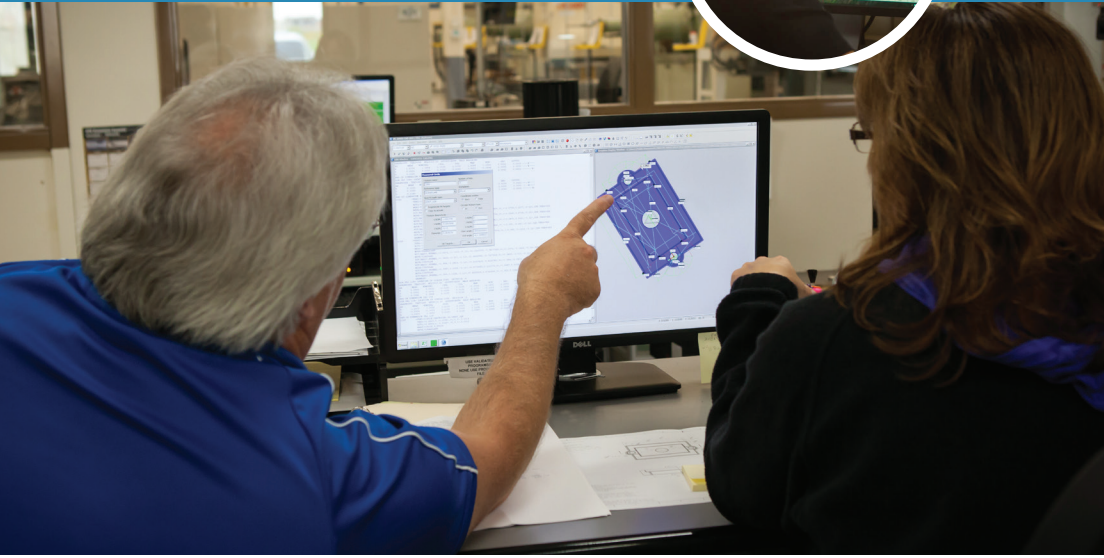
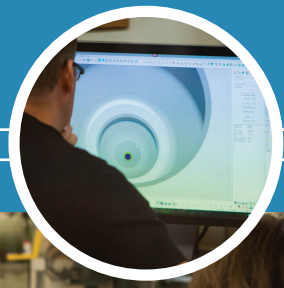


Design and Engineering



The Framework of Our Success Is Supported by Our Industry Leading / Best-In-Class Design and Engineering Services.

Design for Manufacturability (DFM)

Teamvantage's team of engineers are readily available to work with your team to provide superior component design support.

- We begin this process by understanding your product requirements and how this information translates into appropriate part design changes. Subtle alterations can make the difference between molding success and a project that takes months to 'develop'.
- Speed to market is always key...but be wary of those manufacturers that do not ask for or suggest changes in the design.
- Higher quality input leads to a higher quality outcome – teamwork is a crucial component of effective DFM.
- In nearly every project, companies focus on mold delivery lead times as the pacing item. The truth of the matter is better DFM in the beginning of a project leads to a shorter overall project time line.
- We conduct process and technology development projects in partnership with our customers to research new material applications or product concepts – providing complete transparency in the sharing of technical information.
- The key to successful project execution and cost containment / minimization is the early involvement of the Teamvantage design team (e.g.; prognostic design consideration and development leads to the creation of robust processes).
- Our engineering software systems include: Pro/Engineer, Solidworks, Solid Edge, Moldflow, CADKEY, MasterCam, etc.

Mold Simulation

Teamvantage is well versed in the advanced usage of Moldflow software and techniques.

- Predicting flow patterns and identifying potential mold filling concerns early on will save time and revision costs later in the project. Any tool is **only as good as the experience that is driving the decisions.**

Process Development

Our process development team excels in the implementation of Scientific Injection Molding Principles.

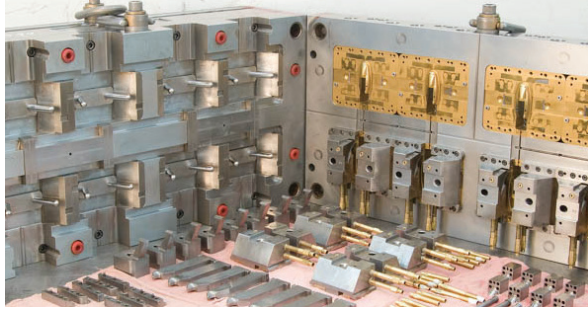
- Scientific Injection Molding – Process development starts with effective DFM, leading to superior tooling design, which sets the stage for robust process development.

Design and Engineering

Validation

Whether protocols are developed by our customers, by Teamvantage or preferably in concert with our customers, our experienced team of experts can support all of your validation requirements.

- From metrology to component qualification to full IQ/OQ/PQ validation, Teamvantage will lead the charge to provide best-in-class validation results.



Tooling Design and Fabrication

Whether you want to participate in the mold design process or not, Teamvantage welcomes you as an integral part of the team...It's your design after all.

- Our tooling support team outshines the competition in the areas of new tool development. We are also industry experts in effectively developing tooling that is transferred from previous molders to Teamvantage.
- Whether it's new tooling or transfer tooling...MS Project time lines are the standard fare that describes all the activities required to meet your schedule.

Types of Tooling

The type of tooling best used for your application is a function of a number of inputs. Things like: part volumes, part complexity, material selection, your product's lifecycle, etc. are all things that must be considered when choosing your type of mold.

Examples of tooling options include, but are not limited to:

- Lower volumes – consider MUD / unit sets
- Similar part designs and materials – family tools may be a consideration
- Similar part designs and different materials – could warrant an interchangeable mold
- High volume projects – multi-cavity and possibly a hot runner system

Whatever your requirements we will help you select the best tooling options for your applications.

At Teamvantage, we approach each project as a team – recognizing that the strength of the Program Manager and the Project Team determines the success of the project. Working together, our engineering professionals combine their experience to ensure your satisfaction.

We are here to solve your unique manufacturing challenges. We do not hesitate to share our expertise about technology and processes. We want you to know what works best and why. Your project, no matter how big or how small, is important to us.



TEAMVANTAGE

Creative Solutions to Unique Manufacturing Challenges

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ISO 9001:2008 Certified

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