and we look forward to new technology and techniques that can help us save energy, reduce waste, and protect the planet. As a leading manufacturer for deep draw metal stamping, custom tooling, and more, we have experience creating precise components for automotive, aerospace, electrical, medical, irrigation, and many other applications. [Contact us](#) to learn more about our products and our green manufacturing practices, or [request a quote](#) for your project today.



About Us

As a leading U.S. manufacturer of deep drawn metal enclosures, or cases, and stampings — including metal diaphragms — Hudson Technologies is committed to providing our clients with the best possible user experience.

For over 75 years, we've been providing services to a wide range of industries, from aviation, automotive, and commercial battery to electrical, medical devices, and irrigation. We work with a variety of high-performance metals, including cold rolled steel, aluminum, shielding alloys, cupronickel, and titanium. And as an AS9100D certified company, we're also proudly committed to green manufacturing and work hard to produce long-lasting, environmentally friendly products.

Learn More

Since our founding in 1940, Hudson Technologies has been a leading U.S. manufacturer of deep drawn metal parts and provider of value-added turnkey services.

Our team works closely with customers from the early design stages through final production and delivery to ensure they receive components perfectly suited to their needs. With experience designing custom solutions and equipment capable of delivering millions of pieces per order, Hudson Technologies can adapt our services to accommodate any stamping need.

To learn more about what Hudson has to offer and how our turnkey services can help save your company both time and money, [contact the team today](#).



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