



UNDERSTANDING LIGHTS OUT MANUFACTURING

HOGGE PRECISION
An ISO 9001:2015 QMS Registered Company

Hogge Precision Parts Co., Inc. is a premier contract manufacturer offering precision machining services to customers across a broad range of industries. Our 42,000-square-foot manufacturing facility houses an extensive selection of machining centers—including computer numerical control (CNC) and screw machining equipment—which enables us to create custom components and assemblies to various specifications and standards. Additionally, throughout our over 30 years in business, we've gradually incorporated advanced automated machining technology into our facility to manufacture certain products at night without any staff present to monitor production operations. As a result, we can provide lights out manufacturing capabilities for most applications.



Lights out manufacturing refers to fully automated production operations that continue to run after employees have left the facility (i.e., after lights out). Components and assemblies can be made without the need for human labor and the risk of human error, resulting in lower overhead costs, better operational accuracy and precision, and many other benefits that help keep companies competitive.

The experts at Hogge Precision have put together the following eBook on lights out manufacturing to help readers understand the concept. It provides a comprehensive overview of it, including what it is, what advantages it offers, and what to consider when selecting a partner who uses it.



Overview of Lights Out Manufacturing

Lights out manufacturing is a production method that uses automation technology to make parts and products with little to no human involvement besides during initial machine programming and tooling setup. The result is that lights out facilities—also referred to as dark factories—can run flawlessly 24 hours a day/7 days week even when they are unmanned (i.e., without human workers to monitor operations) and unlit (i.e., without lights to illuminate operations).

The process of creating a lights out manufacturing facility necessitates the ability to automate and control each step of the manufacturing process without sacrificing quality. Companies generally handle it with a tech stack that includes various forms of automation technology. Examples include machine vision systems, additive manufacturing equipment, edge computing systems, cloud data systems, machine learning programs, robots, and Internet of Things (IoT) systems.

The speed, accuracy, and cost-savings offered by lights out manufacturing make it a top production solution for many industries. In fact, some of the world's largest companies have utilized it, such as:

FANUC: This Japanese group of companies was one of the first to utilize lights out manufacturing practices in their facilities.

Amazon: This technology and e-commerce company uses a variety of automated systems to keep distribution operations running with very little human involvement.

Phillips: This leader in the development and production of electrical appliances and personal care products has established an almost completely automated manufacturing system with more than 100 robots and a handful of attending employees dedicated solely to quality assurance.



Advantages of Lights Out Manufacturing

Lights out manufacturing is at the leading edge of production technology for a reason. It offers a wide variety of benefits over more traditional manufacturing methods, including:

Enhanced Operational Efficiency

Lights out manufacturing enables production facilities to operate day and night with minimal human involvement. The integration of automation technology allows processes to be performed with greater speed and efficiency without a negative impact on quality.

Reduced Overhead Costs

Automating manufacturing operations reduces the need for human labor, which can significantly decrease overall operating costs and increase throughput. Additionally, lights out facilities can operate in the dark, which can substantially lessen electrical costs related to lighting.

Increased Worker Safety

Worker safety is critical in every manufacturing operation. Since lights out manufacturing minimizes the need for human workers, it is highly effective at keeping employees safe from the risks to health and well-being associated with heavy-duty production environments. Automation technology is used to handle nearly all aspects of production—except for initial machine programming and tooling setup—so there is little to no likelihood of employee accidents occurring.

Improved Production Quality and Product Consistency

The automation technology used in lights out manufacturing facilities allows parts and products to be produced faster. Additionally, unlike traditional manufacturing technologies that are susceptible to operator error, it achieves accurate and precise results, which helps reduce or completely eliminate scrap and rework due to production errors.

Advanced Maintenance Strategies

Automated systems provide manufacturers with the opportunity to establish reliable and consistent maintenance strategies that keep operations up and running with minimal downtime or disruption. Internal monitoring systems keep users apprised of the condition of the equipment, which ensures timely repairs and maintenance and eliminates unplanned downtime due to failed components.



Lights Out Manufacturing Solutions at Hogge Precision

At Hogge Precision, we utilize lights out manufacturing to develop and deliver high-quality components and assemblies with fast turnaround at competitive prices. While our employees create production schedules, set up and maintain equipment, and perform other critical facility management tasks, our advanced manufacturing equipment automatically handles physical production operations. This allows us to cut production costs without sacrificing product or process quality.

Whether you are in need of small-scale precision prototypes or high-volume full-scale production, we have the knowledge, skills, and tools necessary to develop manufacturing solutions tailored to your needs. To learn more about our lights out manufacturing capabilities, [contact us today](#). To partner with us on your next manufacturing project, [request a quote](#).

About Hogge Precision

As a premier contract manufacturer, Hogge Precision Parts Co., Inc. provides targeted products and services developed to meet the expanding needs and expectations of the markets we serve. We've developed a reputation for delivering high-quality products at competitive prices using our portfolio of advanced computer numerical control (CNC) and screw machining equipment. In 2020, we served our Customers with over 7,600 shipments and 98% on-time delivery. 99.6% of those shipments met all Customer Quality requirements.

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[Custom Capabilities](#)

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