

A Customer-Centric Culture – Leveraging Custom Engineering to Capture Growth Opportunities



To be relevant in today's competitive climate, suppliers must provide customers with performance-driven solutions by focusing on reliability, flexibility, and customization.

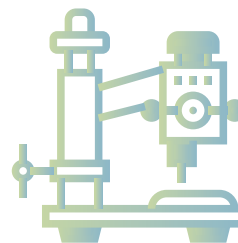
EXECUTIVE SUMMARY

AS COMPETITION INTENSIFIES AND BUSINESSES BECOME INCREASINGLY CUSTOMER-ORIENTED, CUSTOM ENGINEERING CAN BE ONE OF THE KEY BUSINESS DIFFERENTIATORS THAT CAN SET A SUPPLIER APART FROM ITS RIVALS.

Each business has a set of goals, pain points, and other challenges in getting a product to market. Custom engineering allows you to deliver exactly what your customers need, but the path from new product development to market is anything but straightforward. Every detail of a custom, or semi-custom, design is created based on the application's exact specifications. The compatibility of the solution guarantees safety and the best possible performance.

Major Benefits of Custom Engineering

- Collaboration leads to better design
- Improved user experience
- Better resource management
- Cost reduction
- Quality control



When searching for the right fit, it is important to find a company with the experience, commitment to designing and building a quality solution, and the right resources for the project.

The right solution comes when both teams collaborate and work together with full transparency. The engineering team's experience is important, but how well they listen to the customers' needs and outline them based on these needs, along with setting realistic goals, is critical to a successful outcome.

The advantages of working with the right custom engineering team comes down to improving efficiencies through streamlined processes and increased product performance and value.

INTRODUCTION

When considering custom engineering look for a supplier that sets the precedence for uncompromised quality and versatility in the development of innovative components and high-end specialized solutions.

Unlike off-the-shelf solution providers, the right partner works directly with your team to obtain a deep understanding of the challenges you face today. They will have access to a full range of materials, including their own unique formulations. An experienced engineering team then creates a purpose-driven solution to optimize performance and increase efficiencies. Utilizing the industry's most advanced manufacturing capabilities, you should expect a final solution that will yield significant value for your business.

You should expect a skilled custom engineering team to ensure its solutions and designs exceed client expectations by being timely and cost-effective while offering complete transparency, integrity, and good communication throughout the entire process.

Leverage the Benefits of Custom Engineering

A Customer-Focused Approach to Ensure Meaningful Results

Expertise in Mechanical, Electrical, and Software Engineering and Design

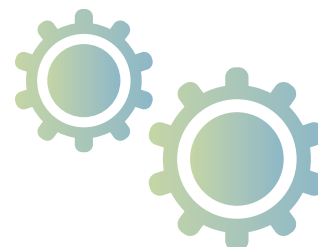
Experience drives design. Customer engineering should offer custom design services with expertise across mechanical, electrical, and software development and engineering disciplines. A team of highly skilled engineers and designers should be able to seamlessly integrate into the customer's team to develop a collaborative approach. This customer-centric approach has been proven to provide the most effective and efficient design solution.

- **Mechanical**—Mechanical solutions combine aesthetics and functionality to ensure high-quality output at an efficient cost and in a timely manner. User-friendly designs and the ability to adapt to any situation are paramount when considering accessibility and simplification for future equipment maintenance.
- **Electrical**—Electrical solutions combine experience and skill to design smarter systems for any industry need. An intelligently-designed control system is an integral part of the success of any material handling system. The supplier provides the expertise to design, build, and install custom engineered solutions to meet even the most specific demands.

- **Software**—Software solutions unify equipment and software into a single, cohesive automation system. Software engineers and designers consistently create software control sequences to maximize efficiency and add redundant safety measures.

The right team will include experienced engineering and design professionals up-to-date on the latest automation advances. They are experts who have significant experience in a wide variety of product lines. They proactively build upon their current knowledge and skill set as new and innovative advances in technology and programming become available.

Often, businesses know what they want, but they might not know the full scope of what is needed to get from concept to product delivery. There is focus and the ability to drill down into customers' specific needs to capture all growth opportunities. A custom engineering team should educate and help its customers identify their needs. The value provided is a product that is faster to market with fewer mistakes and less overall cost.



The Process: Collaborate. Design. Build. Deliver.

There are high stakes regarding vendor selection. Getting a new product to market successfully is an investment and a large part of the risk is with the selection process of the supplier. Having a solid and well-oiled engineering process to ensure a successful outcome for any product is critical for every decision-maker who has to make tough calls from defining a need to delivery.

Recognize the impact a good process can have on customers and look for complete collaboration, flexibility and transparency to ensure trust and good communication throughout the custom engineering process.

Customer Needs Discussion/Research

Customer needs identification is the process taken to determine what and how the customer would like its product to perform. The customer has an idea, and the goal of the discussion is to collaborate to identify precisely what the customer wants.

- **Gather Data:** Without the input of a customer, it would be difficult to identify needs clearly. At this stage, it's not about selling a solution. It is listening and learning as much as possible about the customer. This can be done in many different ways including interviews, focus groups, or just observing the customer's challenge to fully understand what they are trying to solve.
- **Interpreting the Data:** After the interview phase, develop a list of needs and suggestions. How exactly can the information be translated into a workable solution? Collaboration and idea-sharing continue during this phase. Identifying what has been done in the past that worked and didn't can also help improve or refine the defined needs. Any roadblocks or possible walls that can block progress will be documented, as well as alternate solutions identified. The goal is to work toward a Scope of Work (SOW) document.



Concept Development

This phase is still early in the overall custom engineering process. A broad outline of the product's function and appearance is discussed. As part of the SOW, existing drawings could be included to show what's been done in the past, along with initial artwork from the customer needs discussion that shows the impression of what is needed to solve the identified challenges. From there, more collaboration is conducted to move the scope of work forward.

Services provided:

- Initial design
- Collaboration on feasibility
- Initial engineering
- Drawing/Sketches
- Computer renderings
- Scope of work



The advantage of a SOW is to clearly define the requirements for both the supplier and the customer. This evolution becomes a full concept of what is needed, and then the design can begin.

Design, Configuration, and Confirmation

The design phase is one of the most critical steps in the custom engineering process. It follows a predetermined set of steps, but some might be repeated before moving on to the next one. Each project is unique and design will vary greatly, but this phase allows for lessons to be learned and improvements to be made.

A Design document can include:

- Determining objectives and constraints
- Prototyping
- Testing
- Evaluation

When working through the design process, the supplier will identify a list of potential solutions and then establish any problems that may constrain the work. Alternative solutions may be considered at this phase.

Having listed potential solutions and determined the needs of the project, the files, diagrams, schematics, and any numbers will be shared with the customer. High-risk areas will be discussed. Many times there will be multiple solutions giving the customer a chance to collaborate with the designers to establish one preferred prototype.

Building from previous experience, the prototype can also leverage previous work. If there have been applications in the past that have been successful, the customer will benefit by not having to build something completely from scratch. The project will be customized to the needs of the customer, but can include proven solutions that are not new to the supplier.

With the development of the prototype, work will be broken into the various engineering departments including electrical, communication or software, and mechanical. All UL and CE regulatory issues will be identified and standards will be met.

Once the SOW is finalized, a confirmation document will be signed. This identifies exactly what will be built. It can include final drawings, SOW and any relevant design documents. To ensure a successful project, communication at every phase is critical. The customer needs to understand what is going to happen. Communication and collaboration is just as important here as it was in the beginning.

Build and Monitor

Once due diligence has been finalized and the prototype has been approved, the project will move into production. The product is in the hands of skilled manufacturing professionals who continue to work and collaborate with the customer to ensure quality and precise functionality throughout each step. During the production phase, all standards, requirements, and specifications developed during the planning and design phases will be utilized.

Testing is a critical part of the engineering process and there is nothing "off the shelf" to test a new product. An experienced custom engineering team can build the tools to test its products. When required, the team should also be able to design product test stands. Analytical testing includes test methods to ensure all materials meet required specifications.



Post Delivery Review

Service doesn't end after the product has been released to the customer. After the final delivery of the project, the supplier will often schedule a review meeting. During this meeting, the engineers will complete a thorough walk-through to determine if any adjustments or modifications are needed. The goal here is to ensure your overall satisfaction and success of your project.

CONCLUSION

In today's competitive market, customer insight, flexibility, and collaboration are important factors in the success of the custom engineering process. No matter where you are with your project, whether you have an initial idea or an existing solution that needs to be modified, our team will ensure your application requirements are met. Look for a supplier who is a committed partner in the successful design and development of your customized solution, so when leveraging the expertise and knowledge of their engineering department, your team can stay focused on its core competencies.

ABOUT HINE:

BUILD ON OUR EXPERTISE WITH SMALL OR LARGE QUANTITY ORDERS

From initial concept, to design, to delivery, Hine builds and automates with precision and passion. Its team has been developing solutions for more than 30 years and serving customers since 2009.

The highly flexible team of engineers and designers is nimble enough to provide solutions that other suppliers might not be willing to consider. Hine approaches its projects in two ways, "a single, one-and-done" product, or a product that is intended to be produced multiple times. This approach to welcome small and large quantity orders allows customers the flexibility to bring an idea to market with the hope that the product will take off and more units will be delivered in the future. The goal is to provide a path for customers who have been turned down by suppliers who demand large quantities, but at the same time strategically target projects with customers that look like a good investment for the future. It's about growth, both for Hine and its customers.

For more information about Hine Automation, visit our website at www.hineautomation.com.