

Customer Interaction

- Sargent Aerospace & Defense interacts with the customer's Engineering Department early in the development process. On-site coordination optimizes the design from a system standpoint and reduces development cycle time.
- Sargent Program Management assists the customer in establishing program timeliness and other high-level guidelines.
- The result is a system-optimized, realistic specification for the intended function.

Proposal Phase

- Customer specifications are reviewed by a Sargent's design team with over 60 years of company experience in hydraulic valves and actuators. Integral to this review process:
 - Initial trade studies are concluded.
 - Sizing and timing calculations are performed.
 - Appropriate materials are selected, and design weight is balanced against the customer requirement.
 - An electronic solid model of the design is created and reviewed by the prototype machine shop for manufacturing input.
- Supply chain management then provides feedback on the design, establishes realistic costs, and begins work on tooling and manufacturing.
- Design, manufacturing, and pricing reviews produce a detailed technical proposal, outlining the proposed design and recommended alternate design approaches.

Detailed Design

- Contract award initiates another thorough review of the current specifications and proposal design and the start of the detailed design development. This phase includes:
 - Comprehensive stress and fatigue analysis.
 - Performance analysis.
 - Final material selection.
 - Internal design reviews are completed and key components reviewed with the Supply Chain.
 - The design is presented to the customer in a series of comprehensive reviews against the customer requirements.

Initial Manufacture

- Prototype units are manufactured using Sargent's in-house machine shop and supplier base, with full support from engineering.
- FAA conformity is performed upon completion.

Qualification Testing

- Qualification testing is performed by Sargent's test team.
- Testing is performed both in-house, using dedicated facilities, and at outside test houses for certain tests.
- Fully documented test reports are delivered within 30 days of test completion.